

L'urgence psychiatrique pour enfants et adolescents

KCE reports 135B

Le Centre fédéral d'expertise des soins de santé

Présentation : Le Centre fédéral d'expertise des soins de santé est un parastatal, créé le 24 décembre 2002 par la loi-programme (articles 262 à 266), sous tutelle du Ministre de la Santé publique et des Affaires sociales, qui est chargé de réaliser des études éclairant la décision politique dans le domaine des soins de santé et de l'assurance maladie.

Conseil d'administration

Membres effectifs : Pierre Gillet (Président), Dirk Cuypers (Vice président), Jo De Cock (Vice président), Frank Van Massenhove (Vice président), Yolande Avondtroodt, Jean-Pierre Baeyens, Ri de Ridder, Olivier De Stexhe, Johan Pauwels, Daniel Devos, Jean-Noël Godin, Floris Goyens, Jef Maes, Pascal Mertens, Marc Moens, Marco Schetgen, Patrick Verertbruggen, Michel Foulon, Myriam Hubinon, Michael Callens, Bernard Lange, Jean-Claude Praet.

Membres suppléants : Rita Cuypers, Christiaan De Coster, Benoît Collin, Lambert Stamatakis, Karel Vermeyen, Katrien Kesteloot, Bart Ooghe, Frederic Lernoux, Anne Vanderstappen, Paul Palsterman, Geert Messiaen, Anne Remacle, Roland Lemeye, Annick Poncé, Pierre Smiets, Jan Bertels, Catherine Lucet, Ludo Meyers, Olivier Thonon, François Perl.

Commissaire du gouvernement : Yves Roger

Direction

Directeur général Raf Mertens

Directeur général adjoint: Jean-Pierre Closon

Contact

Centre fédéral d'expertise des soins de santé (KCE).
Cité Administrative Botanique, Doorbuilding (10^{ème})
Boulevard du Jardin Botanique, 55
B-1000 Bruxelles
Belgium

Tel: +32 [0]2 287 33 88

Fax: +32 [0]2 287 33 85

Email : info@kce.fgov.be

Web : <http://www.kce.fgov.be>

L'urgence psychiatrique pour enfants et adolescents

KCE reports 135B

DIRK DEBOUTTE, MIKE SMET, VERA WALRAVEN,
ASTRID JANSSENS, CAROLINE OBYN, MARK LEYS

KCE reports I35B

- Titre:** L'urgence psychiatrique pour enfants et adolescents
- Auteurs:** Dirk Deboutte (UA-CAPRI), Mike Smet (UA-Algemene economie), Vera Walraven (UA-CAPRI), Astrid Janssens (UA-CAPRI), Caroline Obyn (KCE), Mark Leys (KCE)
- Experts externes:** Joël Boydens (MC), Bob Cools (CGGZ), Paul De Bock (SPF Santé publ.), Guy Durant (Clin univ UCL), J.-M. Gautier (ULg), Jean-Pierre Gorissen (SPF Santé publ.), Annik Lampo (UZ-Brussel), Ann Moens (Zorgnet Vlaanderen), Koen Schoonjans (SPF Santé publ.), Jean-Paul Matot (ULB), Eric Schoentjes (UZ-Gent), Carine Van de Voorde (KCE), Geert Verscuren (INAMI).
- Remerciements :** Jean-Pierre Gorissen (SPF Santé publ.) a apporté une contribution importante et pleine de compétence dans la phase d'analyse des résumés psychiatriques minimums.
Vanessa Vandergoten, psychologue, a joué un rôle équivalent pour l'analyse des données des focus groupes francophones.
- Valideurs externes:** Sarah Byford (Kings College London, UK), Mark Lambrecht (KUL), Jan N.M. Schieveld (University Hospital Maastricht, The Netherlands)
- Conflits d'intérêt:** Aucun déclaré
- Disclaimer :** Les experts externes ont été consultés sur une version (préliminaire) du rapport scientifique. Une version (finale) a ensuite été soumise aux valideurs. La validation du rapport résulte d'un consensus ou d'un vote majoritaire entre les valideurs. Ce rapport a été approuvé à l'unanimité par le Conseil d'administration. Le KCE reste seul responsable des erreurs ou omissions qui pourraient subsister de même que des recommandations faites aux autorités publiques.
- Layout :** Ine Verhulst
- Bruxelles, 23 septembre 2010
- Etude nr 2009-20
- Domain: Health Services Research (HSR)
- MeSH: Emergency Services, Psychiatric ; Child ; Adolescent
- Classification NLM: WM 401
- Langage: français, anglais
- Format: Adobe® PDF™ (A4)
- Dépôt légal: D/2010/10.273/50
- Ce document est disponible en téléchargement sur le site Web du Centre fédéral d'expertise des soins de santé.

Les rapports KCE sont publiés sous Licence Creative Commons « by/nc/nd » (<http://creativecommons.org/licenses/by-nc-nd/2.0/be/deed.fr>).

Comment citer ce rapport?

Deboutte D, Smet M, Walraven V, Janssens A, Obyn C, Leys M. L'urgence psychiatrique pour enfants et adolescents. Health Services Research (HSR). Bruxelles: Centre fédéral d'expertise des soins de santé (KCE). 2010. KCE Reports I35B. D/2010/10.273/50



AVANT-PROPOS

Le secteur de la santé mentale est fort chahuté en Belgique. On souligne souvent le manque de pédopsychiatres, les centres de santé mentale se débattent avec les problèmes de file d'attente et, dans un pays aussi compliqué politiquement que la Belgique, la répartition des compétences rend un approche intégrée très peu évidente. Et à tout cela s'ajoute l'impression que les besoins ou du moins la demande de soins de santé mentale est en augmentation, en particulier chez les enfants et adolescents.

Le présent rapport aborde un aspect particulier du spectre de ces soins, en posant la question de savoir s'il y a besoin de prendre des dispositions particulières pour les urgences psychiatriques des enfants et des adolescents. Avec comme corollaire la question de l'organisation et du financement de ces urgences. Sujet important mais que l'on ne peut pas dissocier de l'évolution possible ou souhaitable de l'organisation globale des soins de santé mentale pour cette population. Cette organisation globale fait justement l'objet d'un rapport en préparation au KCE. Les conclusions du présent rapport pourront utilement y être intégrées.

Le défi de notre étude consistait à intégrer de manière cohérente des informations limitées que nous donne la littérature scientifique d'une part et des expériences de terrain fragmentaires d'autre part dans une vision intégrée. Dans un domaine d'une telle complexité, regroupant autant d'acteurs différents, nous n'avons pas pu aller beaucoup plus loin que d'esquisser un certain nombre de lignes directrices. Nous espérons que d'aucuns pourront y trouver des pistes utiles à traduire concrètement dans la pratique.

Le KCE remercie en tous cas les nombreux experts et acteurs de terrain qui ont accepté de partager leurs connaissances et leur expérience. Leur apport fut précieux.

Jean-Pierre CLOSON
Directeur Général Adjoint

Raf MERTENS
Directeur Général

Résumé

INTRODUCTION

CONTEXTE

Les professionnels qui travaillent en pédopsychiatrie se trouvent confrontés à un besoin accru en aide psychiatrique urgente (APU) pour les enfants et les adolescents. Le nombre d'enfants et d'adolescents se présentant aux urgences afin d'y recevoir une aide pour des raisons mentales serait en effet en augmentation dans notre pays. Ce phénomène s'observerait également dans d'autres pays occidentaux.

Ce sont principalement trois secteurs qui apportent une aide aux enfants et adolescents souffrant de problèmes de santé mentale : le secteur des soins de santé, les services d'aide sociale et le secteur de la justice. Cela étant, l'aide psychiatrique d'urgence et les interventions de crise chez les enfants et les adolescents sont rarement mis en place de manière structurée en Belgique. De plus, des différences existent entre ces secteurs en ce qui concerne la responsabilité, le cadre légal, le financement, les professions impliquées et la structure politico-institutionnelle.

Le secteur des soins de santé

La situation actuelle se présente comme suit : en pratique, l'APU *en milieu hospitalier* pour les enfants et les adolescents est très souvent dispensé par les services d'urgence et de pédopsychiatrie. Les données enregistrées par les hôpitaux et les avis d'experts indiquent que les patients pédopsychiatriques sont admis en lits K (pédopsychiatrie) mais aussi en lits A (psychiatrie adulte aiguë), T (psychiatrie chronique), D (médecine interne) et E (pédiatrie).

Le secteur de l'aide sociale

Le secteur de l'aide sociale fournit des services d'assistance immédiate pour les enfants et les adolescents. Les services d'aide sociale relèvent de la compétence des Communautés et comprennent, entre autres, les centres de santé mentale, le placement en famille d'accueil, les soins en milieu ambulatoire et résidentiel ainsi que le soutien parental. En Communauté flamande, 'Integrale Jeugdhulp' a créé un réseau d'assistance immédiate ('Netwerk Crisishulp') dans chaque province. En Communauté française, 'SOS enfants' et 'AMO SOS jeunes' fournissent une assistance immédiate aux enfants et adolescents exposés à un risque ou victimes de violences, de maltraitance et/ou de négligence. Le système d'aide sociale à l'enfance n'a pas été conçu de manière spécifique pour les problèmes de santé mentale mais se concentre sur les enfants dont le bien-être est en danger parce que leurs parents ou leur famille sont incapables de leur dispenser des soins, une éducation ou un accompagnement adéquats. Toutefois, on a constaté qu'en moyenne, 60% des enfants et adolescents bénéficiant des services de l'aide sociale souffrent d'une psychopathologie grave.

Le secteur de la justice

Il n'existe pas, dans le secteur de la justice, une institution ou une entité proposant des services d'assistance immédiate spécifiques pour les enfants ou adolescents souffrant de problèmes psychiatriques, les cas étant souvent référés aux services des soins de santé ou d'aide sociale.

Outre ces trois principaux secteurs, les consultations de psychologues et de psychiatres jouent également un rôle.

CHAMP D'APPLICATION DU RAPPORT

L'objectif de la présente étude est de déterminer dans quelle mesure l'APU pour enfants et adolescents en Belgique doit être développé et comment elle pourrait être organisée et financée. L'objet du rapport se limite principalement à l'organisation de la partie du secteur des soins de santé qui relève des compétences du niveau fédéral ; néanmoins le rapport aborde aussi le rôle des autres secteurs.

QUESTIONS DE RECHERCHE

Qu'est-ce que l'urgence psychiatrique chez les enfants et les adolescents ?

Quelles sont les caractéristiques de la population d'enfants et d'adolescents qui entrent dans un système de prise en charge psychiatrique urgente ? Existe-t-il des systèmes d'enregistrement de ce type d'urgence ?

Quels services devraient être proposés aux enfants et adolescents nécessitant une assistance d'urgence et comment peut-on organiser et financer lesdits services ?

MÉTHODES

La recherche se fonde sur la littérature revue par les pairs et sur la littérature grise, sur une analyse des données quantitatives disponibles, sur une recherche qualitative via des entretiens de groupe avec des acteurs clé du vaste domaine des soins (de santé mentale) pour enfants et adolescents ainsi que sur une simulation des ressources nécessaires.

RÉSULTATS

QU'ENTEND-ON PAR URGENCE PSYCHIATRIQUE ET INTERVENTION DE CRISE ?

La littérature relative à l'APU pour enfants et adolescents est peu abondante. C'est la raison pour laquelle le rapport se fonde également sur la littérature relative à l'APU pour adultes.

La littérature montre que, dans la population adulte, on peut clairement faire la distinction entre l'APU et les interventions de crise. Pour la population adulte, l'APU est généralement considérée comme résidentielle tandis que les interventions de crise seraient plutôt organisées au niveau communautaire. Bien qu'il faille faire un distinguo clair entre les situations mettant en péril le pronostic vital et celles qui ne menacent pas la vie dans l'immédiat, la littérature ainsi que les données de la recherche qualitative indiquent que la distinction entre les soins d'urgence et l'intervention de crise est moins claire dans le cas des enfants et des adolescents. Il existe un large consensus selon lequel les deux phases sont étroitement liées. Ce sont le type et l'intensité du comportement problématique, considérés en association avec la disponibilité et la solidité de l'environnement de l'enfant (famille, école, soins déjà dispensés) qui devraient déterminer le type de soins d'urgence à fournir.

La situation des enfants et adolescents est fortement influencée par leur contexte personnel et social. En conséquence, l'APU pour enfants et adolescents devrait explicitement prendre en considération des aspects tels que la responsabilité (légale) et le rôle des parents, le contexte familial ou social au sens large, de même que les questions relatives aux droits des enfants et au cadre légal relatif à la protection de l'enfant (par exemple, la confidentialité).

L'objectif premier de l'APU est de garantir la sécurité du patient : le danger immédiat pour la personne ou son entourage immédiat doit être maîtrisé. Par ailleurs, les interventions psychiatriques d'urgence ont également pour but d'aider les enfants et leurs parents à juguler une situation problématique et à se stabiliser, de façon à sauvegarder les chances de développement personnel futur de l'enfant. L'APU peut constituer une (première) opportunité de mise en place de soins adéquats pour un enfant ou un adolescent ainsi que pour son entourage direct.

CARACTÉRISTIQUES ESSENTIELLES DE L'APU POUR ENFANTS ET ADOLESCENTS

Milieu communautaire

L'APU pour enfants et adolescents a essentiellement pour but de fournir des soins à l'enfant dans son milieu de vie. Par conséquent, ces soins sont par nature ambulatoires ou d'approche, et ne doivent pas uniquement impliquer l'enfant ou l'adolescent mais aussi les parents, l'établissement scolaire ou les proches.

Milieu résidentiel lorsque cela s'impose

Dans certains cas, un environnement résidentiel (protégé) peut être requis pour fournir l'intensité de soins adéquate. Toutefois, une admission ne devrait jamais avoir pour objectif (même à titre temporaire), de soulager les parents ou les dispensateurs de soins de leur responsabilité en matière d'éducation et d'accompagnement de l'enfant. Pas plus qu'une admission ne peut être utilisée de manière abusive en tant qu'alternative provisoire en raison de problèmes avec des enfants ou des adolescents dans des institutions de soins ordinaires.

Néanmoins, il convient de prévoir une capacité (de réserve) suffisante pour une assistance immédiate. Une distinction doit être faite entre les lits hospitaliers hautement sécurisés qui procurent une indispensable protection contre les actes autodestructeurs ou les violences envers autrui, et les lits d'urgence ordinaires.

A tout moment mais pour une courte période

L'APU pour enfants et adolescents doit être d'accès aisé pour tout un chacun (24 heures sur 24, 7 jours sur 7, toute l'année).

Comme il est extrêmement difficile de faire la distinction entre l'APU et les interventions de crise, l'APU pour enfants et adolescents a été définie dans la présente étude comme ne dépassant pas une durée d'au *maximum deux semaines* (14 jours). Cette période permet de stabiliser la situation et de mettre en place des soins de suivi adaptés aux besoins de l'enfant ou adolescent. Au-delà de cette période, les soins ne doivent plus être considérés comme une aide d'urgence. Compte tenu de l'organisation actuelle et des problèmes rencontrés dans les soins pour les enfants et adolescents, la durée admissible est relativement longue afin d'éviter toute exclusion prématurée d'un cadre de soins adéquat.

Contenu de l'APU

L'APU pour enfants et adolescents comprend l'enregistrement, les conseils, la stabilisation, l'évaluation, le traitement et la référence vers d'autres professionnels.

Une évaluation clinique est indispensable pour pouvoir identifier le(s) type(s) d'intervention requise(s), évaluer le caractère aigu du risque et élaborer un plan de gestion du risque. Ce plan doit comprendre un renvoi vers des soins appropriés.

Une aide organisée en fonction des besoins personnels

Les soins doivent être dispensés au cas par cas, de manière flexible et adaptée aux besoins spécifiques de l'enfant ou de l'adolescent dans son contexte.

Dispensateurs de l'aide

L'APU doit être dispensé par un personnel compétent qui doit avoir reçu une formation en soins de santé mentale et pour le traitement et l'accompagnement des enfants et adolescents.

APU globale

Sur la base de la contribution des groupes focalisés, l'APU ne doit pas être organisé de manière distincte en fonction de la catégorie (c.à.d. ni par type de diagnostic ni en fonction de la situation judiciaire).

CARACTÉRISTIQUES DE LA POPULATION

Les analyses systématiques du profil des enfants et adolescents sollicitant une APU sont rares dans la littérature scientifique. Nous n'avons trouvé que quelques indications :

Les enfants et les adolescents se présentent en général pour recevoir une APU lorsque leurs actes, leur comportement ou leur souffrance deviennent intolérables ou ingérables pour les personnes qui prennent soin d'eux. En outre, l'APU est indiqué chez les enfants se trouvant dans un contexte social dangereux. Les urgences pédopsychiatriques incluent les situations dans lesquelles le sujet :

- représente un danger pour lui-même ou pour autrui (c.à.d., comportement homicide ou suicidaire, actes d'autodestruction, agressivité);
- est exposé à un danger provenant d'autrui (par exemple, négligence, maltraitance) ;
- souffre de psychose aiguë (c.à.d. d'une incapacité à fonctionner dans un environnement ordinaire en raison de délire, d'hallucinations) ;
- consomme/abuse de drogues/d'alcool de façon inquiétante;
- présente une vulnérabilité accrue au stress en raison de graves facteurs de stress émanant de son environnement ou d'un effondrement du soutien de son entourage ;
- une psychopathologie individuelle peut mais ne doit pas nécessairement être présente.

La majorité des enfants qui se présentent aux services psychiatriques d'urgence ont entre 6 et 18 ans, avec une concentration de jeunes adolescents âgés de 12 à 15 ans. Les adolescents qui se présentent avec des automutilations délibérées et des troubles émotionnels sont davantage susceptibles d'être des filles. En revanche, les jeunes affichant des problèmes de comportement et de l'agressivité seront plus souvent des garçons. Rares sont les études qui incluent des variables socio-économiques et sociodémographiques dans leur analyse.

Les idées suicidaires ou les tentatives de suicide, de même que les troubles du comportement, y compris une attitude agressive, constituent les raisons les plus courantes pour lesquelles les jeunes se présentent aux services d'urgences psychiatriques. Les diagnostics psychiatriques les plus fréquemment posés sont les troubles du comportement et de l'humeur (dépression).

UNE APU QUI NE SOIT PAS UNE ENTITÉ ORGANISATIONNELLE MAIS BIEN UNE FONCTION SPÉCIFIQUE DANS L'ENSEMBLE DE LA FILIÈRE DES SOINS DE SANTÉ MENTALE

La littérature ne fournit pas de données probantes sur les modes opérationnels à adopter pour la fourniture d'une APU. Cependant, un certain nombre de caractéristiques essentielles émergent et ont été évaluées dans le volet qualitatif de la recherche.

L'APU en tant que fonction

L'APU doit être développée en tant que fonction distincte mais intégrée dans la filière globale des soins de santé mentale pour les enfants et les adolescents. La notion de fonction implique la fourniture d'un service plutôt que la constitution d'une entité organisationnelle spécifique. Ce rôle fonctionnel crée des opportunités de réflexion à propos de la manière dont on peut utiliser les systèmes existants pour l'aide d'urgence aux enfants et adolescents en matière de santé mentale ou de contribution au bien-être des jeunes, sans imposer une configuration opérationnelle spécifique. De surcroît, une approche fonctionnelle permet d'organiser les soins de préférence en milieu ambulatoire, et en résidentiel uniquement si nécessaire.

Collaboration requise et approche multifacettes

Une approche collaborative entre les différents types de services de fourniture d'aide au sein et en dehors des soins de santé est nécessaire. Il convient d'offrir un éventail d'instruments de soutien afin d'assumer la fonction d'aide d'urgence : équipes d'approche mobiles, services d'écoute téléphonique, salles de consultation, lits résidentiels/hospitaliers ordinaires et lits hautement sécurisés dans le service pédopsychiatrique procurant l'indispensable protection contre les actes autodestructeurs et les violences à l'égard d'autrui.

Tant la littérature que la recherche qualitative indiquent que, compte tenu de l'organisation actuelle et des rôles des prestataires, l'APU est, pour bien faire, d'une manière ou d'une aussi en relation avec des services d'urgence (hospitaliers) existants, ce point d'entrée étant familier pour le plus grand nombre de même que pour des institutions telles que la police ou les services judiciaires. Par conséquent, la fonction d'aide pédopsychiatrique urgente a besoin d'au minimum une étroite collaboration avec un service d'urgence spécialisé et soit un service pédopsychiatrique (avec des lits d'urgence hautement sécurisés) soit un service pédiatrique.

Ressources indispensables

Les ressources indispensables pour la fonction d'APU sont les suivantes :

- Une équipe de professionnels (pédopsychiatres, personnel infirmier qualifié, psychologues, éducateurs, travailleurs sociaux et soutien administratif) tant pour les soins d'urgence en milieu ambulatoire que résidentiel ;
- Un cabinet pour la consultation et l'évaluation ;
- Des véhicules et services de transport ;
- Du matériel de communication ;
- L'infrastructure nécessaire pour un nombre de lits d'APU, avec du personnel soignant et la prise en charge des coûts indirects liés à ces lits ;
- Les infrastructures supplémentaires associées aux lits hautement sécurisés. Ceci peut notamment exiger la construction d'un nouveau bâtiment ou la rénovation d'un immeuble existant.

BESOINS EN APU POUR ENFANTS ET ADOLESCENTS EN BELGIQUE

L'évaluation des besoins en APU est un exercice complexe qui dépend de multiples facteurs contingents, notamment le profil de population, les caractéristiques socio-économiques d'une région et l'organisation et l'utilisation globale des soins de santé mentale. Les interventions de crise et l'APU pour enfants et adolescents sont actuellement proposées par différents services d'aide à l'enfance et de soins de santé mentale pédopsychiatriques (tant en milieu ambulatoire que résidentiel). Néanmoins, un enregistrement systématique des données faisant défaut, il est malaisé de déterminer la disponibilité et l'utilisation réelle de l'APU. En conséquence, le présent rapport se fonde sur les données du résumé psychiatrique minimum (RPM), le résumé clinique minimum (RCM) et les données émanant du réseau flamand '*Integrale jeugdhulp*'.

En 2007, on dénombrait dans notre pays 4198 admissions de 14 jours ou moins, d'enfants et d'adolescents pour des raisons psychiatriques, soit 19 admissions pour 10.000 mineurs. En 2009, 1008 cas ont bénéficié d'une intervention du projet Réseau d'assistance immédiate '*Integrale Jeugdhulp*' (Flandre).

Sur la base de ces estimations grossières et des contributions des groupes focalisés, nous proposons une fonction d'urgence pour une population de 150.000 mineurs, mais avec au minimum une fonction par province (d'autres entités géographiques pertinentes pouvant être envisagées si la facilité d'accès ainsi que la couverture de l'ensemble de la population belge sont maintenues en tant que critères).

FINANCEMENT: ESTIMATION DES RESSOURCES

Plutôt que de présenter des estimations exactes pour différents scénarii, le présent rapport introduit une approche méthodologique (théorie des files d'attente ou *queuing theory*) dans le but d'estimer les ressources indispensables à une APU pour enfants et adolescents. La méthodologie de la théorie des files d'attente est utilisée pour estimer les besoins en personnel et en lits de même que les capacités nécessaires notamment en véhicules et en salles de consultation.

Pour étayer notre propos, nous présentons quatre scénarii d'estimation des besoins (en personnel et en lits). Les scénarii se fondent sur des estimations et hypothèses approximatives extrapolées à partir de l'enregistrement des données nationales et des contributions des parties prenantes belges et des experts. Les scénarii sont élaborés sur l'hypothèse de 5340 interventions de soins en ambulatoire et 4198 interventions en résidentiel par an pour la Belgique, et d'un parc de lits hautement sécurisés et d'un parc de lits ordinaires par province. Ne sachant pas précisément dans quelle mesure le personnel et les lits sont actuellement utilisés pour l'APU, les scénarii estiment les besoins totaux de l'APU, et non pas les besoins supplémentaires venant en sus des soins d'urgence actuellement dispensés.

En théorie, il serait possible d'assortir chaque scénario d'une évaluation financière (impact budgétaire) des ressources nécessaires, mais pour que cet exercice soit pertinent, il faudrait disposer de données plus fiables.

Comme on pourra le lire dans ce rapport, la théorie des files d'attente montre que la mise en commun (« pooling ») minimise les ressources nécessaires pour garantir un temps d'attente maximum acceptable avec une capacité de réserve minimale. La mise en commun n'implique pas obligatoirement que toutes les ressources soient situées dans un même lieu physique. Il convient néanmoins de mettre en balance les problèmes d'accessibilité et cette obligation de mise en commun, avec à la clé la nécessité d'avoir une bonne répartition géographique des fonctions d'urgence.

OPTIONS DE FINANCEMENT

Le présent rapport traite des options de financement au sein du secteur des soins de santé. L'avantage d'une approche fonctionnelle est que le financement d'une fonction de soins d'urgence autorise une approche intégrée, ce qui permet de fournir des soins aussi bien en milieu hospitalier qu'à l'extérieur de l'hôpital, même dans le cadre actuel de financement des hôpitaux. Cela étant, la nécessité constatée de collaborer avec d'autres secteurs pour organiser l'APU exige aussi d'explorer d'autres possibilités de financement aux niveaux communautaire et régional si ces derniers devaient être intégrés dans le développement et la mise en œuvre opérationnelle de la fonction.

DISCUSSION

Les concepts « d'urgence psychiatrique » et de « crise psychologique ou de santé mentale » sont souvent confondus. La littérature qui s'intéresse aux populations adultes distingue les deux concepts en termes de type de menace vitale : une crise ne constitue pas immédiatement une menace vitale même si elle requiert une réponse *urgente* (dans les 24h) ; alors qu'une urgence est associée à une menace vitale et requiert une réponse *immédiate* pour préserver la vie. Pour la population pédiatrique par contre, les urgences psychiatriques surgissent souvent dans un contexte de crise, et des critères de délimitation stricts ne peuvent être avancés comme tels. La question de savoir s'il convient que l'intervention soit urgente, immédiate ou autre, doit être évaluée en fonction de la situation plutôt que sur base de critères précis. L'APU ne peut dès lors se développer de manière isolée des autres composantes du secteur de la santé mentale.

La littérature scientifique n'offre pas de données probantes au sujet de l'organisation effective et efficiente de l'APU. Néanmoins, il est clair que l'aide d'urgence doit être considérée comme un des éléments fonctionnels de l'ensemble de la filière des services de soins de santé mentale. La création de pratiques de collaboration entre les différents types d'instances et de dispensateurs, et qui va au-delà d'une collaboration ponctuelle autour d'un patient individuel, constitue à la fois un problème et un défi.

L'évaluation des besoins de la population en APU pour les enfants et les adolescents pêche par manque de données fiables et pertinentes. Le fait que l'aide immédiate ou les soins de santé mentale pour les enfants et les adolescents sont mis en oeuvre par différents secteurs (soins de santé, aide sociale, services judiciaires) et dispensateurs, opérant dans différents cadres réglementaires, n'est pas de nature à favoriser la disponibilité et la cohérence des données. En conséquence, les résultats quantitatifs et les simulations présentés dans le présent rapport doivent être interprétés avec toute la prudence qui s'impose.

Notre recherche n'a pas inclus d'analyse du problème de la sensibilité culturelle nécessaire dans le cadre de l'aide psychiatrique d'urgence. La littérature fournit des indications selon lesquelles la diversité culturelle et ethnique exige l'acquisition de compétences particulières en tant que composantes essentielles d'une fonction d'urgence dans une société multiculturelle.

Dans le présent rapport, nous avons abordé les questions financières uniquement dans la perspective du secteur des soins de santé et plus particulièrement du financement des hôpitaux. Une telle approche est étroite. Le développement de la psychiatrie d'urgence est à envisager dans le cadre plus vaste de l'ensemble de la prise en charge de la détresse et des soins en santé mentale. En particulier, la nécessité constatée d'une collaboration entre le secteur des soins de santé, les services d'aide sociale et les autres acteurs, à différents niveaux politiques et organisationnels, exigerait une approche collaborative concordante au niveau du financement des divers intervenants dans la fonction d'urgence.

RECOMMANDATIONS^a

GÉNÉRALES

- L'aide pédopsychiatrique urgente (APU) doit être développée en tant que fonction et non pas comme structure organisationnelle fixe.
 - L'aide sera préférentiellement ambulatoire, et résidentielle uniquement lorsque c'est nécessaire ;
 - Le développement de la fonction APU devrait être envisagé dans le cadre d'une politique explicite d'organisation globale des soins de santé mentale pour les enfants et adolescents, et non comme des initiatives expérimentales isolées au niveau local ;
- Au niveau politique, il conviendrait de développer une coordination des activités et du financement entre les niveaux fédéral, communautaire et régional pour définir le cadre conceptuel dans lequel va s'insérer la fonction APU.
 - On pourrait envisager de créer une entité structurelle qui s'occupe à la fois des aspects stratégiques et opérationnels des changements organisationnels à apporter sur le terrain de la santé mentale des jeunes en collaboration avec les différents types d'acteurs. On pourrait s'inspirer éventuellement du modèle opérationnel utilisé pour implémenter le programme de réformes 2010 (connu sous le nom d'article 107).
- Au niveau loco-régional, l'opérationnalisation d'une fonction APU implique que l'on établisse et que l'on finance des modèles organisationnels de collaboration entre les différents prestataires concernés par les soins de santé mentale aux enfants et adolescents (services d'aide à la jeunesse, centres de santé mentale, services judiciaires, soins primaires). Tous ces acteurs, internes ou externes au monde de la santé, doivent (continuer à) jouer un rôle dans la santé mentale des enfants et adolescents.
- Cette fonction doit être ancrée dans une approche globale des soins de santé mentaux pour enfants et adolescents.
- Une distinction claire doit être faite entre la collaboration des organisations partenaires et des prestataires (modèle de réseau) et la collaboration qui peut survenir lors de la prise en charge d'un patient individuel ;
- La fonction APU doit être organisée de façon à garantir une aide immédiate et accessible (24 heures sur 24, 7 jours sur 7, toute l'année) et être assortie de l'obligation de ne refuser aucun enfant ou adolescent sans évaluation adéquate. En effet, tout enfant a le droit de bénéficier d'une aide appropriée, en ce compris ceux qui relèvent des services d'aide à la jeunesse ou des services judiciaires ou de police
 - La fonction d'urgence psychiatrique englobe toute une palette d'outils de soutien : équipes d'approche mobiles, services d'écoute téléphonique, salles de consultations, unités d'observation, lits hospitaliers ordinaires et hautement sécurisés.
 - L'aide pédopsychiatrique urgente pour les enfants et les adolescents doit mettre l'accent sur les soins ambulatoires, aussi proches que possible du milieu de vie de l'enfant ou adolescent. Le cas échéant, les infrastructures résidentielles (lits en pédopsychiatrie, hautement sécurisés) peuvent venir en appui.

a Le KCE reste seul responsable des recommandations faites aux autorités publiques

- Idéalement, la fonction doit aussi d'une manière ou d'une autre établir le lien avec les soins d'urgence (hospitaliers) existants qui constituent un point d'entrée familier dans le contexte actuel des soins de santé. D'autres points d'entrée dans le secteur des soins de santé pour les enfants et les adolescents doivent également rester possibles, à condition que le renvoi aux fonctions APU soit facilement disponible lorsqu'il est nécessaire.

RÉPARTITION GÉOGRAPHIQUE ET RESSOURCES

- Nous proposons une fonction psychiatrique d'urgence pour 150.000 mineurs et au minimum une par province en tant qu'ordre de grandeur pertinent (d'autres entités géographiques ad hoc peuvent être envisagées si la facilité d'accès à la fonction d'urgence est maintenue en tant que critère essentiel). Cela veut dire que l'on aurait besoin d'approximativement 15 fonctions APU pour la Belgique.
- Une capacité de lits (de réserve) doit être prévue afin d'être en mesure d'apporter une aide immédiate. Afin de garantir un temps d'attente maximum acceptable avec une capacité de réserve minimale, la solution la plus performante est la mise en commun ('pooling'). Cette option ne signifiant pas nécessairement que toutes les ressources soient localisées dans un même lieu physique.

ENREGISTREMENT ET RECHERCHE

- Des efforts doivent être déployés au niveau de la méthodologie d'évaluation des besoins de la population en soins de santé mentale pour les enfants et les adolescents. Avec pour condition préalable, la poursuite du développement et de l'enregistrement de données fiables et pertinentes d'épidémiologie, de sociodémographie et d'utilisation des services de soins de santé à tous les niveaux de prestation.

La mise en œuvre d'une fonction d'aide pédopsychiatrique urgente pour les enfants et les adolescents doit aller de pair avec une recherche d'évaluation de suivi qui se concentre à la fois sur l'efficacité réelle et l'efficacité des pratiques de collaboration.

Scientific summary

Table of contents

1	INTRODUCTION.....	4
2	PSYCHIATRIC EMERGENCIES AND CRISES IN CHILDREN AND ADOLESCENTS: A LITERATURE REVIEW	5
2.1	LITERATURE REVIEW METHODOLOGY.....	5
2.1.1	Research questions	5
2.1.2	Search methodology	6
2.1.3	Search results	8
2.2	DEFINITIONS AND CHARACTERISTICS.....	9
2.2.1	Psychiatric emergency	9
2.2.2	(Psychiatric/psychological) crisis.....	11
2.2.3	Emergency and crisis in the paediatric population	14
2.2.4	Discussion and reflection.....	20
2.2.5	Summary.....	21
2.3	CHARACTERISTICS OF THE CHILD AND ADOLESCENT PSYCHIATRIC EMERGENCY POPULATION	22
2.3.1	Demographic and socioeconomic factors.....	22
2.3.2	Clinical characteristics.....	25
2.3.3	Discussion and reflection.....	30
2.3.4	Summary.....	31
2.4	ORGANIZATION OF MENTAL HEALTH EMERGENCY AND CRISIS INTERVENTION SERVICES.....	32
2.4.1	Introduction.....	32
2.4.2	Functional components.....	35
2.4.3	Organizational configuration.....	45
2.4.4	Evidence base	58
2.4.5	Registration systems	60
2.4.6	Discussion	61
3	EMERGENCY PSYCHIATRY AND CRISIS INTERVENTION FOR CHILDREN AND ADOLESCENTS: AVAILABILITY AND UTILIZATION IN BELGIUM.....	65
3.1	INTRODUCTION.....	65
3.1.1	Mental health care for children and adolescents: A complex government framework ..	65
3.1.2	Aim and structure of this chapter	66
3.2	AVAILABILITY OF EMERGENCY PSYCHIATRY AND CRISIS INTERVENTION FOR CHILDREN AND ADOLESCENTS IN BELGIUM.....	66
3.2.1	Methodology	66
3.2.2	Literature results.....	67
3.2.3	Survey results.....	69
3.3	FINANCING OF SERVICES CURRENTLY PROVIDING EMERGENCY PSYCHIATRIC CARE IN BELGIUM	70
3.3.1	Federal hospital level	70
3.3.2	Child welfare	72
3.3.3	Discussion	73
3.4	UTILIZATION OF EMERGENCY CHILD PSYCHIATRIC SERVICES IN BELGIUM.....	73
3.4.1	Introduction.....	73
3.4.2	Registration data of hospital based care for children and adolescents with psychopathology	74
3.4.3	Minimal psychiatric data.....	75
3.4.4	Minimal Clinical Data.....	83
3.4.5	Overall view of short stays	85
3.4.6	Netwerk Crisis Hulp - Integrale Jeugdhulp Vlaanderen (IJH)	87
3.4.7	SOS enfants	87
3.4.8	Summary.....	87

4	PERCEPTIONS ON EPC FOR CHILDREN AND ADOLESCENTS IN BELGIUM	89
4.1	QUALITATIVE RESEARCH DESIGN.....	89
4.1.1	Practical organisation.....	89
4.1.2	Participants	89
4.2	NOMINAL GROUP TECHNIQUE (NGT).....	93
4.2.1	Aims and design of the NGT	93
4.2.2	NGT data analysis	93
4.2.3	NGT results.....	93
4.2.4	Discussion and reflection.....	101
4.3	FOCUS GROUPS	103
4.3.1	Aims and design of the focus groups	103
4.3.2	Focus group data analysis	103
4.3.3	Results of the focus groups.....	104
4.3.4	Discussion.....	119
5	MODELLING THE NEED FOR RESOURCES.....	123
5.1	INTRODUCTION.....	123
5.2	GENERAL PRINCIPLES, BUILDING BLOCKS AND ASSUMPTIONS FOR THE ORGANIZATION OF EMERGENCY PSYCHIATRIC CARE.....	123
5.2.1	General principles	123
5.2.2	Required characteristics of psychiatric emergency care.....	125
5.2.3	Assumptions based on general principles	125
5.2.4	Organizational configuration.....	127
5.3	A METHOD PROPOSED TO ASSESS RESOURCES REQUIRED.....	129
5.3.1	Objectives of this section	129
5.3.2	Queueing model as a method for calculating resource requirements for emergency services.....	129
5.3.3	Illustration of the queueing model.....	131
5.3.4	Theoretical minimum resource needs	133
5.3.5	Results of the queueing models.....	135
5.3.6	Discussion on queueing results	139
6	FINANCING OPTIONS FOR EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS	152
6.1	AIMS OF THIS SECTION	152
6.2	LITERATURE REVIEW	152
6.3	RESULTS.....	152
6.4	TYOLOGY OF PROVIDER PAYMENT SYSTEMS IN HEALTH CARE	153
6.4.1	Closed-end versus open-end	153
6.4.2	Variable versus fixed.....	153
6.4.3	Retrospective versus prospective.....	154
6.4.4	Classification according to unit of reimbursement	155
6.4.5	Advantages and disadvantages of the payment systems and created incentives.....	156
6.5	FINANCING OPTIONS FOR A NEW ORGANISATIONAL MODEL FOR EPC FOR CHILDREN AND ADOLESCENTS.....	157
6.5.1	General considerations on the design of a payment system.....	157
6.5.2	Closed-end/open-end.....	158
6.5.3	Fixed/variable and unit of reimbursement	158
6.5.4	Financing of functions versus beds.....	160
6.6	SUMMARY.....	161
7	OVERALL SUMMARY.....	164
7.1	AN OPERATIONAL DEFINITION OF EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS.....	164
7.2	CHARACTERISTICS OF EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS.....	165

7.3	NEED FOR EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS IN BELGIUM.....	166
7.4	DEVELOPMENT OF EMERGENCY PSYCHIATRIC CARE IN BELGIUM.....	166
7.5	FINANCING OF EMERGENCY PSYCHIATRIC CARE IN BELGIUM.....	168
8	BIBLIOGRAPHY	169

I INTRODUCTION

In 2009, professionals working within child and adolescent psychiatry submitted a research proposal to the Belgian Health Care Knowledge Centre (KCE) to assess the current need for the organisation of emergency psychiatric care for children and adolescents. This request is fuelled by the observation that, internationally, an increasing number of children and adolescents present to emergency departments with mental health problems¹⁻³. Allegedly, the number of children and youth presenting to emergency care for mental reasons in Belgium is increasing as well. However, lack of registration of these presentations hinders objective investigation of this trend.

The aim of this study is to examine to what extent emergency psychiatric care in children and adolescents in Belgium needs to be developed and if so, how it should be organized.

Chapter 2 is a literature review focusing on the definition of a psychiatric emergency, the characteristics of children and adolescents presenting with acute psychiatric problems, the need for and existence of registration systems of emergency psychiatric care as well as the way psychiatric emergency care is currently organised internationally. In addition, the financing modalities of emergency psychiatric care are discussed.

In chapter 3, an overview is presented of the availability, utilization and financing of psychiatric emergency care in Belgium, based on literature data, a survey and data from the hospital registration systems.

Chapter 4 describes the results of a qualitative research. Using a nominal and focus group technique, professionals from a variety of sectors involved in emergency psychiatric care in children and adolescents in all provinces in Belgium and Brussels, discussed the need for and the organisation of emergency psychiatric care in the Belgian context.

In chapters 5 and 6 we present elements to model emergency psychiatric care within the Belgian context based on the information from the previous chapters.

Chapter 7 presents the overall summary.

2 PSYCHIATRIC EMERGENCIES AND CRISES IN CHILDREN AND ADOLESCENTS: A LITERATURE REVIEW

2.1 LITERATURE REVIEW METHODOLOGY

2.1.1 Research questions

The literature review was guided by the following research questions:

What is (the definition of) a psychiatric emergency in children and adolescents?

- How is a psychiatric emergency in children and adolescents defined?
- What are the characteristics of a psychiatric emergency in children and adolescents?
- Do we need to distinguish between voluntary and compulsory psychiatric emergency admissions or care in children and adolescents?

How is the population of children and adolescents that enter a setting for emergency psychiatric care characterized?

- What are the clinical, demographic and socio-economic characteristics of this population?
- Do these features vary depending on the type of emergency service (in- vs. outpatient)?
- Do these features vary depending on the type of admittance or care?

Which services should be offered to children and adolescents in need of an emergency service and how are they organised?

- Which theoretical models of psychiatric emergency care are being proposed in the international literature?
- Which emergency psychiatric service models are currently available for children and adolescents, and what evidence supports these?
- Is child and adolescent psychiatric emergency care to be organised separately from adult psychiatric emergency care?

How is psychiatric emergency care for children and adolescents currently organised in a selection of countries that can be considered as good practices?

- In what type of facilities are children and adolescents in crisis taken care off?
- Are specifically allocated “emergency” beds or places available? What is the use of these beds or places throughout the trajectory care of the patient? How are the levels of care in this trajectory organised? Do they collaborate in emergency situations?
- Does psychiatry cooperate with other services in the context of psychiatric emergency care? If so, which?

How are these emergency services financed?

- Which types of systems to finance these services exist?
- What kind of incentives do these systems generate?
- What are the advantages and disadvantages of the various systems?
- Is there a specific funding for these emergency services or is the payment part of the more general mechanism to finance (child) psychiatry or emergency services?
- Does the payment system differ according to the type of emergency service (e.g. inpatient vs. outpatient)?

Do registration systems on these emergency services exist?

- On an international level, are there currently any good practice registration initiatives on psychiatric emergencies in children and adolescents available?
- Are these initiatives scattered or being coordinated?
- What is the content of these registrations?
- What is the purpose of these registrations and how are they used?
- What registration initiatives are currently being developed and exploited in Belgium to study the patient profiles, content and approach of emergency care?
- What is the validity and reliability of these registrations? Are they adapted to in- and outpatient settings?
- Could these data be released for future analysis in view of policy aims?

2.1.2 Search methodology

Between August and October 2009, an in-depth literature search was conducted based on electronic peer-reviewed bibliographic databases as well as other sources of information (grey literature).

2.1.2.1 Peer reviewed databases

All databases were searched starting from 1993 onwards. The rationale for this cut off date is as follows:

- In 1993, the Institute of Medicine published a report on “Emergency Medical Services for Children”⁴ which shows the need for and discusses the efficacy of paediatric emergency services in the USA.
- In Belgium, the Federal Ministry of Health started a pilot in 1993 providing financial support for the development of emergency psychiatry services within four emergency departments throughout the country. The project is aimed mainly at efficiently managing adults with a psychiatric pathology presenting at the hospital emergency services. A second wave of pilots in 2002 focused on double diagnoses and substance abuse⁵.

The following databases were searched:

- Ovid SP: All EBM Reviews Full Text – Cochrane Database of Systematic Reviews (Cochrane DSR), ACP Journal Club, Database of Abstracts of Reviews Effects (DARE), All EBM Reviews – Cochrane DSR, ACP Journal Club, DARE, Cochrane Methodology Register (CMR), Cochrane Central Register of Controlled Trials (CCTR), Health Technology Assessment (HTA), NHS Economic Evaluation Database (NHSEED), Francis (1984 to 2009 October 12), PsycINFO (1806 to October Week 1 2009), Ovid MEDLINE(R) (<1950 to October Week 1 2009>), Ovid MEDLINE(R) In process & other Non-Indexed Citations (October 09, 2009)
- Illumina: CSA: Social Services Abstract (1979- current) and Sociological Abstracts (1952-current); EconLit (1969-Current)
- PubMed: (<http://www.ncbi.nlm.nih.gov/sites/entrez>)
- Embase
- Centre for Reviews and Dissemination (CRD) (<http://www.york.ac.uk/inst/crd/>)

2.1.2.2 Search algorithms

For each of the databases, a search algorithm was developed, adapted to the specific requirements or features of the database. All algorithms were limited with regard to publication date [1993-current].

The research questions were operationalised according to a SPICE format to identify the appropriate keywords.

- Setting: psychiatry, child or adolescent psychiatry, psychiatric hospitals; mental health, community mental health services or centres.
- Perspective: child, adolescent, youth, p(a)ediatrics
- Intervention: emergency services, crisis intervention
- Comparison: voluntary versus compulsory; adult versus paediatric; community versus hospital based
- Evaluation: organizational system, financial system, efficiency

Medline(R) via OvidSP was considered the core database. The search algorithms used for searching Medline(R) are presented in Appendix 2. Search algorithms for other databases built on the Medline algorithm. Pubmed was considered complementary to OVIDSP and Pubmed searches therefore only included Mesh terms. Detailed descriptions of the search algorithms for all databases are presented in Appendix 2. Searches were limited to the presence of selected keywords in the papers' title or abstract.

The study selection process started by running the search algorithms in all of the databases described above. The search results were downloaded in an endnote file for each of the databases separately. Subsequently, the search results from all databases, were merged in an endnote file, thereby automatically removing the majority of duplicate results. A first selection of studies was then performed by one of the researchers based on reviewing the titles and abstracts. In this selection process duplicate articles that were not automatically removed by merging the files in endnote, were manually deleted. The selection criteria for title and abstract evaluation were:

- Inclusion: emergency psychiatry (child, adolescent, paediatric psychiatry or unspecified population) and mental health, be it in- or outside a hospital setting; crisis intervention in the context of mental health problems; the organisational, structural, and financial aspects of emergency psychiatry; populations utilizing (psychiatric) emergency services; theoretical articles focusing on definitions, history,... of emergency psychiatry; English, French, and Dutch.
- Exclusion: crisis intervention in the context of disasters caused by either man or nature (e.g. hurricanes, earthquakes, 9/11, school shootings,...) and school based crisis intervention systems; prevention (e.g. projects on suicide prevention); treatment strategies (for specific disorders) within emergency departments; epidemiological aspects of psychiatric disorders. Languages other than the above.

Following the initial title and abstract selection, a full text evaluation was performed of the remaining articles, during which a hand search was conducted as well. Those papers which the first researcher could not clearly in- or exclude were also reviewed by a second reviewer for selection.

2.1.2.3 *Grey literature and policy documents*

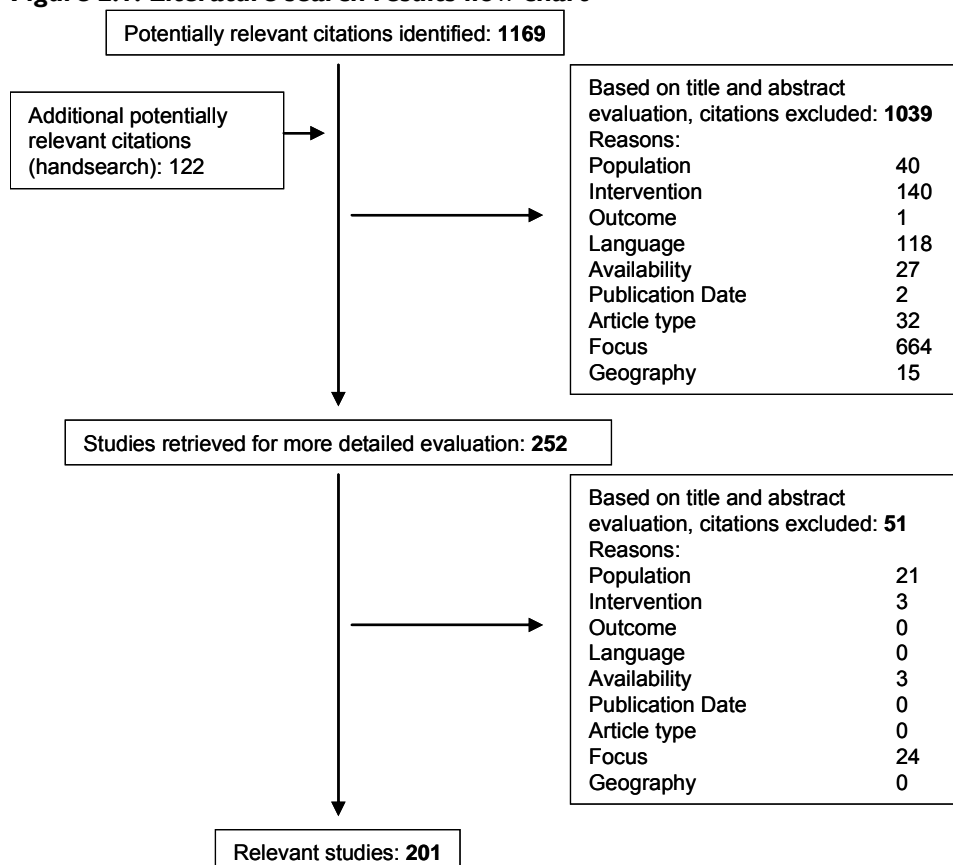
The following key words were selected to guide the grey literature search:

- Setting: psychiatrie (-sch); psychiatry (-ic); mental health; mental illness; mental disorder
- Perspective: kind, kinderen; adolescent, (-en, -s); jongere(n); child(ren); youth; preschool child, enfant; p(a)ediatric, pediatriesch, pédopsychiatrie, child psychiatry, kinder- en jeugdpsychiatrie.
- Intervention: spoed (-opname, -geval, -eisende hulp, -gevallendienst); acuut; crisis (-centrum, -interventie); urgentie; emergency; urgency; acute; crisis; urgence, cas d'urgence; crise
- Comparison: (on)vrijwillige behandeling/opname, (in)voluntary treatment/admission, community mental health services/centers, family practice/physician.
- Evaluation: model; organization, organisatie; care; zorg; service; intervention; systems of care; treatment; theory; theorie; framework; kader; registratie, registration, register, data collection.

The search for grey literature used peer reviewed databases as well as selected search engines and websites. Following a first review round of the available literature, specialized institutions and key experts were contacted for additional information. Existing reports and our personal contact network was used to attain additional relevant documents.

2.1.3 Search results

The primary search in Medline(R) yielded 543 citations. A comparable number of citations was retrieved from PSYCHINFO (639), Embase (567) and Pubmed (711). A much smaller number of references were retrieved from the other databases. A total of 1169 potentially relevant citations were retrieved. Following screening of title and abstract against the predefined selection criteria, 152 citations were selected for more detailed evaluation. Full-text evaluation resulted in 119 relevant citations (Figure 2.1). An additional 122 citations were retrieved by hand search, 82 of which were considered relevant following detailed evaluation.

Figure 2.1: Literature search results flow chart

2.2 DEFINITIONS AND CHARACTERISTICS

This section is quite extensive: besides the written analysis, we presented in each section at the beginning or end summary figures, presenting the findings. The tables, figures and key messages allow readers to have a general overview of the findings from the literature.

2.2.1 Psychiatric emergency

2.2.1.1 Definition

The concept of “psychiatric emergency” lacks a clear definition in the literature (a.o. ⁶⁻¹⁰).

Definitions of “psychiatric emergency” vary. According to Chan and Noone (2000), an adequate definition involves both a statement of who defines the problem as well as an understanding of the biological, social, psychological and existential forces which converge upon the person to create a change in behaviour requiring immediate intervention ¹¹.

A summary of the definitions of psychiatric emergency is presented in Figure 2.2.

Figure 2.2: Summary of definitions of Psychiatric emergency

Definition of Psychiatric Emergency and Crisis	
Psychiatric Emergency	
Callahan (1994):	<ul style="list-style-type: none"> - an acute situation - demands an immediate response - to prevent serious harm - includes potential suicide, psychosis and violence
APA (2002):	<ul style="list-style-type: none"> - an acute disturbance of mood, behaviour, thought, or social relationship - requires an immediate response - as defined by patient, family or community - potential for catastrophic outcome
Breslow (2002):	<ul style="list-style-type: none"> - any marked change in person's mental status - activating a response in the support system to seek help - circumstances in which catastrophic outcome is imminent - materializes suddenly and may occur at any time
Chan & Noone 2000; De Fruyt 2003:	<ul style="list-style-type: none"> - acute clinical situation - imminent risk of serious harm or death - to self or others - unless there is some immediate intervention
Claassen et al. 2000:	<ul style="list-style-type: none"> - two criteria: <ul style="list-style-type: none"> - acuteness of behavioural dyscontrol - dangerousness at presentation = verbal or behavioural demonstration or intent to harm self or other
Huxley & Kerfoot 1993:	<ul style="list-style-type: none"> - when someone [patient, relative, friend, professional] - requests urgent intervention - on behalf of someone in the community who is suffering from a mental disorder

Callahan (1994) proposed the following definition ⁷:

“A mental health, psychiatric or psychological emergency is an acute situation that demands an immediate response. If no response is forthcoming, physical harm or serious bio-psycho-social deterioration, with a poorer prognosis may result.”

Callahan (1994) further contends that there are only three real mental health emergencies: potential suicide, potential violence and acute psychosis. In his opinion, only these three conditions merit an immediate response on the basis of the psychological characteristics of the situation ⁷. All other situations may require rapid or urgent responses, but not immediate ones. Others add mental status change, substance abuse and behavioural disturbances to Callahan's list ^{12, 13}. The mere possibility of such a condition constitutes an emergency until proven otherwise ⁷.

An American Psychiatric Association task force on emergency psychiatric services suggested the following definition ¹⁴:

“A psychiatric emergency is an acute disturbance of thought, mood, behaviour, or social relationship that requires an immediate intervention as defined by the patient, family or community. The behaviour or condition of an individual is perceived by someone, often not the identified individual, as having the potential to rapidly eventuate in a catastrophic outcome and the resources available to understand and deal with the situation are not available at the time and place of the occurrence”.

Breslow¹² defines an emergency as:

“A set of circumstances in which a catastrophic outcome is thought to be imminent and the resources available to understand and deal with the situation are unavailable at the time and place of the occurrence. They often materialize suddenly and may occur at any time. The absence of resources to deal with a situation may provoke an emergency or contribute to the sense of urgency. Any marked change in a person's mental status that activates a response in the support system to seek help may come under the responsibility of the emergency psychiatric system.”

2.2.1.2 Criteria

Mental disorder

Some authors define psychiatric emergency as “occurring when someone [patient, friend, relative or professional] requests urgent intervention on behalf of someone in the community who is suffering from a mental disorder”, thereby emphasizing the presence of mental disorder¹⁵.

Danger

In a retrospective study to develop criteria that can differentiate appropriate from inappropriate psychiatric emergency service requests, Claassen et al. (2000) point out that different views exist on what is to be considered a “psychiatric emergency.” The more traditional perspective suggests that a narrow definition of emergency conditions should be applied, including only “illness episodes characterized by surprise, time constraints, high stakes, and pressure for action”. Two criteria by which to identify a psychiatric emergency are proposed¹⁶: 1) acuteness of behavioural dyscontrol, and 2) dangerousness at presentation, defined as verbal or behavioural demonstration or intent to harm self or other. Another approach is to view only conditions that require hospitalization as legitimate psychiatric emergencies¹⁶.

De Fruyt (2003) emphasizes that a psychiatric emergency is an acute clinical situation in which there is an imminent risk of serious harm or death to self or others unless there is some immediate intervention¹⁷. An emergency is a life-threatening situation^{18,19}. The appropriate type of early response in an emergency is life preserving: securing physical safety, removing the person from the source of danger and diffusing physical violence²⁰.

The appropriate type of early response in an emergency is life preserving: securing physical safety, removing the person from the source of danger and diffusing physical violence²⁰.

Time

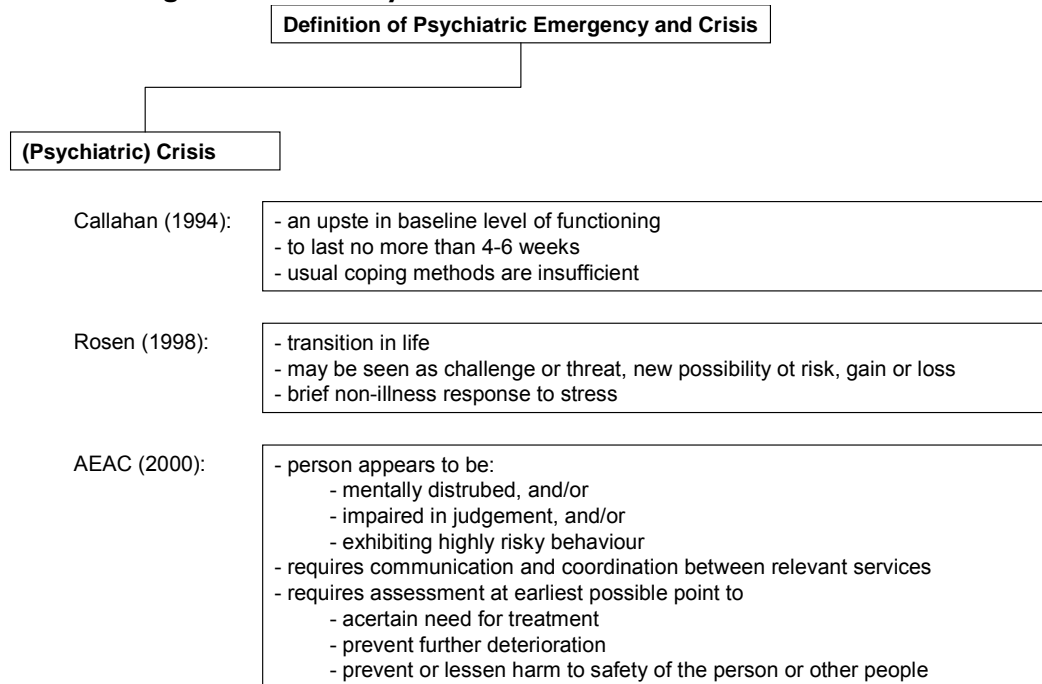
All the above definitions refer to the time dimension: in case of an emergency, the patients literally need to be seen or attended to immediately^{7, 11, 12} (see also¹⁷⁻¹⁹). Cotgrove et al. (2007) apply a less strict timeframe into their definition of emergency, as they use one working day as an acceptable time frame to admit emergencies to psychiatric units²¹.

2.2.2 (Psychiatric/psychological) crisis

2.2.2.1 Definition

The concepts “psychiatric emergency” and “psychological or mental health crisis” are frequently confused or erroneously used interchangeably^{7,20}. Bonyng, Lee, & Thurber (2005) point out that both lay persons and professionals alike have idiosyncratic notions of what constitutes a mental health crisis, but as with the concept of psychiatric emergency, controversy still surrounds the concept of crisis and the term defies consistent definition^{20,22}.

A summary of the definitions of a mental health crisis is presented in Figure 2.3.

Figure 2.3: Summary of definitions of mental health crisis

Callahan (1994) proposes the following definition for crisis:

“A crisis is an upset in an individual’s baseline level of functioning — a disruption in homeostasis — and is generally thought to last no more than 4-6 weeks. In a crisis a person’s usual coping methods are insufficient, there is a marked increase in anxiety and tension, or depression and defeat, the individual does not function at his or her normal level, and he or she searches for new methods or strategies to deal with the situation...The key is the loss of equilibrium in one’s functioning ⁷.”

Rosen (1998) refers to Caplan’s original definition of psychological crisis as a brief non-illness response to severe stress and describes a crisis as:

“A period of transition in the life of the individual, family or group, presenting individuals with a turning point in their lives, which may be seen as a challenge or a threat, a “make or break” new possibility or risk, a gain or loss, or both simultaneously ²⁰.”

He distinguishes several types of crises: developmental crises, situational crises, or complex crises such as severe trauma or crises associated with severe mental illness, which can both increase the number of crises a person experiences and sensitivity to a crisis. Reciprocally, the stress of crises can precipitate episodes of mental illness in those who are already vulnerable. A personal crisis is not a clinical disorder. However, a severe or protracted response to crisis may lead to one (e.g. major depression, or adjustment disorder) ²⁰.

An Australian Expert Advisory Committee ²³ defines crisis situations as:

“A mental health crisis situation refers to a series of events and a combination of circumstances in which a person appears to be mentally disturbed, or impaired in judgement and/or exhibiting highly disordered behaviour. It is a situation that requires communication and coordination between relevant services and assessment at the earliest possible point to ascertain the need for treatment, prevent further deterioration in the mental condition or physical health of the person, and thereby prevent or lessen harm to the safety and health of the person or any other person or to the safety and health of the public in general”.

Table 2.1 summarizes the main differences in definition between psychiatric emergency and crisis.

Implicitly stated in both the definitions of psychiatric emergency and crisis is the view that a crisis or emergency state is subjective and as such may be defined by the client, the family or other members of the community, a view shared by many authors (e.g.^{7, 24}).

2.2.2.2 Criteria

Danger

In contrast to an emergency, a crisis is often not immediately life-threatening⁷.

Time

The timing of the response should be such as to include all participants in the crisis and existing or potential personal supports²⁰. For a crisis, a 24-hour time frame is generally acceptable⁷, which corresponds to the time frame proposed for an emergency by Cotgrove (2007) (see 2.2.1.2). The early response should be crisis assessment and support, defusing stress and interpersonal strife²⁰.

Table 2.1: Summary table: Definition of Psychiatric Emergency and Crisis

	Psychiatric Emergency	Psychiatric Crisis
Who defines it	Patient, family or community	Patient, family or community
Onset	Acute, sudden, unexpected	Gradual
Duration	<2 weeks	4-6 weeks
Presentation	(Potential) disturbance of mood, thought, behaviour, or social relationship	Loss of equilibrium in functioning, mental disturbance, impaired judgement, Or highly disordered behaviour Non-illness response to severe stress
Response time	Immediate	Rapid/urgent, within 24 hours
Consequences	Life-threatening Potential catastrophic outcome Danger to self or others	Not immediately life-threatening
Interventions	Life-preserving Intensive specialist care	Crisis assessment and support Including all participants of the crisis and personal supports
Examples	Suicide, Violence Acute Psychosis Substance Abuse Mental status change	

Key points

- **There is a need for a clear definition of psychiatric emergency in children and adolescents. Few articles address the definition issue of psychiatric emergency, though.**
- **A distinction needs to be made between the concept emergency and crisis.**
- **An emergency is life-threatening requiring an immediate life-preserving response.**
- **A crisis is not life-threatening and requires an urgent response to prevent deterioration.**

2.2.3 Emergency and crisis in the paediatric population

2.2.3.1 Age: how old is paediatric?

One of the conclusions from a national consensus conference in US regarding the current state of emergency mental health resources for children and adolescents, is the lack of consistent age criteria defining “paediatric” emergencies¹³. In the literature, descriptions of child and adolescent populations include age ranges from 0 to 21 years^{1, 25-28}.

2.2.3.2 Definition

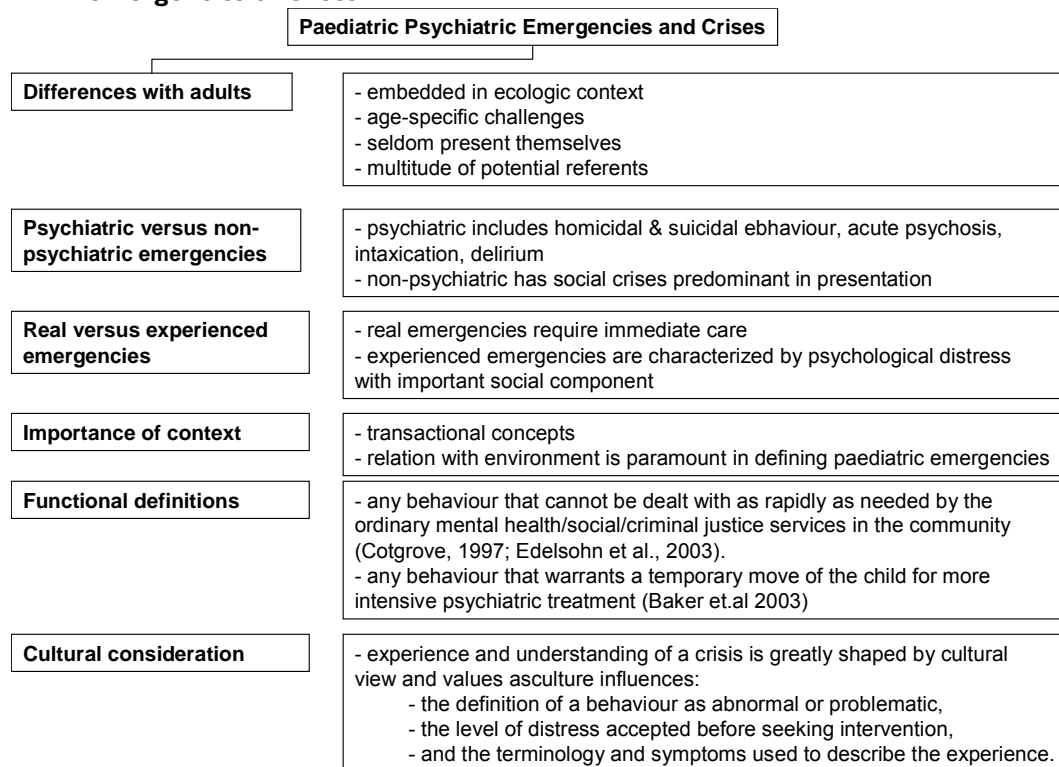
Figure 2.4 presents an overview of the topics addressed with respect to the definition of paediatric psychiatric emergencies and crises.

Differences between children/adolescents and adults

Psychiatric emergencies in children and adolescents differ from psychiatric adult emergencies because:

1. children and adolescents are embedded in the ecologic context of their families, schools, neighbourhoods and other social systems²⁹⁻³¹,
2. their age (i.e. being a minor, and showing higher levels of impulsivity) adds more challenges³²,
3. a child's behaviour or thoughts are brought to psychiatric attention when an adult figure interprets them as inappropriate or unmanageable in the current environment¹⁹, and
4. a multitude of potential referents may consider a child's behaviour to be inappropriate and request or initiate an emergency consult¹⁹.

Figure 2.4: Summary of topics important in defining paediatric psychiatric emergencies or crises



Psychiatric versus non-psychiatric emergencies

In a review article on the role of the family in psychiatric emergencies in children and adolescents, non-psychiatric emergencies are distinguished from psychiatric emergencies³³.

- Non-psychiatric emergencies are defined as having a social crisis predominant in the presentation.
- The nature of some psychiatric emergencies (i.e. homicidal and suicidal behaviour, acute psychosis, alcohol or drug intoxication or delirium) is obvious.

'Real' versus 'experienced' emergencies

In a paediatric population, several authors differentiate between:

- “real psychiatric emergencies” or “emergency psychiatry”, requiring immediate care,
- situations experienced as an emergency by the child or his/her entourage^{29, 30}. These situations are characterized by psychological distress and have an important social component.

The former corresponds to the definitions of psychiatric emergency presented earlier^{7,14}, whereas the latter could be classified as crisis situations^{7, 20}.

The validity of this distinction between “real” and “experienced” emergencies in adolescents may be questioned³⁴. Although no definitions are offered, the concept of “experienced emergency” is interchangeably used with the term “crisis”. The authors point out that in practice this is an artificial distinction as every emergency possesses a dimension of crisis, and each crisis can lead to an emergency. They suggest defining two complementary approaches: emergency care and crisis intervention, but fail to present a definition for these concepts. The authors illustrate the relevance of both concepts in adolescents requiring emergency consultation. The concepts fit four groups of adolescents that present for emergency services:

1. those requiring immediate care as they present with an acute problem or following an accident,
2. those that have already presented multiple times with physical or behavioural problems which renders the request for help less acute,
3. those that do not present for help themselves but whose environment feels there is an emergency (e.g. suicidal, showing behaviours judged by others to be dangerous,...) and
4. those that need a rapid response but do not present with an emergency in the sense that it is “generally understood” (e.g. pregnancy test, morning after pill,...).

They point out that the reason for presenting at the emergency service needs to be analysed in detail as a more complex reality may be masked by the visible urgency.

Table 2.2 summarizes the features of paediatric psychiatric emergencies or crises.

Table 2.2: Features of Paediatric Psychiatric Emergency and Crisis

1. Children and adolescents are embedded in the ecologic context of several social systems and a contextual perspective is required to define a behaviour as an emergency.
2. Behaviour and thoughts are interpreted by an adult as inappropriate or unmanageable.
3. Multitude of potential referents may request /initiate emergency consult.
4. Additional age-related challenges (being a minor, showing higher levels of impulsivity) are involved.
5. Non-psychiatric paediatric emergencies predominantly involve a social crisis.
6. Psychiatric paediatric emergencies include: <ul style="list-style-type: none"> - Being a danger to self or others (e.g. homicidal and suicidal behaviour). - Being in danger from others (e.g. neglect, abuse). - Not able to maintain own safety and use environmental supports (acute psychosis). - Engaging in serious drug/alcohol use/abuse. - Increased vulnerability to stress due to severe environmental stressors. - Break down of environmental supports.
7. Individual psychopathology may but must not necessarily be present.
8. Psychiatric paediatric emergencies may occur in many settings, often at inopportune times.
9. Psychiatric paediatric emergencies may occur as an acute problem or as a gradual culmination of (chronic) dysfunction.
10. Psychiatric paediatric emergencies require immediate care.

Importance of context

The concept of psychiatric emergency in the paediatric population is inherently transactional³⁵ or subjective²⁹ and represents a decision made by others than the child itself, based on a variety of factors, including ones that may be unrelated to the behaviour of the child³⁵⁻³⁷. Although an individual psychopathology may be present, often it is not the psychopathology as such that requires the immediate care, but the associated serious conflicts within the family or institution. Calling a behaviour a psychiatric emergency is not based purely on the clinical assessment of the behaviour itself, but also takes into account the resources and the demands of the service systems³⁸. This contextual perspective has been recognized by many authors^{9, 31, 35, 36, 39, 40}.

This relation with the environment is paramount and specific for paediatric psychiatry and has implications for psychiatric emergency practice³⁰; in the paediatric population psychiatric emergencies are often defined by individuals other than youth themselves and may reflect adults in various social systems being overwhelmed in their capacity to deal with such youth³⁶. Thus, the idea of an emergency as a situation requiring immediate attention is useful in children and adolescents as they rarely present themselves for psychiatric emergency services¹⁹. Children and adolescents with mental health problems present to the emergency department when their actions, their behaviour or the way they appear to be suffering becomes intolerable to the people who feel responsible for caring for them^{2, 33}. The situation becomes intolerable when it is too upsetting, too frightening or too confusing to be coped with by the physical and emotional resources of the young person and their family and/or support systems. The problems may have arisen suddenly and surprisingly (acute problem) or may be the culmination of a gradual accretion of (chronic) dysfunction with a final precipitant or the (acute-on-chronic) recurrence of known problems². A clinician must understand the dynamics that surround the precipitating event to determine the nature and disposition of an emergency presentation properly, and for the children and adolescents this also involves the family's role³³.

Speranza et al. (2002) express the view that a paediatric psychiatric emergency corresponds to a pathological crisis associated to a feeling of imminent danger or vital risk for the young person and/or his entourage⁹. Their view on the distinction between and the use of the concepts “crisis” and “emergency” within a paediatric population corresponds with that of Callahan (1994)⁷. A crisis does not necessarily indicate an intrinsic psychopathology and defining a psychiatric emergency in a paediatric population requires a contextual perspective⁹. Paediatric psychiatric emergencies can thus correspond to three crisis situations: 1) acute outburst of a psychiatric pathology, 2) acute outburst of a familial or social crisis, 3) certain urgent demands, coming from other professionals for a child presenting with complex combination of physical and psychopathological problems⁴¹.

Functional definitions

A psychiatric emergency can be functionally defined as “any behaviour that cannot be dealt with as rapidly as needed by the ordinary mental health, social services, or criminal justice system in a community”^{39,42}.

Mental health emergencies may occur in youngsters who are basically well-functioning but experience periodic crises, and youngsters with longer-term more serious problems who are prone to acute episodes⁴³.

In a residential setting for children who have serious emotional problems in addition to histories of abuse, abandonment and neglect, a psychiatric emergency is defined as any behaviour or situation that warrants a temporary move of the child to a psychiatric hospital or a psychiatric hospital diversion program for more intensive psychiatric treatment³⁵. The seriousness of the behaviours relevant to the decision to hospitalize the child may reflect such underlying dimensions as:

1. an indication of a serious underlying mental disorder that is difficult to treat in a residential setting,
2. a threat to self or a threat to others,
3. a challenge for staff to manage,
4. a violation of clear rules needed [for the group] to function effectively.

A psychiatric crisis or emergency is thus an “acute episode of uncontrolled behaviour perceived to be dangerous for the residents, for their peers and for staff members⁴⁴”.

Emergencies occur in many settings, including emergency rooms, psychiatric/non-psychiatric clinics, home, and school. The setting determines the level of intervention, available resources, and the responsibility and ownership of a particular case. Emergencies tend to occur at inopportune times and many present after hours³³.

In an evaluation study of a new emergency service for adolescents, appropriate emergency admissions are defined as “those adolescents suffering with an acute psychiatric disturbance, including psychosis or life-threatening behaviour, where it is unsafe to continue management in the community⁴²”. This resembles the definition provided by Emmerly & De Corte (2003) in their retrospective evaluation study of a new emergency service for adolescents in a paediatric psychiatric hospital. They describe a psychiatric emergency as an acute intolerable situation for the adolescent or/and his/her context including severe symptomatic behaviour, requiring a psychiatric evaluation and intervention⁴⁰.

Referring to the definitions of Callahan (1993), Goldstein & Findling (2006) define an emergency in child and adolescent psychiatry as “a relatively abrupt, sudden situation in which there is an imminent risk of harm:

1. risk of suicide,
2. risk of physical harm to others,
3. states of seriously impaired judgement in which the individual is endangered,
or

4. Situations or risk to a defenceless victim”⁴⁵.

A crisis on the other hand is defined as “a loss of psychological equilibrium” and

1. tends to be longer-lasting than an emergency,
2. is less specific and
3. involves no or a decreased risk of danger to self or others”⁴⁶.

Emergencies can and do occur in the context of a crisis⁴⁵. The connection between both may warrant further attention within the paediatric population.

Cultural considerations

Child and family's experience and understanding of a crisis is greatly shaped by their cultural view and values. Culture influences their definition of a behaviour as abnormal or problematic, the level of distress they experience before seeing the crisis as acute and requiring intervention, and the terminology and symptoms used to describe or express the experience⁴⁷.

2.2.3.3 *Typologies and classification*

Typology

Pumariega and Winters (2003) developed the following typology of paediatric psychiatric emergencies³¹:

1. The child is dangerous to self or others, either through self destructive or suicidal impulses or aggressive (or even homicidal) impulses;
2. The child is in danger from others (from abuse, victimization, or severe neglect);
3. The child is unable to maintain his or her own safety and use environmental supports (through temporary impairment of mental status or severe or acute developmental regression);
4. The child or adolescent engages in serious drug or alcohol use or abuse that endangers his or her life, either through intoxication and behavioural effects of such (e.g. delirium or psychosis), through medical complications from the drug(s) themselves (or prescribed agents), or through accidental overdose;
5. Severe environmental stressors adversely impact the family system and render the child vulnerable to heightened stress (either through impairment of the child or the parent/caretaker);
6. Environmental supports (family, community, services) break down to the point that they are unable to provide critical safety or supports for the child.

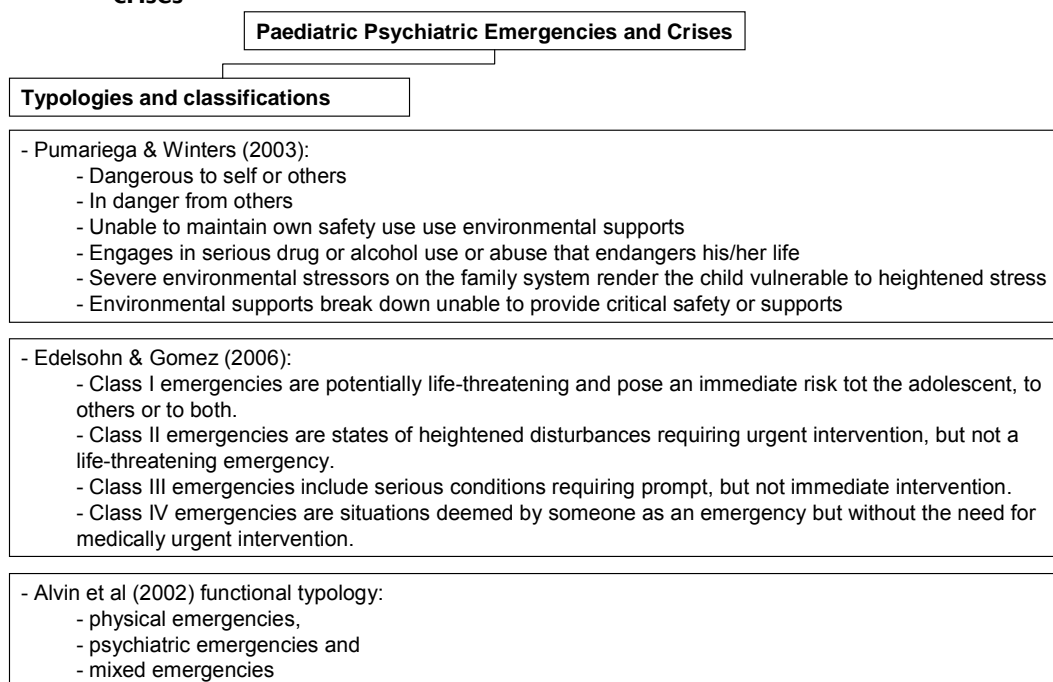
Alvin et al. (2002) present a functional typology of emergency presentations:

1. physical emergencies,
2. psychiatric emergencies and
3. mixed emergencies³⁴.

Psychiatric emergencies might require physical treatment, but the core difference lies in the threat of the situation to the psychological integrity of the patient.

Figure 2.5 summarizes the main typologies of paediatric psychiatric emergencies and crises.

Figure 2.5: Summary of typologies of paediatric psychiatric emergencies or crises



Classification by urgency

Paediatric mental health emergencies are frequently not recognized as such, presenting initially as trauma or somatic complaints⁴⁸. Edelsohn & Gomez³⁸ apply a four-part classification of urgency to conceptualize the common psychiatric emergencies seen in adolescents. It uses clinical conditions or presenting problems that face the emergency physician, and not an exact psychiatric diagnosis.

- Class I emergencies are potentially life-threatening and pose an immediate risk tot the adolescent, to others or to both.
- Class II emergencies are states of heightened disturbances requiring urgent intervention, but not a life-threatening emergency.
- Class III emergencies include serious conditions requiring prompt, but not immediate intervention.
- Class IV emergencies are situations deemed by someone as an emergency but without the need for medically urgent intervention.

This classification has been criticized as it leads to problematic results such as untreated hyperactivity and rape victim receive the same class II rating, and suicidal/homicidal ideation and school refusal both receive a class III rating)⁴⁹.

Clinical condition/diagnosis

The following specific clinical situations are related to paediatric psychiatric emergencies: suicide, mood disorders, agitation and violence, aggression, psychosis, physical abuse and neglect, sexual abuse and rape, conversion symptoms, anxiety disorders, eating disorders, conduct disorder, oppositional defiant disorder, attention deficit and hyperactivity disorder, substance abuse, fire setting and runaways^{2, 19, 50}. Sater and Constantino⁵¹ consider suicidal and homicidal behaviour, eating disorders, psychosis and inadequate or harmful environments true psychiatric emergencies in children and adolescents.

Based on a retrospective chart review, the following psychiatric diagnoses were associated with involuntary admissions of youngster under 16 years of age on a general hospital paediatric ward: suicidal behaviour, behaviour disturbance, mood disorder, and psychosis⁵². The authors are not explicit on the extent to which they consider these admissions psychiatric emergencies.

Key points

- **On a content level, two aspects of an emergency that seem to be agreed upon are: 1) a high risk of harming oneself or others, 2) immediate intervention is required.**
- **A context endangering (the) child(ren)'s life or development should also be considered a psychiatric emergency.**
- **No distinction is found between youngsters that present voluntarily and those that are admitted compulsory when defining an emergency.**

2.2.4 Discussion and reflection

The definition of psychiatric emergency has received remarkably little attention in the literature. Although several authors express the need for clear definitions of “emergency”, “urgency” and/or “crisis” in the mental health field⁶⁻¹⁰, only few papers on the topic of psychiatric emergencies explicitly define the concept of psychiatric emergency. Those that do provide a definition seldom specify the population these definitions pertain to, nor do they clarify whether these definitions can equally be applied to children and adolescents, adults, elderly, or all of these. The literature on paediatric psychiatric emergencies is even more limited and few authors focus on defining the concept of psychiatric emergency in the paediatric population.

In the majority of papers on (paediatric) psychiatric emergencies, the concepts emergency and crisis are approached from a functional perspective: each presentation at an emergency service is initially viewed as an emergency (see also¹⁷). Few papers discuss these concepts on a content level. Some authors tend to add adjectives such as ‘pathological’⁹ to the word crisis in order to define the concept on a content level.

Psychiatric emergencies in the children and adolescents differ from adults on several grounds. One of them is the role of the child’s context. Emergencies by definition involve 1) danger to oneself or others, as primarily determined by the patient’s context, or 2) a context which is a threat to the child’s life or development. Underlying psychopathology may but must necessarily be present. Often both aspects are mutually influenced. It may be expected that the relative weight of both aspects in an emergency may vary with age; the smaller the child, the greater the impact of a threatening context².

The specific characteristics of a child and adolescent population consequently require emergency psychiatric care to take into consideration parental legal responsibility and the children’s legal rights². In addition, emergency psychiatric care should be directed towards reactivating the child’s development and often may be considered the first opportunity for offering help to a child/family/context.

There is no clear agreement on the age range, nor do the authors make a distinction between patients that voluntarily present to the (psychiatric) emergency department, or patients that are compulsory admitted.

In terms of definition and characteristics, the literature does not systematically distinguish between psychiatric emergencies or crises occurring in a residential versus a non-residential setting. Generally, it is agreed that the appropriate type of early response in an emergency is life preserving: securing physical safety, removing the person from the source of danger and diffusing physical violence. These interventions generally require close monitoring of professionals and are thus most frequently handled in a residential setting.

2.2.5 Summary

Although several authors express the need for a clear definition of psychiatric emergency in children and adolescents, only a limited number of authors address the issue of definition in their papers. Many authors use a functional definition of emergency by defining all visits to an emergency department as an emergency. Those that do explicitly address the topic of definition, point out that a distinction needs to be made between the concepts “emergency” and “crisis”. A clear distinction of these terms will benefit the patients and their families by more appropriate referrals and settings for intervention. In addition, professionals are able to deliver such services more safely and effectively when they know the differences between a crisis response and an emergency response. On a content level two aspects of an emergency seem to be agreed upon by the majority of authors: 1) there is a high risk of harming oneself or others, 2) immediate intervention is required.

In the paediatric population, psychiatric emergencies can and do occur in the context of a crisis, and the connection between both may warrant further attention. In addition, psychiatric emergencies in children and adolescents are different from psychiatric adult emergencies because children and adolescents are embedded in the ecologic context of their families, schools, neighbourhoods and other social systems, there are additional age-related challenges, the emergency is most often defined by others than the child/adolescent and a multitude of potential referents are possible.

However, the literature on paediatric psychiatric emergencies is limited and few authors focus on defining the concept of psychiatric emergency in the paediatric population. There is no clear agreement on the age range that involved in paediatric emergencies, and no distinction is made in defining emergency between youngsters that present voluntarily and those that are admitted compulsory and between residential versus non-residential settings.

Overall, it can be concluded that psychiatric emergency and crisis need to be distinguished and that the terms can be conceptualized using key dimensions such as time, the level of danger involved, diagnosis and context.

Key points

- **When discussing psychiatric emergency in children and adolescents a distinction needs to be made between the concepts emergency and crisis.**
- **An emergency is life-threatening requiring an immediate life-preserving response.**
- **A crisis is not life-threatening and requires an urgent response to prevent deterioration.**
- **On a content level, two aspects of an emergency that seem to be agreed upon are: 1) a high risk of harming oneself or others, 2) immediate intervention is required.**
- **A context endangering (the) child(ren)’s life or development should also be considered a psychiatric emergency.**
- **No distinction is made in defining emergency between youngsters that present voluntarily and those that are admitted compulsory.**
- **No distinction is made in defining emergencies occurring in a residential versus a non-residential setting.**
- **The level of danger involved will determine whether the emergency care or crisis intervention needs to occur in a (non-)residential setting.**

2.3 CHARACTERISTICS OF THE CHILD AND ADOLESCENT PSYCHIATRIC EMERGENCY POPULATION

As the concepts emergency and crisis are not very well defined and are being used interchangeably in the literature, our review includes studies examining the populations using either emergency services or crisis intervention services.

Information on the population profile of children and adolescents consulting emergency departments for psychiatric reasons is scarce. Hoyle and colleagues (2003) indicate that accumulation of more detailed information and research is required on the numbers of children and the types of problems they face when they present to the emergency medical services or emergency department⁵³.

Goldstein & Horwitz (2006) reviewed 12 research reports published between 1990 and 2004 and concluded that little systematic analysis is available in the research literature of who uses the emergency department for mental health emergencies that do not involve a medically serious suicide attempt¹⁰. They concluded that no clear and basic understanding could be determined of who these patients are. With the exception of very basic patient variables (sex and age), there was little consistent reporting of sample descriptors. Further, even when a variable such as age was reported, there was variability in regard to how the data were presented. Factors specifically related to psychiatric issues that would inform research and service delivery were also inconsistently reported.

2.3.1 Demographic and socioeconomic factors

2.3.1.1 Age

Studies on paediatric psychiatric emergencies vary with respect to the age groups included (Table 2.3). Most studies (n=46) include children and adolescents, with upper age limits ranging from 17 years to 22 years. A significant proportion of studies focus on adolescents only (n=21)^{34, 42, 54-60}, whereas only few studies focus on children only^{49, 61}.

Mean or median age range from 10 years to 15 years^{30, 35, 39, 40, 44, 46, 49, 56, 62-74}. In a US study evaluating the effectiveness of a multidisciplinary community-based crisis intervention program as an alternative to use of psychiatric treatment beds for young children (0-11 years), mean age was 8.5 years⁶¹. In a sample of 2991 children and adolescents presenting to an urban psychiatric emergency service in the US, ages ranged from 4-22 years, with a mean of 13.8 (SD = 3.32)⁷⁵.

Table 2.3: Age distribution of paediatric psychiatric emergency population

Citations	Snowden et al. 2008	Edelsohn et al. 2003	Soto et al. 2009	Christy et al. 2006
N	351,174	1,524	1,062	36,511
Age groups	(%)	(%)	(%)	(%)
0 - 3 yrs	3			
0 - 5 yrs		3	1	0.2
4 - 5 yrs	7			
5 - 10 yrs				12
6 - 11 yrs	43			
6 - 12 yrs		43	36	
11 -14 yrs				40
12 -17 yrs	47			
13 -17 yrs		54	64	
15 -17 yrs				48

Several studies indicate that the proportion of visits to emergency departments for mental health emergencies increase with age^{72, 76, 77}.

Snowden and colleagues (2008) examined the rates and intensity of crisis services use by race/ethnicity for a large sample of children (N=351174) younger than 18 years who received specialty mental health care over a 3-year period in California⁷⁸. In this study, 90% of the children were between 6 and 17 years of age. Only 3% of presentations concerned children below 3 years, 7% were 4-5 year-olds, 43% were 6-11 years old and 47% were 12-17 years old. Edelson et al. (2003) (N=1362 patients under 18 years who visited a comprehensive psychiatric emergency service of over a 1-year period) found a comparable age distribution: 3% of patients were under 5 years, 43% were between 6 and 12 years, and the majority (54%) was 13 to 17 years old³⁹. In a retrospective cohort study records for 966 children and adolescents were reviewed⁴⁹. Ages ranged from 3 to 17 years: 1% of patients were younger than 5 years old, 36% were between 6-12 years, and 63% were 13-17 years old. Out of over 400 patients in a university hospital serving predominantly minority patients in a socio-economically disadvantaged city, only 8.3% was under 10 years of age⁶³. In an involuntary population using emergency mental health services over a 4-year period, only very few patients younger than 5 years presented (0.2%), 12% were patients aged 5-10 years, 40% were 11-14 years, and 48% were 15-17 years (Christy et al. 2006). In a Belgian study on children and adolescents, only 10% was younger than 10 years and 22% was under 14 years of age⁴⁶.

2.3.1.2 Gender

Concerning gender, the review of the existing literature does not present a consistent picture (Table 2.4). In several studies, the proportion of boys presenting to a PES is slightly higher than the proportion of girls, with percentages ranging from 50% to 67%^{49, 64-69, 71, 72, 74-76, 78-80}. Other authors report a higher proportion of girls presenting with psychiatric emergencies^{44, 62, 63, 81, 82}. Healy et al. (2002) found a much larger proportion of female presentations (73%)²⁶. In a subgroup of presentations following deliberate self harm, the proportion of girls was even higher (83%) whereas in the subgroup with no self harm at presentation, it was markedly lower (56%). These numbers correspond to the findings of Stewart et al. (2006) where 72.9% of the adolescents (12-18 years) presenting to the PES were female⁶⁰. In a Belgian retrospective study profiling a new crisis unit in a paediatric psychiatric hospital, more than half of the 151 admissions were girls (56%)⁴⁰.

Blondon et al. (2007) point out that although somewhat more boys than girls presented to the emergency unit in their study, in children older than 13 years of age, more girls presented³⁰. In contrast, in a retrospective review using data for 2182 patients in Boston from a variety of sources to explore the level of mental health disturbances in children and adolescents, Hacker & Drainoni (2001) report no differences in gender distribution for age groups < 5 years, 10-14 years, and 19-20 years⁷⁷. A higher percentage of males than females however fell in the 15-18 age group. Behar & Shrier (1995) report that in their study the females presenting for emergency psychiatric services were older than the males (14.3 ± 2.6 yrs vs. 13.6 ± 2.9 yrs)⁶³.

Table 2.4: Gender distribution of paediatric psychiatric emergency population

Data on gender distribution are inconsistent		
	Proportion (%)	Studies (N)
Females > Males	56 - 83	8
Males > Females	50 - 67	16
Gender distribution seems to vary with age		
Blondon et al., 2007	> 13 yrs	Females > Males
Hacker & Drainoni, 2001	< 5 yrs	Females = Males
	10-14 yrs	Females = Males
	15-18 yrs	Females < Males
Behar & Shrier, 1995	Females older than males (14.3 ± 2.6 yrs vs. 13.6 ± 2.9 yrs)	

2.3.1.3 *Ethnicity*

Several authors also include data on race/ethnicity in their population description^{26, 39, 61-64, 66-68, 70, 73, 75, 78, 83}. Some studies compare the race/ethnic composition of their study sample to that of a local population^{26, 75, 78}, others do not^{39, 66}.

Muroff et al. (2008) aimed at examining the influence of race and ethnicity in diagnostic and disposition decision making for children and adolescents presenting to an urban psychiatric emergency service⁷⁵. In their sample (N=2991), the majority of subjects was self-identified African-American (64.3%), 21.4% was Caucasian and 14.3% was Hispanic/Latino. This race/ethnic distribution of the sample is reflective of the demographic composition of the local area. Snowden et al. (2008) studied the rates and intensity of two kinds of crisis services use by race/ethnicity for 351174 children under 18 years who received specialty mental health care from county public mental health systems in California⁷⁸. In their sample, the majority of participants were 48.7% Caucasian, 19.8% African American, 26.3% Latino, 4.4% Asian Americans/Pacific Islanders and 0.9% American Indians/Alaska Natives. Comparison of the racial/ethnic composition of the sample with the proportion of racial/ethnic subgroups in California indicated that Whites and African Americans were overrepresented, whereas the other subgroups were underrepresented. In addition, the results showed that African-American children were more likely than were White children to use both hospital-based crisis stabilization services and community-based crisis intervention services, and made more visits to hospital-based crisis stabilization services after initial use. Asian-American/Pacific Islander and American Indian/Alaska Native children were more likely than were White children to use hospital-based crisis stabilization services but, along with Latino children made fewer hospital-based crisis stabilization visits after an initial visit. In Healy et al. (2002) the ethnic profile of the emergency population was similar to that of a local age-equivalent population: Caucasian 54% and Black/Asian/other 46%²⁶. The study of Evans et al. (2001) was conducted in the Bronx, New York, the poorest of New York's five boroughs, and the sample composition there shows a large proportion of Hispanic patients (59%), 34% African American and only 6% White or other races, reflecting the population of the Bronx⁶⁹.

2.3.1.4 *Sociodemography and socioeconomy*

Risk factors for psychosocial dysfunction (e.g. poverty, single parenthood, multiple foster placements and substance abuse) are overrepresented in the ED¹.

Snowdon et al. (2006) included data on the family structure, with 10.6% living in foster care (7.5% in non-kinship foster care)⁷⁸. In Emmery & De Corte (2003) about half (50.5%) of the patients came from intact families, 15% from single parent families, and 15% from reconstituted families. Other residential forms accounted for 19% of patients⁴⁰.

Evans et al (2001) give an extensive overview of the family characteristics of their sample; household composition (70% single parent), age of maternal caregiver (mean age 39 years (SD=10, range 22-83)), caregiver's education (26% without high school education), marital status (34% divorced/separated, 27% never married), number of children (30% four or more, 26% three, 27% two, 18% one), employment status (21% working), income sources (34% welfare, 60% Medicaid) and income level (54% less than \$10,000)⁶⁹. This distribution reflects the low socioeconomic status of the Bronx population.

In Healy et al. (2002) 40% of emergency cases lived in a single parent family, 30% lived with biological or adoptive parents, 16% in a reconstituted family and 14% had other living conditions. Overall, 25% of the sample had been exposed to domestic violence, 21% lived with a carer/parent who was mentally ill in the preceding year and 9% lived with a parent who substance abused²⁶. Living in a single parent family did not distinguish the emergency attendees from the local age-equivalent population in the study, nor did it distinguish subjects presenting following deliberate self-harm from other emergency attendees. A marked proportion experienced intrafamilial psychosocial adversity.

The authors also point out that the apparent association between adolescent presentation with deliberate self-harm and current carer/parent mental ill-health implies the need for health care professionals involved in the care of children to routinely consider the mental health of carers/parents.

Table 2.5 summarizes socio-demographic and-economic characteristics of psychiatric emergencies in children and adolescents.

Table 2.5: Socio-demographic and socioeconomic characteristics of the paediatric psychiatric emergency population

1. Few authors present data on socio-demographic or socioeconomic characteristics of the paediatric psychiatric emergency population
2. Often the race/ethnic distribution of the study sample is reflective of the demographic composition of the local area.
3. Risk factors for psychosocial dysfunction may be overrepresented in the ED: - single-parent households - low socio-economic status

In a retrospective case control study to examine which if any emotional and behavioural problems predicted psychiatric emergency in 42 boys (mean age just over 11) in a residential treatment centre (RTC) lived with parents who were dealing with many challenges: substance abuse problems (50%), imprisonment (10%), psychiatric problems (10%). The subset of residents who were removed to a psychiatric facility for psychiatric emergencies did not differ significantly from matched comparisons on important background variables³⁵.

Specific segments of the population, including the poor and ethnic minorities, rely more heavily on emergency and psychiatric emergency services (PES) due to social circumstances⁷⁵. They are less inclined to seek formal mental health services, preferring nonclinical supports; thus, PES services may be sought only after the individual's health has deteriorated to the point that others are unable to care for him/her. However, few studies include socio-economic aspects in their population descriptions; generally the absence or presence of insurance as a proxy for socioeconomic status^{49, 61, 63, 75}. The majority of youngster presenting to the PES in Muroff et al. (2008) had either public (68.5%) or private (23.2%) insurance, whereas 2.9% was not insured⁷⁵. In Behar & Shrier (1995) the majority of patients did not have any form of insurance, whereas in Blumberg (2002) 20% was uninsured^{61, 63}. Giggie et al. (2007) report a large proportion (48%) uninsured patients, regardless of clinical presentation, in contrast with a national statistic of 10% uninsured children under age of 18 years⁷⁰.

2.3.2 Clinical characteristics

In a review of 150 cases requiring mental health evaluation in the emergency department (ED), 21 diagnoses were found⁸⁴; [attempted] suicide / suicidal ideation, major depression, bipolar disorder, anxiety disorders, substance abuse, ADHD, CD, eating disorders (AN and BN), somatoform disorders, and psychosis (Table 2.6). The most common child and adolescent psychiatric emergency is threatened suicide. Behavioural complaints are increasingly common in the ED. Most studies on paediatric psychological emergencies in the ED have not included the diagnoses of posttraumatic stress or child maltreatment^{84, 85}.

Table 2.6: Clinical characteristics of the paediatric psychiatric emergency population

Most frequent symptoms at presentation:
<ul style="list-style-type: none"> - (Attempted) suicide/suicidal ideation - Behavioural problems e.g. aggressive behaviour, ODD - Emotional disturbances e.g. anxiety, depression - Psychosis
Most frequent diagnoses at discharge or referral:
<ul style="list-style-type: none"> - Behavioural disorders (CD / ODD /ADHD) - Mood disorders (depression / bipolar disorder) - Adjustment disorders - Psychosis
Majority has a past psychiatric history. Many are repeat users. Majority is brought to the ED voluntary by family or friends.

In the literature, symptoms at presentation and clinical diagnosis are not always clearly distinguished. We summarize our findings in two separate sections though.

2.3.2.1 *Reasons for and symptoms at presentation to PES (or crisis intervention services)*

Second to suicidal thoughts, behavioural problems including aggressive behaviour is one of the most common reasons that youth present to the PES^{28, 39, 74, 75, 78}. Other indications to consult an psychiatric emergency department are depression, acute emotional distress e.g. anxiety and panic disorder, eating disorders, psychotic and delirial symptoms, adjustment disorder, developmental problems, alcohol/substance abuse, somatic complaints, learning difficulties or problems at school, relational problems with parents and/or the need for placement due to family crisis^{2, 30, 74, 78}.

In a group of 1436 consecutive ED visits by children under 16 years of age (44% boys, 56% girls) requiring mental health consultation, Peterson et al. (1996) reported the following complaints at presentation: suicidal behaviour (47%), aggression (17%), oppositional defiant disorder (24%) and other (12%)⁸⁶.

Emmery and De Corte (2003) describe the following complaints at presentation in a group of 151 adolescents presenting at a new crisis unit in a paediatric psychiatric hospital: suicide attempts (10%), suicidal ideation (18%), ODD (38%), aggression (21%), psychosis (5%) and other (8%). Deliberate self-harm was reported in 31% of patients. In 26% at least one other family member had known psychiatric problems. 22% of patients had no prior history of mental health usage⁴⁰.

Deliberate self-harm was the reason for presentation at a child psychiatric emergency department in London for 62.5% out of 104 youngsters (7-17 years). The majority were girls (83%)²⁶.

Starling et al. (2006) point out that the most frequent presentation was a medical problem with coexisting psychological factors including severe distress (38%) or a suspicious injury or illness (11%). Males are more likely than females to present with a suspicious injury or behaviour disorder, whereas females more likely than males present with acute emotional disorders. Females are more likely than males to present with overdose²⁸.

Christy, Kutash & Stiles (2006) found that 'harm', either alone or in combination with 'self-neglect' was indicated for the majority of involuntary psychiatric emergency examinations (89.99%)⁶⁶. More specifically 'harm to self', either alone or in combination with 'harm to others' was indicated for the majority of involuntary examinations with harm as evidence type (70.45%). However, the specific nature of the harm and/or self-neglect could not be determined in this study. These results correspond to the results of Healy et al. (2002) who found that a large proportion of the sample (62.5%) presented following an episode of deliberate self-harm (DSH).

The DSH cases were not distinguishable from the rest of the group by age of presentation, family status or ethnicity. However, females comprised a larger proportion of the DHS group (83%) compared to the non-DHS group (56%). During many presentations, medical interventions such as laboratory tests, intravenous access, medication administration, electro cardiac monitoring or radiology investigations, are required⁶⁰.

In a descriptive retrospective chart review study on the referral and resource use patterns for 480 psychiatric-related visits to paediatric EDs, the most common psychiatric related chief complaints alone or in combination were suicidality (47%), aggression/agitation (42%) and anxiety/depression (44%), behaviour disorder (22%), suicidal (15%) and anxiety disorder (4%)⁷³.

In a crisis service located in a US rural area, 48 adolescents were assessed for hospitalization based on a standardized interview protocol⁸². The majority (77%) had a prior history with the agency; 42% had taken overdoses, 33% reported suicidal thoughts, and 8% had evidenced violent behaviour. None of them reported seeking help from any informal network or support system. Acute family problems were involved in 65%, conflict or breakup with boy/girlfriend in 25% and conflict with peers in 6%.

The most frequent presenting behaviours and symptoms in a group of youngsters (5-18yrs) were suicide ideation (57%), depression (55%), temper tantrums (43%), verbal aggressiveness (41%), anxiety (34%), and destruction of property (32%). Substance (7%) and/or alcohol-related (4%) problems were much less frequently reported, reflecting the ages of children presenting for service⁸⁷. Over 70% of the children were assessed as having at least one functional impairment (e.g., cognitive, social), whereas 40% were judged as having two or more functional impairments. Most children (81%) were judged to be at least somewhat dangerous to themselves (47%) and/or others (34%)⁸⁷.

In a retrospective case control study to examine which if any emotional and behavioural problems predicted psychiatric emergency in 42 boys (mean age just over 11 years) in a residential treatment centre (RTC), forty-one (41%) percent had prior history of psychiatric hospitalization prior to entering the RTC, 89% had a legal status of abuse/neglect or voluntary placement, 10.7% entered on a PINS (Person In Need of Supervision) or as a juvenile delinquent³⁵. They are characterized by many life difficulties: around 50% were neglected, 40% had been abused, and 12.4% were known victims of sexual abuse. Also present were histories of fire setting, suicidal gestures, and running away from home. In the two months prior to removal to a psychiatric facility, boys with psychiatric emergencies exhibited a higher number of problems and had a greater number of serious problem behaviours compared to peers. They were significantly more likely to run away, be violent, act out sexually, to talk about suicide, to make suicide attempts and to destroy property. A pattern of serious problem behaviours precipitated the psychiatric emergency³⁵.

In a descriptive study of a crisis residence model within a residential treatment setting the characteristics of two samples of referrals were compared: those referred by the agency's RTC and those referred to the crisis residence centre by outside referrers. About 1/3 of each sample had a history of abuse and two thirds had histories of neglect. There was no difference regarding histories of cruelty to animals (10%), fire setting (20%), violence (75%), problematic sexual behaviour (30-40%), substance abuse (45-30%). Approximately 80% of residents in both samples were considered to have been oppositional defiant just prior to psychiatric emergency, two thirds were rated as having been aggressive, 20-30% had school/truancy problems and substance abuse problems. Depression was seen in almost half of the outside referral sample in 30% of RTC sample. Less common precipitating behaviours included fire setting, sexual promiscuity/sexual acting out, eating disorders and hallucinations (10-20%). Presenting problems: 13-20% were suicidal, 0.3-20% were homicidal, two-thirds were on psychotropic medication, 30-17% were considered to have an alcohol problem. Overall, one third of residents in both groups had known histories of sexual abuse. In addition to having a primary psychiatric diagnosis, many of the residents were difficult to manage behaviourally: a high proportion reported to have problematic sexualized behaviour problems (one third in both samples).

They exhibited an average of four precipitating behaviours prior to the admission, with common behaviours including oppositional defiance, running away, aggression, depression, school failure, and substance abuse. In general the residents exhibited a range of problem behaviours across several functional areas. Much less was known about the events that precipitated the emergency⁴⁴.

2.3.2.2 *Diagnosis*

Behavioural disorders are commonly diagnosed⁷⁵. Anxiety disorders are among the most common psychiatric diagnoses, however, few youth presented with anxiety as their primary problem to PES. Because many anxiety problems are chronic, they may not present 'emergently', perhaps constituting psychiatric emergencies less often⁷⁵. Muroff et al. (2008) demonstrate some racial variation in PES diagnostic rates: African-American and Hispanic/Latino youth in this sample were more likely to be diagnosed with psychotic disorders and behavioural problems, whereas white youth were more likely to be diagnosed with depressive disorders and bipolar disorders. Alcohol/substance abuse occurred more frequently among the Caucasian sample compared to the other ethnic groups⁷⁵.

In Santiago et al. (2006) the psychiatric diagnoses at discharge were conduct disorder (30%), adjustment disorder (29%), depression (29%), psychosis (27%), ADHD (18%), bipolar disorder (16%), ODD (12%), developmental delay (12%), non specific behaviour problem (8%) other (29%). In this study, a large proportion of children (71.9%) had a past psychiatric history, 39% had prior psychiatric admissions and 40.5% were on psychiatric medication. Many of these presentations therefore represented an exacerbation of a chronic psychiatric disorder and may reflect limited community or psychiatric resources such as chronic psychiatric care facilities or acute paediatric inpatient bed availability⁷⁴.

Primary diagnosis at the time of each of the 410 visits in Behar & Shrier (1995) were adjustment disorders (39%), disruptive behaviour disorders (CD, ODD, ADHD) (21%), schizophrenia or psychotic disorders (12%), mood disorders (8%), substance use disorder (6%) and mental retardation or pervasive development disorder (4%). Nearly half (49%) of these patients had a past psychiatric history⁶³.

Among 238 children who received the full course of in-home services during a 26-month study period 37% had disruptive behaviours diagnoses, 21% adjustment disorders, 17% mood disorders, 11% psychotic disorders, 9% anxiety disorders, and 5% other disorders⁸⁷. A surprising finding is that 12% of the children were identified as having psychotic disorders. This is greatly in excess of what might be expected, given the age of the children enrolled in the project⁸⁷.

In Gillig (2004) nearly 70% of adolescents presenting to the crisis service had affective disorders, 17% had evidence of a conduct disorder, 15% were psychotic, 6% had anxiety disorders, 4% had anorexia and 2% had a diagnosis of a substance use disorder. A substance use disorder was a complicating factor in 23% of cases⁸².

In Healy et al. (2002) a clear diagnostic conclusion was documented following emergency assessment in 83 young people (86% of DSH subjects, 82% of non-DSH subjects). Overall, 36.1% of the subjects were considered to have no psychiatric disorder; approximately half of the DSH subjects (49%) and 15.6% of non-DSH cases. Moderate/severe depressive episodes were diagnosed in 20.5% of all subjects, with a greater likelihood in subjects who presented following deliberate self-harm (27.5%) compared to the rest of the sample (9.4%). Almost a quarter of non-DSH subjects received a diagnosis of psychosis (21.9%) compared to none in the DSH sample²⁶.

In an exploratory study screening for risk factors associated with violence in paediatric patients presenting to an emergency department of a Texan University Hospital, 425 patients under 18 years classified into three groups based on the chief complaint being violence (31%), suicide (46%) or other (23%)⁷⁰. Children and adolescents who presented to the psychiatric emergency room with a chief complaint of violence were more likely to be male, while females were the majority in the other two groups. There were significant differences among the patient groups in terms of diagnoses: Violent patients had significant elevated odds ratios (ORs) for a number of externalizing disorders: for bipolar disorder, ADHD, CD, and ODD compared to those with suicide and other presentations. Suicidal patients had a significant elevated OR for major depressive disorder compared to the other groups⁷⁰.

In an empirical study of 98 adolescents admitted to hospital-based psychiatric acute care programs, the majority of female participants (64%) were diagnosed with depression, whereas 43% of the male participants received a diagnosis of depression. More boys were diagnosed with disruptive behaviour disorders (40%) than were girls (16%). Depression and disruptive behaviour disorders encompassed 82% of the clients' primary diagnosis. Clients diagnosed with substance abuse consisted of 5% of the participants in the study. No male participants were diagnosed with a disorder related to trauma; however, 10% of the female participants had a diagnosis related to trauma or abuse. Other diagnostic categories were represented by 6% of the participants of the study^{56,62}.

2.3.2.3 Referral sources, repeat users

Researchers have examined the factors that lead children and adolescents to become chronic users of general hospital services. Results reveal that repeat users of PES represent a significant proportion of child psychiatric emergencies seen in EDs. The repeat patients were more likely to threaten to harm others; to have a diagnosis of adjustment, conduct or oppositional disorder; and to be under the care of a child welfare agency⁶⁵. In a retrospective chart review study to describe demographic and clinical characteristics of 400 paediatric psychiatric emergency patients, over 50% of children were seen again at the ED within 2 months of their initial visit⁶⁵. Starling et al. (2006) described in a cohort of 239 children, that 22% were seen in the ED on two to 5 occasions during the study period²⁸. A lack of adequate access to residential and community treatment are suggested as an explanation for the marked proportion of children receiving multiple examinations⁶⁶.

Forty-eight percent of all cases in Healy et al. (2002) had been in previous contact with child psychiatry and 43% with social services²⁶. Twenty-two subjects (16.5%) had previous emergency contact with psychiatric/social services, this being equally in the DSH and non-DSH groups. In Christy et al. (2006) on involuntary examinations, one fifth of the children (21.18%) experienced more than one examination, ranging from 2 to 24 examinations. 2.65% of all children received more than 5 examinations. The average time between examinations was a little over 6 months (mean=196 days, median=94 days), with 25% of children experiencing their second examination within 30 days of the first examination⁶⁶.

In Behar & Shrier (1995), the major referral source was the paediatric ER (33%). Nearly all of these patients were suicide attempters via drug ingestion. Other referral sources included parents or family (23%), child protective services (13%), police (9%), paediatric outpatient services (9%), and to a far lesser extent, emergency medical services, school officials, self-referral, friends and local detention centre⁶³.

In a descriptive retrospective chart review study on the referral and resource use patterns for 480 psychiatric-related visits to paediatric EDs, 67% of patients had prior outpatient psychiatric care noted in the intake assessment, and 48% were currently taking psychiatric medications. 38% of ED visits had a prior ED visit for psychiatric reasons, and 35% had a prior admission for a psychiatric problem⁷³.

Goldstein et al. (2007) examined six-month recidivism among a sample of 417 paediatric patients who made mental health visits to an urban paediatric emergency department in 2004 to identify factors associated with emergency department recidivism⁸⁸. In this sample, 64% reported being in some form of mental health treatment at the time of their first study visit, 49% had a history of psychiatric hospitalization, and 13% reported a previous suicide attempt. Nineteen percent of patient visits were classified as repeat visits, i.e. return within 6 months of the study index visit, with these patients having a mean \pm SD of $2.37 \pm .72$ visits and a maximum of 5 visits during the subsequent six months. Approximately 50% of patients who returned did so within one month of their initial study visit. Repeat visitors were more often African American and involvement with social services was found to be associated with return (30% vs. 15%). Disruptive behaviour was the only category of symptom that was associated with return (68% vs. 51%). A higher proportion of patients who returned have a history of psychiatric hospitalization (72% vs. 43%). A greater proportion of return visitors than non return visitors were involved in mental health treatment at the time of the index visit. Diagnostic comorbidity was the only severity indicator variable that was significantly associated with return: 38% of repeat patients had more than one diagnosis in comparison with 19% of those who did not return.

2.3.2.4 *Voluntary versus involuntary presentations, community-based versus hospital-based services*

A majority of children are brought voluntary to the ED by family or friends and have a much lower rate of leaving before examination than the general ED population, suggesting a generally compliant population who are actively seeking help^{28,74}. Christy et al (2006) describe the involuntary use of emergency mental health services by children aged 2-17 years over a 4-year period.

2.3.3 Discussion and reflection

Little is known about the characteristics of children presenting for psychiatric emergency services, and virtually nothing is known about the outcomes they experience across a range of referral options⁸⁷. Little systematic analysis of the profile of children and adolescents seeking psychiatric emergency care is available in the research literature. Reports vary in the selected variables and ways of data presentation. These studies found several characteristics associated with paediatric psychiatric emergency room (PPER) visits including demographic variables, illness variables, and visit variables^{26, 63, 65, 71}. Only some of these characteristics have been replicated and others were contradictory⁴⁹. The few replicated variables included female gender, older age, family referral, family psychiatric history, diagnosis of ADHD, disruptive behaviour disorder or adjustment disorder, schoolday presentation, arrival time between the hours of 4 pm and 11 pm and presenting complaint of suicidal ideation/attempt⁴⁹. These results suggest that these visits are most likely triggered by the stresses and interactions related to school, and that children with a family history of mental illness or a diagnosis of behavioural or hyperactivity disorder or those in adolescence may be more vulnerable to that stress. Family referral and presenting complaint of suicidality are consistently present in the literature and thus may be considered strong predictors of PPER visits⁴⁹.

In regard to reporting of demographic data, the more recent literature suffers from the same methodological shortcomings as described in Goldstein and Horwitz (2006)¹⁰. Despite the lack of consistency in the way age data are presented (means, medians, SD, interquartile range, range, age classes,...), it is clear that the majority of patients presenting to an emergency psychiatric service generally are between 6 and 18 years of age. Especially young adolescents (aged of 12 to 15 years) turn to psychiatric emergency services for mental health problems. Young children (<6 years) represent only a very small segment of psychiatric emergency services users.

None of the papers discuss differences between voluntary or involuntary admissions. Christy et al. (2006) examined involuntary psychiatric examinations but did not make a comparison with voluntary patients. The data from this study are not easily compared to data from the other publications due to the general nature of the categories used⁶⁶.

The literature database is dominated by hospital-based psychiatric emergency services compared to community-based crisis intervention services.

2.3.4 Summary

The majority of children presenting to psychiatric emergency services are between 6 and 18 years old. Especially young adolescents between 12 and 15 years frequently visit psychiatric emergency services.

The data on gender distribution are inconsistent: some studies report a slightly higher proportion of boys presenting with psychiatric emergencies or crisis, whereas others report a majority of females. Age and reason for presentation seem to influence the gender distribution; adolescents presenting with deliberate self harm and emotional disorders are more likely to be girls whereas children and adolescents presenting with behavioural problems and aggression are more likely to be boys.

The rate/ethnicity distribution of the population using psychiatric emergency services is generally reflective of the composition within the community, although this is not examined in all reports giving a race/ethnicity distribution.

Few studies include socioeconomic and sociodemographic variables in their analysis.

Second to suicidal ideation or suicide attempts, behavioural problems including aggressive behaviour are the most common reasons that youth present to psychiatric emergency services.

Most common psychiatric diagnoses given during emergency assessment are behavioural disorders (CD, ODD, ADHD) and mood disorders (depression).

Key points

- **Few children presenting to psychiatric emergency services are younger than 5 years old.**
- **Especially young adolescents between 12 and 15 years frequently visit psychiatric emergency services.**
- **The data on gender distribution are inconsistent**
- **Age and reason for presentation seem to influence the gender distribution.**
- **The rate/ethnicity distribution of the population using psychiatric emergency services is generally reflective of the composition within the community.**
- **Few studies include socio-economic and socio-demographic variables in their analysis.**
- **Second to suicidal ideation or suicide attempts, behavioural problems including aggressive behaviour are the most common reasons that youth present to psychiatric emergency services.**
- **Contextual problems are less frequently addressed as reasons to present to psychiatric emergency services**
- **Most common psychiatric diagnoses given during emergency assessment are behavioural disorders (CD, ODD, ADHD) and mood disorders (depression).**

2.4 ORGANIZATION OF MENTAL HEALTH EMERGENCY AND CRISIS INTERVENTION SERVICES

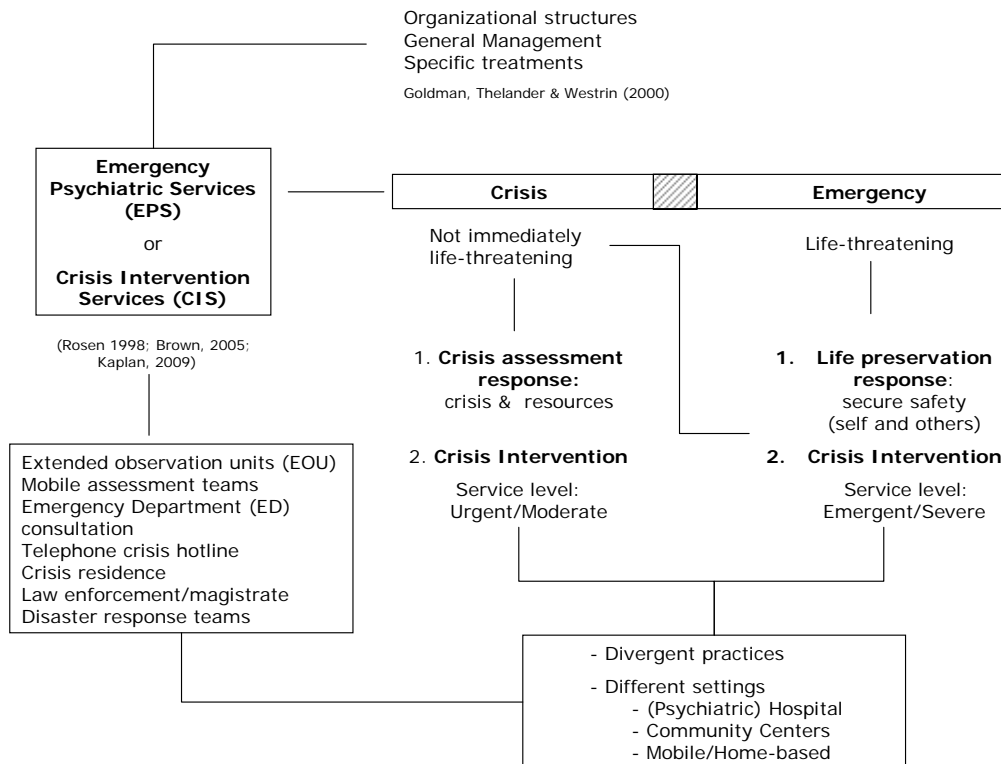
2.4.1 Introduction

This section of the literature review aims to answer the following research question (Q3): “Which services should be offered to children and adolescents presenting with a psychiatric emergency or crisis, and how are they organized?”.

2.4.1.1 The use of concepts

Goldman, Thelander, & Westrin (2000) argue that term ‘services’ is used to refer to three separate aspects of mental health care: organizational structures, general management of mental health problems and specific treatments⁸⁹. In addition, in the names and description of services, the terms ‘crisis intervention’ and ‘emergency psychiatry’ are used interchangeably²⁰. The terms Emergency Psychiatric Services (EPS) and Crisis Intervention Services (CIS) are used in this report to encompass all services dealing with psychiatric emergencies or crises (Figure 2.6).

Figure 2.6: Schematic presentation of content and concepts of the current chapter



In a review on crisis intervention for people with severe mental illnesses, Joy, Adams & Rice (2006) define crisis intervention as:

“Any type of crisis-oriented treatment of an acute psychiatric episode, by staff with a specific remit to deal with such situations, in and beyond ‘office hours’”⁹⁰.

This definition fits Rosen’s (1998) view on crisis management and intervention:

- Crisis management is the entire process of working through the crisis to the point of resolution.
- Crisis intervention is that aspect of crisis management carried out by crisis workers (e.g. clinicians, counsellors, police, and chaplains). Crisis intervention may involve many divergent practices in different settings²⁰.

Kaplan (2009) defines crisis intervention as a process that starts from the moment of first contact, and occurs cumulatively as the patient and family move through the different disciplines and teams they are required to encounter on their way to a resolution². This definition is comparable with Rosen's (1998) concept of crisis management.

Unlike a crisis, an emergency is by definition life-threatening and the appropriate type of early response is life-preserving (i.e. securing physical safety, removing the person from the source of danger, and defusing physical violence). In a crisis, the early response should be crisis assessment and support, defusing stress and interpersonal strife²⁰.

In an article profiling a mental health crisis response program in a rural setting for adults, Bonyng et al. (2005) distinguish two levels of crisis intervention: moderate and severe²².

- The severe level addressed what they call a mental health emergency; services at this level consist of a professional on-call service (rendering immediate assessment and follow up care), crisis beds (less than 72 hours) and mobile crisis intervention within a community mental health centre.
- The moderate level of intervention typically consists of urgent care (within 72 hours) and a crisis hotline.

The APA Task Force on emergency psychiatric services also distinguishes between emergency services and urgent services¹⁴.

- Emergency services are those services that are able to deal with the full range of behavioural and psychiatric emergencies immediately, including involuntary treatment.
- Urgent services can provide care in a short time frame (24-hr) in order to avoid the potential development of a psychiatric or behavioural emergency, but need not be able to provide involuntary treatment.

In a US review on psychiatric emergency services (PES), also labelled 'crisis response services (CRS)', a triad of mental health services is described⁹¹:

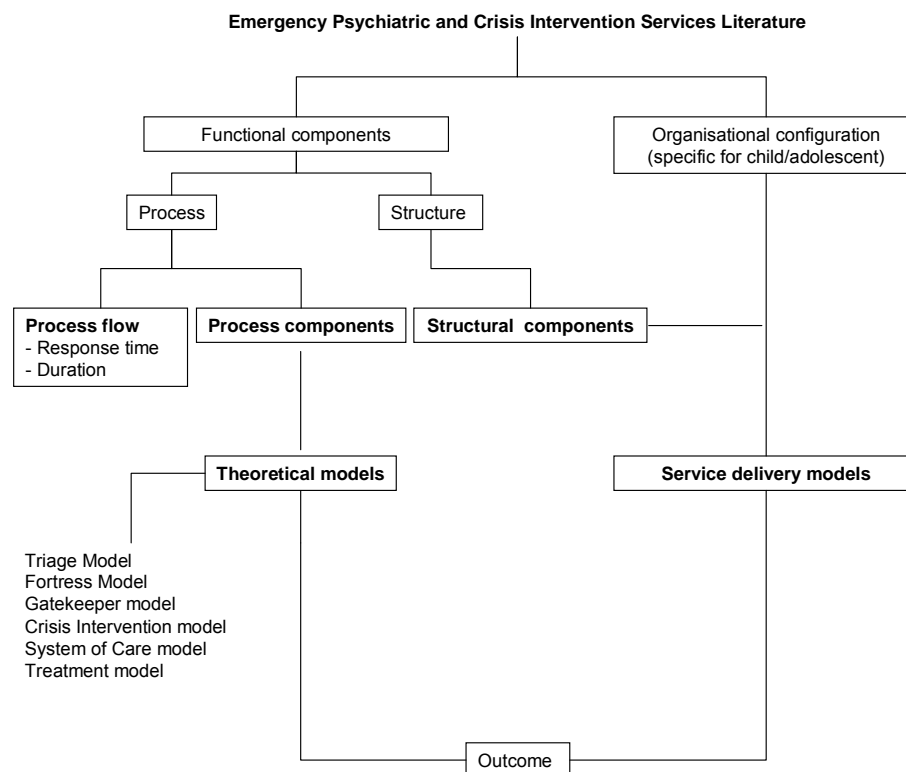
1. PES/CRS refers to a variety of mental health services that aim to provide crisis evaluation, management and sometimes treatment of persons outside an inpatient setting. These services are unscheduled evaluations that assess acuity and establish referral to inpatient or outpatient treatment as necessary. The concept of PES/CRS has come to encompass a variety of services such as 24-hour observation units, mobile assessment teams, law enforcement, crisis hotlines, crisis residence and disaster response teams.
2. Psychiatric acute services exist to treat severe symptoms and are typically provided in an inpatient setting. A patient meets criteria for acute treatment when he is considered a danger to self or others or unable to care for himself.
3. Routine services such as counselling, case management and medication checks occur in the outpatient setting.

2.4.1.2 Classifying the findings

In this report we describe EPS/CIS in terms of functional prerequisites and organizational configuration (Figure 2.7). We can connect this presentation with Donabedian's conceptual framework (structures, processes and outcomes) that is proposed as a conceptual framework for the evaluation of emergency psychiatric services^{91,92}. The functional dimension encompasses process components, the process flow as well as structural components.

- The process flow and components refers to the core functions involved in psychiatric emergency and crisis response care; “the set of activities that go on within and between practitioners and patients”⁹¹, as well as response times and duration of service utilization. These process components form the building blocks of theoretical models for EPS/CIS that subsequently need to be translated into concrete organizations¹⁷.
- The organisational configuration refers to the organizational structure and the principles involved in delivering EPS/CIS.. Structure relates to where, whom for and whom by these services are delivered. They describe the location, the facilities, the staff, the accessibility and flexibility, and the costs of services.

Figure 2.7: Schematic overview of the classification of literature findings



First we discuss the process components found in the peer reviewed and grey literature on EPS/CIS. This is followed by an overview of the associated theoretical models. Subsequently, the structure components are described, as well as the organizational configurations found in the literature. Unlike the section on process and structure, the section on organizational configurations reflects child and adolescent literature only. Finally, the existing evidence base to support these service delivery models is presented.

2.4.2 Functional components

2.4.2.1 Process components

The following process components have been found in the literature on psychiatric emergency services:

- Registration^{40, 71}, triage^{3, 34, 48, 54, 71, 75, 93, 94},
- Stabilization^{38, 48, 66, 84, 93},
- Assessment and evaluation^{27, 36, 39, 43, 45, 48, 54, 66, 71, 75, 93},
- Disposition^{33, 38, 45, 71, 93, 95},
- Treatment^{39, 45, 48, 54, 66, 75},
- Referral and follow up^{39, 48, 66, 75, 95}.

We present these aspects on a generalised level. It should be noted though that not all authors include all these process components in their descriptions, nor do they agree on their importance. The sequence in which the components are described is not necessarily the actual sequence of delivery. Findings are summarized in Figure 2.8.

Figure 2.8: Schematic overview of the EPS/CIS process



Registration

Registration of children and adolescents with psychiatric crises or emergencies can occur either in person^{26, 71, 96} or by phone⁴⁰ and can consist of the individuals in need of care contacting the services directly or via a referrer. The extent to which these registrations are logged may differ greatly with respect to the variables recorded. Variables that may be collected are: identity, gender, age, reason for the call, presenting complaint, psychiatric history or known diagnosis, referrer, family composition, alcohol abuse, psychosocial strain, medication, intervention, admission duration, etc.^{40, 96}

Registration and more specifically registration systems are discussed in more detail in section 2.4.5.

Stabilization

Children with mental health emergencies often need medical stabilization prior to psychosocial intervention and before probing for the circumstances that caused them⁸⁴. In particular, for patients who have attempted suicide, medical stabilization is the first priority⁵⁰. In the acute care environment clinicians have to quickly stabilize a patient and have to make progress in a short period of time^{62, 68, 77}. In an emergency setting, after treating any acute medical needs, the process then focuses on ensuring the child's safety and well-being⁸⁴.

Crisis stabilization services are initiated upon admission or presentation and aim to span the first 24-72 hours^{97, 98}.

Evaluation Process

TRIAGE

The first tier of providing a safe environment for children with mental health problems requires the assessment of the degree of risk through direct, empathic questioning of the child regarding the actual or potential threat of harm to the child or others^{2, 99}. Triage 'involves making a crucial determination within several minutes, about an individual's course of treatment'¹⁰⁰, and determines the initial level of treatment needed^{2, 93, 99}, in order to ensure safety⁵⁰. Triage is a process component present in all psychiatric emergency and crisis intervention services^{54, 71, 77, 93}. It is often described as a first step in the assessment and evaluation process⁴⁵.

Triage can be performed using specific screening tools focused on the assessment of imminent danger of the child/adolescent^{82, 84, 93, 99, 101}. This assessment includes detecting suicide risk, and/or assessing the risk of danger to others. Brief screening tools have been developed to assess suicidality of youngsters presenting at emergency services¹⁰².

Triage requires particular skills of staff^{2, 100}. For instance, in case of emergency outreach programs, triage may consist of a psychiatrist deciding whether a call should result in emergency outreach or telephone consultation⁹⁶.

SOMATIC AND PSYCHIATRIC ASSESSMENT: FOCUS ON RISK

The initial triage assessment to establish safety is followed by a medical evaluation, obtaining the necessary consents for further evaluation, and a clinical interview⁴⁵.

Assessment and evaluation involve both a somatic/physical examination and a psychiatric assessment^{36, 50, 71, 93, 103, 104}. Assessments can either be basic or comprehensive; Home-based Crisis Intervention for instance is developed to involve comprehensive assessment⁶⁸, whereas assessments in an emergency department are usually limited to those aspects needed to make a referral decision⁴².

SOMATIC/PHYSICAL EXAMINATION

A physical examination is required to exclude a medical cause ('organic disease') for the patient's psychobehavioural symptoms, i.e. medical clearance, or to stabilize the patient^{84, 93, 105}. Some form of medical clearance is present in all EPS/CRS processes reviewed. The time of medical clearance may vary; it can be performed prior to referring a patient to a EPS^{71, 93, 100} or be an integral part of evaluation process within a EPS⁹⁵. The cornerstone of medical clearance is a thorough history and physical examination, but assessment and evaluation may also include a mental status examination, a laboratory evaluation (toxicology screen) or other assessments depending on the clinical scenario (e.g. ECG, lumbar puncture,...)⁸⁴.

PSYCHIATRIC ASSESSMENT

The psychiatric assessment of any child or adolescent with a psychiatric emergency has two components: 1) review of psychiatric symptoms and 2) risk factors for suicide and/or violence towards others, and social factors influencing functioning⁴⁵, e.g. social support systems and any resources that might allow for the patient to remain safely in the community during the crisis period¹⁰³. Some service delivery models for instance include an interdisciplinary assessment service for patients with complex biopsychosocial issues within for example a 14-day length of stay⁹⁸.

The primary focus of these psychiatric evaluations in some programs is not the diagnosis but rather the degree of risk posed to the patient and others, to provide the ED staff with a recommendation as to the disposition^{2, 71, 93}. However, Gutterman (1998) provided empirical evidence to support the view that both diagnosis and dangerousness of the patient should be taken into consideration to determine disposition, more specifically hospitalization¹⁰⁶.

The use of standardized protocols for evaluation, which includes evidence-based decision-making tools, has been found helpful in several studies⁸². Young people who have not engaged in self-harm but present in crisis form a heterogeneous group with diverse needs. Therefore, this group in particular would benefit from an assessment protocol that facilitates an integrated multi-agency approach²⁶.

Disposition

The aspect of disposition is most extensively discussed in a paper from Goldstein & Findling (2006) The most difficult aspect of the evaluation process is the clinical decision making regarding the most appropriate disposition⁴⁵. Two primary decisions need to be made: whether the patient is a clear danger to himself or others, and what the most appropriate level of care is for the patient. Although the emphasis in the clinical literature is on treating young people in the least restrictive and clinically most appropriate setting, the constraints of the mental health service delivery system need to be considered; despite the need, there may not be sufficient numbers of community-based mental health programs available⁴⁵.

The paediatric EPS/CIS can make dispositions for discharge, admission to an inpatient psychiatric facility, extended observation units, acute hospitalization, acute detoxification programs, partial hospital programs, and outpatient services^{32, 33, 38, 39, 66, 71, 95, 107}.

Treatment

Crisis intervention is expected to provide active treatment intervention rather than being a holding station on the way to begin 'real' treatment in some other venue^{68, 104, 108}. Following a period of crisis stabilization and/or assessment, transitional care services may be provided that are linked to explicitly identified treatment goals and can include short-term individual, family, and/or group therapy. These services are generally delivered within a 2- to 6-week period^{68, 98}.

Crisis Resolution Teams in the UK provide treatment in the form of home visits, up to three times a day, with phone contacts being used additionally or instead of visits as clinically required¹⁰³. Interventions can include: ongoing assessment, emotional support, short-term goal setting, prescription, administration and monitoring of medication, support and advice to carers, teaching anxiety management techniques, planned structured activities, linking with day care and relapse signature identification¹⁰³.

PESs provide immediate psychiatric assessment to minimize the undesirable results from inappropriate decision to admit or discharge patients in psychiatric emergencies⁹⁴. The PES model aims to provide a therapeutic environment where patients in psychiatric crises may receive proper psychiatric medical and social support.

Referral and follow up

Referral decisions vary depending on the services offered by the PES/CRS involved and may be based on the availability of the resources to which they refer¹⁰⁰. Some services provide an extensive follow up over longer periods (1 year)^{68, 104}.

2.4.2.2 Process flow

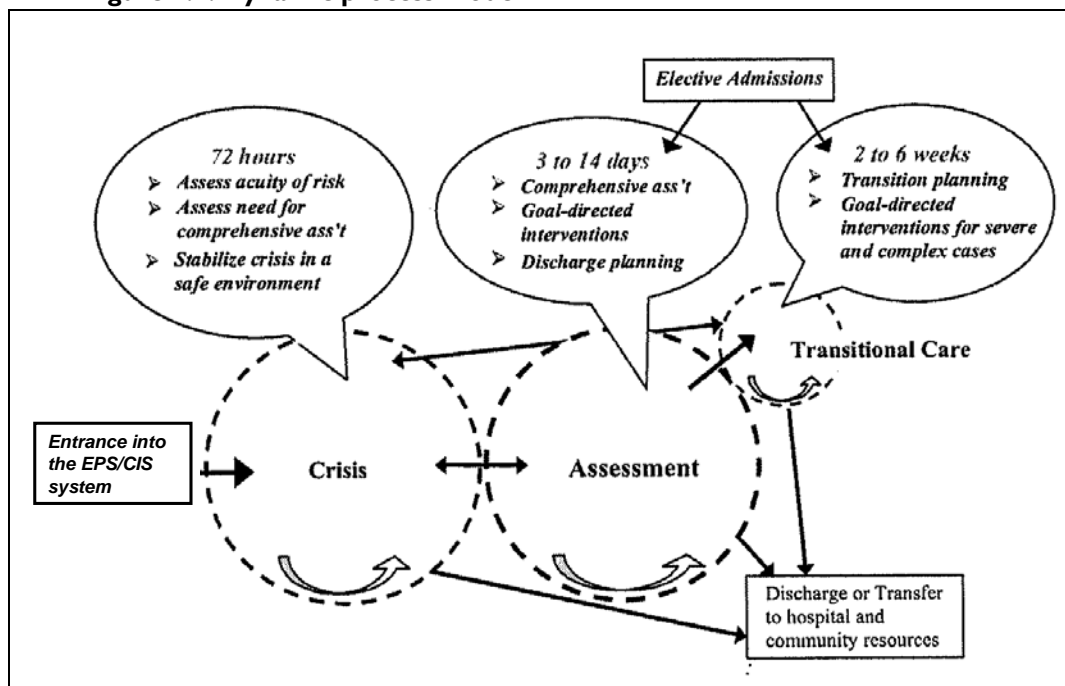
Response time

Response time refers to the speed with which services are delivered once requested¹⁰⁹. An emergency requires an immediate response, while the timing of the response in a crisis should be such as to include all participants in the crisis and personal supports²⁰. Generally emergency services respond within 24 hours of receiving the request⁴⁴.

Dynamic process model

Greenham and Bisnaire (2008) present a dynamic process model (Figure 2.9) for their inpatient psychiatric unit at a children's hospital in Ontario, Canada⁹⁸. The vast majority of patients are admitted to the Crisis Stabilization Service (to span the first 72 hours) but then move along different pathways to discharge.

Figure 2.9: Dynamic process model

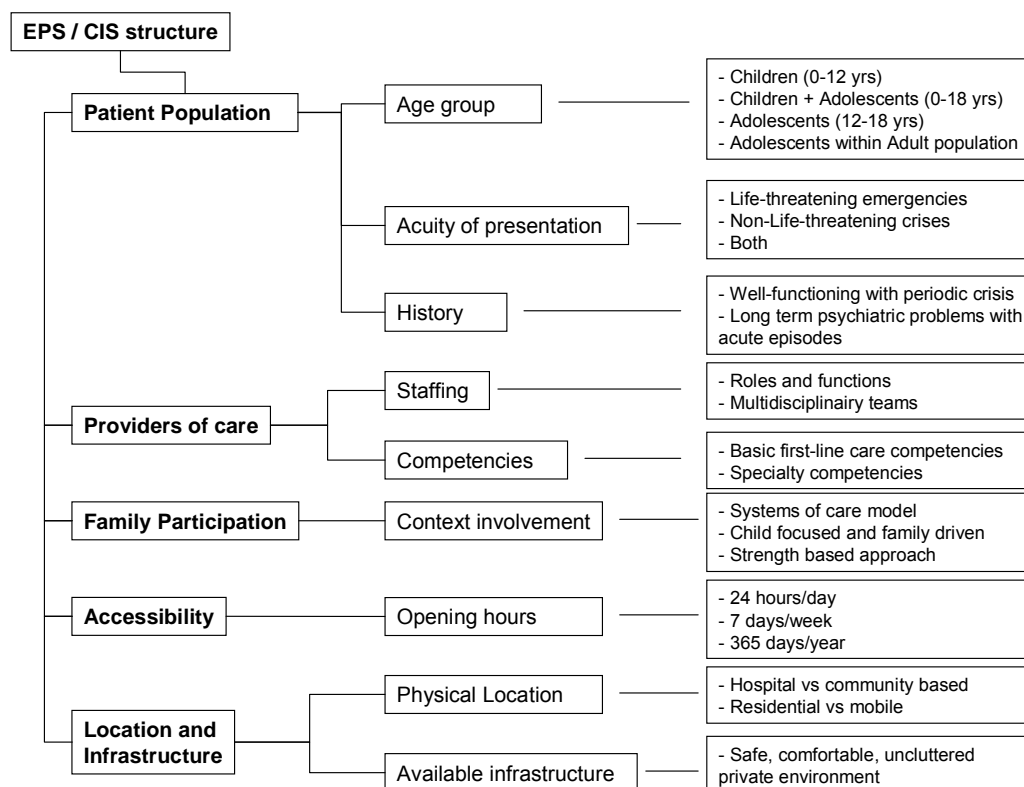


Adapted from Greenham & Bisnaire (2008)

2.4.2.3 Structure

Researchers have attempted to address several aspects of emergency psychiatric service structure, including exploration into patients, providers, and service characteristics^{91, 92}. In this section we will develop further on the structural prerequisites (Figure 2.10).

Figure 2.10: Schematic overview of EPS/CIS structural components



Target patient population

Some emergency services focus on children and adolescents only⁸², some are specifically developed to treat adolescents^{54, 110}, others target an adult population but also include 16-18 year-olds^{103, 111}, and still others serve both paediatric and adult populations^{22, 79, 82, 95, 96, 112}.

Rudolph et al. (1998) illustrate that in the US a number of particular community crisis response programs have been created to respond to the needs of individuals with developmental disabilities and challenging behaviour without resorting to institutional placements¹⁰⁴.

Crisis intervention and psychiatric emergency services for children and adolescents serve both youngsters who are basically well-functioning but experience periodic crises, and youngsters with longer-term, more serious problems who are prone to acute episodes at which times they require special services⁴³.

In addition, a distinction can be made between services targeting life threatening crisis situations/emergencies and urgent but not life threatening. Some programs can provide services to both these populations, whereas others need to decide to focus on one of these. These differences in acuity of the target population distinguish the emergent from the urgent services^{48, 113}.

The importance of gender and culture

In the literature on emergency psychiatric care or crisis intervention for children and adolescents little attention is given to gender and culture as critical components of development, mental health, crisis and disorder.

Pumariega ⁴⁷ pointed out there are many cultural influences on health beliefs and practices. Attributional beliefs about physical and mental illness are largely culturally determined. The determination of behavioural and emotional normality is largely culturally determined. Expected role functioning in different contexts is also largely culturally governed, including gender (female versus male characteristics), familial and occupational roles.

Children respond to cultural expectations in their environment for role functioning (female, male...), interpersonal relationships and communication patterns, and behavioural norms. For most culturally diverse children and adolescents, this may involve being conversant with at least two cultural systems, sometimes more. An inability to adapt results in a number of adverse psychological consequences. Various risk factors for crisis and / or psychopathology are influenced by cultural background and immigration status.

Not only in regular care but also and maybe more in emergency care caregivers and clinicians must become knowledgeable about the behavioural and developmental norms and parenting and child-rearing patterns of the populations that they serve. This cultural competence is important, not only for the assessment but also for organisation, care planning and selection of interventions.

Providers of care: staffing and competencies

Rosen (1998) distinguishes between appropriate personnel to respond to an emergency and those to respond to a crisis²⁰. The former include police, ambulance services, hospital emergency departments and state emergency services, whereas the latter includes general practitioners, community mental health practitioners, and lay crisis response organizations. Professionals in the position to do crisis intervention require higher levels of awareness of and training, with support from specialty services²⁰.

Parker et al. (2003) point out that an experienced child psychiatrist is required who is trained in and interested in emergency psychiatry and requires a cohesive team with support from the managers⁸. Hospital emergency staff is rarely trained to recognize mental health issues, especially as they present in children, and have no systematic way to identify or refer children to appropriate services¹¹⁴.

In an AAP policy statement, Dolan and Mace (2006) indicate that paediatric mental health emergencies are best managed by a skilled multidisciplinary team approach, including specialised screening tools, paediatric trained mental health consultants, the availability of paediatric psychiatric facilities when hospitalization is necessary and an outpatient infrastructure that supports paediatric mental health care, including communication back to the primary care physician and timely and appropriate ED referrals to mental health professionals⁴⁸.

Staffing varies with the nature of the service but generally requires a child psychiatrist, child psychiatric nurse, psychiatric social worker, mental health workers and utilization reviewer for insurance communication¹⁰⁸. The most challenging aspect of staffing occurs when the volume is too low to justify such a dedicated staff and too high to be managed by ad hoc deployment of staffing from other services¹⁰⁸. Allen et al. (2002) specifically state that every patient under 18 years of age within any emergency psychiatric service should have an assessment (including a developmental assessment) performed by a licensed independent mental health professional with appropriate training and experience in the assessment and treatment of children in a crisis setting¹⁴.

Interdisciplinary approaches that incorporate psychiatric expertise into the team of crisis service providers are important given the frequent co-existence of developmental and psychiatric disabilities among persons with behavioural crises and the potential for misdiagnosis of psychiatric problems in this population¹⁰⁴.

In a multiagency Youth Emergency Service in New York, Expanded Children's Services is part of the program¹¹⁵. This consists of a telephone consultation service for mental health professionals in the area to reach child and adolescent psychiatrists and to discuss alternative treatment modes and medication.

Kaplan et al. (2009) describe the professional staff involved in the different access points of the referral pathway from community to in-patient tertiary CAHMS services in the UK by role and function². They include:

- Primary care and community CAHMS
- Paramedic and ambulance staff
- Emergency department generic staff/triage
- Paediatric first-line staff
- Psychiatric first-line staff
- CAHMS first-line (or on-call) staff
- Social Services first line staff (the duty social worker/approved social worker)

The competencies (knowledge and skill base) for these professionals (from whichever discipline or grade) are made up of the competencies assumed for all first-line doctors and specialist nurses and specialist competencies related to their particular role and function. These competencies pertain to making an assessment, to intervene therapeutically if possible and to make a useful and effective referral on². Common competencies include taking a referral in a calm, thoughtful and respectful way, making useful referrals, possess effective communication skills, being knowledgeable about the legal framework as it relates to children and adolescents, being able to take and record a history accurately and sensitively, doing initial assessments and knowing the symptoms that indicate a mental health presentation, doing risk assessment, working in multidisciplinary teams,...².

Pumariaga et al. (2003) also point out the importance of cultural competence of staff and agencies involved in psychiatric emergency services for children and adolescents⁴⁷.

Fortunati & Zonana (2003) address the issue of multiple legal issues to be taken into account by clinicians who practice in the child psychiatric emergency department¹¹⁶. Some of these legal considerations are present at the start of the evaluation (e.g. consent for evaluation and treatment), during evaluation (psychiatric hospitalization) and at the end of an evaluation (mandatory reporting of suspected child abuse and duty to warn or protect third parties from harm). Other issues (confidentiality and consent for release of information) are present at all stages of the evaluation and continue long after the evaluation has been completed. Clinicians should be knowledgeable of these legal and privacy issues.

Collaboration

Several studies show that collaboration between agencies for responding to psychiatric emergencies of children is a worthwhile strategy^{2, 20, 54, 115, 117}. The agencies, departments and disciplines involved include primary care (who refer in), the police and the ambulance and paramedic services (who may bring the patient in), the emergency department, mental health teams, paediatric teams, social services and sometimes even voluntary sector services². Crisis intervention should also be closely linked with a true continuum of services so that the interventions begun are continued uninterrupted in the next clinical setting¹⁰⁸.

Baren et al. (2008a) conclude that emergency departments would best serve children with mental health emergencies by establishing collaborative efforts with social service agencies, psychologists and psychiatrists, local mental health agencies, schools and mental health advocacy groups¹. These relationships would then create a continuum of care and promote better identification of paediatric and adolescent patients with mental health disorders. Early recognition and treatment are key to effective referral and treatment^{1, 20}.

Based on a national consensus conference in the US, Hoyle and White (2003b) propose an integrated system for mental health emergency, including prehospital and hospital-based ED services, based on close cooperation and collaboration between emergency medical services (EMS), emergency medicine and mental health communities, to ensure appropriate local resources¹³. They stress that integrated systems for identifying and treating paediatric mental health emergencies would require the active participation and cooperation of numerous organizations. A psychiatric emergency team should liaise with other medical services (e.g. Paediatrics, Surgery, Neurology,...) or other mental health teams (e.g. eating disorders, partial hospital) on a case-by-case basis^{98, 118}.

Involvement of context

It has been pointed out by several authors that contextual factors are particularly relevant to child and adolescent psychiatric emergencies^{2, 31}. Londino (2003) addresses the role of the family in psychiatric emergencies and the implications for the emergency service delivery models³³. The community-based systems of care model promotes several important principles that are readily translated to services that are child focused and family driven, and are designed to meet an individual child and family's needs³¹. It promotes an interdisciplinary and interagency team approach, with close coordination of services by different agencies with which the child and family are involved. There is a focus on strength-based approaches in which natural supports are mobilized and enhanced, and the services are delivered in the least restrictive environment and in the child's community¹¹¹. Service intensity is separated from service restriction, with intensive services delivered in the child's home wherever possible.

Accessibility

A comprehensive EPS or CIS is open 24 hours a day, 7 days a week, 365 days a year^{43, 79}. If not open 24/7, the services must be available at least at the times that regular mental health providers are unavailable, e.g. out-of office hours (evenings and nights), weekends and holidays⁹⁶.

Location and infrastructure

The American Psychiatric Association's task Force on Psychiatric Emergency Services¹⁴ distinguishes on the one hand two broad categories of services, hospital and community based services, and on the other hand two approaches to providing the service, residential and ambulatory or mobile.

The EPS/CIS can be located within a general hospital^{79, 110}, a psychiatric hospital^{26, 30} or paediatric hospital^{40, 113}. It can be adjacent or nearby a medical emergency service^{40, 79, 119} or in a community crisis centre⁴⁴.

Dealing with psychiatric emergencies requires a safe environment for patients and staff, a physical space designed to minimize overstimulation and prevent access to potential weapons. However, few emergency departments have the resources to construct or allocate designated space for mental health patients^{85, 107}. The optimal place for evaluating mental health patients who are medically stable should be comfortable, private and uncluttered with minimal furniture⁸⁴.

2.4.2.4 *Theoretical models of emergency psychiatric service delivery*

Introduction

The concept of 'model' within psychiatric emergency service literature mostly refers to 'organizational configurations'. Based on the process discussed previously, several theoretical EPS/CIS delivery models can be distinguished. These process based models are summarized in Table 2.7.

Few authors discuss the theoretical basis underlying the delivery models of psychiatric emergency care and crisis intervention. The process elements and practices employed by individual programs differ greatly depending on community needs and underlying treatment philosophies¹²⁰. The number of process components involved in a program determines the organizational complexity of psychiatric emergency and crisis intervention services¹²¹.

Table 2.7: Emergency Psychiatric and Crisis Intervention Services: Theoretical models

	Triage model¹ Fortress model²	Gatekeeper model¹ Case Formulation Model²	Theoretical models Crisis intervention model	System of care model	Treatment model
Goals	Efficient care: rapid evaluation, containment and referral. Limited resources; focus on determination of priority for treatment by identifying those at risk for (self)harm. Minimizing subtle diagnostic evaluations.	Quality care is linked to efficient care: more attention is being given to diagnostics and evaluation.	Crisis is seen as a turning point; less emphasis on long term hospitalization, more attention for treatment outside hospital and briefer psychotherapies	Services are to be provided in the least restrictive setting appropriate to the needs of the child and family. Crisis and emergency services represent only one in a continuum of both residential and non residential services, aimed at preventing hospitalization.	Comprehensive services that still serve triage function but are capable of providing comprehensive assessment and broader range of services
Location	hospital-based /ED	hospital-based/ additional provisions required to ED	community based	community based	hospital-based/ additional provisions required to ED
Triage/stabilization	yes	yes	yes	yes	yes
Assessment: medical clearance	yes	yes	yes	yes	yes
Assessment: psychiatric evaluation	minimal (risk of inadequate assessment)	comprehensive	comprehensive	comprehensive	comprehensive
Treatment	no	no	brief	brief	brief
Disposition	admission or discharge	admission, referral or discharge	admission, referral or discharge	admission, referral or discharge	admission, referral or discharge
Referral/ follow up	limited	yes, including guidance towards ambulant services	yes	yes	yes, including guidance towards ambulant services
References	¹ Chan & Noone 2000; ¹ Allen et al. 2002; ² De Fruyt 2003	¹ De Fruyt 2003; ² Londino 2003	Chan & Noone 2000;	Kutash 1995; Pumariega 2003	Allen et al. 2002; De Fruyt 2003;

Different models

None of the models found in the reviewed literature address the paediatric population or children and adolescents.

In the Emergency Mental Health Manual, developed on request of the Ministry of Health in British Columbia, Canada, Chan & Noon (2000) distinguish two models for the delivery of emergency mental health services ¹¹:

- The triage model: The underlying assumption is that there are limited resources and that the priority for treatment is for those most in need or those most able to benefit from a brief therapeutic intervention.
- The crisis intervention model emphasises crisis as an opportunity for growth. Crisis intervention generally includes a psychiatric assessment and evaluation of the crisis situation, collateral care and brief therapy focused on change on both short- and long-term, they are usually provided in the community and are designed for less urgent crises ^{66, 78, 122}. The underlying goal of crisis services is to assist the child and family in resolving the crisis situation and to deter hospitalization ⁴³ (Kutash et al., 1995). One comprehensive example is the integrative model of crisis intervention ²⁴.

De Fruyt (2003) distinguishes three different models for delivery of psychiatric emergency services in hospital-based psychiatric emergency departments: the fortress model, the gatekeeper model, and the treatment model ¹⁷.

- The fortress model focuses on identification of patients that are in danger of harming self or others and require hospitalization. Efficiency of care, i.e. speed of evaluation and referral, is emphasized, as well as screening for psychiatric hospitalization rather than crisis intervention ³¹. This is similar to the triage model cited before ^{11, 14}.
- In the gatekeeper model, quality of care is linked to efficiency by increased attention to thorough evaluation and diagnosis, and guidance towards ambulant care in addition to hospitalization.
- Finally, the treatment model includes all of the above and additionally provides the option of brief therapy. Allen et al (2002) describe the treatment model as a more comprehensive service that still serves the triage function but is capable of providing comprehensive assessment and broader range of services ¹⁴. According to Healy et al. (2002), the treatment model involves a high rate of diagnosis and engaging the patient in a therapeutic relationship at the time of the crisis ²⁶. The philosophy of the treatment model approaches that of the crisis intervention model by Chan and Noone (2000) ¹¹.

Authors claim that these theoretical models need to be translated into organisational configurations. The fortress model can easily be integrated into a general emergency department. The gatekeeper and treatment model require additional conditions with regards to space and personnel to facilitate extended observations. As a consequence, these models are generally translated into specific units for psychiatric emergency interventions ¹⁷.

All the above theoretical models implicitly reflect the goals of psychiatric emergency care ¹²:

- Timely rendering of emergency care,
- Access to care, i.e. availability of local care,
- Safety/stabilization and assessment,
- Continuity of care: that is rendered at the least restrictive level possible.

In crisis situations, the requirements for an EP and CI service are the capacity to provide timely, intensive and accessible intervention, by a trained child and adolescent specialist ¹⁰⁹.

2.4.3 Organizational configuration

Crisis services used in children's mental health emergencies are typically designed to provide immediate care and assist in the provision of long term care within the mental health system⁶⁶. A comprehensive emergency psychiatric service is generally described as a service providing triage, assessment for psychiatric and drug and alcohol problems, crisis treatment, referral services, and linkage follow-up⁷⁹.

Crisis and emergency services for children and adolescents may range from non residential (e.g. crisis mobile outreach) to residential (e.g. crisis group homes) and involves various agencies, services and personnel^{1, 43, 91}. Services may range from consultation in a (paediatric) emergency department to an integrated service of emergency department consultation and treatment and scatter beds on paediatrics to a self-contained, separate service in the emergency department with linkages to mobile crisis and home-based services^{12, 108, 123}. The number of services (i.e., functional aspects) that are offered determines the organizational complexity of psychiatric emergency services¹²¹.

In an educational manual on emergency mental health, developed on request of the British Columbia Ministry of Health, the following core organizational components of a crisis response and emergency system are described¹¹:

- Crisis lines
- Mobile crisis outreach
- Crisis stabilization services
- Hospital-based psychiatric emergency services

These components are according to the authors to be conceived as a continuum of services that are needed for a crisis intervention and emergency response¹¹.

The APA Task Force on emergency psychiatric services proposes the following classification of service delivery models¹⁴:

- Psychiatric Emergency Services in Medical Emergency Settings
- Psychiatric Emergency Service Facility (including 23-hour observation and 48-72 hour extended observation)
- Psychiatric Urgent Care Facility
- Mobile Psychiatric Emergency Service
- Mobile Psychiatric Urgent Care Service
- Psychiatric Emergency Residential Facility
- Psychiatric Urgent Care Residential Facility

For each of the categories they provide guidelines on the actual organization of the service model.

The APA Task Force also distinguishes between 'vertical' and 'horizontal' categories of emergency services¹⁴.

- Horizontal categories refer to the abilities of the emergency service to provide care for more or less complicated and specialized problems. They are represented by three types of service: psychiatric emergency service provided in a non-specialty setting (e.g. medical emergency room), psychiatric emergency services provided in a specialty setting, and urgent psychiatric services provided in a specialty setting.
- Vertical categories refer to the resources available within the facility for care beyond the emergency service. They are embedded, to some extent, in the distinction between hospital or health care facility based services (which often have rapid access to inpatient psychiatric care and related resources) and community based services (which generally do not).

The variety of EPS/CIS found in the literature is presented in Table 2.8.

Table 2.8: Schematic overview of EPS/CIS organizational models

Descriptive classification	Organisational model	Procedural model
Services in Medical Emergency Setting	Consultant model	Child Guidance Model Crisis Intervention Program Rapid Response Model
Psychiatric Emergency Service Facility	CPEP PES Integrated PES Dedicated or scatter bed model Semi-institutional model	
Community based services	MST ICM Assertive outreach Crisis Stabilization program Special Services program Other	
Mobile Psychiatric Emergency Services		

2.4.3.1 Services in medical emergency settings

Emergency department (ED) visits for paediatric mental health emergencies occur when events cannot be managed at home or when adult caretakers cannot control behaviour or provide adequate support⁸⁴. The ED has been acknowledged to function as the safety net for children with mental health emergencies in US as well as in other countries^{2, 11, 31, 48}.

Consultant model

The model of the psychiatric consultant to the emergency department (i.e. the consultation/consultant model,^{14, 32, 94}) has since long been the mainstay for treating behavioural emergencies^{12, 74, 94, 123}.

Institutions have developed a variety of procedural models or programs to guide the emergency care process within the organisational ED consultant model:

- Mahajan et al. (2007) describe a Child Guidance Model used to speed up the process from physical evaluation by the ED physician to final disposition, thereby decreasing ED costs and burden¹²⁴. The child guidance model is a collaborative effort consisting of a full-time psychiatric social worker and full-time child psychiatrist evaluating all children and adolescents visiting an inner-city paediatric ED for mental disorders in Detroit.
- In an ED of a Canadian paediatric tertiary care university teaching hospital, a Crisis Intervention Program has been developed to manage the increasing influx of patients. Using a triage assessment tool, patients are triaged to see either a crisis intervention worker (CIW) for assessment and intervention, or an ED physician for medical intervention^{27, 93}.
- In Canada, the Rapid Response Model (RRM) approach is developed to meet the emergency needs of children and adolescents referred from the community⁸. The model falls within the official AACAP practice parameters highlighted for the management of children and adolescents with suicidal behaviour. The RRM has three components: 1) emergency consultation, 2) urgent consultation, 3) education of those who might use the service. The Emergency Consultation provides immediate consultation by a child psychiatrist or a resident over the phone or within the ED. The Urgent Consultation provides daily urgent appointments for the ED and community service providers during the working week. Patients are seen in outpatient psychiatry rather than in the ED, and the ED staff has the prerogative of booking patients directly into Urgent Consultation appointments reserved for their use.

This appointment is usually given within 48 hours and is a brief interview focused on crisis. The objectives of the RRM are 1) to reduce frustration felt by the community agencies and ED physicians in gaining access to services for urgent and emergent cases, 2) to prevent urgent cases reaching emergent proportions, 3) to avoid inappropriate crisis admission to the inpatient unit.

2.4.3.2 *Psychiatric Emergency Service Facility*

Comprehensive Psychiatric Emergency Program model

By law, Comprehensive Psychiatric Emergency Programs (CPEP) in US implement the treatment model and need to provide emergency psychiatric evaluations, treatment and disposition, extended observation beds up to 72 hours, mobile crisis outreach services and crisis residential beds⁹⁵. The hub of the CPEP is the emergency room in a general, paediatric, or psychiatric hospital, where patients are triaged, evaluated, treated and referred to the appropriate level of care. It is designed to rapidly assess and refer, while maintaining a safe therapeutic environment for the large number of acutely ill patients seen. In addition, Extended Observation Unit beds are available enabling the clinician to evaluate, treat and observe the patient for up to 72 hours before making a referral. This often allows the patient to stabilize, receive a more carefully designed discharge planning and often avoid a lengthier inpatient admission. A CPEP also has crisis services by means of a Mobile Crisis Unit (MCU) which is the arm of the CPEP into the community and Crisis Residence beds.

Psychiatric Emergency Service model

The Psychiatric Emergency Service (PES) model^{14, 92, 94} is founded on the CPEP model as it prescribes immediate psychiatric assessment and also provides a therapeutic environment where patients in psychiatric crises may receive proper psychiatric, medical and social support. PESs are the most comprehensive services, many of which also provide 24 hour crisis stabilization or 72-hour extended observation and treatment¹⁴.

Feiguine et al. (2000) describe a PES model-based crisis service within a children's hospital in Manhattan, providing both emergency assessment and short term treatment services for children, adolescents and their families¹¹³. The service is also available for emergency consultations and evaluations to the paediatric emergency department.

Currier & Allen (2003) report that 77% (39/51) of PES facilities are general hospitals⁹². Of those, 64% have a separate PES, and 21% have a PES as a component of the medical emergency department, and 13% consulted to the medical ED. Other PES facilities include psychiatric hospitals, community mental health centres and mobile response teams. The core elements of a PES within or associated with an emergency department are the availability of secure and dedicated space, qualified staff, appropriate accessibility (24h/day, 7d/week), and immediate access to medical emergency care.

Integrated Psychiatric Emergency Service (PES) model

Kates et al. (1996) present a model of an integrated psychiatric emergency service in Canada¹²⁵. It has integrated five separate hospital-run emergency psychiatric services in a single service. They offer comprehensive services by a multidisciplinary team that is familiar with community resources and principles of emergency psychiatry. They have three interview or seclusion rooms located within the ED for safety purposes. In addition to direct assessment and disposition functions, it also provides short-term care, triage for inpatient beds, after-hours coverage for registered patients and a training centre in emergency psychiatry. It is not clear however whether the services also serve children and adolescents.

Dedicated bed and scattered bed model

Cotgrove (1997) describes a pilot trial of an emergency admission service in a regional adolescent psychiatric unit in the UK in which beds were kept empty for admissions at short notice⁴². The service is available 7 days a week on a 24-hours basis. Referrals are assessed within 24 hours by a senior member of the staff and are only accepted if the local services have made their own assessment and consider emergency admission appropriate. A maximum time of three weeks is placed on each admission to ensure maximum availability of the emergency beds. Although this organisation is not always cost-effective, and may work disruptively for the staff, the study also demonstrated a beneficial effect of the easy availability of an assessment and second opinion⁴².

Greenham & Bisnaire (2009) describe an inpatient psychiatric unit at a Canadian tertiary care paediatric teaching hospital⁹⁸. The inpatient psychiatry unit offers a 12-bed crisis stabilization and assessment service, and a 6-bed transitional care service. It provides a continuum of psychiatric and mental health services to youth aged 6-17 that require hospitalization for psychiatric emergencies. The unit is staffed by a multidisciplinary team that liaises with other mental health teams on a case-by-case basis. Crisis stabilization services are initiated upon admission to the unit and aim to span the first 72 hours. The goals are 1) to assess acuity and severity of risk from the perspectives of youth, family/guardian and staff; 2) evaluate the need for comprehensive assessment, and 3) to stabilize the crisis by providing a safe environment. Discharge planning is also initiated. The second component of the service delivery model is an interdisciplinary assessment service, provided when there are complex biosocial issues. The goal is to provide these services within a 14-day length of stay. Finally, there are transitional care services provided following a period of crisis stabilization and/or assessment when a need for further inpatient services is identified.

In a large general hospital in London, an adolescent unit consisting of 10 inpatient beds and four day patient places are provided¹¹⁰. All mental health patients (12-18 years old) can be admitted, including involuntary patients, except for those with a level of dangerousness requiring security at the level of an adult intensive care unit. A 24-hour, 7 day a week emergency admission service is offered, requiring all referrals to be channelled through an out-patient psychiatric team. A broad range of treatments are provided.

Schweitzer & Dubey (1994) describe the rationale, development and implementation of a countywide scattered-site crisis bed program for seriously disturbed youngsters¹¹⁷. The program was developed by an interagency coalition consisting of representatives of the mental health, social service, and juvenile justice systems in New York county, and was implemented with no new funding, using available beds in facilities administered by the participating agencies. These beds are not dedicated to crisis care but represent the pool of available beds on a given day. Referrals are screened by an interagency crisis consultation team responsible for the program's operation. During the daytime this task is carried out by the state psychiatric centre, whereas during evenings and nights, the social services emergency department takes on this responsibility. A computerized registry significantly reduces the amount of time needed to make placements and helps agencies meet the goal of placing youngsters on the day of referral. This program shows to be a cost-effective alternative to more restrictive longer-term placements and has resulted in positive clinical outcomes.

Semi-institutional service model

Partial hospitals provide a place for people in crisis to stay during the day but return to their homes or a crisis respite service at night. They are often run in a similar institutional way to inpatient units, providing medication and a place to stay, but are more likely to provide activities, talk therapy and support services¹²⁶. Some day hospitals provide intensive day treatment using a variety of individual and group therapeutic approaches, and include an on call 24 hours response service¹²⁷. They provide additional services such as 24-hours crisis assessment, a small number of emergency crisis beds, and 24-hours crisis support phone services.

These are generally small residential services outside hospitals and often attached to community mental health centres ¹²⁶.

2.4.3.3 *Psychiatric Urgent Care Facility*

The Psychiatric Urgent care facilities provide ready access to psychiatric assessment and treatment for patients with urgent needs. They are intended for patients who do not have a behavioural emergency (i.e. not likely to hurt themselves or others) but who might develop one if they are not provided with same day assessment and treatment ¹⁴.

Institutional service model

Emmery & De Corte (2003) describe a crisis intervention unit located within a small child psychiatric hospital, adjacent to a general hospital with an emergency service ⁴⁰. There is an outpatient child psychiatric department providing urgent consultations and taxation of potential admissions. Only short-term follow up is available following admission. Child psychiatrists are available for advice by telephone 24 hours a day. Out of hours services are arranged in collaboration with adult psychiatry. The crisis unit offers crisis admission for a maximum duration of 14 days to 13-18 year olds living within the province. High turnover rates result in the absence of a waiting list. Indications for admission are strictly selected based on the initial registration by telephone and during the intake. It always involves youngsters with an acute unmanageable situation including severe symptomatology which necessitates psychiatric taxation and intervention. Exhaustive diagnostic assessment is not a goal, and multisystemic hypotheses are formulated, aimed at a pragmatic treatment plan. Treatment involves child psychiatric diagnostics, limited psychological test research, conversations with the family, a therapeutic package including psychodynamic group therapy and sociotherapy. Follow-up care needs to be provided by other services.

Gillig (2004) describes how in a rural area where no general hospital or inpatient psychiatric facility is available, only a medical urgent care centre, one clinic with two satellite offices serves the mental health needs of children and adolescents ⁸². Another clinic generally serving adults, also provides outpatient substance abuse services for adults and adolescents. All outpatient clinics collaborate with the emergency hotline by alerting crisis staff who are on call to any potential crises, so clients who seem at risk can be served after clinic hours. The clinics are staffed by part-time general psychiatrists and nurses, and full-time social workers who implement standardized protocols for emergency evaluations of youth under supervision of a general psychiatrist.

Semi-institutional service model

Day and partial hospitals provide a place for people in crisis to stay during the day but return to their homes or a crisis respite service at night. They are often run in a similar institutional way to inpatient units, providing medication and a place to stay, but are more likely to provide activities, talk therapy and support services ¹²⁶. Some day hospitals provide intensive day treatment using a variety of individual and group therapeutic approaches, and include an on call 24 hour response service ¹²⁷. These are generally small residential services outside hospitals and often attached to community mental health centres ¹²⁶.

2.4.3.4 *Mobile psychiatric emergency services*

Mobile psychiatric emergency services are an important element of the service array in many US states ^{14, 120}. They are intended to provide face-to face crisis assessment, intervention and stabilization in the community, and most programs have a primary purpose of diverting youth from ED admissions and residential placements ¹⁴. They are available 24 hours a day, 7 days a week, provide stabilization and crisis intervention and prevent hospitalization, emphasize short-term intervention, serve relatively small numbers of youth and families, include evaluation/assessment, intervention/ stabilization, and follow-up service and employ staff that are flexible and adaptable, competent and highly skilled, and able to establish rapport and terminate therapeutic relationships quickly. Many provide a linkage function whereby they ensure that youth in crisis are referred to appropriate longer-term treatment options in the community.

Staff members in these programs are highly trained mental health professionals who are skilled in providing crisis intervention services, are knowledgeable about available treatment options in the community, are able to collaborate effectively with other community providers.

Rosen (1998) indicates that in Australia there is still a lack of child and adolescent mobile crisis services operating extended hours to augment outpatient nine-to-five mental health services for these age groups²⁰.

In 2002, the American Psychiatric Association (APA) published guidelines for mobile psychiatric interventions. Organizational model considerations for mobile psychiatric emergency services focus on the structuring of these services, including training, staffing and community linkages. Many of the guidelines, standards and models are however tailored to individual programs serving limited regions and have limited applicability to the design and implementation of nationwide emergency psychiatric services¹²⁰. Based on the review of the literature, discussions with program administrators of national service programs and site visits with current EMPS providers in Connecticut (US), several recommendations were formulated to be included in an enhanced EMPS model¹²⁰.

- Youth Emergency Services (YES), is an experimental program developed through collaboration of six New York agencies to respond to psychiatric emergencies in children and adolescents¹¹⁵. The YES system represents a consortium of interrelated programs and services that are individually and collectively designed to meet the emergency psychiatric needs of children in crisis and their families. YES has six basic components: the Child Crisis Specialists, The Mobile Crisis team, Expanded Children's services, Home-Based Crisis Intervention, Residential Crisis services and Psychiatric Hospitalization. The Mobile Crisis Team is a central program component. Clinicians are on call 24 hours a day, seven days a week to go directly to the scene of the crisis when called by the children's crisis specialist in any of the catchment areas. Independent of location, the clinicians see the child, stabilize the crisis, and do an on-site assessment sufficient to ensure the child's physical and emotional safety. They also stay with the family until the child is in the treatment process. Usually this occurs in less than 24 hours.

2.4.3.5 *Community-based services*

Community-based crisis services share a number of common characteristics^{43, 128}: 1) crisis services are available 24 hours a day, 7 days a week, 2) crisis services share the common purpose of prevention of hospitalization and stabilization of the crisis situation in the most normalized setting available, 3) crisis services are offered on a short term basis, 4) the capacity of crisis programs tends to be limited to a small number of children/youth, 5) crisis services typically include evaluation, assessment, crisis intervention, stabilization and follow up planning, 6) to the extent possible involve families in all phases of crisis treatment, 7) staff in crisis programs tend to share similar characteristics and 8) crisis services are generally part of a larger agency that offers other services such as inpatient day treatment or outpatient services.

Several programs or models (approaches) are described to organize crisis interventions within community care settings. Community-based crisis intervention programs are characterized by multidisciplinary teams, providing rapid response to referral (assessment within 24 hours), and include psychotherapy focused on specific family or individual goals⁶¹.

Out-of-hospital approaches (a number of which are offered for emergency/crisis situations) include^{31, 127, 129}: the Wrap around approach, Crisis Service models, Mobile crisis services, Multisystemic therapy (MST) at home, Intensive Case Management, Home Treatment, Outpatient/outreach services, and Day treatment, Family Preservation, and Therapeutic Foster Care.

Multisystemic Therapy (MST)

Next to the clearly identifiable health facilities, some models or programs are described on the edge of facility(ies) and functional components.

MST has been studied as an alternative to inpatient treatment for young people in psychiatric crisis^{130, 131}. It was originally developed as an intensive family-based approach to young offenders presenting with serious antisocial behaviours at risk of being placed out of their home area¹²⁹. The original MST program was adapted to psychiatric emergency situations by 1) integrating additional clinical staff such as child and adolescent psychiatrist, crisis case worker, to facilitate the development and implementation of safety plans aimed at stabilizing the psychiatric emergency outside the hospital if possible, 2) integration of evidence-based pharmacological interventions with the other MST interventions that comprise MST treatment protocols, 3) the planned and judicious use of out-of-home placements such as hospitalization and foster care to promote safety and facilitate the attainment of treatment goals¹³⁰.

Intensive Case Management (ICM)

Intensive case management encompasses a number of approaches including assertive outreach, wraparound and assertive/intensive community treatment. It is a commonly used strategy for increasing access to and coordination of services within the care system and it is not time limited¹²⁹. It is offered within the community for children and young people in crisis¹²⁷. One form of case management is known as 'wrap around' in which special education and mental health services collaborate to provide care¹²⁷.

Assertive outreach

A variety of outpatient/outreach services are provided for psychiatric emergencies; some specifically operate a rapid response, intensive crisis management service for suicidal young people^{58, 61, 82}.

It consists of around the clock and daily availability of multidisciplinary team provision of services within the client's own setting. There is an emphasis amongst others on crisis intervention¹²⁹.

Crisis Stabilization Program

Ruffin et al. (1993) report the development of a Crisis Stabilization Program located in a mental health centre aimed at reducing the number of admissions to a State psychiatric facility for children and adolescents and to increase utilization of community-based treatment alternatives to inpatient treatment in South Carolina, USA¹⁰⁹. The program consist of a two-person crisis intervention team which provides timely and intensive intervention, as well as frequent follow up to divert children and adolescents from unnecessary hospitalization. A four-person team is on call after regular working hours, on weekends and holidays to consult with graduate students who work in the emergency room of the community hospital. This team consults on every child and adolescent seen in the emergency room and makes face to face contact with any young person who is being considered for admission to the psychiatric facility. Funds are available which the Crisis team can use to contract with and purchase alternative services for children who do not have the financial resources.

Blumberg (2002) describes a crisis intervention program based at a children's psychiatric centre⁶¹. The program utilizes a community-based multidisciplinary treatment approach, including family therapy, psychiatric intervention and school-consultation. The goal of the program is to provide a safe and effective alternative to psychiatric hospitalization and residential treatment for children under 12 years old.

Home-based Treatment

Home-based treatment is an intensive service for young people with mental disorders who are in crisis and are otherwise eligible for admission to a residential setting¹³². Home-based treatment is a rapid-response acute service provided in the patient's own home at any time day or night. Members of a multidisciplinary team make up to several visits a day and provide medications, brief counselling, practical assistance, information and support to service users and their family¹²⁶. Although according to¹²⁶ they can provide services to people who are at significant risk to self or others, as well as those under compulsory treatment, Kurtz (2009) points out that exclusion criteria for home treatment are severe psychosis, life-threatening eating disorder, risk-taking behaviour and living more than 30km from therapeutic unit¹²⁹. The team remains available until the crisis is resolved. In contrast to New Zealand, it is a rapidly increasing service in the UK¹²⁶ and US¹⁴.

Some programs provide Home-Based Crisis Intervention as part of a larger multiagency crisis intervention service that may also include Mobile Crisis Services and inpatient treatment¹¹⁵.

Several models of intensive in-home services have been described^{68, 83}. Evans et al. (1997) describe and compare three in-home crisis services: Home-Based Crisis Intervention, Enhanced Home-Based Crisis Intervention, and Crisis Case Management. These interventions are typically short in duration (4-6 weeks), occur in homes, are designed to teach crisis management and communication skills, and to provide a more comprehensive array of service options by filling the gap between less intensive community-based clinic services and more intensive and restrictive residential and inpatient programs. They are often viewed as alternatives to hospitalization for children experiencing psychiatric crises⁶⁸. In NY, guiding principles in designing HBCI is that every child in psychiatric crisis and his or her family should have access to emergency services that provide them with comprehensive assessment, stabilization, and if necessary treatment and referral. The system must contain a wide array of flexible emergency service options that are available to families in their homes and in the community. These services include mobile crisis teams, crisis residences, acute inpatient programs and home-based crisis intervention⁶⁸.

The first model, the Home-based Crisis Intervention model aims to prevent psychiatric hospitalization by offering short-term intensive in-home services to a family with a child at imminent risk of being admitted to a psychiatric inpatient program. The primary goal is to defuse the presenting crisis so that the child can remain at home. The teams consist of 4 counsellors and 1 supervisor and are responsible for a maximum of 2 children and their families at any given time. Their flexible working hours include a 24 hours response capability, 7 days a week. The program can be accessed through referrals from psychiatric hospitals or general hospitals providing psychiatric emergency services. Contact is initiated within 24 hours of referral and services are provided for 4-6 weeks. Child safety is ensured by including a child psychiatrist who is available for in-home psychiatric assessment and treatment services, as well as for consultation to counsellors. Interventions focus on family strengths and needs, using a multifaceted approach (skill building, counselling concrete services,...)⁶⁸.

The second model, the Enhanced Home-Based Crisis Intervention, have the same staffing and core services as the previous one, but additional support services are provided for families (e.g. in-home and out-home respite care; flexible dollars) and training/technical assistance for staff⁶⁸.

The third model, the Crisis Case Management model, is focused on rapid assessment of need and linkage to services. The caseload is 4 families for crisis case management and 4 families for intensive long-term case management. Additional services are provided for families (e.g. respite care and flexible dollars), and the service is available 24/7^{127, 129}. A psychiatrist is available for consultation to crisis managers⁶⁸. Crisis case management services have the specific goal of reducing hospital admissions by offering intensive support. Brief hospitalization is sometimes used to provide respite care to families¹²⁷.

Special Service Program

In 1992 a community crisis intervention and behavioural support program for persons with developmental disabilities was established in Minnesota, US, within an "Intermediate Care Facility for persons who are Mentally Retarded" (ICF/MR) serving five counties in the western Minneapolis metropolitan area ¹⁰⁴. This Special Services Program provides two basic types of services: 1) outreach services, 2) short-term (<90 days) crisis placement services in a specialized unit. Both services involve multidisciplinary assessment and intervention focused on no aversive responses to and functional analyses of challenging behaviour. Service referrals are made by case managers. When possible outreach services are stressed as the first option for services provided. The crisis unit provides long-term goals. It is staffed 24 hours a day with a minimum staff to client ration of 2:4 during waking hours. The unit staff includes two program coordinators, residential counsellors and two night care workers. It can house up to 4 individuals at a time ¹⁰⁴.

Classification (descriptive)	Organizational model	Organizational configuration
	<p>Integrated PES model (Kates et al., 1996)</p> <p>Dedicated bed and scatter bed model</p> <p>Semi-institutional service model (O'Hagan, 2006)</p>	<p>- Crisis service in paediatric hospital (Feiguine et al. 2000) <i>emergency assessment and short term treatment, includes emergency consultation to ED</i></p> <p>- integration of 5 hospital-run emergency services into single emergency service</p> <p>- 2 out of 10 unit beds dedicated for emergency purposes (Cotgrove, 1997) – UK</p> <p>- adolescent unit in general hospital (Corrigall & Mitchell, 2002) – UK</p> <p>- Inpatient unit in tertiary care paediatric teaching hospital (Greenham & Bisnaire, 2009) – CAN <i>12 bed crisis stabilization and assessment unit (72 hours)</i> <i>Interdisciplinary assessment services (14 days LOS)</i> <i>6 bed transitional care (following crisis admission)</i> <i>Liaison multidisciplinary team</i></p> <p>- county-wide scattered site crisis bed program for seriously disturbed youngsters (Schweitzer & Dubey, 1994) <i>interagency coalition (mental health, juvenile justice, social services) using available beds in facilities of participating agencies</i> <i>beds not dedicated to crisis, pool of available beds</i> <i>interagency crisis consultation team screens referrals</i> <i>computerized registry system</i></p> <p>- partial hospitals and crisis respite, 24h response service, crisis beds</p> <p>- small residential services outside hospitals, attached to community MH centers</p>

Classification (descriptive)	Organizational model	Organizational configuration
Psychiatric Urgent Care Facility	Institutional service model Semi-institutional service model	<ul style="list-style-type: none"> - Crisis Intervention Unit in child psychiatric hospital with outpatient services (Emmery & Decorte, 2003) - Collaboration of rural community clinics with emergency hotline (Gillig, 2004) – US - Day and partial hospitals (O'Hagan, 2006)
Mobile Emergency psychiatric services	Youth Emergency Services (Shulman & Athey, 1993) APA guidelines (Allen et al., 2002)	<ul style="list-style-type: none"> - Interrelated programmes & services, outreach -24h/7d Six basic components: <ul style="list-style-type: none"> the Child Crisis Specialists, The Mobile Crisis team, Expanded Children's services, Home-Based Crisis Intervention, Residential Crisis services and Psychiatric Hospitalization. - training, staffing and community linkages
Community-based services	Out-of-hospital approaches: <ul style="list-style-type: none"> Multisystemic Therapy Intensive Case Management Assertive Outreach Crisis Stabilization Program Home-based Treatment Special Service Program 	<ul style="list-style-type: none"> - Community-based Crisis Services - UK <ul style="list-style-type: none"> <i>Crisiservices 24/7</i> <i>Prevention of hospitalisation & stabilization of crisis situation</i> <i>Evaluation, assessment, crisis intervention, stabilization and follow-up + involving family</i> - Community-based Acute Services - NZ <ul style="list-style-type: none"> <i>Small home-like environments, Not accessible for all patients (mostly less severe crises)</i>

Other

Crisis and suicide hotlines (telephone crisis services) have the unique ability to a) offer some level of service at times when other services are unavailable, b) offer confidentiality and anonymity to clients, c) provide information about other treatment sources, d) providing a safe and nonjudgmental environment enabling clients to articulate complex feelings. They offer the added benefit of allowing callers to freely initiate and terminate contact⁵⁷.

2.4.3.6 Governmental frameworks

In UK, the department of health developed a public service agreement for Children and Adolescents Mental Health Services (CAMHS) to provide 24 hours access and develop crisis services. However, most children and adolescents in need do not have (rapid) access to an inpatient unit^{42, 132}. The unwillingness or inability of many units to admit in an emergency contributes to the high number of young people admitted to adult psychiatric or paediatric wards¹³³. Kurtz (2009) describes the evidence base to guide development of Tier 4 CAMHS (Child and Adolescent Mental Health Services) in the UK¹²⁹. Although Tier 4 was originally an inpatient service, it has more recently become to be understood as multi-faceted, with multi-agency services that can include inreach, outreach, intensive and crisis community initiatives, day provision, therapeutic fostering and other services that may be described as 'wrap around'.

In 1999, the National Board of Hospital Services in Belgium, sanctioned the advisory text regarding the content and organization of emergency psychiatric services. In 2001 advices for the operationalization were formulated based on following prerequisites: 1) a simultaneous and integrated approach is required, 2) everyone is equally responsible, 3) unnecessary steps need to be avoided in providing appropriate treatment, 4) registration and indication need to be distinguished from follow up care, and finally, 5) the principles in this advice including concrete proposals for operationalization are also applicable on children and adolescents, taking into account the specificities of this group¹³⁴.

Broers, Depla and Donker (1996) describe 24/7 services for RIAGGs (Regional Institute for Ambulant Mental Health Care) in the Netherlands¹³⁵. They compare the quality of services provided by five different acute services representative for the organisation of all acute services in the Netherlands. They found that RIAGGs with a separate crisis unit are more capable of motivating patients for further treatment. However, they do not indicate whether the described services also support child psychiatric emergencies.

A large project has been set up in Amsterdam (the Netherlands) in which Mental Health Care services, the police, the Community Health services and the general practitioners collaborate to establish a client-focused, effective, 24/7 available high quality service. The system is strongly directed at the client's own resources as well as those of his/her environment (family, friends or others involved). It aims at keeping costs low whilst maximising efficiency, and strong communication between chain partners. The service offers timely crisis intervention (<24h) for children, adolescents and adults with acute problems ranging from severe psychosocial problems to severe psychopathology, with or without addiction issues. It also includes a mobile crisis team for youth¹³⁶.

Key points

- **A diversity of emergency psychiatric service organizations is currently available for children and adolescents: Services in a medical emergency setting, psychiatric emergency facilities, mobile emergency psychiatric services, community-based services.**

2.4.4 Evidence base

The general observation holds that very little evidence is available on the organisation of child and adolescent emergency services. In this section we try to summarise some of the findings.

2.4.4.1 *Psychiatric Emergency Facilities*

Effectiveness studies for inpatient treatment have been limited historically by poor methodology and difficulties in generating appropriate treatment controls for experimental studies. Additionally, it is an example of complex intervention where the active agent of change may not be simple and systematic¹³⁷.

It is often held that admission can offer containment and rapidly reduce risk in acute crises. However, there is uncertainty as to the effective components of the intervention, optimal length of admission, suitability for prepubertal children and whether any positive effects gained are maintained following discharge¹³⁷. McDougall et al. (2008), on the other hand, point out that there is strong evidence that inpatient services are effective¹³².

Few studies evaluate the outcome of short-term inpatient crisis stabilization and assessment programs. The existing outcome research shares a number of limitations: many studies are qualitative and descriptive without presenting empirical outcome data. Others are retrospective. Few utilize appropriate comparison groups, standardized and psychometrically sound outcome tools, or baseline assessments of functioning and level of severity of presenting complaints⁹⁸.

Greenham and Bisnaire (2009) provide outcome data from inpatient crisis stabilization/assessment programs for youth⁹⁸. Their data indicate a significant reduction in risk acuity at discharge or transfer for most youth; those referred to transitional care continue to have significant internalizing symptoms, including risk suicide.

Kurtz (2009) summarizes the evidence base on two models of care: 1) inpatient and day patient care, 2) out of hospital approaches (e.g. Treatment Foster Care, Multisystemic Therapy & Case Management)¹²⁹. Most inpatient units in the UK have day programmes providing intensive day treatment. The evidence suggests that treatment effects of several community models of care are of similar size to those obtained through residential treatment and may be sustained longer after follow up. As yet, there is not always the evidence to decide which model is best for which group of young people.

No randomized evidence has been identified comparing intensive day treatment for young people in crisis with inpatient care or an alternative^{127, 138}.

The implementation of a Rapid Response Model in a Canadian psychiatric hospital caused a very substantial drop in night time and weekend emergency consultations for which daytime urgent consultations were substituted. This was not associated with a drop in the overall number of visits and was not mirrored in another department consulting to the same emergency service. It was associated with an increase in daytime admissions⁸.

2.4.4.2 *Community based services*

A systematic review for the UK National Institute for Health research Service Delivery & Organization Programme¹³⁸ aimed to identify alternatives to inpatient mental health services for children and adolescents and to assess the evidence of effectiveness, acceptability and cost of these alternatives. Lamb (2009) discusses this review and points out that the target population included was not limited to children and adolescents in psychiatric crisis. Participants included children and adolescents aged 5-18 years with a serious mental disorder requiring very specialist services¹²⁷. Lamb (2009) concludes that, compared to adult literature, there is little research into alternatives to inpatient care for young people requiring intensive treatment of acute or complex severe mental health problems¹²⁷.

Shepperd et al. (2009) found no randomized evidence comparing crisis case management with inpatient care or other alternatives¹³⁸. Nor were differences reported at follow-up for behavioural or psychological outcomes for those receiving intensive outpatient services compared to inpatient care¹²⁷.

Blumberg (2002) identified three published studies in the literature on the effectiveness of psychiatric crisis intervention and hospital diversion for children and adolescents⁶¹. It concerned a Systemic Crisis Intervention Program (SCIP), an Emergency Room Follow Up Team (ERFUT) and Multisystemic Therapy (MST). The interventions share features such as multidisciplinary intervention teams, rapid response, and psychotherapy focused on specific individual and family goals. All three programs were judged to be effective. Blumberg (2002) also described the impact of a crisis intervention program as an alternative to use of psychiatric treatment beds for young children⁶¹. In comparison to an historical control group, the program resulted in a 23% reduction in the use of psychiatric treatment beds.

MST and Intensive Case management have the strongest evidence base¹²⁷. At least four intensive in-home intervention programs – Multisystemic Therapy, Crisis Case Management, Home-Based Crisis Intervention, and Enhanced Home-Based Crisis Intervention- have been shown to decrease inpatient hospitalization and placement in restrictive service settings⁶⁷. These effective community-based programs could be linked directly with mobile crisis services to reduce the number of PES referrals and restrictive placements⁶⁷.

In a randomized trial studying MST as an alternative to inpatient treatment for young people in psychiatric crisis, nearly 50% of the MST group needed psychiatric admission in the initial period¹³⁰. The authors conclude that this highly intensive form of focused care does not substitute for inpatient provision but can reduce the need¹²⁷.

Roberts and Everly (2006) meta-analysis of 36 crisis intervention studies found that 8 hours or more of in-home intensive family-based crisis intervention over a 1- to 3-month period is highly effective for sharply reducing child abuse and neglect with troubled families¹³⁹. Also effective but to a lesser extent is multicomponent crisis intervention stress management (CISM), as well as a 4- to 12- session format of crisis intervention. The authors note however that research on crisis intervention is in its early stage of development.

Several randomized controlled trials relating to models of home treatment that include both short-term acute care and longer-term 'assertive' follow-up demonstrate that a majority of individuals with severe, acute mental health problems can be cared for by community-focused services with social and symptomatic outcomes equal or better than when care is provided by services with a hospital focus¹⁰³. Evidence suggests that intensive home treatment delivered by crisis intervention teams does reduce admission rates, although a substantial group of patients is still admitted to hospital, despite the availability of such teams, with admission rates ranging from 11% to 29% of service users referred from community sources^{103, 132, 140}. Very little research evidence as to what characteristics may be predictive of this exists¹⁰³.

Pumariega and Winters (2003) describe seven evidence-based community-based interventions: the wraparound approach, intensive case management, non-traditional crisis service models such as mobile crisis teams, home-based interventions and short term residential services such as therapeutic foster homes³¹. Finally, partial hospitalization and day treatment models are described and evidence is presented. They conclude that community-based systems of care offer some promising ecologically based approaches to child psychiatric emergencies, but that more effectiveness research is needed on child and adolescent mental health crisis services.

In a prospective study, Greenfield et al. (2002) report the outcomes of suicidal adolescents who came to the emergency department of a university hospital and were treated with either a rapid response outpatient team approach, or a model with a wait of approximately 10 days before follow up could be initiated after discharge from the emergency department⁵⁸. Patients who had access to a rapid-response outpatient team were hospitalized less often than those who did not.

The outcomes associated with both treatment models were essentially identical, indicating that most adolescents can be treated within a simple rapid-response outpatient team model.

In addition to out-of-home placement prevention rates, a few investigations have examined measures of individual and family functioning and behavioural indicators⁴³. Some studies indicate that home treatment leads to longer maintenance of symptom and behaviour improvement¹³².

2.4.4.3 *Mobile services*

Research comparing hospital-based emergency psychiatric service programs to community-based mobile psychiatric programs shows that the former have higher rates of inpatient admissions for youths and adults¹²⁰, and that the latter have an increased capacity to divert youth from ED visits as well as restrictive residential services¹¹⁵. Consumers of home-based crisis response have a high likelihood of being referred or enrolled on other community-based services⁶⁴ which is likely to contribute to successful ED diversions¹²⁰.

2.4.4.4 *Other*

Telephone crisis services including crisis/suicide hotlines have the potential to serve vulnerable individuals in crisis, although evidence for their efficacy is sparse⁵⁷. Telephone crisis counselling appears to yield significant decreases in suicidality and significant improvements in the mental state of youth during the course of the call⁵⁷. However, a study examining the attitudes of 519 adolescents showed that few adolescents (2%) used hotlines and negative attitudes were stronger toward hotlines than they were toward other formal sources of help⁵⁷.

Key points

- **Only very few effectiveness studies are found.**
- **The research evidence suggests a need for a combination of a variety of complementary models of intensive mental healthcare provision including intensive outreach services, crisis intervention teams and age-appropriate day patient and inpatient provision.**
- **It appears that crisis programs can serve as an effective means of reducing hospitalization and other out-of-home placements for many children.**
- **There is insufficient evidence on which to base decisions on which model is best for which group of young people and further health services evaluation research is needed.**

2.4.5 Registration systems

Little to no information has been found regarding systems to register psychiatric emergencies and crises systematically or on a regional scale. Several authors describe their local registration systems (see also 0), but no large scale systems have been found. In Belgium, hospital based psychiatric care by children and adolescents is registered in:

- the Minimal Psychiatric Data / Minimale Psychiatrische Gegevens/Résumé Psychiatrique Minimal (MPD/MPG/ RPM), and
- the Minimal Clinical Data / Minimale Klinische Gegevens/ Résumé Clinique Minimal (MCD/MPG/RPM).

Both registration systems are compulsory systems operating respectively in all general hospitals (MCD/MKG/RCM) and in all psychiatric hospital and psychiatric units of general hospitals (MPD/MPG/RPM).

In MCD/MKG/RCM, a separate registration for emergency units is included. Since 2008, suicidality and social problems are added to the classification of the emergencies in MCD/MKG/RCM. However, the system does not allow to register aggression towards others and dangerous or problematic contexts. In MPD/MPG/RPM, emergencies are not registered separately.

In Belgium, Flanders has developed a crisis network within “Integrale Jeugdhulp (IJH)”, which is a child welfare policy process aiming to optimize youth care by facilitating collaboration between seven sectors involved with child welfare (see Chapter 3). This network uses an interregional registration system to gain insight in the types of crisis questions within a region whilst at the same time providing utilization data of the different care programs¹⁴¹. This registration system is part of the “Databank Integrale Jeugdhulp” and serves all the regional crisis networks. It consists of network utilization data and admission data. The former provides an overview of the available care within the crisis network at any point in time. The latter presents qualitative data on the clients in and around the regional networks¹⁴². Some of the data vary with the mode of registration and only have an indicative value¹⁴². We did not find information on other registration systems for psychiatric emergency care, for instance with respect to the ambulatory mental health centres.

The core indication for a psychiatric emergency intervention is dangerousness to oneself or others. One aspect of a valid registration system within emergency psychiatric care, would be the possibility to assess and register the presence or absence of this core feature. Therefore we examined the existence of clinical tools that could serve this purpose. Although several tools exist to measure suicide risk¹⁰², no specific tools exist to measure the patients’ level of danger to others. To our knowledge, the CASII (Child and Adolescent Service Intensity Instrument) is one of the few, if not the only, tools that includes both the assessment of danger to oneself and to others, and might therefore be suitable to be included in a registration system¹⁴³. In Belgium, the CASII has been translated in Dutch, i.e. the IZIKA¹⁴⁴.

- **Little to no information has been found regarding systems to register psychiatric emergencies and crises systematically or on a regional scale**

2.4.6 Discussion

2.4.6.1 A lack of evidence

Most crisis and emergency programs have no formal evaluation component; few studies and evaluations examining effectiveness have been conducted^{31, 43, 90, 94}.

Brown (2005) reviewed EPS literature published between 1983 and 2003⁹¹. A total of 85 articles were reviewed, while only 3 discuss EPS in the paediatric population, indicating a scarcity in the availability of literature on this subject. In addition, the literature included in the review suffers from several methodological limitations: studies are primarily descriptive, and lack empirical analysis, the universal applicability of the results is often questionable due to the fact that the samples frequently exist of only a single or at most several facilities within one region, and author’s assertions are not backed by empirical evidence. Further, the majority of the studies on patient characteristics examine a single psychiatric diagnosis without accounting for co-morbidities, and of those studies that did include empirical analysis, the level of statistical rigor was weak⁹¹.

Many of the papers published after 2003 suffer from the same limitations as described above⁹¹. Additional methodological shortcomings that hinder comparison are:

- A lack of terminological and conceptual clarity and consistency: e.g. community (services), psychiatric emergency services, treatment, intervention, crisis intervention (services),... reflected a variety of concepts meanings throughout the reports.
- Lack of clear population descriptions: in a significant proportion of papers no indication was given of the population and in many cases it is unclear whether the services described only refer to adults or also apply to the child and/or adolescent population. Studies which focus on children and youth usually clearly report this, but include a wide variety of age ranges, e.g. the upper limit for a population of adolescents may range from 16 to 22 years¹⁰⁰.

Besides this lack of evidence, the literature is biased by the amount of American studies. Since the different health care systems in different countries have a major influence on the organization of psychiatric emergency services this phenomenon makes it even harder to compare organizational aspects.

The research evidence suggests a need for a combination of a variety of complementary models of intensive mental healthcare provision including intensive outreach services, crisis intervention teams and age-appropriate day patient and inpatient provision. It appears that crisis programs can serve as an effective means of reducing hospitalization and other out-of-home placements for many children^{43, 97, 130}. However, there is insufficient evidence on which to base decisions on which model is best for which group of young people and randomized control studies are urgently needed^{127, 132}. Treatment effects of several community models of care are of similar size to those obtained through residential treatment and may be sustained longer after follow up. As yet there is not always the evidence to decide which model is best for which group of young people¹²⁹.

2.4.6.2 *Providing child and adolescent emergency psychiatric services or crisis services*

There is a need for greater clarity with respect to crisis programs, their components, coordination and characteristics of the people they serve. In addition, the settings in which mental health emergency and crisis intervention services are delivered, need to be carefully considered, as the majority has been developed and studied in urban and metropolitan areas²².

It has been argued in literature that out of the existing diversity of services, a tendency emerges to develop services that fit available resources and the structure of local institutions, rather than the needs of patients in a psychiatric emergency or crisis. The standards for psychiatric emergency services have been poorly specified and are generally lower than any other category of organized service, they are unpredictable from facility to facility and hour to hour within the same facility¹⁴.

The evidence points towards a need for a 'mixed economy' of residential outreach, community and home-based services. Gaps in the range of provision such as emergency access to home-based services and inpatient beds for 16-17 year olds should be addressed as a priority¹³². There is still a lack of child and adolescent mobile crisis services operating extended hours to augment outpatient nine-to-five mental health services for these age groups²⁰.

Psychiatric services cannot provide the entire range of crisis interventions required in our society. Emergency services should be carefully distinguished from a network of formal and informal crisis support structures²⁰. Crises can precipitate or be a consequence of mental illness. There is strong evidence that more 24-hour crisis response services are needed for individuals with mental illness and their families²⁰. Rosen (1998) points out that not all crises should be referred to psychiatric services, although these are most appropriate for people in crisis who have diagnosable psychiatric illnesses and who may be suicidal. Not only do psychiatric services not have the resources or the mandate to handle all crises in the community, when the crisis is not complicated by significant psychiatric symptoms, it may be managed with significantly better outcome outside the psychiatric setting²⁰.

The literature on emergency psychiatry tends to be conceptualized from the perspective of emergency psychiatry (generally by physicians) and emphasizes the acute reactions of patients with diagnosed psychopathology. The literature on crisis intervention tends to be found in psychology, social work and nursing and emphasizes disruptions in living experienced by relatively normal individuals who are treated in outpatient settings. Crisis intervention literature rarely describes "emergencies" whereas psychiatric emergency literature rarely defines or discuss "crisis"¹¹.

Chan & Noone (2000) present the following conclusions with regard to the development of emergency mental health services in general ¹¹: 1) The emergency departments of general hospitals increasingly tend to become the gate keeper to the mental health system, 2) Improved quality of assessments by psychiatric emergency services should lead to more clinically appropriate decisions about who needs to be admitted and who does not need to be admitted, 3) Many of the diagnostic groups that contribute to the problem of "chronic crisis patients" may not be best dealt with by traditional hospitalization, 4) The orientation of psychiatric emergency services should develop from an emphasis on triage to incorporate crisis resolution, based on thorough assessment of available patient coping resources and of environmental supports, 5) Psychiatric emergency services are uniquely positioned at the interface between the community and hospital and between inpatient and out-patient services and thus, can sensitively mirror changes in the philosophy and provision of mental health services.

2.4.6.3 *Quality of care*

A good quality service should be equitable, accessible, acceptable, appropriate, effective, ethical, and efficient. The evidence required to ensure quality in service provision must take into account a range of considerations when deciding that provision is successful. Much of the evidence in Britain is limited in terms of randomized controlled trials. Much of the evidence that is pertinent for service development comes from methods classified as 'qualitative' ¹²⁹. Elements of good acute services also include: 1) a safe normalizing environment, 2) recovery values, 3) egalitarian culture, 4) a well matched mix of people, 5) a broad range of competencies, medical as well as psychosocial competencies, and 6) a broad range of interventions ¹²⁶.

Various surveys in New Zealand of people's views about what they need from services when they are in a mental health crisis have shown with overwhelming consistency that they want: 1) a safe unthreatening environment, 2) a small number of other people around them, 3) accepting people to talk to, 4) help to solve problems, 5) a choice of psychotherapy, complementary and medical treatments, 6) acknowledgement of their strengths, 7) direct involvement in decision-making about their care, and 8) to learn from the crisis and find personal meaning in it ¹²⁶. Results from a qualitative study of examining the experience and satisfaction of families of young children in psychiatric crisis show the need for development of a more family-centred, community-based crisis response system that includes secure transportation and access to 'warm-line' services ¹²⁸.

2.4.6.4 *Accessibility of care*

Hospital-based services are overwhelmed by large numbers of sometimes inappropriate referral of psychiatric emergencies and respond by introducing some combination of triage (selection and allocation of cases) and waiting lists. Community referral sources are frustrated by the long waiting lists for appointments to hospital-based services and the triage efforts are seen as exclusionary. Therefore, a frequent outcome in communities that lack an organized system of care, is the increased use of crisis services via the emergency department and traditional hospital-based emergency services may become the 'default' mental health crisis system ^{11,31}. These ED referrals of the triage-bypass type are not necessarily true emergencies. In part, the problem inherent in this complex process is the development of divergent conceptions of what constitutes a crisis or emergency ⁸.

Hoyle & White (2003a) present a critical review of practices and models for treatment of children and adolescents including an identification of barriers to mental health treatment and recommendations for their resolution ⁵³. They plea for a community-wide system for inpatient and follow up care, including sexual abuse assessment teams, psychiatric ED or 24-hr psychiatric emergency services as in their opinion mental health emergencies require more complex care than can be delivered in the ED only.

2.4.6.5 *Considerations on population needs*

A qualitative research using structured group interviews to gain a better understanding of how Washington State hospital emergency departments identify and refer children and adolescents with mental health concerns point to a system wide lack of emergency mental health services for youth, and a lack of coordination between larger mental health system and hospital EDs¹⁴⁵.

Key points

- **The available literature is scarce and suffers from methodological limitations.**
- **Studies published on this subject have an American bias.**
- **More clarity is needed with respect to EPS/CIS programs, their components, coordination and characteristics of the people they serve.**
- **The research evidence suggests a need for a combination of a variety of complementary models of intensive psychiatric care provision including intensive outreach services, crisis intervention teams and age-appropriate day patient and inpatient provision.**
- **The standards for psychiatric emergency services have been poorly specified and are generally lower than any other category of organized service, they are unpredictable from facility to facility and hour to hour within the same facility**
- **A tendency has emerged to develop services that fit available resources and the structure of local institutions, rather than the needs of patients in a psychiatric emergency or crisis.**
- **There is insufficient evidence on which model is best for which group of young people. More research is urgently needed.**

3 EMERGENCY PSYCHIATRY AND CRISIS INTERVENTION FOR CHILDREN AND ADOLESCENTS: AVAILABILITY AND UTILIZATION IN BELGIUM

3.1 INTRODUCTION

3.1.1 Mental health care for children and adolescents: A complex government framework

In Belgium, the responsibility of caring for children's and adolescents' mental health is distributed among different sectors such as education, family, welfare, justice, and health care. School and family are the two 'natural' systems that support the development and mental health of children. Other sectors provide professional care for children and adolescents with mental health issues: health care sector, the welfare sector and the justice sector. These sectors differ with regards to responsibility, legal framework, financing, and professions involved. In ¹⁴⁶ each of the systems is described in more detail.

- The health care system is responsible for detecting, diagnosing and treating diseases, disorders or disabilities; the subdivision of 'Mental Health Care' focuses on mental health rather than somatic issues..
- The welfare system is responsible for safeguarding an individual's right to housing, nourishment, employment and education. Children in vulnerable situations are the main focus within the Welfare system.
- The justice system has a legal responsibility in domains like delinquency and child abuse.

Belgium as a federal state is politically complex, also for the organization of health care, welfare and justice; the state structure identifies three communities related to language, culture and personal matters (i.e., the Flemish, French and German Community). Furthermore it distinguishes three independent regions when it comes to political powers with regard to socio-economic areas (The Flemish Region (Flanders), the Walloon Region and the Brussels Capital Region) ¹⁴⁷.

Health care related services for children and adolescents with mental health issues include mainly:

1. On the federal level:
 - hospital-based child and adolescent psychiatric centres
 - centres for rehabilitation (revalidatiecentra/centres de revalidation) for children and adolescents with psychopathology
2. On the community level:
 - youth teams within ambulatory mental health services
 - institutions and services for children and adolescents with emotional or behavioural handicap (MPI/IMP)
3. A large number of private practices of medical doctors, psychologists, psychiatrists, social workers and nurses.

The communities also have authority with respect to health care prevention and care for children and adolescents with disabilities.

The child welfare system has not been specifically created for mental health care matters but focuses on children whose welfare is endangered because the parents or family are unable to provide adequate care, education or guidance (i.e. problematische opvoedingssituatie – 'POS'). On average 60% of children and adolescents receiving care from child welfare suffer severe psychopathology ¹⁴⁸.

It is mainly a communities' responsibility and includes a.o. foster care, residential and home-based care, and parental support.

Justice is a federal matter and is concerned with the care for youth delinquents. Youth protection is part of the justice competencies on a federal level, but since the 1980s, communities have become responsible for the development of the protective services for youth. Although the measures that a juvenile court may enforce, are determined by the federal state, the communities are responsible for the execution thereof. In Flanders, both private and community institutions may be involved (<http://wvg.vlaanderen.be/jongerenwelzijn/poo/inleiding.htm>)¹⁴⁷.

3.1.2 Aim and structure of this chapter

This chapter presents an overview of the availability and utilization patterns of emergency psychiatric care and crisis intervention for children and adolescents in Belgium.

In view of the complexity of the Belgian federal state, we have organized the sections below based on the systems' responsibilities: i.e. (mental) health care, welfare and justice.

Firstly, we briefly describe for each of the sectors what they currently offer with respect to emergency psychiatry and crisis intervention for children and adolescents, based on :

- a search of the grey literature (policy documents, reports, books,...).
- a survey conducted as part of the qualitative research. The survey provides an overview of services and or institutions in Belgium that currently provide emergency psychiatric care for children and or adolescents.

Secondly, we describe the current financing of emergency psychiatric care in Belgium.

Thirdly, we present utilization data on emergency psychiatric care and crisis intervention services in Belgium. Despite searching for databases or registration systems within several sectors, utilization data were ultimately available only from the obligatory registration databases for hospitals (MKG-RCM/MPG-RPM) and from an evaluation report for Integrated Youth Care in Flanders (Integrale JeugdHulp).

3.2 AVAILABILITY OF EMERGENCY PSYCHIATRY AND CRISIS INTERVENTION FOR CHILDREN AND ADOLESCENTS IN BELGIUM

3.2.1 Methodology

3.2.1.1 Literature review

The internet and grey literature were searched for documents relating to emergency psychiatric care for children and adolescents in Belgium, using the Dutch and French search terms described for the systematic literature search (see chapter 2). In addition, reports and books were searched for relevant information.

3.2.1.2 Survey

The aim of the survey was 1) to obtain an overview of services and/or institutions in Belgium that currently provide emergency psychiatric care for children and/or adolescents, and 2) to list the obstacles hindering the organisation or the use of psychiatric emergency care for children and adolescents.

We used a survey containing both closed and open questions. A complete survey (Dutch and French) is available in Appendix 3.1-3.2.

The first four questions provide participant information (profession, experience with psychiatric emergencies,...). An extensive description of the participants to the nominal and focus groups is provided in chapter 4 (qualitative research).

Questions 5 and 6 are most relevant for describing emergency psychiatric care currently available in Belgium for children and adolescents:

- Are there institutions in your province that specifically offer emergency psychiatric care for children and adolescents? If so, please write down the name (and type of institution).
- In situations where in your opinion emergency psychiatric care for children and adolescents is required, do you sometimes turn to institutions other than those previously listed? If so, please write down the name (and type of institution).

The question relating to problems with the current offer in psychiatric emergency care for children and adolescents will be discussed in chapter 4.

Following a general introduction to the study and a more specific description of the scope of the survey, all participants to the nominal and focus group sessions (see chapter 4, 1.2 for selection) were invited to fill in the anonymous questionnaire prior to the start of the sessions.

All data were tabulated and summarized per question and per province. These data are purely descriptive in nature and represent the personal view and experience of the participants. In this chapter we present a summary of the data relating to the emergency psychiatric care currently available in each province.

3.2.2 Literature results

An extensive search in the grey literature yielded very little results in terms of structural provisions of child and adolescent emergency psychiatric care or crisis intervention. Several isolated initiatives to respond to crises or psychiatric emergencies in children and adolescents are described, but information on structural emergency psychiatric care or crisis intervention for children and adolescents is practically nonexistent.

3.2.2.1 *Mental health care*

On a federal level

Hospital-based emergency services and child and adolescent psychiatric centres structurally offer emergency psychiatric care or crisis intervention for children and adolescents. Any hospital can autonomously decide to offer emergency psychiatry or crisis intervention, and therefore the organization and the content of the services are highly variable. Services may range from absence of any emergency psychiatric care, over a consultant or liaison function of a child psychiatrist to specific units.

In 2008, the federal government invested additional resources in hospital-based psychiatric care for children and adolescents under measure of the juvenile court (i.e. For-K). Additional beds and finances were provided to child and adolescent psychiatric centres to offer care to children and adolescents with psychopathology that have committed a crime or those that are involved in a problematic educational situation (POS) ¹⁴⁹.

Although largely focused on an adult population, some addiction centres (rehabilitation centres) in Belgium offer emergency care to adolescents over 15 years of age.

On a community level

Ambulatory mental health services and MPI/IMPs generally do not offer emergency psychiatric care or crisis intervention for children and adolescents in a systematically and structurally organized manner.

3.2.2.2 *Child welfare*

Flemish Community

In Flanders, “Integrale JeugdHulp (IJH)” is a child welfare policy process aiming to optimize youth care by providing instruments that facilitate collaboration between seven sectors involved with child welfare: “Algemeen WelzijnsWerk (AWW)”, “Bijzondere JeugdBijstand (BJB)”, “Centra Geestelijke Gezondheidszorg (CGG)”, “Centra Leerlingenbegeleiding (CLB)”, “Kind & Gezin (K&G)”, Centra Integrale Gezinszorg (CIG)” en “Vlaams Agentschap voor Personen met een Handicap (VAPH)”.

Recently, IJH has created a ‘Netwerk Crisis hulp’ in every province. The crisis network offers the following services:

1. A crisis contact number is available 24 hours a day, 7 days a week. Any professional (and only professionals) that is confronted with a child and/or family in a crisis situation can contact the crisis number. Response time is usually less than 24 hours.
2. Crisis intervention focused on managing acute relational/emotional problems either at the patients’ home, the crisis centre or the referrer’s. The crisis worker clarifies the request for help and ensures safety. Mobile interventions are part of the service.
3. Crisis guidance may be organized following crisis intervention and lasts for a maximum of 4 weeks, during which time the crisis situation is followed up intensively.

Crisis admission of maximum 7 days duration may be provided in combination with crisis intervention and crisis guidance.

Home-based crisis intervention (CaH) is an intensive, ambulatory and mobile form of crisis intervention for families in crisis situations. The main aim of CaH is preventing placement of one or more of the minors and to present the family with new perspectives. There are no waiting lists and families are contacted within 24 hours of presentation. The crisis intervention process lasts for approximately 1 month during which time the family can rely on professional guidance for an average of 6 hours a week. Families can present to CaH via “Bijzondere Jeugdbijstand” or the juvenile court’s social services. Home based crisis intervention is in some, but not all (e.g. Antwerp), provinces part of the crisis network of ‘Integrale Jeugdhulp’.

French Community

The French speaking Community has developed ambulatory teams ‘SOS –enfants’ and ‘SOS Jeunes’ These multidisciplinary teams provide crisis intervention and care for children at risk for or victim of maltreatment, abuse or neglect (www.federationsosenfants.be). No other reports regarding the work and progress of SOS enfants were found.

German Community

No particular initiatives for child and adolescent psychiatric care in Belgium exist to receive patients from the German Community. Most people are served in the Walloon hospitals and services. Collaboration has been put in place with the university hospital of the city of Aachen “Universitätsklinikum Aachen” to provide psychiatric emergency care to children and adolescents.

3.2.2.3 *The Justice system*

Currently, no institutions or sectors within the justice system offer specific services for children or adolescents with psychopathology. Thus, youth welfare and mental health care have taken on the responsibility of magisterial duties in case of emergencies, such as containment of delinquent youth ¹⁴⁶.

3.2.3 Survey results

The results from the survey largely confirm the findings from the literature search; emergency psychiatric care for children and adolescents in Belgium is mainly offered by the mental health care and the youth welfare services are involved. The full results of the survey are tabulated and presented in Appendix 3.3.

Table 3.1 briefly summarizes the survey results. For each of the provinces, the number of participants are presented, the total number of facilities providing emergency psychiatric care (EPC) for children and adolescents as cited by the participants, the number of participants stating the absence of any EPC in their province, or not being aware of any, the most frequently cited EPC option within each province, and finally, whether or not EPC located outside their own province was cited.

The average number of EPC options cited per participant varied between provinces from 1.2 (Liege) to 2.9 (Flemish Brabant). The highest variety of EPC options was provided in Hainaut (19 different EPC options by 10 participants), whereas in Luxembourg only 5 different EPC options were cited by 12 participants. In some provinces, one or more EPC options were cited by a majority of participants (e.g. In Luxembourg: 83% cited 'Centre Universitaire Provincial (CUP) La Clairière Bertrix' as a provider of EPC for children and adolescents; in Limburg 82% cited the child psychiatric clinic (KPC) Genk; in Antwerp 75% of participants cited the Antwerp University Child and Adolescent Psychiatry (UCKJA)). In other provinces, participants were less unanimous in citing EPC options (e.g. in Brabant Walloon, 'Outreaching de "La petite maison" Chastre' was the most frequently cited provider by 14% of participants. In all provinces, the majority of options cited were hospital based, be it psychiatric hospitals or psychiatric departments within general hospitals. In most provinces, one or more child welfare services and the justice system (juvenile court) were listed as one of options to turn to.

Table 3.1: The availability of emergency psychiatric care (EPC) per province based on a survey

Province	# Participants	# Facilities providing EPC	# Alternatives for EPC	available / EPC not known	mentioned EPC option	Most Frequently cited EPC option	Use of EPC outside province
Antwerp	16	8	8	1	15	UCKJA	yes
Brussels Capital	11	13	6	1	4	CHU St LUC	yes
Hainaut	10	19	19	0	2	Domaine Braine l'Alleud / centre de santé mental	yes
Limburg	11	6	5	0	9	KPC Genk	no
Liege	11	5	16	2	6	HOP Centre Hospitalier Citadelle	yes
Luxembourg	12	5	11	0	10	CUP La Clairière a Bertix	?
Namur	14	7	18	9	3	General hospital not specified	?
East – Flanders	12	10	9	1	7	UZ Gent	yes
Flemish Brabant	10	11	7	1	6	UC Kortenberg	yes
Walloon Brabant	14	11	16	9	2	Outreaching de "La petite maison" Chastre	yes
West - Flanders	13	8	6	1	9	De Korbeel Kortrijk	no

Although a limited number of institutions or services are specifically organized to provide emergency psychiatric care for children and adolescents, the survey shows that professionals seek care also in institutions that are not specifically oriented towards children or do not have a dedicated emergency psychiatry offer, such as adult psychiatry (e.g. UPSIE), family physicians, paediatrics, private practices of psychologists and/or psychiatrists, community institutions for delinquents, etc.

Key points

- **Structurally provided emergency psychiatry and crisis intervention for children and adolescents in Belgium is scarce.**
- **In the mental health system, hospital-based emergency psychiatric care may structurally be delivered by emergency services and child and adolescent psychiatric centres.**
- **In the welfare system, in Flanders, 'Integrale Jeugdhulp' has created a 'Netwerk Crisis Hulp' in each province.**
- **In the welfare system, in the French Community, 'SOS enfants' provides crisis intervention for children and adolescents at risk or victim of abuse, maltreatment and/or neglect.**
- **Within the justice system, no institutions or sectors offer specific crisis services for children or adolescents with psychopathology.**
- **The survey results on the provincial provision of emergency psychiatric care confirm that this care is mainly offered by hospital based services.**
- **Professionals in need of emergency psychiatric care for children and adolescents, however, also turn to institutions that are not specifically oriented towards children or do not have a dedicated emergency offer such as youth welfare services, adult psychiatry (e.g. UPSIE), family physicians, paediatrics, private practices of psychologists and/or psychiatrists, community institutions for delinquents, etc**

3.3 FINANCING OF SERVICES CURRENTLY PROVIDING EMERGENCY PSYCHIATRIC CARE IN BELGIUM

In the previous sections the availability of emergency psychiatry and crisis intervention for children and adolescents in Belgium was presented and discussed. This section discusses the financing principles of mental health care at different policy levels

3.3.1 Federal hospital level

Dual financing

Belgian hospital financing is to a large extent a dual system: nonmedical activities, such as accommodation and nursing activities are financed via a prospective closed-end macro budget while medical activities and technical procedures are predominantly reimbursed using a Fee For Service (FFS) mechanism. Only the B2-part of the Budget Financial Means (BFM/BMF) is discussed in this section. The B2-part covers main operational costs including nurses and medical consumables. Besides the B2 part, there are other financing components in the BFM/BMF, such as the A1 part for building investments and the B1 part for overhead, but these are not further described here. For a more detailed description and analysis, the reader may refer to ^{150, 151}.

In general, for each hospitalisation, the number of justified hospitalisation days is calculated, based on average national length of stay per APR-DRG (corrected for severity and age category). If the actual length of stay is smaller than the national average, the hospital is entitled to the national average (the justified number of days) and thus gains. On the other hand, if the actual length of stay exceeds the national average, these excess days are not reimbursed. Subsequently, the justified days are transformed into justified beds and points.

This transformation mechanism accounts for different staff ratios (the allocated points per justified bed differ across different hospital departments) as well as for different standard occupancy rates. Finally, every point has a Euro-value, allowing calculating the hospital budget.

On top of the nationally agreed fees (which consist of payments by the NIHDI and the patient (co-payments)), hospitals and physicians can also generate revenues from supplementary fees if patients choose to stay in a single or double room. These supplements are determined autonomously (within certain restrictions established by a national regulatory framework) by hospitals and physicians.

A-, K- and T- department

For the A-, K- and T-departments the number of recognised beds (corrected for standard occupancy rates) is used instead of the number of justified beds to calculate the points the hospital is entitled to. The funding for day- or night hospitalisation in acute psychiatry (Ad, An), chronic psychiatry (Td, Tn) or child psychiatry (Kd, Kn) is based on an expected utilisation of the 'partial hospital beds' during weekdays (i.e. expected occupancy of 80% of the capacity during 251 days per year – or 56% per year. The funding for 24-hour hospitalization (A, T, K beds) is based on 80% occupancy rate per year. The financing of a hospital stay in A-, K-, or T-beds is thus not linked with real costs or real activities. Due to the lack of a patient classification system for psychiatric patients, the payment system is not a function of the types of patients served and the resource intensity required by those patients. Funding of the stay component in A-, K-, or T-beds can thus be classified as fixed and prospective. Minimum norms for staffing per bed are demanded to ensure qualitative care.

D- and E- department

Financing of the D- and E-department consists of two major components: a basic part based on justified days and beds and a supplementary part based on activity and care profile. Since the justified days depend on the national average length of stay for a particular pathology, the basic part is fixed and prospective per APR-DRG, creating an incentive to reduce the length of stay within a hospital. The aim of this system is to make hospitals financially responsible for the excess days (i.e. compared to the national average length of stay) they produce. A possible disadvantage is that there may be an incentive to discharge patients too early. The supplementary part is based on the value of medical and surgical activities per bed and on the amount of nursing activities per day, compared to other hospitals. This part can be classified as variable and prospective, creating an incentive to increase activities (as long as the fees exceed the marginal cost of providing the service), but to reduce the intensity (or cost) of these activities.

Emergency department

Financing of the emergency department (at general hospitals) is based on the number of justified beds of the hospital, the level of specialisation of the emergency department and the severity of the inpatient urgent medical interventions.. Hospitals with a first aid emergency department receive 3 points per 100 justified beds, while hospitals with a specialised emergency department receive 5 points per 100 justified beds. Supplementary points are allocated according to a system based on the value of the supplements for urgent medical interventions with hospitalised patients. Since emergencies are to a large extent exogenously determined, the risk of selecting patients is limited. Emergencies that are hospitalised indirectly influence the emergency department financing via the mechanism of justified beds and the associated points.

Psychiatric hospitals

Psychiatric hospitals are financed differently from general hospitals. The B2 part of the BFM/BMF is fixed (an index is applied to adjust for inflation) at the historical value of before the financing reform. Last adjustments were made in 1999. The B2 of the psychiatric hospitals has been frozen since (notwithstanding some minor adjustments for hospitals deemed most underfinanced in the period 2005 - 2006). Similarly to the A-K- and T-beds in general hospitals, these beds are financed based on the number of recognized beds instead of justified beds.

Medical activities and technical procedures

Medical activities and technical procedures are predominantly financed via FFS. A considerable share of these fees is redistributed from physicians to hospitals, implying that hospitals are indirectly also financed through this FFS mechanism. Since the unit of reimbursement in this FFS system is relatively small (e.g. consultation), providers can influence the amount of activities per patient or per day, which may lead to overconsumption of medical care. On the other hand, since the fee per item is fixed, physicians may be inclined to reduce the amount of care per service item or to redirect patients with complex needs to other care providers.

Crisis units adult emergency psychiatric care

In addition 9 projects for adult emergency psychiatric care in hospitals are financed via specific Royal Decrees. These Royal Decrees specify, for every hospital separately, a lump sum amount per year. In addition, the number of beds, the number of FTE (and level) for each crisis unit, as well as minimum targets for occupancy rates and annual number of patients are stipulated.

Rehabilitation centres for addiction

Some rehabilitation centres for addiction for adult provide (limited) inpatient facilities for emergency psychiatric care for children and adolescents. They are financed through RIVIZ/INAMI conventions. These RIVIZ/INAMI conventions are specific contracts negotiated between RIZIV/INAMI and the centre. The centres receive a fixed per diem payment per stay day. However the total annual budget is capped and the staff the centres have to hire is fixed.

3.3.2 Child welfare

3.3.2.1 Flemish community

In Flanders, 'Integrale Jeugdhulp' is part of the welfare system and facilitates collaboration between a number of institutions involved with child welfare. There is no specific financing for emergency or crisis psychiatric services. The Centra Algemeen WelzijnsWerk (CAW) and 'Centra voor Kind en Gezin (CKG)' that are managing the 'Netwerk Crisis Hulp' receive a fixed amount per year (based on the number of youth in their province) to cover expenses for the staff to operate the 24/7 regional contact numbers. Organisations participating in the 'Netwerk Crisis Hulp' agree to provide support within their existing capacity and receive a prospective fixed fee per crisis intervention, per crisis guidance and per crisis admission¹⁵². In addition, due to the creation of 'Netwerk Crisis Hulp' in every province, 'Kind en Gezin', 'Agentschap Jongerenwelzijn' and 'Vlaams Agentschap voor Personen met een Handicap' agreed to provide joint resources for crisis guidance and crisis admission. They do not receive additional funds for these resources.

Patients do not have to pay out-of-pocket payments.

3.3.2.2 French community

The "SOS enfants" teams receive funding that is to a large extent a fixed amount which is based on the number of youth living in the region they cover^{153, 154}

3.3.3 Discussion

Currently there is no specific financing dedicated to the provision of integrated EPC for children and adolescents. Hospitals that do offer EPC rely on general financing of the emergency department, honoraria from physicians for consultations and financing of A-, K-, T-, D- or E- beds. The lack of specific financing may produce a number of problems in the provision of care. Firstly, the used beds are not necessarily highly protected (or do not receive financing for high protection) and therefore hospitals may be inclined to restrict hospitalisation to those patients not needing highly protected beds. Furthermore, as normative occupancy rates for these beds are relatively high, there is no continuous availability of beds for emergency cases. Furthermore an integrated approach of care is hampered as there is no financing for teams of professionals having the possibility to deliver care outside the hospital. In addition, as there is no patient classification system for psychiatry, it is currently not precisely known to what extent beds are currently used for EPC for children and adolescents.

Key points

- **Hospitals that do offer child emergency psychiatric care (EPC) rely on general financing of the emergency department, financing of A-, K-, T-, D- or E- beds and honoraria from physicians for consultations.**
- **A limited number of EPC projects for adults rely on a fixed annual budget**
- **Some rehabilitation centres for addiction for adults offering EPC are financed via a fixed per diem through RIZIV/INAMI conventions**
- **Organisations participating in 'Netwerk Crisis Hulp' receive a small incentive fee per intervention, guidance or admission**
- **'SOS Enfants' teams receive a fixed annual budget, based on the number of youth living in their region**

3.4 UTILIZATION OF EMERGENCY CHILD PSYCHIATRIC SERVICES IN BELGIUM

3.4.1 Introduction

Utilization patterns of health care may be explained by either the need or the demand for care. Need refers to the amount of care required to bring the public health to a standard 'healthy' level, given the state of medical knowledge and technology¹⁴⁶. The demand for health care is the amount of health care a person (wants to) buy(s).

In the domain of child and adolescent mental health, a needs assessment must be based on developmental epidemiological research and the effectiveness of care. Currently, there are no data available on the need for specialised mental health care, such as crisis intervention or urgent psychiatric care for children and adolescents.

A broad range factors, such as the availability and social acceptance of care, influence the demand for mental health care¹⁴⁶.

The number of referrals, admissions or interventions within a certain time frame usually defines the demand for care. Crisis intervention for children and adolescents is offered by different services of both child welfare and child and adolescent mental health. There are no aggregated data available on this topic of demand on a national level in Belgium. The hospital registration system and a report of Integrale Jeugdhulp were the only data available. Thus, we used the data of the two compulsory registration systems for the Belgian hospitals to estimate the demand of emergency psychiatric care for children and adolescents in a hospital setting. In addition, data are reported from an evaluation report of the Crisis network IJH in Flanders (April 2010). With regards to the remainder of the emergency psychiatric care offered in Belgium, no utilization data are available.

3.4.2 Registration data of hospital based care for children and adolescents with psychopathology

3.4.2.1 Data sources

Utilization data of hospital based care by children and adolescents with psychopathology can be obtained from two different data sources:

- the Minimal Psychiatric Data / Minimale Psychiatrische Gegevens/Résumé Psychiatrique Minimal (MPD/MPG/ RPM), and
- the Minimal Clinical Data / Minimale Klinische Gegevens/ Résumé Clinique Minimal (MCD/MKG/RCM).

The MPD/MPG/RPM and the MCD/MKG/RCM are compulsory registration systems operating respectively in all general hospitals (MCD/MKG/RCM) and in all psychiatric hospitals and psychiatric units of general hospitals (MPD/MPG/RPM).

3.4.2.2 Data reliability and selection

It is important to stress that the data discussed in this section give an overall impression of the utilization of the available services. They are strictly indicative and are tentatively described to sketch the situation of crisis and emergency psychiatric care.

The data are reliable with respect to demographical data (gender, age) and psychopathology (i.e. psychopathology is present), but less so with respect to the planned or unplanned nature.

Emergency psychiatric care is not defined as such in the registration system. Therefore, an operational definition was developed. Stays that could be considered to be emergency stays are either unplanned and/or of short duration. In this report the operational definition for emergency stays is the admissions resulting in stays of less than two weeks duration. This operational definition was selected because:

in the literature, emergency stays tend to last approximately two weeks (see chapter 2, 2.2.2).

1. data on whether or not a stay was planned are considered insufficiently reliable.

Statistics on the MCD/MPG/RPM presented below concern children and adolescents, 0-17 years old, admitted with one of the following principal diagnostics: mental problem (MDC 19), alcohol or drugs abuse (MDC 20), psychiatric problem or psychiatric emergency (MDC 00).

With regard to the MPD/MPG/RPM, all fulltime hospital stays of children and or adolescents younger than 18 years are included. Day hospital stays are excluded. These data tend to be indicative of the utilization of hospital-based psychiatric care. They do not presently allow assessing the number of children and adolescents in need of psychiatric care for several reasons:

2. The statistical unit is the hospital stay and there is no identifier, which means that it is not possible to count patients admitted in hospitals.
3. The quality of the collected information is difficult to check and therefore the reliability of the data remains uncertain.
4. These databases only register hospital stays and do not take into account other residential or ambulatory psychiatric care.

As such, these data should be interpreted with caution. One should be particularly careful with certain variables such as planning of stays, judicial measure and primary diagnosis. Information about a patient regarding these variables sometimes is lacking or incomplete, and as such these variables are not always registered correctly.

Detailed tabulated data over the 10-year period are presented in Appendix 3.4. In the sections below, the main findings are described.

3.4.3 Minimal psychiatric data

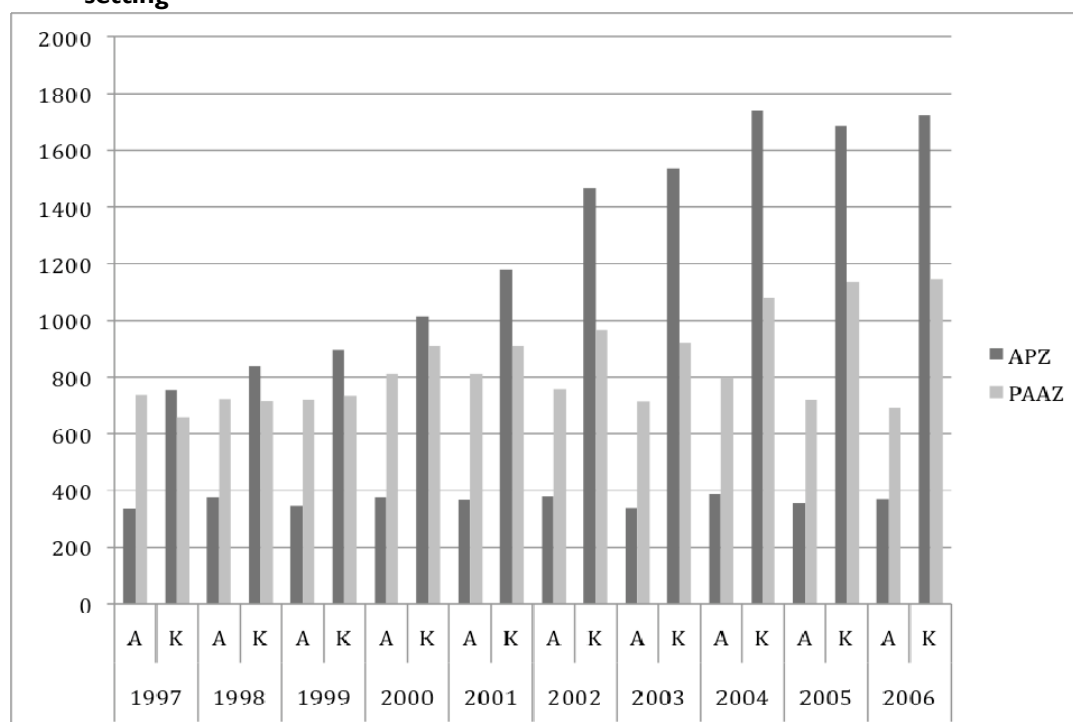
The MPD/MPG/RPM data span a 10-year period, from 1997 up until 2006.

The data refer to two types of hospital based psychiatric services: those within general psychiatric hospitals (APZ: Algemeen Psychiatrisch Ziekenhuis/Hôpital Générale Psychiatrique) and psychiatric services within a general hospital (PAAZ: Psychiatrische Afdeling binnen een Algemeen Ziekenhuis/Service Psychiatrique dans un Hôpital Générale). Adults (A) services are described separate from services for Children and Adolescents (K).

3.4.3.1 Overall distribution

Figure 3.1 gives an overview of all stays of children and adolescents (age range 0 to 17 years) at any psychiatric service (APZ+PAAZ, A+K) in Belgium from 1997 till 2006.

Figure 3.1: Number of stays for 1997-2006, by type of hospital and type of setting



APZ=General Psychiatric Hospital/Algemeen Psychiatrisch Ziekenhuis/ Hôpital Générale Psychiatrique; PAAZ= Psychiatric unit within General hospital/Psychiatriche Afdeling binnen een Algemeen Ziekenhuis/Service Psychiatrique dans un Hôpital Générale; A=adult department, K=child and adolescent department

In 2006, the total number of stays of minors is almost two (1,7) times higher than in 1997 (4984 vs. 2854). The increased number of stays at child and adolescent psychiatric services (K) almost entirely accounts for the increased total number of stays. This might be explained by the increase of the number of K-beds and services over the years.

Out of 4984 hospitalizations in 2006, 2373 (47.6%) occurred in an APZ compared to 2611 (52.4%) in a PAAZ. In both settings, the majority of hospitalizations were to a K-service (84.4% for APZ and 73.5% for PAAZ). Overall, the number of stays of minors at an adult psychiatric department (A) has remained stable but high (20%) over the years (N=1062 in 2006).

Distribution by Age

In 2006, overall 58% of stays at an adult service and 65% of stays at a child and adolescent service of any hospital-based psychiatric setting (PAAZ+APZ) concern adolescents (13-17 years old). In adult services the proportion of stays of 18 year-olds (41%) largely outnumbers the stays of children younger than 12 years (< 1%). In child and adolescent services, 23% of stays concern children aged 6-12 years of age, 8% concern 18 year-olds and 4% concern children younger than 5 years old (Appendix 3.4; table 2).

The last ten years, the number of stays of adolescents (13-17 year old) at a child and adolescent psychiatric service more than doubled (from 917 to 2031). Especially at the psychiatric hospitals (K at APZ), the number of stays of 13-17 year-olds increased exponentially from 493 in 1997 to 1255 in 2006. This is consistent with the observed overall rise of stays at K-services. However, compared to the other age groups, adolescents increasingly account for a larger part of the stays at the APZ: from 58% in 1997 to 66% in 2006. Similarly, the proportion of adolescents admitted to a PAAZ increased from 60% of stays in 1997 to 65% in 2006. In contrast, the number of stays at an adult department of both APZ and PAAZ has remained more or less constant over the last decade for each of the age classes (Appendix 3.4; table 3).

Distribution by Gender

Throughout the past decennium, the number of stays in child and adolescent (K) services has been equally distributed between boys and girls for both APZ and PAAZ. In the adult (A) department however, stays of girls largely outnumber those of boys. In 2006, this gender difference is most marked for the PAAZ (69% female stays) (Appendix 3.4; table 4).

3.4.3.2 Distribution by duration and planning of admission

Duration of stays

Statistics regarding the duration of hospitalization are based on data of stays that were ended in the year of admission. For example, in 1997, there had been 1411 stays at K-departments of APZ and PAAZ hospitals (Appendix 3.4 Table 1). However, only 1061 of these stays ended in 1997 (Appendix 3.3 Table 5). In 2006 out of 2867 stays, 2358 ended in the same year.

In 1997, children and adolescents stayed on average 54 days (sd: 60) at a K- department of an APZ, and 45 days (sd: 47) at a K of a PAAZ. In 2006, the average duration of a stay at a K decreased to 40 days, for both types of hospitals. The duration of hospitalisation of children at an A-department did not change significantly: 34 (sd: 42) days at APZ and 14 (sd: 19) days at PAAZ in 1997, and respectively 33 (sd: 49) and 12 (sd: 17) days in 2006.

In the literature, crisis intervention is defined as an intervention of approximately two weeks (chapter 2). Therefore, stays of 14 days or less may be considered to include emergency stays. Figures 3.2 and 3.3 show the number of stays lasting a maximum of 14 days and those longer than 14 days.

Figure 3.2: Number of stays at A-department of APZ (right) and PAAZ (left), by duration of stay (0-14 days and more than 14 days)

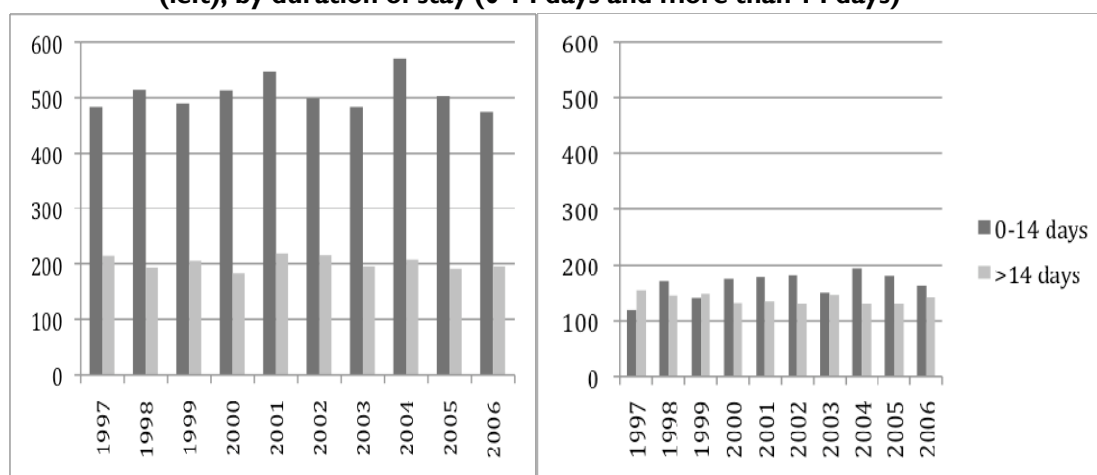
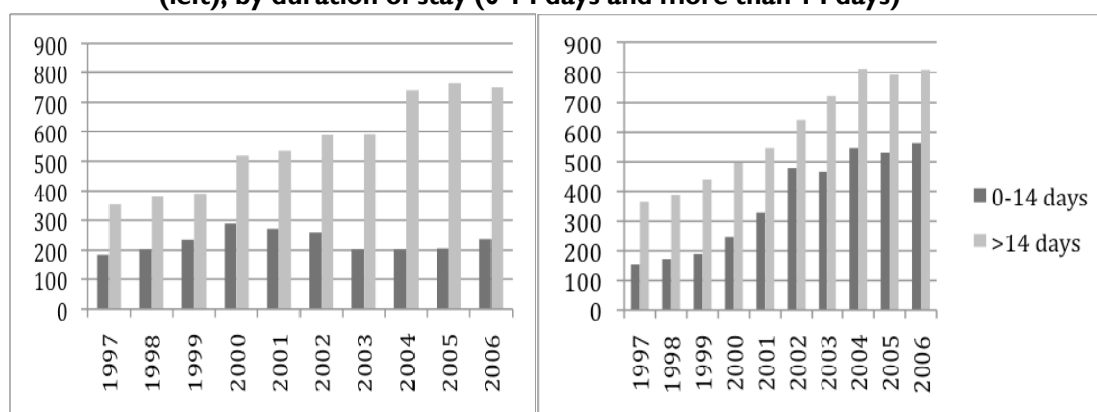


Figure 3.3: Number of stays at K-department of APZ (right) and PAAZ (left), by duration of stay (0-14 days and more than 14 days)



Although overall (APZ+PAAZ, A+K), the number of stays lasting 14 days or less increased from 944 in 1997 to 1434 in 2006, the proportion of these short-term stays diminished slightly from 46% (944/2035) to 43% (1434/3332). In 2006, half of the short-term stays occurred in a PAAZ (710/1434). The majority of these short-term stays occurred on an adult service (66.6%). In contrast, in the APZ, the majority of short-term stays occurred in a child and adolescent service (77.5%) (Appendix 3.4 Table 5).

Planned or non-planned stays

In addition to duration of a stay, the extent to which stays are planned in advance (more than 24 hours) may be an indication of emergency or crisis hospitalization.

Overall, in 2006, 1177 (35%) of stays to either an APZ or PAAZ, A-or K service were unplanned (≤ 24 hours). The majority of these unplanned stays concern hospitalizations in a PAAZ (62%). Within PAAZ, most unplanned hospitalizations occurred in an adult service (78%). In contrast, within APZ, the majority of unplanned hospitalizations occurred in a K-service (66%). Overall, more unplanned hospitalizations occur in an adult service (61%) within a PAAZ (79%). The majority of unplanned hospitalizations in a child and adolescent service, however, occur in APZ (65%) (Appendix 3.4 Table 6).

In 2006, 85% (569/668) of hospitalizations to an adult PAAZ and 50% (152/306) of hospitalizations to an adult APZ were not planned more than 24 hours beforehand (Figures 3.4 and 3.5). In contrast, the majority of stays at the children and adolescent departments were planned more than 24 hours before. In 2006, 16% (159/987) of stays at the PAAZ and 22% (297/1371) at the APZ were not planned. There were no marked changes between 1997 and 2006.

In 2006, almost 65% (759/1177) of all the non-planned stays were of short duration (i.e., ≤ 14 days). The majority of these non-planned, short-term stays occurred at an adult PAAZ (55.5%), followed by stays at K-APZ (22.6%). Only 12% and 10% of non-planned short-term stays occurred at respectively A-APZ and K-PAAZ (Appendix 3.3 Table 7). This pattern has not changed markedly since 1997.

In 1997, of the short-term, non-planned hospitalisations 9.1% (31/341) occurred at K (APZ & PAAZ) under a judicial measure, in 2006 it was 4.8% (38/798).

Figure 3.4: Number of stays at A-department of APZ (right) and PAAZ (left) planned less than 24 hours (<24 hr) or more than 24 hours (>24 hr)

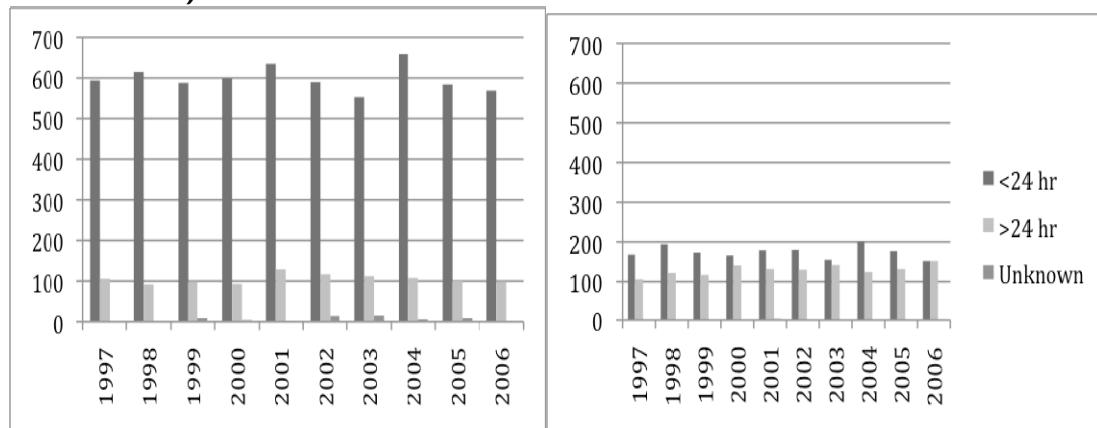
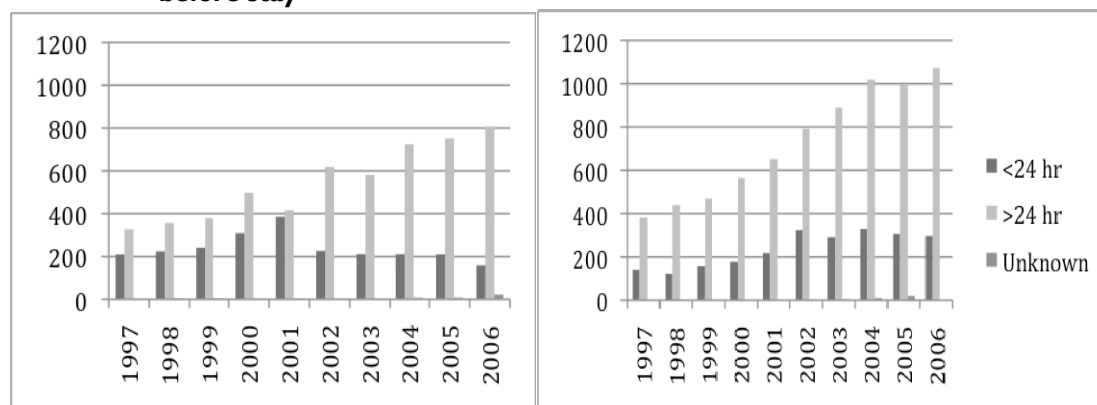


Figure 3.5: Number of stays at K- department of APZ (right) and PAAZ (left) planned less than 24 hours (<24 hr) or more than 24 hours (>24 hr) before stay



As outlined before, in this report we have opted to consider only stays of short-term duration (14 days or less) as indicative of emergency hospitalizations, and not the planned versus unplanned status of stays (see 3.4.2.2).

3.4.3.3 Distribution of short-term stays by province

Tables 3.2-3.4 present an overview of the distribution of short-term stays at either an APZ or PAAZ by province of patients' versus hospital's residence for adult and child and adolescent departments separately as well as overall. This distribution is indicative of the extent in which children and adolescents with acute psychiatric problems can be admitted within or outside their province of residence. This may be considered a barometer for the local capacity to admit minors with acute psychiatric problems.

With respect to short-term (≤ 14 days) stays, the majority of hospitalizations in any psychiatric service/department of patients from Limburg (93%), West-Flanders (92%), East-Flanders (88%), Antwerp (79%) and Liege (75%) occur in the patients' province of residence. Only a minority of patient hospitalizations in these provinces occur outside the patients' province of residence.

For example, in the province of Antwerp, 12% of hospitalizations of Antwerp patients occur in Flemish Brabant, whereas in Liege, approximately 15% of hospitalizations occur in either Hainaut or Brabant Walloon (Table 3.4).

Brussels capital and Brabant Walloon more frequently refer patients from their province to hospitals in other provinces: 26% of hospitalizations of Brussels' patients occur in Brabant Walloon, and 21% of Brabant Walloons' hospitalizations occur in Brussels capital.

In Luxembourg, Flemish-Brabant and Hainaut, less than half of the local hospitalization occur in the patients' province of residence; Luxembourg refers mainly to Brabant Walloon (41%), Liege (14%) and Brussels Capital (10%). Hainaut relies on Brabant Walloon (28%) and Brussels Capital (16%), and Flemish-Brabant refers to Brussels capital (17%), Limburg (13%) and East-Flanders (11%) (Table 3.4).

From the perspectives of the hospitals, in Antwerp, Limburg, Liege and West-Flanders more than 80% of hospitalizations come from within the hospitals' province of residence. On the other hand, in Brabant (Flemish and Walloon), Namur, and Brussels Capital, only a small proportion of short-term hospitalizations is from within their province of residence (28-50%). For example, in Flemish-Brabant 28% of hospitalizations come from Antwerp, and in Namur, a significant proportion comes from Hainaut (54%) and Brabant Walloon(23%) (Table 3.4).

For the majority of provinces trends are similar for short term hospitalisations in the A and K-departments. However, in Hainaut, more than 75% of hospitalizations in an adult department can occur in the province of residence of the patient, whereas only 28% of hospitalizations in a child and adolescent service can. A comparable situation is evident in Luxembourg (50% for A-service versus 26% in K-services), Flemish-Brabant (53% A-service vs. 31% K-service) and Namur (13% A-service vs. 0% K-service) (Tables 2-3). Limburg and Brabant Walloon are the only provinces in which proportionally more hospitalizations in a K- than can occur within the patients' province of residence compared to an A-service (75% A-service vs. 97% K-service in Limburg, 52% A-service vs. 72% K-service in Brabant Walloon).

In all but one province, in an A-service proportionally more hospitalizations come from within the province than in a K-service (Tables 2-3). In Liege, 98% of short term hospitalizations in a K-service are from within the province, compared to 78% at an A-service.

Table 3.2: Number of stays at K - department of APZ and PAAZ, of 14 days or shorter, by province of hospital and province of residence of patient in 2006

Residence Patient	Residence Hospital											All
	Antwerp	Brussels Cap.	Hainaut	Limburg	Liège	Luxembourg	Namur	East - Flanders	Fl. Brabant	W. Brabant	W - Flanders	
	N	N	N	N	N	N	N	N	N	N	N	
Antwerp	59	0	0	5	0	0	0	1	14	0	1	80
Brussels- Cap.	0	46	1	0	0	0	0	0	2	22	0	71
Hainaut	0	27	35	0	0	2	6	0	0	53	2	125
Limburg	1	0	0	153	0	0	0	1	0	0	3	158
Liege	0	4	2	1	47	3	0	0	0	8	0	65
Luxembourg	0	2	0	0	0	5	0	0	0	12	0	19
Namur	0	10	3	0	1	1	0	0	0	20	0	35
Other	15	1	25	2	0	1	0	0	0	5	0	49
East-Flanders	5	0	0	0	0	0	0	19	1	0	3	28
Fl. Brabant	1	10	0	11	0	0	0	3	14	6	0	45
W. Brabant	0	16	0	0	0	0	0	0	0	41	0	57
W-Flanders	0	0	0	0	0	0	0	8	0	3	55	66
All	81	116	66	172	48	12	6	32	31	170	64	798

Table 3.3: Number of stays at A - department of APZ and PAAZ, of 14 days or shorter, by province of hospital and province of residence of patient in 2006

Residence patient	Residence Hospital											Total
	Antwerp	Brussels Cap.	Hainaut	Limburg	Liege	Luxembourg	Namur	East - Flanders	Fl. Brabant	W. Brabant	W - Flanders	
	N	N	N	N	N	N	N	N	N	N	N	
Antwerp	66	0	0	0	0	0	0	5	5	0	3	79
Brussels- Cap.	1	10	0	0	0	0	0	3	0	0	0	14
Hainaut	0	4	54	0	1	0	1	4	1	2	5	72
Limburg	0	0	0	24	0	0	0	5	3	0	0	32
Liege	0	0	5	0	29	1	1	0	0	0	0	36
Luxembourg	0	1	0	0	4	5	0	0	0	0	0	10
Namur	0	0	11	0	1	0	2	0	0	1	0	15
Other	1	0	2	0	1	0	0	0	1	1	1	7
East-Flanders	0	0	0	0	0	0	0	119	1	0	9	129
Fl. Brabant	6	4	0	0	0	0	0	6	20	1	1	38
W. Brabant	0	1	2	0	1	0	3	0	4	12	0	23
W-Flanders	0	0	0	0	0	0	0	7	2	0	172	181
Total	74	20	74	24	37	6	7	149	37	17	191	636

Table 3.4: Number of stays at A+K department of APZ and PAAZ, of 14 days or shorter, by province of hospital and province of residence of patient in 2006

Residence patient	Residence Hospital											Total
	Antwerp	Brussels Cap.	Hainaut	Limburg	Liège	Luxembourg	Namur	East - Flanders	Fl. Brabant	W. Brabant	W - Flanders	
	N	N	N	N	N	N	N	N	N	N	N	
Antwerp	125	0	0	5	0	0	0	6	19	1	3	159
Brussels- Cap.	1	56	1	0	0	0	0	3	2	0	22	85
Hainaut	0	31	89	0	1	2	7	4	1	4	58	197
Limburg	1	0	0	177	0	0	0	6	3	3	0	190
Liège	0	4	7	1	76	4	1	0	0	0	8	101
Luxembourg	0	3	0	0	4	10	0	0	0	0	12	29
Namur	0	10	14	0	2	1	2	0	0	1	20	50
Other	16	1	27	2	1	1	0	0	1	1	6	56
East-Flanders	5	0	0	0	0	0	0	138	2	3	9	157
Fl. Brabant	7	14	0	11	0	0	0	9	34	1	7	83
W. Brabant	0	17	2	0	1	0	3	0	4	12	41	80
W-Flanders	0	0	0	0	0	0	0	15	2	55	175	247
Total	155	136	140	196	85	18	13	181	68	81	361	1434

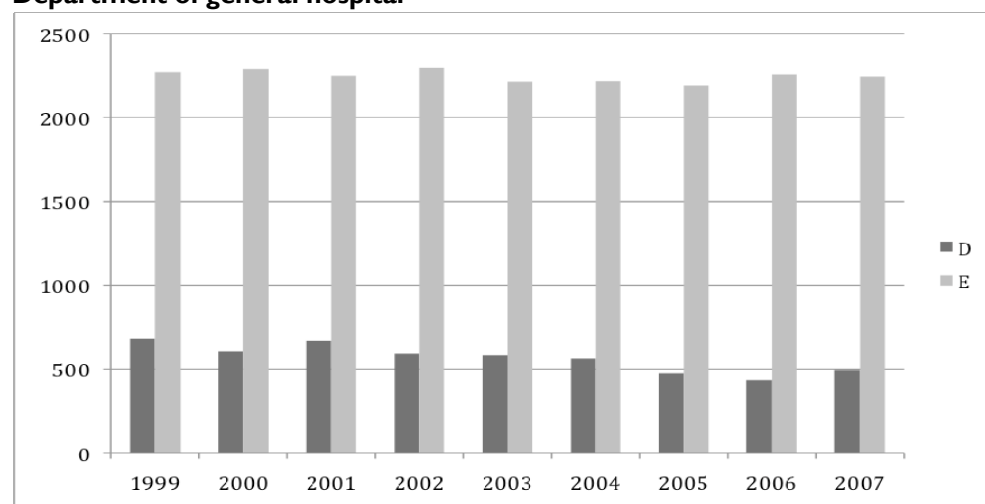
3.4.4 Minimal Clinical Data

Besides psychiatric hospitals or psychiatric departments of general hospitals, children and adolescents with psychiatric problems are also admitted at other departments of general hospitals. Therefore we examined the Medical Clinical Data (MCD) on children and adolescents, 0-17 year old, admitted with one of the following principal diagnostics: mental problem (MDC 19), alcohol or drugs abuse (MDC 20), psychiatric problem or psychiatric emergency (MDC 00). Selected data range from 1999-2007.

3.4.4.1 Overall distribution

Figure 3.6 shows the number of stays of children and adolescents with psychiatric problems at Internal Medicine (D) and Paediatric (E) departments of general hospitals from 1999 until 2007. The number of stays of youngsters at non-psychiatric departments has decreased over this 10-year period (N=3284 in 1999 compared to N=3095 in 2007); especially at the department of Internal Medicine (D) the number of stays decreased by nearly 30% (491 compared to 681).

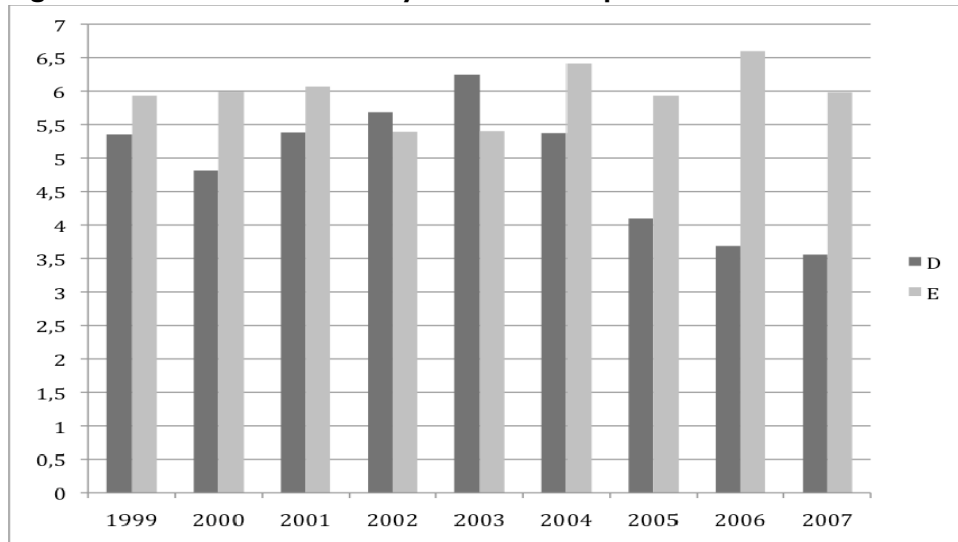
Figure 3.6: Number of stays at D (Internal Medicine) and E (Paediatric) Department of general hospital



3.4.4.2 Duration of stays

The mean duration of a hospitalization at a D-department decreased from 5.35 days (1999) to 3.56 days (2007) in contrast to the mean hospitalization period at the paediatric departments (5.93 days in 1999 versus 5.98 days in 2007) (Figure 3.7). Thus, hospitalisations at an internal medicine department seem to occur less frequently nowadays, and if they do, they are shorter. On the other hand, no marked changes occurred at the paediatric departments.

In 1999, short-term stays (≤ 14 days) presented 91% of total hospitalizations outside a psychiatric department. In 2007, the proportion of short-term stays decreased to 87%.

Figure 3.7: Mean duration of stays at D and E department

3.4.4.3 Distribution by gender

The number of girls is comparable to the number of boys that are admitted at the general hospitals. This gender distribution remains stable over the years (1999-2007)(Figure 3.8).

3.4.4.4 Distribution by age

In 1999, the 13-17 year-olds accounted for the majority of hospitalizations (44%), followed by the children under 5 years of age (34%) and the 6-12 year-olds (23%) (Figure 3.9). There seems to be a resemblance between the age distribution of the admitted youngsters at general hospitals and psychiatric departments, although the proportion of hospitalisations of young children (0-5 year) is much higher at the general hospitals (34% versus 7% in psychiatric departments in 1997). In 2007, the number of stays of young children has decreased by 10%, whereas the hospitalizations of both children and adolescents have increased (by 3-5%).

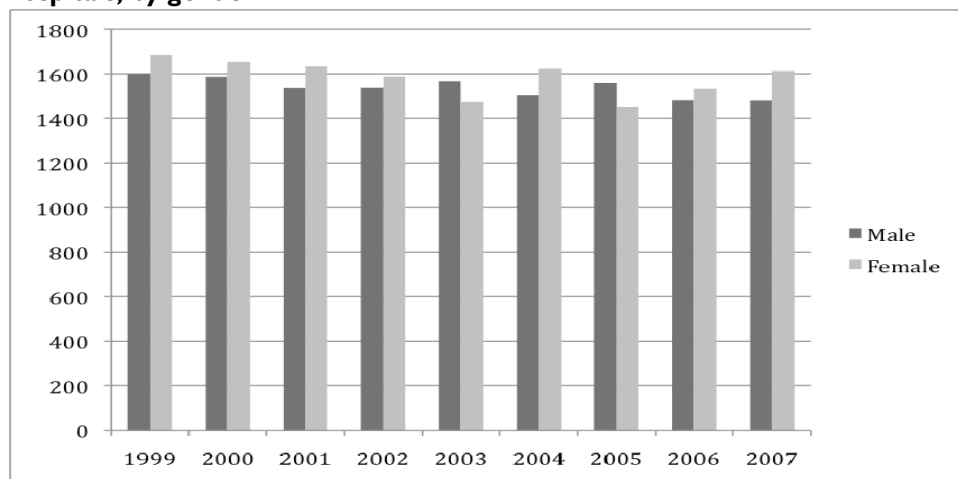
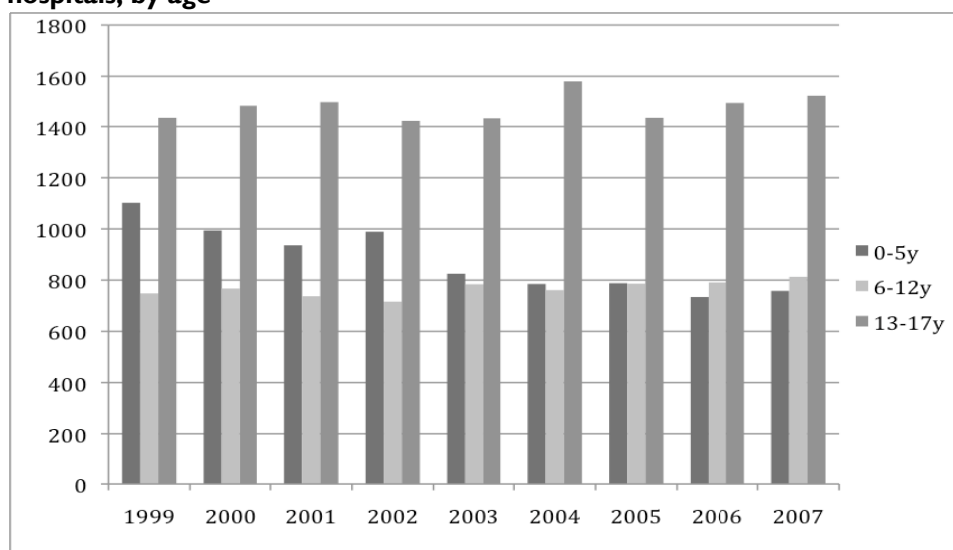
Figure 3.8: Number of stays at non-psychiatric departments of general hospitals, by gender

Figure 3.9: Number of stays at non-psychiatric departments of general hospitals, by age



3.4.4.5 Distribution by province of residence for short term stays

For all provinces, except for Flemish-Brabant and Brussels Capital, the majority of minors with psychiatric problems admitted for 14 days or less in 2007, could be hospitalized in a non-psychiatric department within their province of residence (Table 3.5). In Flemish-Brabant, 55% of patients from the province can be hospitalized in Flemish-Brabant, but 20% is referred to Antwerp and 14% to Limburg. In Brussels Capital, less than half (48%) can be hospitalized within Brussels Capital, with 18% being referred to Hainaut and 16% to Flemish Brabant.

From the viewpoint of the hospitals however, the picture is more divers: a marked proportion of minor patients with psychiatric problems that are admitted to a non-psychiatric department for less than 14 days in Walloon- and Flemish-Brabant, have been referred from other provinces. In Brabant Walloon and Flemish-Brabant for instance, 38% and 44% of the patients respectively is local, whereas 44% and 39% comes from Brussels Capital. Nearly 30% of admitted minors in Luxembourg come from Liege.

3.4.5 Overall view of short stays

We calculated the number of occupied beds in 2006-2007 per province based on the number of stays shorter than 14 days, in either a psychiatric (shorter than 14 days) or a non-psychiatric hospital (shorter than 7 days). The number of occupied beds per 10.000 minors per province varies from 0.23 in Namur to 0.96 in Walloon-Brabant (Table 3.6). Calculations are based on an average stay of 14 days or less for A+K departments in psychiatric hospitals, and on stays of maximum 7 days in the D+E departments in non-psychiatric hospitals.

Table 3.5: Number of stays at non-psychiatric departments during 7 days or less, by province of residence of patient (horizontal) and province of hospital (vertical) for 2007.

2007	Antwerp	Brussels-City	Hainaut	Limburg	Liege	Luxembourg	Namur	East-Flanders	Flemish-Brabant	Brabant Walloon	West-Flanders	Total
Antwerp	243	6		2				1	37		2	291
Brussels-City		274	2			2	2		3		2	285
Foreign stay	3	2	2	2	1	5	1	4				20
Homeless		7	2		3							12
Hainaut		105	465		3		15	2		10	8	608
Limburg	1	1		73	1				25		3	104
Liege		7	1	1	324			1				334
Luxembourg		6	1		26	55	5	1				94
Namur		14	22		10	4	86					136
East-Flanders	11	18			1			208	14		4	256
Flemish-Brabant	6	89	1	4				11	102	1	16	230
Brabant Walloon	1	40	4		2		4		3	34	2	90
West-Flanders		3	1		1			11	1		287	304
Total	265	572	501	82	372	66	113	239	185	45	324	2764

Table 3.6: Number of occupied beds in per province per year based on the number of short stays in 2006 / 2007

Province	# stays -14d A+K	# stays -7d D+E	0-17yr	#beds A+K	#beds D+E	Total # beds	#beds A+K/10.000	#beds D+E/10.000	Total #beds/10.000
Antwerp	155	265	343166	6,0	5,1	11,1	0,17	0,15	0,32
Brussels Captial	136	572	229420	5,2	11,0	16,2	0,23	0,48	0,71
Hainaut	140	501	278899	5,4	9,6	15,0	0,19	0,35	0,54
Limburg	196	82	160546	7,5	1,6	9,1	0,47	0,10	0,57
Liege	85	372	221269	3,3	7,2	10,4	0,15	0,32	0,47
Luxembourg	18	66	61984	0,7	1,3	2,0	0,11	0,20	0,32
Namur	13	113	101819	0,5	2,2	2,7	0,05	0,21	0,26
East Flanders	181	239	276506	7,0	4,6	11,6	0,25	0,17	0,42
Flemish Brabant	68	185	217367	2,6	3,6	6,2	0,12	0,16	0,28
Walloon Brabant	187	45	84361	7,2	0,9	8,1	0,85	0,10	0,96
West - Flanders	255	324	219206	9,8	6,2	16,0	0,45	0,28	0,73
All	1434	2764	2194543	55,2	53,2	108,3	0,25	0,24	0,49

3.4.6 Netwerk Crisis Hulp - Integrale Jeugdhulp Vlaanderen (IJH)

IJH reports for 2009 (from 1-01-2009 until 31-12-2009) a total number of 2214 crisis presentations.

In 2009, a total of 2684 minors presented in crisis to the IJH crisis network. The majority (74%) were accepted as crisis situations. Of the accepted 1008 crisis cases or 8,3 per 10.000 minors, 33% were referred to crisis intervention, 14% to crisis guidance, and 53% to crisis admission. 36% of crisis cases were not dispatched internally mainly because alternative care was available (225/965). Out of all crisis presentations, 711 (26.5%) were not accepted by the crisis network. The reasons for exclusion were: no crisis situation (284/711), outside the region (104/711) and involuntary presentations (330/711).

The majority (79%) of presentations occurred during office hours (9-17h). Approximately 7% of presentations occurred during weekends.

The police/justice is the main referrer to the crisis network with 28% presentations, followed by Youth Welfare (CBJ & Social Services of the Juvenile Court) with 21%. Centres for student guidance (CLBs) are the main referrers from the department of education (14%). Very few referrals are received from VAPH (1%), Mental Health Care (2%), and General Medicine (5%).

No significant differences were found with respect to gender of the minors presenting in crisis. The majority of crisis presentations were adolescents aged 12-18 years (56%) and children 0-12 year-olds (36%).

3.4.7 SOS enfants

No utilization data for SOS enfants were found.

3.4.8 Summary

Data of MPG/MPD/RPM and MKG/MCD/RCM should be considered as indicative and interpreted with caution. The total number of hospitalizations nearly doubled the past 10 years (1997-2006). In 2006, nearly 5000 hospitalizations of minors with psychiatric problems occurred in a psychiatric department (APZ or PAAZ, K or A-department).

The number and proportion of adolescent hospitalizations show a marked increase, especially in the K-departments of psychiatric hospitals (APZ). In A-departments of PAAZ, the number of hospitalizations of girls is twice that of boys.

Stays lasting 14 days or shorter may be considered as an indication of emergency hospitalizations. The 1434 short-term stays in 2006 were almost equally distributed between PAAZ (49.5%) and APZ (50.5%). The majority of short-term stays at APZ occurred within a child and adolescent service (77.5%) whereas in the PAAZ, the majority occurred at an adult service (66.6%).

In the provinces of Antwerp, Limburg, Liege, East Flanders and West-Flanders, short-term hospitalizations mainly occur in and come from the province of residence of the patient/hospital. Hainaut, Luxembourg, Namur, and Flemish Brabant rely to a greater extent on other provinces to hospitalize youngster at a child and adolescent service, and accept more hospitalizations from other provinces.

Over a 10-year period (1999-2007), the number of stays of minors with psychiatric problems to non-psychiatric services has decreased, especially at the paediatric department (by 30%). Overall, 87% of stays to a non-psychiatric department in 2007 were short-term (less than 14 days' duration).

In 2008, IJH Crisis network accepted 73% out of 1519 presentations as crisis situations. The police/justice and Child Welfare (CBJ & Social Services of the Juvenile Court) are the main referrers to the crisis network. Few referrals are received from VAPH, Mental Health Care, family practitioners and General Hospitals.

Key points

- No utilization data could be found for ambulatory emergency psychiatric care except for 'Integrale Jeugdhulp'
- Data of MPG/MPD/RPM and MKG/MCD/RCM should be considered as indicative and interpreted with caution
- The total number of stays nearly doubled the past 10 years (1997-2006).
- In 2006, nearly 5000 stays of minors with psychiatric problems occurred in a psychiatric department (APZ or PAAZ, K or A-department).
- Overall (PAAZ+APZ), adolescents represent a high proportion of hospitalizations in both adult and child and adolescent services.
- In A-departments of PAAZ, the number of hospitalizations of girls is twice that of boys.
- Stays lasting 14 days or shorter may be considered as an indication of emergency hospitalizations.
- The 1434 short-term stays in a psychiatric service in 2006 were almost equally distributed between PAAZ (49.5%) and APZ (50.5%).
- The majority of short-term stays at APZ occurred within a child and adolescent service (77.5%) whereas in the PAAZ, the majority occurred at an adult service (66.6%).
- The decrease in short-term stays at a K-department in a PAAZ is counteracted by a similar increase at K-departments in APZ.
- Approximately half (759/1434) of the short-term stays in 2006 were unplanned.
- In the provinces of Antwerp, Limburg, Liege, East Flanders and West-Flanders, short-term hospitalizations mainly occur in and come from the province of residence of the patient/hospital.
- Hainaut, Luxemburg, Namur, and Flemish Brabant rely to a greater extent on other provinces to hospitalize youngster at a child and adolescent service, and accept more hospitalizations from other provinces.
- Over a 10-year period (1999-2007), the number of stays of minors with psychiatric problems in non-psychiatric services has decreased, especially at the department Internal Medicine (by 30%).
- Overall, 87% of stays to a non-psychiatric department in 2007 were short-term (less than 7 days' duration).
- Overall in 2006 / 2007 there were 19,1 short stays for psychopathology linked problems per 10.000 minors per year. This means 108,3 occupied beds.
- In 2009, IJH Netwerk Crisis Hulp accepted 73,5% out of 2214 presentations as crisis situations, or 8,3 cases / 10.000 minors. The police/justice and Child Welfare (CBJ & Social Services of the Juvenile Court) are the main referrers. Few referrals are received from health care.

4 PERCEPTIONS ON EPC FOR CHILDREN AND ADOLESCENTS IN BELGIUM

4.1 QUALITATIVE RESEARCH DESIGN

In this section we describe the results of a qualitative research aiming at collecting ideas, needs and experiences of the Belgian professionals (being involved as experts in) providing emergency psychiatric care to children and adolescents.

The qualitative research part consists of nominal groups and focus groups:

- The nominal groups aim at collecting participants' ideas regarding the organisation of emergency psychiatric care for children and adolescents in Belgium.
- The focus groups aim at collecting in-depth information on ideas, exchanging experiences and developing their theories regarding the organisation of emergency psychiatric care.

We organised the nominal groups and focus groups on the level of the Belgian provinces and in Brussels separately, with the underlying objective to make an inventory of the local needs, expectations and potential regional differences.

4.1.1 Practical organisation

The qualitative study ran from August 2009 until May 2010. Table 4.1 summarizes the sequence of study set up, execution and data analysis.

Table 4.1: Planning and timelines of qualitative research

August '09	Local partners contacted for the organisation of the qualitative research
	Letter of invitation with brief explanation of the study sent (see Appendix 4)
September '09	Data collection of qualitative research per province planned (date per province fixed, a moderator and or observer assigned)
	Participant selection (in close collaboration with the local partner) and invitation
October '09	Data collection organized per province (logistics)
October-March '09-'10	Data collected (nominal and focus groups executed)
January-May '10	Data analysis and report writing

4.1.2 Participants

Within each province, the same profile of participants were invited to participate in both the nominal and the focus groups.

4.1.2.1 Selection criteria

The main criterion for participation was having expert knowledge of, and/or being actively involved in psychiatric emergency care. Participants from different public service sectors were invited. The preset quota for inclusion of experts or professionals of each of the selected sectors were (minima-maxima):

1. Child and adolescent psychiatry (2-3)
2. Ambulatory mental health services (2-3)
3. Psychiatry (adult) (2-3)
4. 'Vlaams Project Integrale Jeugdhulp' (4)
5. General Practitioners (2-3)
6. Emergency services (2-3)

7. Paediatrics (2-3)

8. Judge sitting in a juvenile court (2)

The 'mental health care consultation platforms' (Overlegplatform Geestelijke Gezondheidszorg / Plate-forme de Concertation en Santé Mentale) were consulted to provide a list of potential participants taking into account the inclusion criteria. They were subsequently invited to participate in the study. The invitation included the goal of the study, who commissioned the study and the expected contribution of participants.

The same inclusion criteria were used in Flanders, Brussels and the Walloon provinces. The sector 'Vlaams Project Integrale Jeugdhulp', which covers different sectors in the area of child welfare, does not exist in Wallonia. Key persons^a were consulted too seek for alternatives in Wallonia and led to the decision to include child welfare, the 'IMPs' and 'SOS Enfants'.

Each provincial meeting started with the same introduction. Participants were informed that the discussions would be audio taped and that study results could not be revealed prior to approval by the commissioner of the research. Each participant signed an informed consent, thereby agreeing to the conditions of the study (see Appendix 4.1).

4.1.2.2 Participant characteristics

In total, 135 professionals, representing 184 jobs, participated in one of the 11 meetings. On average 12 persons attended each meeting (Table 4.2). It proved difficult to have a representative of each of the invited sectors/professions. East-Flanders had representatives of only three of the invited professions. Especially the general practitioners and the psychiatrist working at an adult psychiatric department were excused (respectively at 6 and 5 out of the 11 meetings), especially in the Walloon provinces. Also, in 3 out of 11 meetings representatives of the paediatric department (Antwerp, East Flanders and Hainaut) and the emergency department (East Flanders, Namur and Brussels) were absent.

Half of the participants worked at a service that offers some form of emergency psychiatric care (see Table 4.2). Three quarters of the participants (N=93/122) were regularly (weekly to monthly) confronted with psychiatric crises among their clients. Most of the participants worked, at least part time, with patients (Table 4.3).

Key points

- **Nominal groups and focus groups were used to collect data on the local ideas, perceptions, experiences and expectations**
- **Different sectors and professions were represented at the meetings.**
- **Each meeting included on average 12 participants, of which a vast majority is regularly confronted with psychiatric emergencies.**
- **GPs and adult psychiatrists were most frequently unable to participate.**

^a J.-M. Gauthier (ULg), Dominique Charlier (UCL) and J.-P. Matot (ULB)

Table 4.2: Occupation of the participants, per province and Brussels

	Antwerp	East Flanders	Limburg	Flemish Brabant	Brussels	Liege	West Flanders	Namur	Hainaut	Walloon Brabant	Luxembourg	Total
CAP service	2	5	3	3	5	1	3	2	1	4	1	30
Private child and adolescent psychiatrist	1	2	1	1	1	3	1	3	2	2	0	17
Ambulatory mental health care	2	0	1	3	3	1	2	3	2	1	1	19
Psychotherapist (private)	0	0	0	0	1	0	0	0	1	0	1	3
Adult psychiatry unit	0	2	1	1	2	0	4	0	2	0	0	12
Private adult psychiatrist	0	0	0	0	0	0	0	0	1	0	0	1
Kind en Gezin / ONE	1	0	1	0	0	0	0	1	0	1	1	5
Youth welfare	3	2	1	0	2	3	1	2	1	1	4	20
VAPH/AWIPH/COCOF	4	1	1	0	2	0	2	3	1	1	2	17
CLB	0	0	1	0	0	0	1	0	2	0	1	5
General practitioner	1	0	1	0	0	1	1	1	0	0	0	5
Emergency room (Hospital unit)	1	0	1	1	0	1	2	0	1	1	1	9
Paediatric unit (Hospital unit)	0	0	3	2	1	1	2	1	0	2	1	13
Private paediatrician	0	0	0	0	0	0	1	1	0	0	0	2
Judge at juvenile court	1	0	0	1	1	1	2	1	1	1	1	10
Care and treatment of drug addicts	0	1	0	0	0	0	0	0	0	0	0	1
Staff IJH	1	0	1	0	0	0	0	0	0	0	0	2
Crisismeldpunt IJH / SOS Enfants	1	1	0	0	0	1	1	0	0	1	0	5
Special education	1	0	0	0	0	0	0	0	0	0	0	1
Lawyer for public prosecutor	0	0	0	0	0	1	0	0	0	0	0	1
Surrogate counsel for the prosecution	0	0	0	0	0	0	0	1	0	1	0	2
Advise centre for child abuse	0	0	0	1	0	0	0	0	0	0	0	1
Youth prison Everberg	0	0	0	1	0	0	0	0	0	0	0	1
Convention INAMI	0	0	0	0	0	0	0	1	0	0	0	1
Platform Mental health	0	0	0	0	0	1	0	1	1	1	0	4
Total	19	14	16	14	18	15	23	19	16	16	14	184
Total number of participants	16	12	11	10	12	11	13	14	10	14	12	135

Note: Participants could tick different options, if they worked at different places. As such "Total"=Total number of 'jobs' presented at the meeting.

Table 4.3: Description of the work(place) of the participants: Function, working at EPC, contact with emergencies

		Antwerp	East Flanders	Limburg	Flemish Brabant	Brussels	Liege	West Flanders	Namur	Hainaut	Walloon Brabant	Luxembourg
Function	Executive function	7	5	3	2	3	6	9	4	1	9	5
	Direct (actual) care	5	2	4	3	3	2	2	5	4	3	3
	Executive function + Direct care	2	3	4	5	6	2	2	4	4	0	2
Availability emergency care?	Yes	8	7	6	6	6	6	4	5	5	2	2
	No	6	3	5	4	6	4	9	8	4	10	7
How often are you confronted with psychiatric emergencies / crises?	Daily	0	1	2	0	5	1	2	0	0	0	0
	Weekly	5	4	0	3	3	2	3	4	2	5	1
	Every two weeks	2	1	0	2	0	0	2	3	2	0	1
	Monthly	3	3	7	4	4	6	5	3	4	5	4
	A few times a year	4	1	2	1	0	1	0	2	1	1	3
	Never	0	0	0	0	0	0	1	0	0	0	1

4.2 NOMINAL GROUP TECHNIQUE (NGT)

4.2.1 Aims and design of the NGT

The aim of the nominal group technique (NGT) was to collect ideas and proposals regarding the organisation of emergency psychiatric care for children and or adolescents in Belgium.

The NGT is a highly structured meeting to collect information from relevant experts about a given issue. It consists of three rounds: first, the participants individually generate ideas. Then, one by one, they share their ideas and if necessary elaborate shortly on the presented idea. Finally, they individually rate each of the generated ideas. The technique aims to allow all participants to freely bring forward their ideas, without being restricted by either other participants.

Two members of the research group conducted each nominal group session: a Dutch-speaking researcher was in charge of the meetings in Flanders, a French-speaking researcher led the meetings in Wallonia. The presentation and elaboration on the ideas was audio taped. The ideas were collected on a whiteboard. The meeting was guided by a moderator.

4.2.2 NGT data analysis

The NGT generates a list of ideas, ranked by the participants. An overview of the collected ideas for each province is included in Appendix 4.3. At each meeting the participants ranked the ideas from 1 (most desired or highest priority) to “x” - being the number of collected ideas - (least desired or lowest priority). This allows a priority ranking of ideas in each province.

Additionally, the discussion was audio taped. This information was not transcribed verbatim and used only to complete the description of the ideas, which were collected on the whiteboard or flipchart. The taped discussions were also used to assist the analysis of the focus group, when a referral was made to the nominal group session.

4.2.3 NGT results

In the next paragraphs, a brief summary is presented of the main themes emerging from the nominal groups.

Overall, a great number of themes recurred in the different nominal groups. In addition, many of the themes that were touched upon during the nominal groups were resumed during the focus groups (see 1.3).

The following themes are presented in random order, as it is not possible to rate the importance of themes over the different nominal groups because of different reasons. Firstly, some ideas are formulated such that they may be attributed to different themes. Secondly, different ideas emerge in different nominal groups; this hinders overall scoring of ideas and therefore themes.

Following the overall summary of the different themes, the top-10 list of ideas of each meeting is presented. These lists are ordered according to the individual ratings of the participants.

4.2.3.1 Overall view

Accessibility

Accessibility covers many aspects. Emergency psychiatric care (EPC) should be accessible, in every respect: “*right here, right now and for everyone*”. Many ideas include an element of this principle. EPC is expected to be accessible 24 hours a day, every day of the year (24h/7d). EPC should be easy to access geographically (from all over the province) and financially. Above all, the service should not make any exclusion: all children and adolescents, irrespective of the presenting problem, should get help when presenting for EPC.

Continuity of care and intersectorial collaboration

Many ideas touch upon the idea of continuity of care and collaboration between carers within as well as across sectors. Many participants stress that EPC should be embedded in the existing mental health care provision for children and adolescents and that EPC should be linked in the process of care with actions taken prior to and following EPC. These ideas relate to communication (fluent information transfer between professionals), collaboration, follow-up, referral, consultation (interprofessional consultation regarding a common client) and trust and respect between professionals. The current services requires additional resources to fulfil these needs. Ultimately, the main goal is to secure continuity of care of a youngster.

Individualised custom-tailored emergency psychiatric care

Participants indicate that EPC should provide a broad spectrum of care activities at different levels of intensity, ranging from a simple consult to less or more intensely outreaching and ambulatory care, including a hospitalization or not. Participants emphasise that these options should be applied 'as needed'. Every child or adolescent and his context should be assessed and offered the care needed. Participants indicate that hospitalizations are required in many cases to offer a child a secure setting. Necessary care does not equal fulfilling all the requests of the child or the person admitting the child for EPC. A comprehensive clinical evaluation is necessary to identify the adequate care, adapted to this child and its context.

It's about the child and its context

EPC is expected to include both the child and its family or context. Professionals should listen to both the patients and its family at admission, and not focus solely on the patient.

Multidisciplinary teams

Participants indicate that EPC should be provided by a multidisciplinary team including many types of professionals. A child and adolescent psychiatrist should be available 24 hours a day, every day. Some participants expect the psychiatrist to bear final responsibility. The team may further include a range of professions such as psychologists, social assistants, educators, etc. All should have experience with crisis situations and working with children. Team members should be professional, highly competent and as a team cover a broad range of competences.

4.2.3.2 Differences and similarities between nominal groups

For each province, the top-10 highest ranked ideas are summarized in Tables 4.4-4.14^b. The full rankings and original description in Dutch or French can be found in Appendix 4.3. The mean score of an idea gives an indication of the priority as rated by the participants in each of the nominal groups. The lower the score, the higher the priority.

The number of ideas per group ranged from 21 (Limburg, 11 participants) to 46 (Luxembourg, 12 participants), with an average of 35 for all groups. Although many of the themes described above recur several times, each groups developed different priorities. In the sections below, the results for each of the nominal groups are briefly described.

In Antwerp, the 24h/7d availability of EPC for all (without any exclusion) children and their context is prioritised, including the availability of immediate hospitalization (ensuring the child's safety) if required (Table 4.4). Individualised care and expansion of resources (beds, child psychiatrists) are also considered a priority, as are the need to collaborate closely with the referrer and the need for immediate diagnostics.

^b Tables legend: N= the number of participants scoring the ideas. Min=lowest score (i.e. highest priority) given to this idea. Max= highest score (i.e. lowest priority) given to this idea. Sum= sum of scores for this idea. Mean=average score of this idea over the number of participants (N). The lower this mean score, the higher the priority of this idea as rated by the participants. SD=standard deviation

Table 7.4: Top-10 ideas from the nominal group in Antwerp

Antwerp (Total number of ideas =45)	N	Min	Max	Sum	Mean	SD
EPC 24h/7d available for consult, possibility to admit to a bed if required (ensure safety of the child)	13	1	20	109	8,38	7,51
A complete package of care for both patient and context	13	1	20	119	9,15	7,07
No exclusions based on presenting problems: "Treatment obligation"	13	1	27	159	12,23	8,53
Different entry-levels of EPC, depending on the presenting problem(s): ranging from ambulatory care to an hospital admission	13	1	29	170	13,08	9,26
More crisis beds available at CAP, available 24h/7d	13	5	40	173	13,31	11,22
More child and adolescent psychiatrists	13	4	36	197	15,15	10,32
A psychiatric service for diagnostic work, fast and easily accessible	13	1	44	202	15,54	13,50
Possibility to be able to secure the child (and its context) immediately/offering immediate protection for the child/context	13	3	44	202	15,54	11,86
Close collaboration with referrer	13	4	26	213	16,38	8,64
Ability to take care of and look after child during crisis	13	1	35	219	16,85	9,63

See footnote b

The participants in Brussels consider the obligation not to exclude patients when they present, 24h/7d availability and the possibility to immediately hospitalize the patient as priorities (Table 4.5). In addition, high priority is given to the child's context, as 4 top-10 ideas in Brussels refer to working with the child's context when delivering EPC. The need for a flexible network is a priority as well. Participants also stress the importance of a warm and approachable reception of services delivering EPC.

Table 4.5: Top-10 ideas from the nominal group in Brussels

Brussels (Total number of ideas =25)	N	Min	Max	Sum	Mean	SD
Accept the youngsters with the symptoms they have (no exclusions)	12	1	22	59	4,92	6,05
The possibility to hospitalise immediately, without exclusions (rapid orientation, referral towards the appropriate person/service)	12	1	20	60	5,00	5,86
Accessibility: 24h/day, 7 days/week	12	1	19	75	6,25	5,86
Taking family/context into consideration	12	3	12	90	7,50	2,78
Having the possibility to hospitalise	12	1	20	90	7,50	6,54
Flexible network	12	4	23	121	10,08	5,60
Flexibility of admission: integrate original context / environment; facilitate reintegration post-emergency	12	2	20	124	10,33	5,18
Reception of the family	12	1	25	129	10,75	8,53
Willing to listen to the family/context/environment	12	5	24	132	11,00	6,31
Reception of / willing to listen to the professionals presenting the child	12	3	25	140	11,67	6,39

See footnote b

In Hainaut, priority is given to the ability to assess and evaluate the risk and urge of a case presenting at EPC (Table 4.6). The different competencies of professionals delivering EPC - a multidisciplinary team with good knowledge of the available regional services, able to perform triage and orientation of the client – thus receive high rates as well. In addition, a team of child and adolescent psychiatrists should be available 24h/7d on the emergency ward to triage and orient patients. EPC should collaborate with the current care providers in the region and be flexible (providing care at home, within the context of the child). Decompartmentalization of care is a priority specific to Hainaut.

Table 4.6: Top-10 ideas from the nominal group in Hainaut

Hainaut (Total number of ideas =43)	N	Min	Max	Sum	Mean	SD
EPC should be able to assess/evaluate the urgency and the danger	9	1	11	49	5,44	3,75
Multidisciplinary team with a good knowledge of the available services (ambulatory and residential network) able to address the question(s) and orient clients	9	1	20	64	7,11	7,06
Connection between all services (this requires financing), (Psychiatry, IMP, Aide à la jeunesse)	9	1	43	88	9,78	13,27
A team of child and adolescent psychiatrists on call (24h/7d) at the emergency ward: should perform triage (diagnostic - orientation) and have possibility to orient clients. Orientation should run smoothly ensuring accessibility of the service	9	1	43	95	10,56	14,13
Professional collaboration	9	1	43	125	13,89	12,61
Increase the accessibility of services for other services	9	1	41	128	14,22	12,17
Local network	9	1	43	133	14,78	14,23
Decompartimentalized care	9	1	43	138	15,33	13,79
Consultation at home/at place of intervention, with all parties concerned	9	2	43	148	16,44	15,73
Consultations with the network	9	1	43	149	16,56	16,49

See footnote b

In Limburg, the priorities focus on organizational aspects such as the need for integrated EPC and the development of a central, provincial point of admission (Table 4.7). Participants stress that EPC should be able to react and intervene rapidly. They suggest a crisis admission centre within a child and adolescent department, with child psychiatric expertise and an outreach and assessment function. Also the need for crisis beds in a child psychiatric department is a top-10 priority. EPC should be delivered by a multidisciplinary team, with a child psychiatrist bearing final responsibility. They also stress regional expertise and increasing publicity of primary health care.

Table 4.7: Top-10 ideas from the nominal group in Limburg

Limburg (Total number of ideas =21)	N	Min	Max	Sum	Mean	SD
Maximum integrated offer: integration of all EPC (consultation from a central admission centre)	10	1	21	70	7,00	6,60
Rapid child psychiatric assessment + rapid orientation/referral to the required care	10	1	21	72	7,20	7,61
Crisis admission centre (including child psychiatric expertise) – Activities: outreach, assessment of child and environment	10	1	21	76	7,60	7,46
Crisis beds at existing CAP-services	10	1	21	77	7,70	6,80
Development (increase) of existing ambulatory care: make it accessible (financially + geographically)	10	3	21	89	8,90	6,72
Ambulatory, outreach, multidisciplinary teams (managed by a CA psychiatrist) 24/24, with knowledge of the local expertise (and services), using local and existing facilities and or services, linked to a CAP service with crisis beds	10	1	21	90	9,00	7,92
Give greater publicity to possibilities of primary health care	10	1	21	97	9,70	5,96
CAP-service (managed by a child and adolescent psychiatrist): Extramural functioning and rapid referral (cf. a central/ly situated) point with different antennae)	10	1	21	106	10,60	7,93
Watch out for isolation of child and adolescent psychiatric problems: investigate in (permanent) education/training (of e.g. master in medical sciences)	10	2	21	112	11,20	6,86
EPS should be linked to a CAP service and provide good triage (not every client needs hospitalization)	10	1	21	112	11,20	7,52

See footnote b

Table 4.8: Top-10 ideas from the nominal group in Liege

Liege (Total number of ideas =35)	N	Min	Max	Sum	Mean	SD
Establish a new service for those children with a chronic psychiatric problem (les abandonniques / psychopathes)	11	1	16	77	7,00	4,84
Deficiency: services for children with an intellectual disability, autistic, psychotic and aggressive.	11	1	21	105	9,55	6,46
At emergency ward: increase the number of child and adolescent psychiatrists (and their availability), they should perform triage (diagnostic - orientation); increase the coherence and continuity between the different care providers	11	1	31	119	10,82	9,67
Shortage of beds: allocated for diagnostics and treatment	11	1	31	127	11,55	8,19
Find physicians with knowledge of orienting children	11	1	31	136	12,36	9,62
More child and adolescent psychiatrists	11	1	32	140	12,73	11,56
Shortage of resources/means at paediatric departments to treat children with psychiatric problems (aggression,)	11	1	27	141	12,82	8,91
Accessibility: geographically and temporal (24hrs/7d)	11	1	35	144	13,09	12,30
After care/Follow-up: visualise care at long-term (pursue continuity)	11	1	28	145	13,18	9,17
Multidisciplinary approach: interdisciplinary consultation when a problem occurs in a case (with and within) different sectors)	11	1	26	145	13,18	8,57

See footnote b

The Liege nominal group emphasises the needs of particular patient populations (i.e. chronic psychiatric problems, autism, intellectual disability etc.) (Table 4.8). In addition, increasing the available capacity is given top priority, particularly child psychiatrists and beds.

In Luxembourg, the availability of beds for crisis admission and accessibility of EPC (24h/7d, no exclusion, rapid access, geographical proximity) are top priority. (Table 4.9). In addition, the need for developing or engaging in a long term care perspective has top-10 priority in Luxembourg, a perspective not expressed in this way in any other province. Participants also mention that a good assessment is necessary to differentiate between reactive and structural disorders.

Table 4.9: Top-10 ideas from the nominal group in Luxembourg

Luxembourg (Total number of ideas =46)	N	Min	Max	Sum	Mean	SD
To have the possibility to protect a child (remove from environment when necessary): put a child in a secure setting (hospitalisation when necessary)	11	1	28	106	9,64	8,73
Accessibility: 24/24	11	1	46	121	11,00	12,85
Reception centre: immediately at one's disposal	11	2	42	154	14,00	12,83
No exclusions	11	2	46	179	16,27	18,05
Avoid multiple changes of service during the course of a youngster	11	5	36	181	16,45	9,53
Differentiate between reactive disorder and structural disorder: take time to make a good assessment	11	3	31	182	16,55	11,06
Create rooms/places for reception (reception centre) + services for after the crisis	11	7	36	198	18,00	10,15
Reception of the emergency, type hospitalisation; with possibility to perform an assessment, orientation (for the sequel)	11	1	46	201	18,27	15,85
Working at long-term with a child (go further than the crisis)	11	2	37	204	18,55	11,26
Complete offer available within the province: proximity	11	3	46	218	19,82	14,28

See footnote b

In Namur, accessibility and availability is top priority as well (Table 4.10), followed by themes concerning the care providers (multidisciplinary teams, collaboration). The need for a clear definition of psychiatric emergency is high on the priority list in Namur.

The need for a clear definition of child and adolescent emergency psychiatric care is listed as the number one priority in the East Flanders nominal group (Table 4.11). The participants prioritise embedding EPC within the spectrum of psychiatric care currently available, collaboration between professionals and sectors, and continuity of care. Participants of the nominal group introduced the idea of a central point of admission with more regionally embedded centres that deliver ambulatory as well as residential care. The central point of admission should act rapidly, should not exclude patients and should refer the child to the appropriate care. A specific priority put forward in the East Flanders nominal group is prevention of crises by providing structural psychiatric support within the child welfare services, thus reducing the need for acute services.

Table 4.10: Top-10 ideas from the nominal group in Namur

Namur (Total number of ideas =42)	N	Min	Max	Sum	Mean	SD
Accessibility: territorial & places available	13	1	42	128	9,85	13,43
Accessibility: all professionals l	13	1	38	131	10,08	11,06
A place that can organise: being in charge of the child + orientation (= reception + observation + assessment)	13	1	26	133	10,23	9,02
Proximity between professionals: getting to know each other	13	1	42	167	12,85	11,92
Accessibility: 7d/24hrs	13	1	42	173	13,31	17,13
Principle of continuity: organise/develop a network of professionals (around the child)	13	1	28	179	13,77	9,15
EPC should not be restricted to children and or adolescents with pure psychiatric problems and should not exclude children/adolescents with behavioural problems	13	1	34	192	14,77	12,45
Clarify the specificity of an EPS: Definition 'emergency', 'psychiatric' (crisis versus emergency)	13	1	42	194	14,92	12,30
Consultation multidisciplinary around a patient (consultation with all professionals concerned)	13	1	42	219	16,85	13,00
Create a "centre d'écoute" (reception centre): a place where a child/adolescent or its environment can confide their troubles to someone: availability of a multidisciplinary team (ambulatory, mobile)	13	1	42	222	17,08	13,67

See footnote b

Table 4.11: Top-10 ideas from the nominal group in East Flanders

East Flanders (Total number of ideas =26)	N	Min	Max	Sum	Mean	SD
Need to have a good definition of "emergency psychiatric care for children and adolescents"	12	1	26	74	6,17	7,22
Emergency psychiatric care should be embedded in the actual care: pre- and post emergency psychiatric care should be embedded in the child's overall trajectory of care)	12	1	26	117	9,75	9,83
Intensive collaboration/consultation between care providers concerned in the trajectory of care	12	3	26	131	10,92	9,54
Implement structural psychiatric support within child welfare services, to diminish the need for urgent intervention/assistance	12	1	26	144	12,00	11,31
A central point of admission where each and every question (no exclusion criteria) is dealt with rapidly and an appropriate answer is searched for	12	1	26	144	12,00	10,78
Guaranteed intervention when 'Crisismeldpunt IJH' is consulted by professionals	12	1	26	145	12,08	9,96
One central supervising organ/centre with different antennae implemented in the province; regional centres with possibility for ambulatory care and short-term hospitalization if necessary	12	1	26	149	12,42	10,46
Psychiatric consult function for children, parents and professionals, available 24hrs/7d	12	1	26	165	13,75	11,19
Continuity of care for children and adolescents	12	5	26	173	14,42	8,84
Coordination and exchange of expertise across the different sectors in assisting a child; IJH does not fulfil this function	12	4	26	177	14,75	10,06

See footnote b

The development of a flexible walk-in clinic with a coordinating EPSI ('Eenheid voor Psychiatrische SpoedInterventie'/Unit for Psychiatric Emergency) and an outreach team is considered highest priority in Flemish Brabant (Table 4.12). In addition, much attention is given to expanding the regular psychiatric care, continuity of care and crisis prevention, as well as assessment of the urgency of a crisis/emergency.

Table 4.12: Top-10 ideas from the nominal group in Flemish Brabant

Flemish Brabant (Total number of ideas =22)	N	Min	Max	Sum	Mean	SD
A sufficiently flexible walk-in clinic (with possibility to admit families) with and EPSI function (by analogy with adult psychiatry) and an outreach team	11	1	14	41	3,73	4,03
EPSI-service for children with coordinating function for referral and follow-up	11	1	11	52	4,73	4,10
Expansion of actual regular assistance, to provide the necessary care in time after residential care	11	1	17	58	5,27	5,48
Assessment of urgency	11	1	22	69	6,27	7,06
Sufficient (increasing) manpower (personnel/staff) in regular child assistance to prevent crisis	11	1	17	73	6,64	5,57
Gate keeping (selection), with a trained child psychiatric nurse to assess the crisis situation	11	1	22	79	7,18	6,74
Referral, without waiting lists	11	1	22	91	8,27	7,27
Emergency psychiatric care, without exclusion criteria	11	1	22	93	8,45	7,30
A child and adolescent psychiatrist on duty at every city	11	1	21	95	8,64	7,67
Expansion of both ambulatory and residential offer (child assistance)	11	1	20	105	9,55	6,09

In Walloon Brabant, the highest priority is given to having a multidisciplinary team available that can assess and refer the patients to the appropriate care (Table 4.13). In addition, hospitalization is not necessarily considered the best option and priority must be given to developing a system or network surrounding the child, which can act fast in case of an emergency. Mobile intervention is also considered an important aspect of emergency psychiatric care in Walloon Brabant.

In West Flanders, highest priority is given to emergency psychiatric care being available 24h/7d, as well as the need for a regional crisis centre which can care for the patient and its context (Table 4.14). The issue regarding the definition of what exactly constitutes an acute psychiatric crisis is considered one of the main priorities in this nominal group.

Table 4.13: Top-10 ideas from the nominal group in Walloon Brabant

Walloon Brabant (Total number of ideas =40)	N	Min	Max	Sum	Mean	SD
Multidisciplinary team, in case of an emergency: intake procedure (thorough interview/conversation) + orientation + start up ambulatory or residential care	11	1	40	107	9,73	15,70
Mobilize a system/network around the child, fast. The hospital is not necessary the right place for the child	11	1	26	113	10,27	8,93
Training for primary health care professionals (not working at a hospital)	11	1	33	134	12,18	11,12
Mobile intervention teams	11	1	40	135	12,27	15,43
Assure basic security of the child	11	1	40	154	14,00	15,53
More primary health care professionals	11	1	40	169	15,36	14,53
A mobile professional, standby to participate when requested: at juridical, judicial, medical, social and school level	11	1	40	175	15,91	16,53
A CAP unit, to be able to remove a child from its context – immediate protection	11	1	40	181	16,45	16,42
Being able to use the available resources where necessary: flexible, mobile. Each professional should take responsibility for the child in care	11	1	40	185	16,82	14,46
24/24, 7/7; Immediate (rapid) response	11	1	40	196	17,82	18,90

See footnote b

Table 4.14: Top-10 ideas from the nominal group in West Flanders

West Flanders (Total number of ideas =35)	N	Min	Max	Sum	Mean	SD
Permanent offer: 24h/7d	13	1	35	109	8,38	10,07
Regional crisis centre: care for child/adolescent and environment (context)	13	1	35	114	8,77	10,08
Definition of 'acute psychiatric crisis'	13	1	35	131	10,08	11,12
Social map + well defined and subsidized crisis beds (CAP, Crisis beds), linked to an outreaching unit	13	1	35	140	10,77	12,09
Geographical distribution of emergency psychiatric care	13	1	20	151	11,62	5,61
Each CAP-unit should have an outreaching team, to turn out 7/7, 24hrs a day (to the place of the crisis)	13	1	35	167	12,85	12,63
All services (both residential and ambulatory services) should be geared to one another	13	1	21	167	12,85	6,69
Emergency psychiatric care offer: 7 days a week, 365 days a year	13	1	35	169	13,00	12,75
Definition 'acute crisis'	13	1	35	170	13,08	12,78
Ambulatory and out-reach at emergency psychiatric care, to complete the offer of other sectors	13	1	35	192	14,77	10,88

See footnote b

The priority ranking shows that nominal groups of each province develop a proper focus when brainstorming over EPC. The foci are presented according to the classification outlined in the literature review (chapter 2). In some provinces, process flow and process components are considered most important:

- Continuity of care (Flemish Brabant),
- Speed of action (Walloon Brabant and Limburg),
- Possibility to admit to a bed if required (Antwerp, Brussels, Luxembourg, Hainaut).

Other nominal groups prioritise more structural aspects:

- Accessibility (24/7: Antwerp, West Flanders, Brussels, Luxembourg; geographical accessibility for all professionals: Namur),
- Patient population (specific groups: Liege; no exclusion: Brussels),
- Care providers (multidisciplinary teams: Hainaut, Walloon Brabant; collaboration across sectors: East Flanders, Hainaut, Liege; competencies: Walloon Brabant), and
- Location of EPC (central admission point: Limburg; regional: West Flanders).

Finally, the specific organizational aspects of EPC are main focus for Flemish Brabant (Walk-in clinic with EPSIE), as well as Walloon Brabant (range of EPC options) and Limburg and East Flanders (integration).

Some aspects are specific for only one or two provinces:

- Prevention (East Flanders and Flemish Brabant),
- Social map (West Flanders),
- Need for definition (East- and West Flanders),
- Guaranteed intervention by “Integrale Jeugdhulp” (East Flanders),
- Need for long term care (Luxembourg), and
- Flexible network (Brussels).

4.2.4 Discussion and reflection

4.2.4.1 *Methodological issues*

At each province, a heterogeneous group was composed. The aim was to have representatives of the preselected sectors in all of the groups. As invited professionals were not always able or willing to participate, this might suggest a selection bias. However, it has been shown that doctors who are willing to participate in expert panels are representative of their colleagues^{155, 156}. General practitioners and adult psychiatrists were most frequently excused from the group sessions. Adult psychiatrists were markedly more often absent in the Walloon provinces than in Flanders or Brussels.

Although NGT is a qualitative research technique, the numerical priority scoring has been introduced to present a more detailed picture of the subtle differences between the eleven nominal groups. These numbers should however be interpreted with caution and do not allow us to make an overall ranking of ideas. Participants could only score the ideas generated within their own session; an overall ranking would have required all participants to score all ideas across provinces. An average ranking score of 10 in one province may not necessarily be considered of equal priority as another idea scoring 10 in another province. Therefore, ranking scores are evaluated relatively to one another within the sessions only. It should also be considered that the top-10 priority ideas score top priority by some but also low priority by other participants (see minimum and maximum scores). None of the ideas were considered top priority by all participants within a province. So this presentation is certainly not presenting the consensus of the sector.

Provincial differences in priority rating of ideas may reflect a local need: some ideas were formulated such as to specifically give expression to existing lacunas in current EPC. However, these are perceptions and or expressed needs of the participants present at the nominal groups. It is beyond the scope of this study to verify to what extent these ideas or expressed needs are shared or supported by colleagues of the participants. Analysis of prioritisation by the different sectors represented at each of the nominal groups is also beyond the scope of this study.

In addition, it must be noted that data are not analysed as function of the professions/sectors, due to the small numbers of representatives per sector in each of the nominal groups. Also, the ideas come from a limited number of representatives from each of the sectors. It is not clear whether the ideas of the participants are representative of their proper sector.

4.2.4.2 *The findings*

Although the topic of terminology and definition is explicitly addressed in only three provinces, it must be noted that the terms emergency and crisis were used interchangeably throughout the nominal groups in all provinces. This illustrates the lack of consensus on what exactly constitutes a psychiatric emergency or crisis, confirming the literature findings.

Many of the themes from the nominal groups may be classified into the framework as described in the literature review (chapter 2). However, many of the ideas from the nominal groups encompass a multitude of dimensions, some of which are not explicitly stated. When more than one aspect of EPC is described in an idea, it is not clear whether these aspects are considered equally important.

With respect to the EPC process, speed of delivery is top-10 priority in half of the nominal groups, in Flanders as well as Wallonia. Several of the process components described in chapter 2 are addressed in the priority listings of most provinces, except for East Flanders and Namur: the importance of triage and assessment, referral and orientation of the patients are listed high on the priority lists in many of the provinces. Structural aspects that are granted high priority by many provinces include accessibility, patient population, participation of context, location and providers of care. Organization of EPC includes ideas on the specific set up of EPC, such as walk-in clinics with and child and adolescent EPSIE, to a central point of admission at a child and adolescent psychiatric department with antennae providing a range of care options (outreach, ambulatory, residential,...).

Key points

- **An average of 35 ideas concerning organization of emergency psychiatric care (EPC) in Belgium are generated in each province.**
- **A number of themes recur in each of the provinces.**
- **The priorities for EPC differ between the provincial nominal groups. It is not clear if this reflects actual interprovincial differences in the local needs of EPC.**
- **Ideas may be classified according to functional (process and structure) and organisational aspects of EPC.**
- **Top-10 priority process components include process flow (speed of action) and process components (triage and assessment, referral and follow up).**
- **Structural aspects high on the priority list include patient population (no exclusion, specific groups), accessibility (24h/7d, geographical and financial), providers of care (multidisciplinary teams, resources, intersectorial collaboration), family participation (include context) and location.**
- **Specific organizational aspects at top of the list include walk-in clinic with EPSI (Flemish Brabant), Central admission point in CAP with antennae (Limburg, East Flanders), broad range of EPC options (Antwerp, Walloon Brabant), integration of EPC (Limburg, East Flanders).**
- **Nearly all nominal groups request the availability of crisis beds (at CAP) for residential care to ensure patient's safety if required.**
- **Outreaching and ambulatory care are listed as a requirement in more than half of provinces, in both Wallonia and Flanders.**

4.3 FOCUS GROUPS

4.3.1 Aims and design of the focus groups

The aim of the focus groups was to examine how emergency psychiatric care may be organized in Belgium. As a research technique, the focus group employs guided, interactional discussion as a means of generating information.

One focus group was organised in each of the Belgian provinces (10) and in Brussels (1). The methodology was identical for all focus groups: presentation of the literature review, introduction and clarification of the research task (explaining basic rules of focus groups), group discussion guided by the moderator based on topic guide containing open questions, and finally, closure (see Appendix 4.4 for a detailed screenplay).

Each of the focus groups was guided by the same research members as in the nominal groups (see 4.2.1).

4.3.2 Focus group data analysis

The qualitative data from the focus groups were collected in the form of audio taped discussions in Dutch and French. Because of the language differences, the analysis of the focus groups was divided in two phases.

4.3.2.1 *Phase one*

The audio tapes of the focus groups in Flanders were fully transcribed verbatim. The observer's notes of the non-verbal communication and interaction between the participants were added when transcribing the audio tape.

Based on a Grounded Theory approach¹⁵⁷, these transcripts were inductively analysed in three sequential steps using Nvivo8 software.

- **Open coding:** Text units representing a discrete idea (a sentence or paragraph) were coded. For reliability purposes and to ensure that all possible meanings were captured accurately, two different coders (Astrid Janssens, Vera Walraven) executed the whole analysis process. The results of the open coding of both coders were imported into one Nvivo8-project and compared. Final codes were attributed. After discussing the codes that emerged from the first focus group, the next focus group was coded. This process was repeated for each focus group in Flanders.
- **Axial coding:** In the axial coding stage, each researcher aimed to integrate all categories into one or more general themes. Core categories were denoted and relationships between codes and core themes were identified.
- **Selective coding.** The axial coding of both researchers was compared, discussed, and adapted.

4.3.2.2 *Phase two*

The discussions of the Walloon focus groups were not transcribed verbatim. The audio tapes were used as raw material. Two coders (Astrid Janssens, Vanessa Vandergoten) coded the content of the discussion directly on the audio material. They followed the same procedure, using the codebook of the Flemish focus groups. Additional codes were added when on new content emerged from the focus groups.

4.3.2.3 Data analysis report

The results from the focus group data analysis were structured along the lines of the following core research questions:

- How should emergency care in child and youth psychiatry be organised in the Belgian context? Are these services best organised in a medicalized or non-medicalized setting, in in-patient or out-patient facilities, and is there a need for different service levels of crisis care provision?
- Should the role of these emergency services be defined in a continuum of care model? How could emergency services and other regular mental health care services in child and adolescent psychiatry collaborate?
- Is separate financing needed to organise emergency services in child and adolescent psychiatry?
- Is there a need for a specific registration system in paediatric emergency psychiatry? What would be the purpose? What would be the necessary content? How can it be developed and implemented?

4.3.3 Results of the focus groups

The results of the focus groups in Wallonia, Flanders and Brussels show a considerable resemblance. Although the same core themes emerged, different aspects are put forward and / or emphasised within these themes in each of the focus groups. The complete list of codes is presented in Appendix 4.5. In the following sections we present the themes that are relevant to the research questions and discuss any provincial differences that emerged. Quotes are presented for illustrative reasons.

4.3.3.1 Emergencies and/or crises?

A matter of definition

The issue of defining “emergency” and or “crisis” frequently arose during the focus groups: what is a crisis and to what extent does it differ from an emergency and vice versa? This discussion surfaced spontaneously (i.e. not initiated by the moderator) in each of the focus groups.

In none of the focus groups a consensus or final definition was reached, but participants did not experience this as a fundamental problem for continuing the reflection. However, some participants put forward that a clear definition of “emergency” and “crisis” becomes necessary when installing emergency psychiatric care in Belgium, to avoid confusion about its function and the target population served. The discussions show however, that in daily practice it is practically impossible to separate emergencies and crises.

West Flanders (CAP Department, Child and adolescent psychiatrist): Ik hoor dikwijls van dat knippen, maar je kan dat niet zomaar knippen. Het is niet zo eenvoudig van te zeggen, dit is nu een terechte acute crisis en dit niet. Voor de mensen in een crisis is het dikwijls altijd iets acuuts. Een psychiatrische of niet psychiatrische crisis, ik heb in die tijdspanne niet de tijd om daar een diagnose te gaan stellen...

Participants agree that the experience of patients, their carers and peers is crucial in defining a crisis or emergency. They stress that the validity of this judgement should not be challenged. The child, parent or any person within the environment of the child can assess the situation or condition of the child or adolescent as critical or urgent.

Flemish-Brabant (child and adolescent psychiatrist): Ik ben het er mee eens dat spoedeisend eigenlijk vanuit de cliënt, de vrager zelf komt die het gevoel heeft van ik moet hier dringend geholpen worden.

Hainaut (Juge au tribunal de la jeunesse): I. (femme) Sachant que le non-urgent voyez-vous c'est un peu vaste, parce ce qui peut paraître urgent pour quelqu'un ne l'est pas pour l'autre ; (homme) c'est ça, on ne peut pas se taper le boulot ; (femme) et bien oui, la question c'est...de qui ?; (homme) Est-ce qu'on pourrait imaginer qu'indépendamment des psys une équipe soit en milieu hospitalier ou non hospitalier

dans une structure hospitalière, si pas, rattachée à un hôpital général dans les soins... souvent...si on parle de soins psychiatriques en urgence on a besoin de soins médicaux. Est-ce qu'il se pourrait qu'une équipe pluridisciplinaire soit là et une autre équipe qui est pas en urgence, pour après, pour les parents, je n'en sais rien moi... ! (femme) oui, ou une équipe qui existe déjà et qui peut prendre en charge...

Types of problems

Some participants (mostly child and adolescent psychiatrists) remarked that children and adolescents may present with two types of problems: firstly, the “pure and hard” (Fr: ‘pure et dure’) psychiatric emergencies such as suicide attempts, psychoses, and extreme anorectics, and secondly all other problems. They claim that, compared to the less obvious psychiatric emergencies, patients from the first group, generally, can access a child and adolescent psychiatric department quite easily.

Ultimately, participants feel that all emergencies and/or crises should be dealt with by emergency psychiatric care^c (EPC); every patient should have access to EPC and appropriate action should be taken following an initial assessment. Acceptance of all presentations implies that EPC will have to be able to deal with a variety of problems and a thorough assessment will need to be performed at presentation.

East-Flanders (Department Child and adolescent psychiatry, child and adolescent psychiatrist): Wanneer je handboeken over psychiatrische urgentie leest dan zijn dat, wij zijn geen cardiologen die een hartinfarct behandelen, maar onze crisissen zijn acting-out, zijn suïcidepogingen, zijn gedragscrisissen, dat is zo. En heel vaak heb je 's anderendaags de indruk dat er geen link is met een psychiatrische problematiek maar in se vind ik urgentiepsychiatrie moet aan de slag kunnen met symptomen zonder dat je meteen weet of er een link is met iets. Dus ik kan ook begrijpen wanneer iemand compleet uit zijn dak gaat dat het goed is dat er daar iets mee gebeurt.

4.3.3.2 Accessibility and target population

No exclusion

Participants realised that it is impossible to define a target population for emergency psychiatric care. Thus, the overwhelming majority of participants required that emergency psychiatric care should be directly accessible for everyone and no exclusion criteria should be applied.

Antwerp (Ambulatory mental health, Child and adolescent psychiatrist): Waar absoluut geen exclusie is.

Flemish-Brabant (Department of Child and adolescent psychiatry, psychologist): Maar ik vind wel niet dat mensen met een mentale handicap, of jongeren moeten geëxcludeerd worden van die opname, ik vind niet dat dat een exclusie criterium kan zijn...

Walloon Brabant (Department of child and adolescent psychiatry, social worker): ...pas d'exclusion, pas de critères restrictifs...

Direct access

Although the majority of participants clearly indicate that EPC should be directly accessible, in both Antwerp and Flemish Brabant, some participants (psychologists from both ambulatory mental health care and CAP department) believe otherwise. In their opinion, a referrer should be able to judge the situation and decide whether or not emergency psychiatric care is required. Thus, in this view only professional care providers should be allowed to appeal directly to emergency psychiatric care. This implies the existence of ‘gatekeepers’: these professionals are the first point of contact for patients and their carers and it is they who decide whether the request for EPC is legitimate.

^c The term ‘emergency psychiatric care’ is used throughout this document as a neutral term to refer to EPC function and not to EPC as an organizational entity.

Antwerp (Ambulatory mental health, psychologist): Nee, dat is trouwens ook met het crisismeldpunt, dan kunnen alleen professionele verwijzers aanmelden, geen ouders. Dat is niet opengesteld voor ouders. Een ouder moet terecht bij een CLB of een JAC of een , die nemen dat op en dan kan het snel gaan.

Flemish-Brabant (Department of Child and adolescent psychiatry, psychologist): Iedereen moet er terecht kunnen. Iedere patiënt moet terecht kunnen op die spoedopname en op de EPSIE, maar niet, het is niet de patiënt die een outreach-team moet kunnen bellen. (instemming van de groep) Ik denk dat we heel specifiek moeten zijn in de regelgeving wie kan een outreach-team contacteren (instemming van de groep): een huisarts, een psychiater, een kinderpsychiater en dat is het dan misschien, een psycholoog (instemming van de groep) want anders zijn die overbelast en dan werkt het systeem ook niet meer...

4.3.3.3 Individualised, needs-based care

Individualised, needs-based care = tailored care

Participants stress that every child presenting for emergency psychiatric care requires individualized care, adapted to his/her particular needs and problems.

Antwerp (VAPH, MPI, Child and adolescent psychiatrist): Ik denk dat uw crisis, uw crisisopname zelfs altijd moet starten met een gesprek. Om te analyseren: wat is hier de gepaste hulp?

Luxembourg (AWIPH, IMP, superintendent):... on pourrait, je pense que les structures on peut les avoir, mais il faut adapter en fonction des jeunes, parce qu'on va créer des... quand on voit le nombre de problématiques des jeunes, chaque jeune a une réponse tout à fait spécifique et donc il faut que les services aient des capacités d'adaptation vraiment importantes, et puis s'établit le réseau, le scolaire, enfin toute une série, mais justement pouvoir avoir suffisamment de personnel pour pouvoir réaliser ce réseau et de mettre ces enfants-là avec des réponses les plus adéquates possibles en fonction de la problématique...

Walloon-Brabant (Department child and adolescent psychiatry, Ambulatory mental health, child and adolescent psychiatrist): ...je reprends cette idée de ces deux dispositifs parce que la particularité en pédopsychiatrie c'est que la réponse n'est pas la même pour chaque situation, la réponse est singularisée, il se peut que pour quelqu'un qui dise "je vais me suicider" il y ait une nécessité d'hospitalisation, il se peut que pour une autre, il y ait surtout une nécessité de ne rien faire, et je pense que s'il y a concertation autour du patient dans un second temps, chacun des intervenants se connaissant, voilà, peut entendre le point de vue de tous quoi, je me dis si on se connaît, si madame la juge me connaît peut être qu'elle pourra plus facilement comprendre que je.. j'estime que dans cette situation il y a surtout lieu de ne rien faire parce qu'il y a aussi à traiter, je pense l'angoisse ou je crois la crainte des professionnels... je pense que la difficulté est la réponse singulière pour chaque situation, il n'y a pas à une situation la réponse appropriée, idem pour tous, et c'est là la difficulté..

Assessment

The determination of the appropriate care or most adequate solution for a child is performed at presentation. Participants refer to this act as an assessment, a determination, an evaluation, a triage etc.

Antwerp (VAPH, Educational psychologist): En dat is de taak van de crisisdienst op dat moment om in te schatten of dat iets voor hen is of niet.

Limburg (child and adolescent psychiatrist): Het is goed, dat sorteermecanisme, ik vind het belangrijk ook dat een aantal vragen wel eruit getrancheerd worden, er zijn een aantal situaties waar het heel evident of voor de hand liggend is dat spoedgevallen daarmee niet lastig gevallen worden

Flemish-Brabant (child and adolescent psychiatrist): dat er alleszins een goede inschatting kan gebeuren aan die voordeur. En selectiviteit gaat er over dat ze moeten terecht kunnen komen op de plek waar dat ze thuis horen,

This assessment should be performed by 'a competent person'. Sometimes this person is explicitly named: e.g. a child and adolescent psychiatrist, a paediatrician, a psychiatric nurse etc. However, participants more often refer to this person by identifying the necessary competences to perform this 'assessment and disposition' (see also 4.3.3.5).

Some participants request a full psychiatric assessment (diagnostics), especially judges sitting in a juvenile court. Psychiatrists and participants working at a child and adolescent psychiatric (CAP) department are of the opinion that this takes time, and is almost impossible to accomplish at short notice. The issue of time constraint is raised in all focus groups in Wallonia and some Flemish focus groups (Flemish Brabant, Limburg, and Antwerp): Participants emphasize that a thorough psychiatric diagnostic evaluation generally can not be performed during a crisis intervention (of maximum 2 weeks). Participants of Luxembourg and Hainaut conclude that they need a separate centre for diagnostics at their province.

Walloon- Brabant (Department Child and adolescent psychiatry, Ambulatory mental health, child and adolescent psychiatrist): ...on dérive je trouve dans la façon dont on parle je trouve car diagnostic, c'est sans doute un éclairage, je préfère qu'on dise: "j'ai besoin d'un éclairage"; ...oui mais ce n'est pas un diagnostic médical je le dis dans des termes ...; je préfère qu'on dise éclairage que diagnostic; oui mais vous savez, quand on vient réparer une machine à laver on parle de diagnostic aussi, ce n'est pas forcément médical; le diagnostic peut être social, l'équipe multidisciplinaire peut dire qu'il ne s'agit pas d'un diagnostic médical, il n'y a pas de maladie mentale, mais le diagnostic social c'est que cette femme-là est complètement...

EPC: general versus categorical

In all provinces, except for Namur and West-Flanders, participants reject the idea of categorical emergency psychiatric care. Categorical EPC refers to selective care for specific target populations with respect to developmental age or psychopathology. In their opinion, EPC should be general, dealing with all kinds of crises, independent of the child/adolescent's age. They feel that categorical care is, however, warranted as follow up care, once the emergency or crisis has subsided.

Participants in Namur believe that whoever offers emergency psychiatric care should decide how EPC needs to be provided. In that respect, they plea for minimal regulations with regard to the organisation of emergency psychiatric care.

In West-Flanders, participants choose to implement emergency psychiatric care at the existing CAP departments, and thus to respect the current specialisation of the concerned CAP department.

4.3.3.4 A spectrum of emergency psychiatric care

Individualized and flexible care can only be offered if a continuum of EPC is available. Different options are cited by the participants: (emergency) consultation, mobile team or outreach team, ambulatory care, residential care and every combination and/or variation of these. The participants' view on this spectrum of care is described below.

A range of EPC options

According to the participants, targeting a wide range of emergencies or crises (see 4.3.3.1 and 4.3.3.2) requires a broad spectrum of emergency psychiatric care (EPC). The quotes below illustrate that EPC should include provisions ranging from as little as a telephone consult, over an ambulatory consult, an outreaching and a time-out function, to residential care (i.e. crisis beds).

Antwerp (Child welfare, superintendent): En die setting kan heel ruim zijn denk ik he ... dat kan gaan van een telefonisch consult bij wijze van spreken tot een ambulante consult van de jongere, het kind op dat moment als het nodig is en nog kan, hangt af van de crisis eigenlijk, van de jongere met een psychiater tot een outreach gelijk dat gezegd is geweest dus tot een residentiele crisisbed.

Antwerp (Ambulatory mental health, child and adolescent psychiatrist): Ja dat is zo een heel scala van aanbod: van ambulante, outreachende, residentiële, consult, time-out-functie....

West-Flanders (IJH, staff member): we hebben een divers aanbod nodig..

Flemish-Brabant (Ambulatory mental health, supervisor): En het vervolg is dan eigenlijk voldoende aanbod om die mensen een plek te geven, gaande van ambulante, residentiële intensief, naar stabilisatie, naar beveiliging toe. Dus daar heb je heel veel mogelijkheden op dat moment die er moeten zijn.

Namur (Department of Child and adolescent psychiatry, Superintendent, psychologist): oui, mettre du temps disponible pour le travail en réseau, ce que vous disiez sur la supervision, la formation; avec une équipe comme monsieur T. nous le disait tout à l'heure qui a cette triple possibilité de faire un peu d'hébergement, de l'accueil de jour et du travail mobile; et même de la consultation...

East-Flanders (VAPH, Supervisor): Dus ik verwacht ook niet dat die crisissen allemaal zomaar, lap, boef, vallen in een psychiatrische eenheid. Ik verwacht een aanmelding en dat die aanmelding dan, hopelijk voldoende mogelijkheden heeft, om ofwel te komen en te ondersteunen ofwel op te vangen in de meest geschikte opvang. Dus het is niet één oplossing, het is een hele range van oplossingen die we samen moeten vinden.

Flexibility within the spectrum of care

Participants stress the importance of being able to use the available EPC in a flexible manner, adapted to the potentially evolving needs of the child/adolescent. This flexibility would allow optimal use of the full range of care options (consultation, ambulatory care, outreach care residential care or combinations). Transitions between different EPC options should go smoothly, and the choice of which EPC to provide, is for many participants guided by the principle of subsidiarity: “do not use a bed if a chair is equally sufficient”.

Limburg (Child and adolescent psychiatrist): ...En selectiviteit gaat er over dat ze moeten terecht kunnen komen op de plek waar dat ze thuis horen, waar dat subsidiariteit voor mij ook een zeer belangrijk principe is, je gaat geen bed gebruiken als je ambulante verder kan.

The term ‘subsidiarity’ as such is used only by a few participants. However, many participants express the opinion that a child should be offered the least invasive care possible, and thus should be helped within its own environment for as much and as long as possible:

Antwerp (Ambulatory mental health, psychologist): Want je moet altijd in u achterhoofd hebben dat een kind in nood dat geplaatst moet worden, of een kind in nood dat ook ambulante kan begeleid worden, dat dat een groot verschil is. (instemming vanuit de groep) Voor een traumatisering. En ik denk dat ons, binnen de kinderpsychiatrie, zowel ambulante als residentiële, is het zo van, zo snel mogelijk in de gewone leefwereld of zo lang mogelijk in de gewone leefwereld kunnen blijven van het kind. Dus het moet op die verschillende niveaus kunnen

Residential versus non-residential care

In all focus groups, participants from different sectors express the view that emergency psychiatric care does not always correspond to residential care.

East-Flanders (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): Wel, daar ben ik niet zo mee akkoord dat dat altijd een residentiële opname moet zijn

Antwerp (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): Dat als er een hulpvraag komt, vrij snel iemand is die die hulpvraag mee opneemt en daar een gepast antwoord op zoekt, wat daarom niet altijd een opname moet zijn...

For some of these participants, EPC should be provided in situ: i.e. where the child is at the time of crisis. Preferably, EPC works from within the child's or adolescent's context.

East-Flanders (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): (zucht) Ja, maar met misschien minder, dat residentiële ok. Maar altijd die bedden, die bedden, ik geloof daar niet echt in. Ik denk dat wij veel meer naar de context, wat die dan ook is, moeten...

Limburg (general practitioner): Is zeker nodig denk ik. Maar niet alle dingen horen dan weer thuis vind ik in een opname. (instemming van de groep) Veel van die dingen kan je thuis afhandelen mits ondersteuning van bepaalde diensten, maar wie zijn die, waar zijn die? En dan heb je weer iemand nodig die u daarin een beetje gidst.

However, participants agree that sometimes residential care is warranted, and crisis beds should somehow be available at all times. However, beds should not be used just because it is the only option available.

Brabant-Walloon (AWIPH): (femme) et l'inverse aussi, parce que moi je me méfie très fort de l'urgence. J'ai bien entendu que monsieur, le médecin-là a dit, c'est la demande des gens, mais néanmoins, ils ne sont pas forcément en urgence d'avoir un lit dans un lit dans un hôpital. Donc je crois qu'on doit... ; (homme) je n'ai pas dit ça hein... ; (femme) non, non, non, non... donc je suis d'accord avec vous, mais j'y ajoute, pas pour avoir un lit dans un hôpital. Donc il faudrait qu'au moment où les gens se précipitent aux urgences psychiatriques en disant « ah, il faut tout de suite un lit pour m'hospitaliser ou pour hospitaliser ma fille ou mon fils », peu importe. Qu'il y ait là une personne de la concertation qui soit capable d'être ...qu'on puisse l'appeler ou qu'elle soit de garde, je n'en sais rien...et qu'elle puisse justement faire le point et...dédramatiser un peu certaines situations parce que sinon les gens remplissent les lits et puis euh...madame le juge n'a plus de place pour des personnes qui en ont vraiment besoin ou pour des gens qui sont sur le point de se suicider, etc. Donc je trouve que là il y a un soucis, parce qu'on va mettre dans un lit, parce qu'on n'a pas d'autre solution, et bien quelqu'un qui n'en a peut être pas tout à fait besoin et si on pouvait tout de suite passer le relais, plutôt que de dire à la personne, retournez chez vous, c'est pour demain, ben je pense que ce serait plus facile.

East-Flanders (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): Wel, daar ben ik niet zo mee akkoord dat dat altijd een residentiële opname moet zijn, omdat zoals ik daarnet zei: als je met spoedeisende zaken bezig bent, moet je eerst eens kijken wat er aan de hand is en degene die een spoedeisende vraag heeft, en in de meeste crisissituaties komt dat voor, is er een blikvernuwing en dan ziet men eigenlijk niet meer dat er andere oplossingen ook nog mogelijk zijn, of andere interventies.

The topic of residential crisis beds surfaced in each of the focus groups, without exception. Although the need for non-residential care has frequently been stressed throughout the focus groups, residential care remains essential in emergency psychiatric care.

East-Flanders (child and adolescent psychiatrist): geef ons veel meer middelen om ambulant en outreaching te werken en wij gaan veel meer crisissen gaan oplossen dan nog eens zo veel bedden te gaan bijvoegen, maar ... nogmaals, bedden zijn wel noodzakelijk, ik denk echt dat er een paar bedden moeten komen,!

Residential care is often translated in K-beds. These beds are necessary for short-term (emergency, and so unplanned) admissions. Ensuring the safety of the child or its environment and the context's need for a time-out, a moment to get one's breath, are the two reasons most frequently cited to admit the child or the adolescent to a bed.

West-Flanders (Jeugdrechter): Ok, ik zou hier dan ook even iets willen toevoegen, voor mij is het eigenlijk, vanuit onze functie denk ik, het belangrijkste, het onmiddellijke gevaar wegneemt, we hebben her daarstraks nog over gehad, de kenmerken: het gevaar voor zichzelf, het gevaar voor anderen, dus voor mij is dat belangrijk eigenlijk, onmiddellijk dat neutraliseren eigenlijk.

Antwerp (Crisismeldpunt IJH, staff member): Nee, maar is vaak wel een eerste vraag. En daarom moet je niet altijd ingaan op een eerste vraag, maar vanuit de praktijk leer ik wel, als jongeren 1 of 2 nachten tot rust kunnen komen in dat bed, dat er na 2 dagen op een andere manier kan gewerkt worden, en dat het soms wel noodzakelijk is om voor die 2 nachten dat bed wel te voorzien om die rust...

Limburg (Paediatric Department, Head of Department): Maar als daar iemand zit die mij kan helpen en praktische veiligheid kan bieden ook, ok.

A few participants request the possibility of long-term admissions, to ensure treatment as well.

Liège (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): ...et donc pour un peu ressaisir ma logique je pense qu'il y a la question de l'urgence immédiate de porte ou au domicile, ça c'est une équipe, qui à mon avis doit avoir une euh... pour être là 24h sur 24 un certain territoire et puis il y a par salle d'urgence savoir s'il y a derrière un nombre de jours d'hospitalisation, un peu dispatching et puis après il y a des hospitalisations plus longues, je pense qu'elles peuvent être sur différents lieux mais là alors de manière plus spécialisée parce que sinon, si on fait tous dans l'hospitalisation, après les 5 jours, euh, la même chose généraliste, c'est un peu malheureux! Mais alors effectivement, on peut avoir par hôpital certains qui se spécialisent dans tel domaine et comme "Lierneux" c'est déjà spécialisé dans le côté suicidaire mais à partir de 15 ans.

Antwerp (Dept. Child & adolescent psychiatry): Ik denk dat er, ja, er gaan inderdaad een klein aantal gevallen zijn die dan in de avonduren of in het weekend in crisis gaat en dan heb je inderdaad wel een, misschien een opnamesetting nodig, kortdurend, langdurend, in functie van de noden van dat kind. Als je iemand hebt die knalpsychotisch wordt om een of andere reden, dan heb je dat ook niet op vijf dagen opgelost en als er een extreem gedragsprobleem is, waar het netwerk niet functioneert en waar dat het juist is waardoor het kind uit de bol gaat en uit de voorziening uit moet, ook dan heb je binnen vijf dagen niet direct iets geactiveerd als je dan niet flexibel op maat kan werken. Sommige kinderen hebben na vijf dagen hun rust en zijn gestabiliseerd, maar andere hebben gewoon langer nodig...

These beds should be available and financed throughout the year. Also, these beds should be available for voluntary as well as involuntary emergency admissions.

East-Flanders (Psychiatric Hospital, Adult, superintendent): maar dat is er en ze hoeven uiteindelijk ook niet volzet te zijn om je financiering ook binnen te halen, dat is nog een addertje onder het gras... Als je het hebt over crisis, moet je een aantal bedden altijd ter beschikking hebben zonder dat je er een financiële inzet voor moet geven, en vooral ook, je hebt uiteraard ook een team nodig die daar mee om kan, permanent he!

EPC also a consult function

According to some of the participating paediatricians, emergency room staff and staff of social services (Agentschap Jongerenwelzijn/Aide à la Jeunesse), consulting an EPC expert for advice may sometimes be sufficient for them to continue working with a patient. The expert needs to be competent in the fields of child and adolescent psychiatry as well as emergency care (see also 4.3.3.5).

Limburg (Paediatrician): Maar het is toch niet alleen de cliënt of patiënt zelf die moet geholpen worden. Ik zie dan vanuit mijn standpunt als kinderarts heb je ook graag advies, dringend advies over een patiënt die misschien zelf niet realiseert dat er zorgen of dringende zorgen nodig zijn of het niet wil aannemen, of een omgeving die het niet wil aannemen of er van de andere kant wel op aandringt maar daar beter niet zou zijn.

Flemish-Brabant (Department of Paediatrics, Superintendent): Wel, ik denk toch dat het advies van een kinderpsychiater moet kunnen ingewonnen worden. Niet dat ik daarom er direct mee moet kunnen spreken, maar er moet toch een medisch advies, een kinderpsychiatrisch advies kunnen ingewonnen worden, dringend, omdat het soms ook nodig is om dringend medicatie toe te dienen, om bepaalde medische handelingen te stellen. Maar dat mag voor mijn part verlopen via eerst een psychiatrisch verpleegkundige, dat mag, maar ik denk dat toch de mogelijkheid moet bestaan om een kinderpsychiater ook in urgentie er bij te betrekken als het echt nodig is.

Antwerp (Emergency department, Head of Department): Nee, ja, persoonlijk heb ik het daar heel moeilijk mee. Omdat het is een zeer specifieke problematiek, ik ben een 'stoeme' spoedarts, dus ik ken heel weinig van psychiatrie en zeker niet van kinderpsychiatrie, dus als ik met zo een geval geconfronteerd wordt, heb ik een hulplijn nodig (instemming van de groep) die komt inschatten: is dat erg, is dat niet erg? Ik kan, een volwassene durf ik soms inschatten, dat is niet altijd naar suïcidaliteit toe, naar draagkracht van de thuissituatie toe, maar bij kinderen durf ik daar zelfs niet aan te beginnen omdat ik gewoon onvoldoende ervaring heb, allez, ik durf niet zeggen met een gerust gemoed tegen ouders: 'ga maar naar huis, dat gaat lukken' of 'neenee, die moet hier blijven'.

This 'consultation' may take many forms: some prefer an EPC team to come and see the patient; others consider a phone call to be sufficient.

Antwerp (Crisismeldpunt IJH, staff member): Ik denk dat dat beiden wel kan ook telefonisch en dat dat zeker ook een soort van consultfunctie moet hebben voor hulpverleners die op dat moment met een crisis zitten, maar die zoiets hebben van: als ik handvatten heb, kan ik wel verder; maar die daarvoor wel een specialist kunnen raadplegen en dan voornamelijk telefonisch denk ik.

Brabant-Wallon (Department of Paediatrics, Superintendent): ...une équipe mobile mais qui ne se déplace pas nécessairement au domicile du patient mais qui se déplace au lieu d'urgence..

Liaison psychiatry

Today, this 'psychiatric consult' exists as liaison psychiatry at some hospitals with a child and adolescent psychiatric department. Some hospitals have been experimenting with this form of consultation at paediatric departments and ERs with mixed success (and mixed feelings among the professionals involved).

Namur (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): ...moi j'ai parfois l'impression que comme pédopsychiatre en urgence on est un peu le pédopsychiatre pompier qui intervient quand déjà plein de choses parfois euh...se sont passées effectivement et qu'on doit trouver une solution magique et ça ça ne va pas non plus ; (femme) et donc il faut des gens très flexibles, qui puissent fonctionner jour et nuit à mon avis hein, en tous cas les week-ends

East-Flanders (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): Eigenlijk bestaat het al he, Marleen, de spoedafdeling. Dat bestaat al. In Sint-Niklaas is er de spoedopname en je kan bellen en 24/24u is er een kinderpsychiater beschikbaar en die kan advies geven.

Flemish-Brabant (Department of Child and adolescent psychiatry, child and adolescent psychiatrist): Er bestaat hooguit liaison binnen de kliniek waar kinder-psychiatrie aanwezig is

EPC: Mobile, outreach or ambulatory

The need for emergency psychiatric care to reach out and to be mobile is eminently stressed and debated in each of the focus groups:

However, participants are not very specific about this mobile or outreaching care. They refer to a mobile crisis intervention team, a team with a 'Mobil home', a 'psychiatric MUG / SMUR' (Mobile Urgency Group), a mobile intervention team, an outreach team, mobile care, outreaching (without further specification), etc. All of these terms stress the need of being mobile, being able to provide care where the child resides at that time. This includes the (parental) home of the child, any social service or hospital department (paediatric department, emergency room) or any other place the child is at the time of crisis.

Namur (General Practitioner): il y a quand même un point, je m'en suis rendu compte pendant l'échange, sauf si tu me contredis F., c'est l'outreaching par rapport aux urgences. Est-ce que ça entre quelque part ou bien est-ce que c'est une...; (homme) en partie oui, dans la manière dans l'outreaching à Namur fonctionne on essaie de répondre rapidement à des situations mais ça reste tout à fait ambulatoire donc là c'est, mais oui...l'attente est certainement moins grande que dans un centre de santé mentale ou euh...un service résidentiel

Brussels (Emergency service, Bachelor in Psychology): la question des équipes mobiles aussi, je pense que c'est important ; (modérateur) d'avoir des équipes mobiles; (femme) de le dire oui; (modérateur) et par équipe mobile vous entendez alors qui vont à domicile?; (homme et femme) oui; (homme) qui sont rattachés à un service, qui sont rattachés à l'unité de crise, qui peuvent aller; (modérateur) mobile à quels endroits? : (femmes) en famille, en institution, dans la rue, là où est l'adolescent, où sont les enfants...; (modérateur) dans leur système de vie?; (femme) oui dans le milieu de vie de l'adolescent

Brussels (Paediatric Department, Paediatrician): moi je dis que c'est ce qui manque: des centres, je veux dire des urgences psychiatriques dans les hôpitaux il y en a déjà je veux dire si vraiment t'as un ado qui s'est taillé ou quelque chose comme ça, ça il peut aller aux urgences, mais effectivement c'est toutes les situations d'urgence, ben nous maintenant en pédiatrie on est vraiment envahi par des situations de crise qu'on est obligé de mettre à l'hôpital parce qu'il faut un temps de séparation, mais je pense que s'il y avait une équipe d'outreaching, ou une consultation déjà pour apaiser les choses, on peut être quand même en ambulatoire ou des choses comme ça...

Liege (Child welfare, supervisor) equipe mobile: ...Une équipe d'intervention mobile là ça peut être large, mais maintenant effectivement, plus en hébergement je vais dire hein, là ça pose même;

Flemish-Brabant (child and adolescent psychiatrist): wat wel nodig is, is een snel interventieteam dat naar een collega-organisatie kan, een instelling met een jongere, de bijzondere jeugdzorg, een hospitaal dat niet meteen een kinderpsychiatrische unit in huis heeft en waarbij we toch, met de kleine ervaring met de outreachteams, ervaren dat als je een psychiatrisch verpleegkundige kan toevoegen aan een bestaand team waar dat die pecifiek de expertise mee op gang zet, dat eigenlijk dan die setting heel vaak in staat is om dat op te nemen

West-Flanders (Department of Child and adolescent psychiatry, social worker): de kracht van crisis hulp is echt aan huis gaan...

Some participants also indicate that, currently, resources for outreaching are clearly insufficient.

Luxembourg (Child and adolescent psychiatry, General Hospital, psychiatric nurse):.. le service par exemple hospitalier, on se déplace, on essaie d'aller visiter des institutions, euh... on on...on va au service d'aide à la jeunesse euh..et.. mais voilà euh... moi quand je détache quelqu'un de mon équipe, euh au lieu qu'ils soient trois personnes à travailler un matin euh je n'ai plus que deux personnes en service et parfois ils sont seulement deux en matin, et je suis obligée de rappeler des gens pour faire des heures supplémentaires pour pouvoir faire ce travail de liaison et c'est ça qui manque aussi, c'est de pouvoir euh se rencontrer, se déplacer, et pouvoir travailler en collaboration parce qu'on n'a pas les moyens (vanessa) et donc des contacts en réseau, c'est ça que vous voulez dire, au sein du réseau une meilleure communication? (femme) oui

East-Flanders (Care and treatment of drug addicts, psychologist): ... Ik denk dat een soort MUG-systeem nodig is, een soort mobiel systeem want die crisissen komen regelmatig voor, maar ook niet zo regelmatig dat je daar constant extra middelen voor kan inzetten, dus ik denk dat de oplossing daar ergens moet gezocht worden.

Not everyone adheres to this overall trend that outreaching or mobile care is essential to or should become the core of emergency psychiatric care. In particular, some specifically question the added value and effectiveness of at-home care:

East-Flanders (Child welfare, supervisor): Ik denk toch, als ik kort even mag reageren, dat zo een outreaching-team in geval van echte crisissen te laat komt. Ik denk dat dit geen oplossing is voor crisissituaties.

East-Flanders (Department of child and adolescent psychiatry, child and adolescent psychiatrist): het is correct dat de jongere terugwil, maar ik heb zelf ooit nog vanuit mijn ambulante praktijk aan huis, pfff, dan krijg je inderdaad een pan tegen, ook zelf tegen uw hoofd.

Participants seldom clearly distinguish ambulatory or outreaching care and mobile care. Both forms of emergency psychiatric care are delivered where the child or adolescent resides at the time, and that is what prevails. However, it seems that ambulatory care is more appropriate at the start (even before the actual crisis or emergency) and at the end of the emergency psychiatric care process. Participants all report that the current offer of ambulatory care needs to be expanded to prevent emergency psychiatric care of silting up.

4.3.3.5 Practitioners and competencies in EPC

“A multi- or pluridisciplinary team” is the key concept to characterize the professionals delivering EPC. In some provinces (West-Flanders, Brabant-Walloon, Brussels, Liege) all different professions that should be part of the team have been listed: educators, psychiatric nurses, social workers, psychologists, criminologists, child and adolescent psychiatrists. The team should be a mix of different disciplines. In West-Flanders and Flemish-Brabant, participants refer to the composition of the current outreach-teams including a psychiatric nurse, child and adolescent psychiatrist and a psychologist.

Other participants (Hainaut, Antwerp, Luxembourg) believe the team should consist of professionals of different sectors such as the welfare sector (including VAPH/AWIPH), school, medical sector, the legal sector.

Many participants in Namur, Flemish-Brabant, Limburg, Antwerp and East-Flanders agree that the profession or sector does not really matter, as long as the person providing emergency psychiatric care is a professional, a senior expert, who can judge a matter expertly.

In addition, EPC professionals should have a broad variety of competences: flexibility, experienced in working with children and dealing with crises, knowledge of child development and the social map of the region.

4.3.3.6 Location, infrastructure and resources: where to install EPC?

The answer to this question is closely linked to the topic on spectrum of care (see 4.3.3.4).

New or existing service?

Participants in all focus groups agree that it is not recommendable to create a new service as so many already exist, some of which offer some kind of EPC.

Limburg (Department of Paediatrics, Psychologist): Het zou juist een grote valkuil zijn denk ik om weer iets apart, iets nieuws (instemming van de groep) iets central gaan creëren, maar dingen bestaan. Maar laten we daar dan de verbindingen mee leggen, maar dat zou een grote valkuil zijn denk ik om weer iets nieuws apart te installeren.

Thus, they all make it clear that, in their opinion, emergency psychiatric care should be linked to or embedded in (an) existing service(s).

EPC inside or outside the hospital?

Many of the participants are indecisive whether or not emergency psychiatric care should be located in a hospital. During the discussions many participants make it clear that a hospital is not the only (let be the best) option whereas to organize EPC. However, they always stay vague in giving alternatives and/or a concrete location:

Antwerp (Crisismeldpunt IJH, staff member): Dat kan ook ergens anders, als er van daaruit maar een specialist kan geraadpleegd worden en dat hoeft voor mij niet in een ziekenhuis te zijn.

Hainaut (Child and adolescent psychiatrist): Mais moi je pense que c'est quand même compliqué d'hospitaliser, par exemple, un jeune qui a fait une TS (tentative de suicide), par exemple cinq jours en étant isolé d'un service de pédiatrie, c'est quand même du médical. ; (homme) si ça relève du médical on ne le prendra pas, il faut que ce soit médicalisé,... ; (femme) donc moi je dirais une équipe qui travaille mais qui peut plus travailler avec le réseau existant qu'il faut peut être renforcer

Luxembourg (Child welfare, superintendent): ... (modérateur) et est-ce que ça devrait être lié alors à un centre hospitalier ou pas? Est-ce que ça doit être lié à un centre hospitalier ou la crise doit être gérée...; (femme) il y a un centre hospitalier à Libramont donc ce ne serait pas impossible de relier ça; (femme) maintenant lier, peut être mais peut être pas non plus nécessairement dans les mêmes...enfin, ça dépend, j'ai envie de dire ça dépend; (homme) administrativement, peut être en décentralisation; (femme) on peut profiter peut être de l'équipement médical là-bas pour une structure qui est à quelques centaines de mètres, Libramont n'est quand même pas...

Brussels (Child and Adolescent Psychiatry Department, Child and adolescent psychiatrist): (homme) on pourrait peut être étayer ce qui est en amont, et puis ce qui est en aval, je veux dire en amont, un système de renforcement de dispositif et puis pour l'évaluation, la gestion de l'urgence; (modérateur) et qu'est-ce que vous identifiez comme étant en amont?; (homme) et bien justement, des services de référence pour faire de l'expertise pour éviter d'être dans des situations où la crise est là et où l'urgence est là; (modérateur) pour renforcer ça et en aval alors?; (homme) ben en aval après les unités de crise, articulées soit à des hôpitaux, soit à des unités de crise, soit à des services de santé mentale je veux dire donc il y a une pluralité à ce niveau-là et puis dans l'accompagnement continu soit à travers des équipes outreaching attachées à ces centres, des centres de crise ou de santé mentale, enfin, en termes de renforcement hein...; (femme) là tu rejoins l'articulation...ce qui pose la question de la coordination des soins;

A frequently cited reason not to install EPC in a hospital setting is the fear of stigmatizing children (Hainaut, Luxembourg, Antwerp). Participants fear that a stay at emergency psychiatric care would hamper the organisation of the aftercare, as other services would refuse a child with a psychiatric past.

In Brabant-Walloon, some participants explicitly state that emergency psychiatric care should be situated at a neutral location and therefore not in a hospital setting.

Walloon-Brabant (Judge at juvenile court): ...moi je rejoins fort l'avis de Mme X plutôt détaché d'un hôpital et alors des structures neutres et plusieurs dans l'arrondissement puisque c'est vrai que l'arrondissement ici, en tous cas du Brabant-Walloon est très très étendu; ...Ben une à Nivelles, un à Jodoigne; (femme) et une à Ottignies; (femme) et à Tubize hein...; (homme) tout dépend du mode de fonctionnement, je pense que la structure hospitalière de base, du fait même du mode de financement hospitalier, ça end tout à fait impossible la mise en place d'une telle structure puisqu'il n'y a rien au niveau budget, moyen hospitalier qui permette de mettre ça en place, donc ça c'est clair, si c'est une structure extra-hospitalière, multidisciplinaire, vu la géographie de la province, il faut pouvoir aller chercher le gosse en difficulté à Rebecq ou à Jodoigne. Il est impossible, enfin il est totalement illusoire, d'imaginer que l'enfant de Rebecq va aller à Jodoigne et vice-versa, on le voit déjà pour les patients malades ou normaux en transports en commun, c'est quasiment, c'est impossible alors à fortiori dans une situation de crise psychologique ou psychiatrique, c'est illusoire;

The main reason to install emergency psychiatric care in a hospital setting is the necessity of a residential offer. Participants refer to residential care as “beds”, which most frequently imply K-beds (beds at a child and adolescent psychiatric (CAP) department).

*Hainaut (Juge de la jeunesse au tribunal de charleroi): Les soins psychiatriques en urgence pour les enfants **essentiellement, pas mais essentiellement**, en urgence en **milieu hospitalier**, autrement, créer des cellules inter-hospitalières*

Luxembourg (Juge de la jeunesse): ...il y a un centre hospitalier à Libramont donc ce ne serait pas impossible de relier ça; (femme) maintenant lier peut être mais peut être pas non plus nécessairement dans les mêmes...enfin, ça dépend, j'ai envie de dire ça dépend; (homme) administrativement, peut être en décentralisation; (femme) on peut profiter peut être de l'équipement médical là-bas pour une structure qui est à quelques centaines de mètres, Libramont n'est quand même pas étendu à ce point-là...

Namur (AWIPH, Psychiatric qualified nurse): ...Excusez-moi mais quand vous dites il n'y a rien d'organisé au point de vue publiquement psychiatrique, moi je dis dans mon hôpital, de manière certes, imparfaite, on fait face à des urgences quand même; (femme) à la réalité; (homme) on ne peut pas dire à raison qu'on est dans un désert; (femme) non, non; (femme) on fait du bricolage quand même; (homme) mais ça pourrait se situer dans un hôpital, pourquoi pas? S'il y a là, comme monsieur D. disait, à un certain moment, il faudrait pouvoir avoir les moyens de structurer correctement la prise en charge de ce type de situations mais pourquoi pas y associer justement une cellule d'écoute au départ et de pouvoir capter directement les messages et puis bien entendu être en contact avec le réseau hein, les différents services existants, les équipes mobiles etc.; (homme) parce que l'hôpital n'est pas forcément la réponse adéquate, dans certains cas, il y a des urgences qui peuvent se gérer autrement qu'à l'hôpital, ça c'est assez clair

Brussels (Emergency Service, Child and adolescent psychiatrist): ... ça dépend principalement de la relation qui existe entre le soignant et le bénéficiaire, la contenance je trouve hein...s'il y a une relation, s'il y a un jeune qui est suivi par un pédopsychiatre et qui a besoin d'un soin pédopsychiatrique urgent et si le pédopsychiatre peut répondre soit urgemment c'est bon, il n'y a pas besoin d'un hôpital mais si l'indication est plutôt une tentative de suicide, ou une décompensation psychotique sérieuse avec mise en danger possible, avec agressivité etc, c'est une question d'indication donc là il faudra plutôt du résidentiel psychiatrique

Brussels (Emergency Service, Bachelor in Psychology): ...ben pour moi le fait que ça soit relié à un hôpital l'intérêt ce serait si l'hospitalisation s'avère nécessaire après l'accueil, le premier accueil, c'est quand même intéressant à ce moment-là qu'il y ait la proximité d'un hôpital où il peut y avoir ne fut-ce qu'un court séjour mais ce n'est pas forcé... ; (homme) si tu as besoin de synergie, en termes de contenance, et de soins médicaux, ça aide

Flemish-Brabant (Child and adolescent psychiatrist): in zo'n spoeddienst heb je vooral een ziekenhuisfunctie, je hebt een 24uurs-context nodig, en waar ik bovendien toch ook kijk naar het probleem van de ruimte, van de infrastructuur...

Secondly, child and adolescent psychiatrists are scarce and mostly linked to a CAP department. Therefore, installing emergency psychiatric care at a CAP department would facilitate the availability of a child and adolescent psychiatrist.

Thirdly, emergency psychiatric care needs specific infrastructure and a medical component, all factors present at a hospital. Moreover, the ER remains the most popular and well known entrance for crisis situation and or emergencies. Therefore, installing emergency psychiatric care at the hospital would facilitate collaboration with the (local) ER.

Fourthly, some participants explain that they would locate emergency psychiatric care at a hospital because this is currently the gateway into EPC (Liege, East-Flanders, Brussels, Flemish-Brabant)

Currently, some children in need of emergency psychiatric care end up at the ER or at a paediatric department of a hospital. Some of the staff present (Liege, Namur, Limburg), reported they feel unqualified, understaffed and unequipped to provide the necessary care. However, several mention that if their staff would be strengthened with expert professionals and/or external support from a child and adolescent psychiatrist (linked to an outreach team) could be provided, they would prefer to take care of these children themselves.

Flemish-Brabant (Paediatrician): Het is dus eigenlijk ook een soort van een dringende doorverwijzing naar iemand competent om daar een evaluatie van te maken, dat is zoals ik het zie als kinderarts. Dus de patiënt zelf maar ook de hulpverlener die niet kinderpsychiatrisch zwaar onderlegd is, maar er toch mee te maken heeft om een degelijk advies te hebben op korte termijn. In regionale ziekenhuizen kunnen wij dus bepaalde patiënten niet direct helpen als wij met zelfmoordpogingen of toestanden zitten en een hele heisa van een familie daarrond is het heel moeilijk om dergelijke patiënten te hospitaliseren; ook de infrastructuur laat dat niet toe, vensters kunnen open enzovoort... Het is ook van onze kant uit dat er een vraag is naar dringend advies en eventueel opvang als dat nodig is.

Other participants do not support this idea and believe neither the ER or a paediatric department are suitable to deal with this population.

Limburg (Paediatric Departement, Paediatrician): Maar daarom, ik wil geen kinderpsychiatrische bedden op mijn afdeling, maar misschien moet er tussenin iets bestaan

Some participants indirectly indicate that the whole spectrum of emergency psychiatric care (both residential and non-residential care) should be registered at a hospital. They require that the whole range of non-residential emergency psychiatric care should be linked to the beds and be located at the CAP department of a hospital.

In contrast, many participants suggest that a hospital is not the only organization to offer EPC. The ambulatory mental health services are cited most frequently as a potential candidate to offer emergency psychiatric care. Again, this remains vague and never a concrete proposition or outline of this alternative is presented.

The non-residential component is more difficult to locate. Participants emphasize repeatedly the importance of expanding and supporting current (non-residential) services.

4.3.3.7 Financing emergency psychiatric care

Participants touch upon the themes 'funding and financing' throughout the whole discussion: who is going to pay for all this? It is rather a rhetoric question. Participants often report a shortage of resources to develop the current services as they would want to. As such, a thought exercise regarding a new service raises questions about financing emergency psychiatric care: if insufficient budget is available to finance current services, why would budget to install a new service become available, and thus, why fantasize unlimitedly about a new service?

Walloon-Brabant (qualified nurse): ... Je crois qu'il faudra qu'on tienne un minimum compte des contraintes. Quand madame dit qu'elle n'a pas les moyens mais qu'elle veut bien faire de l'urgence, mais les moyens c'est parce que.. il n'y a pas... le personnel ne sera pas payé en conséquence s'ils doivent travailler la nuit etc. Alors on se restreint nous-mêmes dans ce qu'on formule comme possibilités parce qu'on sait tout ça... Il n'y a pas ceci, la province est étendue, les transports fonctionnement mal, alors on fait des réponses qui sont limitées parce qu'on a toutes ces contraintes-là mais on les aura demain hein, même si vous faites une belle étude expliquant que ça doit se faire comme-ci, comme-ça on fait tous avec du bricolage avec les contraintes locales....

Besides lack of budget, the question about financing called forth associations about the current financing of health care and welfare. As mentioned previously, participants would prefer that both crises and emergencies should be dealt with at emergency psychiatric care. In addition, emergency psychiatric care should be implemented at existing social services or hospitals, as much as possible. Thus, taking into account current financing, emergency psychiatric care is at the border of federal and regional financing. According to all participants, an agreement on the financing of emergency psychiatric care between the federal and regional governances is a precondition before even thinking about the outlines of this care. In Hainaut a participant requested an interministerial commission to deal with this issue.

Flemish-Brabant (Ambulatory mental health, supervisor): Ik heb nog iets van een heel ander niveau. Het gaat uiteindelijk toch als er gezocht wordt naar betere manieren van samenwerken, dat er toch eens gekeken moet worden naar de federale verantwoordelijkheden en de Vlaamse verantwoordelijkheden. En dat er op dat niveau ook naadloos moet samengewerkt worden en dat die twee 'boitten' niet in concurrentie met elkaar gaan en over elkaar heen schuiven, want dat werkt op de werkvloer niet, en dat is toch ook iets wat men...

Antwerp (Ambulatory mental health, Child and adolescent psychiatrist): Tsja daar zit je dan met de verzuiling, niet de verzuiling van ons, nee de organisatie, federaal en Vlaams niveau. Dit is nu onderzoek dat gevraagd wordt vanuit federaal, wat er bestaat is op Vlaams niveau he!

Antwerp (VAPH, MPI, Child and adolescent psychiatrist): Maar het probleem is dat je in een diversiteit, je hebt federaal, het gewestniveau, je hebt volksgezondheid, je hebt justitie, je hebt onderwijs (instemming van Emergency department, Head of Department)... Crisismeldpunt IJH, staff member: Welzijn en gezin zit daar nog tussen.

Hainaut (Child and adolescent psychiatrist, 38:57-41:02): qui n'ont pas abouti parce qu'à ce moment-là on m'a dit oui il n'y a pas de financement possible pour ce projet, en tous cas. Le projet en question a été proposé au fédéral au même moment, au même moment, il a été proposé à l'aide à la jeunesse, à la région wallonne et 'à l'AWIPH. Et la région wallonne, l'AWIPH et l'aide à la jeunesse ont répondu oui mais pas le fédéral.

Luxembourg (Child welfare, superintendent): ...et donc derrière ça il faut un accord de coopération entre le fédéral qui pourrait apporter l'aspect psychiatrique etc, et la communauté française qui pourrait apporter l'aspect encadrement éducatif; (femme) et la région wallonne; (homme) la région wallonne et l'AWIPH donc il faut déjà des accords de différentes instances et on retrouve quand même si on pense aux délinquants, on voit qu'on arrive quand même à des accords

Another topic, brought forward by the participants, concerns the financing of the professionals. Firstly, it is hard to find a child and adolescents psychiatrist: mainly because few choose this specialisation, but also because plenty of those available choose to work privately instead of in a hospital.

Namur (Department of child and adolescent psychiatry, Child and adolescent psychiatrist):...les centres de santé mentale et alors pour trouver des psychiatres adultes et enfants dans des centres de santé mentale, ça devient une pénurie hein, il n'y a plus personne hein, faut quand même pas rêver hein !! Quand on parle de valorisation de l'acte psychiatrique, c'est clair que par rapport à des pédiatres et à des médecins généralistes, j'ai... mon travail c'est du temps.. je suis payé à l'heure moi...dans le cadre du service de santé mentale, donc je peux aller; (femme) Donc pas à la prestation?; (homme) pas à la prestation; (femme) ça c'est tout à fait important; (homme) je peux faire plein d'attestations, mais je ne suis pas dépendant du nombre d'attestations, je suis payé à l'heure, donc je peux aussi bien aller en urgence; (femme) mais ça c'est confortable!; (homme) je dirais à l'hôpital en pédiatrie, de façon contenante ou bien dans une euh.. à l'école euh...tant qu'on lie l'acte pédopsychiatrique je dirais à une certaine rentabilité soit d'attestations soit de, je dirais d'exams, d'exams bio, sanguins, de radios, c'est zéro hein !!!

Brussels(Department of child and adolescent psychiatry, Child and adolescent psychiatrist): ...ben, ce sont des questions structurelles dont on a déjà parlé hein, c'est...Les expertises rapidement ce n'est pas possible d'en avoir, elles sont très mal payées et les équipes pluridisciplinaires ne savent pas les faire parce qu'elles sont très mal payées donc il y a déjà des problèmes à ce niveau-là et dans les services qui pourraient le faire il n'y a pas assez de pédopsychiatres, il n'y en a plus assez déjà euh.. (femme : on n'en trouve plus) à Bruxelles, en Belgique, et donc forcément qu'il y a des urgences parce que la situation est devenue tellement critique que ça devient médical alors qu'il y a peut être moyen d'intervenir autrement..

East-Flanders (VAPH, superintendent): En het probleem dat er te weinig kinderpsychiaters zijn...

Limburg (Department of child and adolescent psychiatry, Child and adolescent psychiatrist): Daarvoor heb je dan wel voldoende kinderpsychiaters nodig.

Secondly, the remuneration of a child and adolescent psychiatrist as physician prevents them to comply with the request of other care providers to participate in consultations and or counselling. A general practitioner can not deal with a child in crisis, because the whole process of stabilization, evaluation and disposition will take longer than can be charged for.

Walloon-Brabant (Department Child and adolescent psychiatry, Ambulatory mental health, child and adolescent psychiatrist): ...si chacun a des activités professionnelles, et bien voilà, organiser des concertations autour d'un patient qui réunit et bien il faut, il faut; (femme) il faut que ce soit financé oui;

Namen (AWIPH, Psychiatric qualified nurse): Il faudrait peut être penser aussi à valoriser davantage l'importance des interventions des personnes de première ligne, hein, les médecins traitants ou d'autres..., d'autres paramédicaux éventuellement pour que, parce qu'en fait, comme mon voisin vient de dire, en fait parfois c'est extrêmement pénible hein de trouver la bonne solution. On passe des heures pour décanter un problème important où il n'y a pas de solution. On devrait pouvoir valoriser ce type d'intervention pour pouvoir justement quelque part agir à la source quelque part et parce qu'en fait un médecin traitant il a dix autres clients à voir, pourquoi pas investir une heure, une heure et demie en plus pour décanter vraiment une crise, mais en fait il n'est pas valorisé pour ça. Il peut facturer sa prestation et c'est tout. Non mais sur le plan financier il y a peut être quelque chose à faire de ce côté-là aussi;

Antwerp (VAPH, MPI, Child and adolescent psychiatrist): De bereikbaarheid, dat vraagt een grote flexibiliteit van mensen, die ook financieel erkend moet worden..

4.3.3.8 Overall picture

A summary view of how the participants believe emergency psychiatric care in Belgium should be organised, is presented below.

The child, parent(s) or non-parental carers use the entrance or gateway he or she knows best: the emergency room, the police, a paediatric department of a general hospital, the general practitioner (GP), a child and adolescent psychiatric department etc. These professionals or services should subsequently have the option to appeal to emergency psychiatric care, specialised in dealing with psychiatric emergencies and crises of children or adolescents.

Several functional roles of this specialised service are mentioned: EPC may include giving advice, providing counselling or may act as a central point of reception for the patient in need of emergency psychiatric care.

EPC should be accessible 24 hours a day, every day of the year. It should not exclude any patients presenting for emergency care. Subsequently, a wide spectrum of emergency psychiatric care options should be available, ranging from providing advice, ambulatory and outreach care, to intensive residential care.

Two different organisational models are suggested:

- A single EPC service offering the complete package of emergency psychiatric care
- A central service ensuring reception and performing triage, in combination with a broad range of locally embedded services that take up the actual care of the child. This is referred to as 'antenna model' or 'spinnenkopcentrum'.

Either way, participants stress that emergency psychiatric care needs to be embedded within the spectrum of care currently available for children and/or adolescents: permanent communication and a seamless transfer of the child between the different care providers involved is essential.

Mainly, emergency psychiatric care needs to be tailored: an individualised approach to care that is flexible and adequately adapted to the child's current needs.

4.3.4 Discussion

4.3.4.1 Methodological issues

The eleven focus groups produced plenty of information. Performing an inductive qualitative analysis showed that similar concerns and themes in Flanders, Brussels and Wallonia were discussed. The results of the qualitative analysis have been reported based on the initial research questions of the report. Although the focus group technique implies that the moderator guides the discussions as to focus on issues relevant for answering the research questions, additional issues may and do arise during focus groups. These additional aspects have been analysed and are included in the concept tree (Appendix 4.5), but they were not explicitly reported and discussed in this report.

Moreover, despite the wealth of information, answers to some of the questions remain unclear or vague. Time constraints did not always allow expanding on vague issues. Alternatively, some participants remarked that they would have liked to have participated in a repeat focus group a couple of weeks later to allow them to reflect on some of the themes and topics, or to discuss them with colleagues. Therefore, similarly as in the nominal group technique, opinions offered during the discussions were often personal and reflected one person's view, not necessarily representing the view of other professionals in the sector.

Some of the themes are brought up spontaneously by the participants themselves, others needed to be initiated by the moderator. The discussion on where to embed or locate emergency psychiatric care was a topic rarely initiated by the participants themselves and it was mostly up to the moderator to introduce the question.

Some participants had an explicit opinion regarding this matter; others were a little overwhelmed with the question and clearly hadn't thought about it yet. Occasionally, this resulted in an imbalanced discussion: those with a clear opinion took the lead, while others still had to reflect on the question and participated only much later in the discussion.

4.3.4.2 *Comparison with literature findings*

Definition

The discussions regarding the definition of an emergency (versus a crisis) and what would make it a 'psychiatric' emergency did not clarify ambiguities regarding the topic. This confirms literature findings. Although some psychiatric emergencies are clearly defined (somatic component) many emergency or crisis situations are not. Participants were not hindered to continue discussing the organisation of emergency psychiatric care without resolving the topic of definition. It may be questioned to what extent this has influenced the expressed views on organisational aspects of emergency psychiatric care.

Target population

It was impossible for participants to define the target population for emergency psychiatric care. The solution to this problem lies within the provided care: all children and adolescents presenting for emergency care should receive some form of help. It is up to the system to decide what the appropriate help for the different types of populations are. It is clear however that participants feel a pressing need to install EPC for populations that currently find it most difficult to receive appropriate care: severe aggressive patients, mentally disabled, older adolescents,...

Spectrum of care

Clearly, participants want emergency psychiatric care to cover a broad variety of options. This mimics the international perspective. In general, they make it clear that beds, i.e. residential care are a necessity within EPC, and that in addition a range of non-residential emergency psychiatric care options should be developed. Although, the presentation of the results might erroneously suggest that participants make a clear distinction between ambulatory care, outreach and consultancy (expert advice); many forms of non-residential care have been discussed. It seems that it is not recommendable to classify these forms as either 'ambulatory care', 'outreaching' or 'consultancy'. In general, these forms seem to merge into one another. Non-residential care can adopt many forms and it should be flexible and deployed as requested by the professional carer, the referrer and or the child or its environment.

Thus, although participants expressed the international view that a range of emergency psychiatric care is required, they are not clear regarding the different forms this care should adopt exactly. In contrast to literature findings, participants stress the importance of EPC as a consult function.

Residential vs. non-residential care

Focus groups results confirm literature findings: although participants agree that both residential and non-residential care should be available, taking the child out of its natural environment is not preferred and should be considered as the last option. Some participants refer to this idea as "subsidiarity". However, it is not clear how this concept is used throughout the focus groups. Although the term has actually been used only twice, other participants describe the concept as "use residential care only when all other options have been ruled out, and use it not longer than necessary".

As such, the idea was brought forward explicitly in many provinces when talking about residential care.

Thus, participants confirm the international view that residential care is absolutely necessary (to ensure the security of the child when requested) but should not be used inconsiderately.

4.3.4.3 *Organization of emergency psychiatric care in the Belgian context*

Residential emergency psychiatric care is in the focus groups mostly translated into K-beds. However, some participants also make it clear that other options should be possible. However, they stay vague about where these beds could be located. Sometimes, ambulatory mental health is mentioned. However, currently ambulatory mental health has no beds and this idea has not been elaborated on any further. Nowadays, beds at the paediatric department and the emergency department are occupied by children with urgent psychiatric problems. Participants disagree on the extent to which these beds could and should be used for EPC: some report that with additional (expert) support this could work, others clearly state that these departments are not able to take care of these children.

The location of the non-residential part of emergency psychiatric care remains unclear as well. Participants rarely discuss the subject explicitly. Some participants link both types of emergency psychiatric care to a child and adolescent psychiatric department, as the beds are located there. However, this is certainly not always the case. Mainly, participants are indifferent regarding which entity provides non-residential care, as long as it is available. Participants often stress the need to expand the current offer of 'ambulatory care', implying that non-residential emergency psychiatric care should be taken on by current services, on condition of increasing associated resources.

4.3.4.4 *Current emergency psychiatric care*

It is important to note that discussions to a large extent focus on the current emergency psychiatric care, and more specifically on the gaps in the current offer of child welfare and or (mental) health care. Repeatedly, participants mention that organising emergency psychiatric care is useless without investing in the current offer. There should be more resources for prevention and long-term care, to prevent emergency psychiatric care from silting up.

Although participants are able to lay a finger on the current problems of emergency psychiatric care, it becomes more difficult to go into detail on the organisation of EPC in their province. Reflections remain superficial; and it seems difficult to go beyond general principles and ideas. Although the moderator insisted and repeated the question several times, participants seldom reflected on concrete outlines of emergency psychiatric care within their province.

4.3.4.5 *Financing*

Participants more or less agree when it comes to financing: they are indifferent to who is paying, as long as emergency psychiatric care is continuously available for them to appeal to. Nevertheless, they point out that emergency psychiatric care shifts between health care and welfare, therefore, relies on both federal and regional financing. It is clear for participants that an agreement at this level is necessary to guarantee easy access to emergency psychiatric care for professionals in the field.

In addition, remuneration of professionals' performances is a hot topic as well. The work of experts at the domain of emergency psychiatric care is 'time'. However, professionals often are paid by performances, therefore hindering every form of "non-residential" interventions such as: consultancy, consultations among different care providers, tele-advice, at-home care etc. Politics should create a solution to support these 'non-residential' (unconventional) interventions.

Key Points

- **Participants stress that “crisis” is a personal perception of a situation: if somebody calls upon emergency psychiatric care because of a crisis or an emergency this should not be questioned.**
- **Emergency psychiatric care should be adequate and flexible: an assessment should identify the appropriate care for a child.**
- **Emergency psychiatric care comes in many forms: coaching or expert advice, outreaching, ambulatory care and beds.**
- **Emergency psychiatric care should be embedded within the current offer: close collaboration between professionals is required to ensure continuity of care.**
- **Investing in emergency psychiatric care is necessary, however, this has to go hand in hand with large investments to ensure a more effective regular offer (child welfare and health care) for children and adolescents.**

5 MODELLING THE NEED FOR RESOURCES

5.1 INTRODUCTION

Based on the information presented in the previous chapters, we propose some general principles for the organization of emergency psychiatric care (EPC) for children and adolescents in Belgium. The previous sections of this report offer relevant background information for the organization of EPC. However, previous chapters also showed that many aspects concerning the organization of EPC for children and adolescents are still unclear and open for debate.

Building on the general underlying principles of EPC, some assumptions are formulated regarding the required criteria for EPC within Belgium. We had to develop assumptions as no hard data are readily available. These assumptions are subsequently translated into more tangible aspects, resulting in a potential model of EPC organization in Belgium.

In this section, we view EPC as a separate function in the field of youth mental health with specific organization and control.

The first part of this chapter proposes building blocks that could be applied to develop a model of emergency psychiatric care for children and adolescents in Belgium, based on the findings of the literature review (chapter 2) and qualitative research (chapter 4), and taking into account the current availability and utilization data described in chapter 3.

It should be stressed that the model proposed below is just one of a range of possible models. It should not be considered as prescriptive in any way. Because of the lack of “hard” evidence, this chapter mainly introduces aspects to take into account when modelling the need for and/or planning EPC.

5.2 GENERAL PRINCIPLES, BUILDING BLOCKS AND ASSUMPTIONS FOR THE ORGANIZATION OF EMERGENCY PSYCHIATRIC CARE

5.2.1 General principles

The proposed general principles underlying a viable Belgian emergency psychiatric care for children and adolescents pertain to the target population, the aim and content and the conditions of emergency psychiatric care.

5.2.1.1 *Target population*

Based on input from literature and focus groups, it can be deduced that emergency psychiatric care focuses primarily on children and adolescents that present an acute danger to themselves or others, or live in a dangerous social context.

Psychopathology underlying a psychiatric emergency may include: Suicidality/depression, hypomania, anorexia, panic disorder, symptoms related to trauma, escalation of symptoms related to developmental or conduct disorders, psychosis, substance abuse/intoxication, somatoform disorders or adverse drug effects.

5.2.1.2 *Aim and content of emergency psychiatric care*

Literature and input from the qualitative part suggests that the first aim of emergency psychiatric care is to ensure patient’s safety: immediate danger must be controlled and immediate or very quick interventions are required. Further, emergency psychiatric interventions may aim to improve the situation to allow the children and their context to get a grip and to maintain themselves.

Compared to adults, more attention should be paid to the personal context of children and youth. It should certainly consider:

- the (legal) responsibility of parents, the role of parents, family or larger social context in decompensation and intervention,

- the children's rights (e.g. confidentiality) and the legal framework with respect to child protection.

Thus, emergency psychiatric care should aim at facilitating further development. Emergency psychiatric care should however never be considered an alternative for existing care. It should complement it for particular situations, as described in previous sections. Emergency psychiatric care may be a (first) opportunity to install needed care for a child or adolescent and its context.

Emergency psychiatric care should provide containment of anxiety or behavioural problems to enable further specialist assessment. In addition, it should facilitate such assessment and if required allow installing new or correcting existing 'structural' care.

Emergency psychiatric care for children and adolescents focuses primarily on the child in its own environment. Whenever possible it is preferred to provide it in ambulatory or outreach form. The care process should involve not only the child or youngster, but also the parents, school or significant others. It would preferably be provided by crisis intervention professionals, in cooperation with a child and adolescent psychiatrist. In some cases a (secured) residential setting may be required to immediately deliver the appropriate intensity of care.

The process of emergency psychiatric care requires a range of activities: Primarily, it may involve an assessment to inform and contribute to the initially required intervention, an acute risk assessment, taking into account the outcome of the initial intervention(s), the development and implementation of a robust risk management plan, and referral to appropriate care.

The type and intensity of the problem behaviour, and the availability and strength of the context (family, school, installed care) may determine the type of emergency care to be delivered. It may include:

- providing advice (to either the patient and its context or the referrers and carers)
- crisis intervention
- increase coping skills of parents and / or child
- psychopharmacological treatment
- treatment of adverse drug effects
- family counselling
- home and/or school visits
- admission to a bed in an (secured) emergency bed, etc.

The length of EPC depends on the seriousness of the condition and may theoretically range from the duration of a telephone call, to intensive ambulatory and/or outreach interventions with or without an overnight stay to a 2-week residential stay. Emergency psychiatric care should be limited to a maximum period of two weeks. Further care should no longer be considered emergency care.

Key points

- **Based on these general principles from literature and focus groups, assumptions are formulated regarding the required criteria for EPC.**
- **These assumptions are subsequently translated into more tangible aspects, resulting in a possible model of EPC organization in Belgium.**
- **EPC focuses primarily on children and adolescents that present an acute danger to themselves or others, or live in a dangerous educational context.**
- **Psychiatric emergencies may include a wide range of underlying psychopathologies.**
- **The first aim of EPC is to ensure a patient's safety.**
- **Any form of EPC should explicitly take into account the personal context of children and youth**
- **EPC is by preference offered in ambulatory or outreaching form. It should involve not only the child or youngster, but also the parents, school or significant others.**
- **In some cases a (secured) residential setting may be required to deliver the appropriate intensity of care**
- **EPC is not to be considered an alternative for existing care.**
- **EPC lasts a maximum of two weeks.**

5.2.2 Required characteristics of psychiatric emergency care

The following conditions for emergency psychiatric care in children and adolescents are proposed to be considered as vital:

- **Accessibility:** Emergency psychiatric care should be easily accessible to everyone, 24 hours a day, 7 days a week, throughout the year. This would require permanent availability of (mobile) staff to either answer incoming telephone calls or receive patients that present in person.
- **Competence:** Staff should be highly competent in many fields such as: experienced in working with children/youth and their context, have extensive knowledge of child development, developmental psychopathology, gender and culture specific aspects, crisis intervention, and medical-psychiatric issues.
- **Availability of (a range of) beds:** taking into account the patient's age and required level of security and supervision.
- **Flexibility:** care will be adapted to the needs of child and context.

Process components include: registration, advice, stabilization, assessment, disposition, treatment and referral (see chapter 2).

5.2.3 Assumptions based on general principles

Based on the proposed general principles of EPC described in 2.1, in this section a number of assumptions are formulated. In subsequent sections, these assumptions will be used to estimate required resources for one particular model (the base scenario) of EPC that is being proposed.

Some assumptions are made because of a lack of data. (E.g. this is the case for the number of patients and the resource input per patient. Estimating resource input per patient appeared difficult as emergency psychiatric care is scarcely provided on a structural basis in Belgium. Extrapolating data from abroad was no option as the resource input is highly dependent from the local context of organising mental health care.)

Other assumptions are made for parameters that depend on a (financing) policy decision. One of these decisions concerns the geographical distribution: the current scenarios assume that the administrative borders of provinces are the point of reference and that there is at least one EPC per 150 000 minors and at least one per province. These assumptions are based on the results of the focus groups.

1. Assumptions with respect to speed and accessibility:

- Intervention starts within 24h of crisis onset and notification – based on literature (chapter 2)
- Accessibility 24/24, 7/7 – based on literature (chapter 2)
- At least one EPC function per every 150.000 minors, and at least one per province (other relevant geographical entities could be considered if easy accessibility (including distance) is maintained as a core criterion and if the whole of Belgium is adequately covered)) – based on the results of focus groups (chapter 4)

2. Assumptions with respect to number of interventions

- A total of 4198 admissions of 2 weeks of shorter per year (based on data in chapter 3)
- One new (ambulatory) intervention per day, i.e. 365 per year, for every 150.000 minors, (i.e. 5340 interventions / year) - based on the results of focus groups (chapter 4)

3. Assumptions with respect to duration of EPC

- To facilitate estimation of the resources required, we theoretically distinguish between ambulatory or outreach care, admission to a regular bed and admission to a highly secured bed.
- Duration of EPC per ambulatory intervention: ranging from as brief as a telephone call to 2 weeks
- Length of stay for inpatients
 - In a regular bed: an average of 1 week – based on the duration of admissions in non psychiatric services (chapter 3)
 - In a highly secured bed: up to 2 weeks – based on the duration of admissions in psychiatric services (chapter 4)

It should be noted that in our proposal the length of stay may vary from 24 hours to 2 weeks depending on seriousness of the condition: the higher the level of danger to oneself or others, the more the length of stay will approach the 2 weeks duration.

4. Assumptions with respect to staff

These assumptions are based on discussions of the research group with local experts in the organization of child & adolescent psychiatric services.

- A competent crisis intervention professional to provide advice by phone or for consultation in person during 8 hours on week- and Saturdays. A child psychiatrist is on call in weekends and during nights.
- Administrative support
- Time investment by crisis intervention professionals
 - 20 hours (excluding child psychiatrist) of ambulatory or outreaching care per 2- week intervention
 - Direct patient or context related intervention during admission:
 - Highly secured beds: 27 hours (excluding child psychiatrist) of EPC per intervention (3 hours pre-, 20 hour during and 4 hours post admission),
 - Regular beds: 17 hours (excluding child psychiatrist) of EPC per intervention (3 hours pre-, 10 hour during and 4 hours post admission),

- A total of 1626 working hours per FTE per year
- Time investment of a child and adolescent psychiatrist
 - During ambulatory or outreaching interventions: 5 hours per intervention
 - During admissions:
 - Highly secured beds: 14 hours per patient
 - Regular beds: 7 hours per patient
- Nursing staff (related to beds)
 - For all emergency beds, at least 2 FTE staff per bed is required to provide individual guidance during daytime and supervision at night. There are no formal arguments to support this but it does take into account the need for individualised care

5. Assumptions with respect to beds

- We propose that 60% of all emergency beds should be highly secured, thus implying adequate infrastructure 40% of all emergency beds should thus be regular beds.

5.2.4 Organizational configuration

In view of the elements discussed in paragraph 5.2.1 and 5.2.2, it is suggested that emergency psychiatric care for children and adolescents may essentially be viewed a separate function within the domain of youth mental health.

Process components such as registration, stabilization, assessment, disposition, treatment and referral (see chapter 2) should be taken into account when organizing the emergency psychiatric care function.

Link to emergency services use

Both the literature and the focus groups show that emergency psychiatric care is preferentially linked to and embedded in the existing emergency care (cq. emergency services and emergency telephone numbers) familiar to most people.

The emergency function should be designed to accommodate all tasks and activities required for EPC for children and youth (registration, stabilization and assessment, provision of the required spatial accommodation, and availability of professionals with strongly developed psychiatric skills,...).

Complementarities of collaborating services

Child and adolescent psychiatric departments may play a crucial role in emergency psychiatric care. Collaboration or cooperation across sectors with other services that can and will take part in developing the function of emergency psychiatric care for children and adolescents (e.a. Bijzondere Jeugdbijstand / Aide al la jeunesse) ambulatory mental health services)

Geographical distribution

Based on the limited data on mental health services use and the information received during the focus groups (qualitative research), it is estimated that an EPC function should be offered at least per every 150.000 minors, and at least one per province (or other relevant geographical entities, if easy accessibility for patients is guaranteed).

Resource needs

An EPC function requires competent and mobile professionals: child and adolescent psychiatric expertise is fundamental. An EPC intervention team may consist of several professions including: child and adolescent psychiatrists, competent staff from nursing, psychology,... and administrative support.

A sufficient number of beds (in case of inpatient care), rooms for consultation and assessment, and communication equipment. An immediate access to residential beds (including highly secured beds), within a child- and adolescent psychiatric setting is to be foreseen. Regarding beds, a distinction should be made between highly secured beds and regular beds. Especially the provision of highly secured beds involves specific architectural needs that may require the construction of a new or renovation of an existing building. In contrast to regular crisis beds, highly secured beds should preferably be located within a child and adolescent psychiatric unit.

Collaboration with other services

An emergency psychiatric care function assumes minimally a close collaboration between a specialised emergency service (well-known entrance), a child and adolescent psychiatric unit (highly secured crisis beds) and a paediatric unit.

Use of existing resources

Other departments (paediatric, internal medical or child and adolescent psychiatric services) could provide in regular (not highly secured) EPC beds. According to the current hospital norms and regulations, the number of FTEs per bed in these departments is generally lower than the proposed 2 FTEs for EPC. If these regular beds are provided in these departments additional FTEs should be provided to reach the 2 FTE preset norm. These additional FTEs should cover EPC competencies, and thus be more than a mere extension of staff in the department. Depending on the use of the regular EPC beds in these departments, the additional FTEs could be flexibly and temporarily used for temporary crisis support at patients' home, in another institution, in paediatric or child and adolescent psychiatric services, in close collaboration with a crisis intervention professional and a child and adolescent psychiatrist.

Key points

- **Accessibility, competence, availability of beds, flexibility and specific process components are considered as vital conditions for EPC in children and adolescents.**
- **EPC is conceptualised as a separate “function”, rather than as a specific service or department.**
- **EPC should be provided by competent and mobile professionals, where child and adolescent psychiatric expertise is fundamental. EPC should have immediate access to beds, including continuously available highly secured beds within a child- and adolescent psychiatric setting.**
- **It is estimated that EPC should be offered at least per every 150.000 minors, and at least one EPC function per province.**
- **EPC is preferentially linked to and embedded in the existing emergency care (cq. emergency services and emergency telephone numbers) familiar to most people.**
- **A child and adolescent psychiatric hospital department may play a crucial role in EPC.**
- **Collaboration or cooperation across sectors with services such as child welfare or ambulatory mental health centres is expected to provide EPC.**

5.3 A METHOD PROPOSED TO ASSESS RESOURCES REQUIRED

5.3.1 Objectives of this section

This chapter introduces a methodological approach (queueing theory) to estimate the required resources for EPC for children and adolescents, rather than to present exact estimations for different scenarios and input parameters. Queueing theory can be used for the assessment of staff and bed/place needs and to determine the need for other capacity resources (vehicles and rooms for consultation).

As argued in previous sections, the modelling relies on a number of assumptions and as currently available data do not allow to develop precise and detailed analysis, the development of scenarios is illustrative of a methodology .

We use the method (queueing theory) for a number of hypothetical scenarios. The resource assessment for the base scenario is based on the assumptions presented in section 5.2.3. Given the large uncertainty around the parameters, a number of alternative scenarios are also explored.

Emergency care as conceptualised as a “function” and not as a particular residential or ambulatory organisational configuration. Several organisational units can theoretically provide in the function. The issue of ambulatory versus residential care is discussed in so far that particular features need to be considered (e.g. secure beds or not).

In this section we present a total, not incremental, resource assessment.

5.3.2 Queueing model as a method for calculating resource requirements for emergency services

Queueing theory is used to account for the unpredictability of the arrival of an emergency or a crisis. As emergency visits are not scheduled upfront, there is a need for standby capacity, even when it is not fully utilized. Queueing models have appeared useful in determining the extra required staff and other capacity resources in function of a maximum waiting time for patients at emergency departments¹⁵⁸. In order to calculate results from queueing models, information on the number of arrivals per unit of time (e.g. the expected number of new patients per day in a particular province) and on the duration of the service time (e.g. length of stay for an admission) are needed.

To cope with stochastic problems, a variety of models and techniques to solve them exist. Since the reliability of the underlying data regarding arrivals and service times is highly uncertain and necessary detailed information to estimate more sophisticated models (e.g. transition process between different stages of EPC (registration, triage, assessment, ...)) is unavailable, a relatively basic model that generates results on an aggregate level has to be used.

A commonly used queueing model is the so-called M/M/s model, where the first M stands for Markovian or pure random arrivals, the second M means Markovian service times and s equals the number of servers (e.g. beds). This model assumes a single queue with an unlimited waiting room that feeds into s identical servers (e.g. staff, beds/). The elapsed time from the start of service to its completion is called service time. The M/M/s model assumes that all interarrival times and service times are independently and identically distributed according to two (distinct) exponential distributions (i.e. input process and service are a Poisson process). Arrivals occur according to a time-homogeneous Poisson process with a constant rate. EPC-units (or EPC-teams) will be considered as a system consisting of s parallel servers, where each bed/place (or FTE) is treated as a server. The assumption is that the statistical pattern by which patients are generated over time is according to a Poisson process. It can be shown that the Poisson process is equivalent to the case where arrivals occur randomly but at a certain fixed mean rate, regardless of how many customers are already served or still waiting. An equivalent assumption is that the probability distribution of the interarrival times is exponential (i.e. “memoryless”).

Queueing theory allows calculating a number of relevant variables: e.g. the expected waiting time in queue, the expected number of people queueing (and being served) and the probability that someone has to wait more than a certain specified threshold.

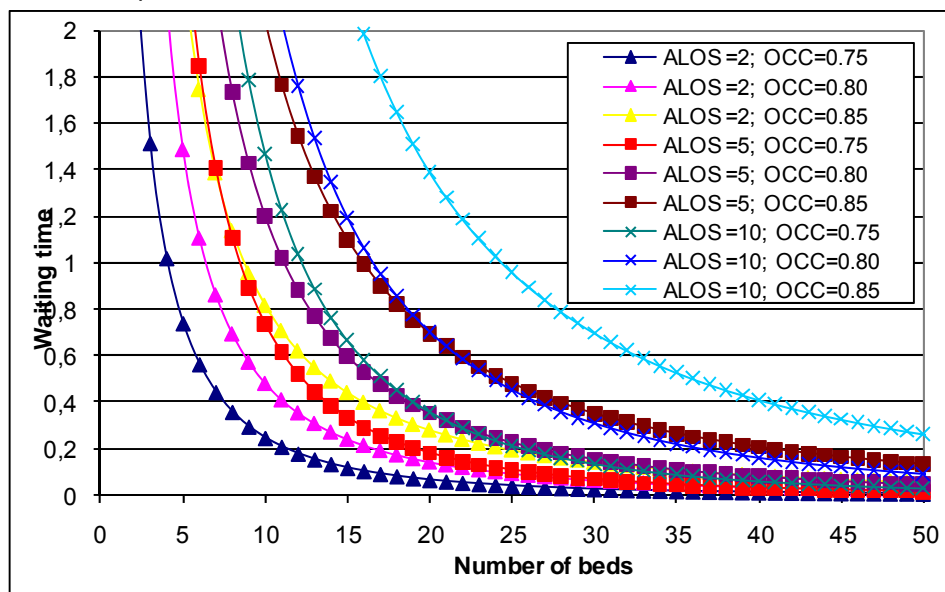
The waiting time can be calculated as follows ¹⁵⁹

$$W_q = \frac{P_0 \lambda^{s-1} \rho}{s!(1-\rho)^2 \mu^s} \text{ with } P_0 = \frac{1}{\sum_{n=0}^{s-1} \frac{(\lambda/\mu)^n}{n!} + \frac{(\lambda/\mu)^s}{s!} \frac{1}{1-\rho}} \text{ and } \rho = \frac{\lambda}{s\mu}$$

with λ the mean arrival rate (i.e. expected number of arrivals per unit of time); μ the mean service rate (i.e. expected number of customers completing service per unit of time) and ρ the expected utilisation (or occupancy) rate of the system. Consequently $1/\lambda$ and $1/\mu$ can be interpreted as the expected interarrival time and the expected service time, respectively. The number of customers already in the system (i.e. being served and waiting) upon a random arrival is denoted with n . P_0 is the steady-state probability of zero customers in the system. In order to ensure that the queue does not grow without limit, the utilisation rate must be smaller than one.

Queueing theory shows that the size of the system (e.g. the number of beds) and the rotation rate of patients (i.e. the number of arrivals combined with their service time) are important determinants for the expected waiting time. Figure 5.1 depicts the relationship between the occupancy rate, the average length of stay (or service time) and the number of beds on the waiting time. Three different hypothetical service times (2, 5 and 10 days) and three different hypothetical occupancy rates (75%, 80% and 85%) are combined with the number of available beds to calculate the average waiting time before being served.

Figure 5.1: Influence of the occupancy rate, service time and the number of beds on W_q



ALOS: Average length of stay; OCC: Occupancy rate

For a given average length of stay, larger units can provide the same degree of standby capacity while operating at a higher occupancy rate. If, for example the average length of stay is 2 days and the maximum acceptable average waiting time is 8 hours (0.33 days), units with 9 beds can occupy maximum 75% of their beds, while units with 12 beds can operate at 80% of the capacity and units with 17 beds at 85% to achieve this target. For longer service times, the curves shift to the right, implying that, for a given occupancy rate, more beds are needed or, conversely, units should operate at lower occupancy rates (for a given number of beds) to stay below the maximum average waiting time.

Especially small units will thus suffer from rapidly increasing waiting times if the occupancy rate or the length of stay grows. Larger units can achieve the same reservation quality while operating at higher occupancy rates, implying that the average cost of maintaining a given level of reservation quality decreases with the size of the unit. Consequently uncertain demand for EPC may be a source of economies of scale.

5.3.3 Illustration of the queueing model

A number of scenarios for the provision of emergency psychiatric care are explored mainly to illustrate the methodology. It should be stressed that the lack of reliable data only allow us to make very rough estimates.

5.3.3.1 Overview of input and output parameters

Table 5.1 presents an overview of the in- and output parameters for the different scenarios. The basic scenario builds on the assumptions discussed before.

Table 5.1 Input and output parameters for basic scenario versus alternatives

	Scenario 1 (basic)	Scenario 2 (5% of interventions > 14 days in highly secured and > 7 days in regular bed)	Scenario 3 (10% of interventions > 14 days in highly secured and > 7 days in regular bed)	Scenario 4 (maximalist scenario)
Input parameters				
- Number of interventions per year nationally	Mobile interventions: 5 340 Inpatient care: 4 198			
- Number of services nationally	At least 1 service per 150 000 minors and at least 1 per province			
- Average length of stay in a highly secured bed - (implied share of patients staying more than 14 days)	10 days (25%)	5 days (7%)	6 days (10%)	14 days (37%)
- Average length of stay in a regular bed - (implied share of patients staying more than 7 days)	3 days (10%)	2 days (3%)	3 days (10%)	7 days (37%)
- Average EPC hours* per intervention (ambulatory)	20	20	20	20
- Average EPC hours* per intervention (highly secured bed)	21	14	16	27
- Average EPC hours* per intervention (regular bed)	11	10	11	17
- Average child psychiatrist hours per intervention (highly secured bed)	10	5	6	14
- Average child psychiatrist hours per intervention (regular bed)	3	2	3	7
- Staff travelling time	Not considered (0 hrs assumed)			
- Type of beds required	60% highly secured EPC beds 40% regular EPC beds			
- Work hours per FTE per year	1 626			
- Acceptable average waiting time	Approx. 24 h or less	Approx. 24h or less	Approx. 24h or less	Approx. 24h or less
Output parameters				
- Theoretical minimum number of beds and FTE per province	Table 5.2	Table 5.6	Table 5.10	Table 5.14
- Number of beds (queueing model) per province	Table 5.3	Table 5.7	Table 5.11	Table 5.15
- Illustration of pooling beds versus spreading interventions	Table 5.4	Table 5.8	Table 5.12	Table 5.16
- Number of FTE (queueing model) per province	Table 5.5	Table 5.9	Table 5.13	Table 5.17

* Staff time investment for direct patient or context related intervention (excluding psychiatrist time)

In order to estimate the required resources for a particular model of organizing emergency and crisis services for child and adolescent psychiatry, a variety of inputs is needed.

Number of interventions and services nationally (input)

First, calculating the yearly cost per centre and/or crisis team requires an estimate of their scale, i.e. the number of patients treated per year. Calculating the impact on a national level also requires an estimate on the number of centres and/or crisis teams in Belgium (or the number of patients nationally).

As already mentioned, at least 1 EPC function is assumed per 150 000 minors, and at least one per province. This implies an approximate of 15 services for Belgium. (The regional distribution could be organised along other geographical entities than the administrative borders of provinces too).

As described in Chapter 3, well-founded data on the numbers and types of EPC interventions (both inpatient as well as ambulatory) are not readily available, making resource estimates based on the number of emergency interventions difficult. An alternative would be to determine an estimated range rather than an average number. However, data do not allow to determine a pertinent range. Therefore, an average number has been estimated using the tentative MCD/MKG/RCM and MPD/MPG/RPM data.

Based on MCD/MKG/RCM and MPD/MPG/RPM data (see Chapter 3 for a discussion on the limitations of the data) the number of inpatient interventions is estimated as N=4198. The assumed number of ambulatory interventions (N=5340) is based on input from focus groups (1 new ambulatory intervention per day, i.e. 365 per year, for every 150 000 minors). Both assumptions are based on the current context of psychiatric care in Belgium. Should this context change, then assumptions will need to be adapted accordingly.

Because of the lack of readily available data, the estimated resource needs have to be interpreted with caution.

Operational and infrastructural resources per intervention (input)

A list of resources needed for EPC is discussed in section 2.3.

Some preliminary comments can be made on this issue

- Theoretically, resources needed will change according to the patient mix presenting at the emergency service. Resources per patient will also largely depend on the duration of the crisis/emergency-intervention. In this analysis, no estimates were made with respect to the patient mix. Resources per patient were solely estimated in function of the duration of the interventions.
- As it is difficult to obtain well-founded estimates on the transport time of staff members, both for mobile interventions as well as for inpatient care (staff members may need to travel to another hospital), it was not included in the analysis yet. As a result, the estimated staff resources are underestimated.

Operational and infrastructural resources per province (output)

Based on the above-mentioned input factors, estimates for *total* resource needs per province are made. First theoretical minimum resource needs are calculated (not taking into account that emergencies cannot be scheduled upfront). Afterwards resource needs are presented based on the queuing models.

5.3.4 Theoretical minimum resource needs

Assuming that a FTE works 1626 hours per year (i.e. taking into account working hours per week, public holidays and holidays)¹⁶⁰, one FTE member of an EPC team could theoretically deal with 77 inpatient interventions (1626/21) (highly protected beds), with 148 patients in a regular bed (1626/11) or 81 ambulatory interventions (1626/20) annually. A full time working child psychiatrist could then serve 163 patients in a highly secured bed (1626/10), 542 patients in a regular bed (1626/3) or 352 ambulatory patients (1626/5). It should be noted that these numbers are hypothetical: it is implicitly assumed that all interventions are perfectly planned and scheduled, i.e. these numbers are the maximum attainable interventions. However emergencies and crises are not planned upfront, so actual numbers of interventions per FTE will be lower, due to the variability of the emergencies and the need of standby capacity.

In addition, the assumed EPC hours per intervention do not take into account that there is also need for transport time for EPC staff-members. It is however impossible to obtain a well-founded estimate on the transport time of EPC staff-members, both for ambulatory/outreach as well as for inpatient care (EPC staff-members or a child psychiatrist may need to travel to another hospital to see a patient). First, both the share of hospitalised patients for which EPC-staff has to travel to another hospital as well as the share of ambulatory patients receiving care at home (or another location, different from where the EPC function is based) is unknown. Second, the actual (average) travel times to and from a patient are unknown and will depend on the number of EPC functions per province and their physical location. Consequently, including transport time is impossible since the required parameters are unknown.

Based on the assumed number of admissions requiring a highly secured bed (N=1303) and the number of admissions requiring a regular bed (N=2895), combined with an average length of stay of respectively 10 days and 3 days, the theoretical (i.e. assuming perfectly scheduled admissions and occupancy rates of 100%) minimum amount of beds can be calculated: 36 highly secured beds and 24 regular beds. The division per province (and Brussels) is presented in Table 5.2 (assuming that the number of admissions per province is proportional to the share of minors in every province).

Similarly, the theoretical minimum amount of FTE (of EPC-team and of child psychiatrist) can be determined. The details (per province) can also be found in Table 5.2. For the EPC-team (excluding child and adolescent psychiatrist) 102 FTE would be needed nationally to serve all patients. In addition 30 FTE child and adolescent psychiatrists would be required to meet the demand for their services.

Once again, it should be stressed that these numbers refer to the hypothetical (and unrealistic) situation of perfectly planned interventions and require an occupancy rate of 100% of the beds and the FTE. These numbers can thus only be used as a benchmark to a more realistic case where we assume that EPC interventions are not perfectly planned and that the duration and the hours of care spent per intervention is not uniform. It allows to calculate the amount of standby capacity (beds and FTE) and occupancy rates (of beds and FTE) that are needed to provide an acceptable maximum waiting time before a patient can get access to an EPC-team, child psychiatrist or bed.

Table 5.2: Minimum number of beds and FTE (all interventions are perfectly scheduled and beds and staff have occupancy rate of 100%) : scenario I

			Number of beds		Number of required FTE for EPC (excluding child psychiatrist)				Number of required FTE for EPC (child psychiatrist)			
			Highly secured	Regular	Inpatient highly secured	Inpatient normal	Ambulatory	Total	Inpatient highly secured	Inpatient normal	Ambulatory	Total
Brussels	229 420	10.5%	3.7	2.5	1.8	2.0	6.9	10.7	0.8	0.6	1.7	3.1
Antwerp	343 166	15.6%	5.6	3.7	2.6	3.1	10.3	16.0	1.3	0.8	2.6	4.7
Flemish Brabant	217 367	9.9%	3.5	2.4	1.7	1.9	6.5	10.1	0.8	0.5	1.6	2.9
West Flanders	219 206	10.0%	3.6	2.4	1.7	2.0	6.6	10.2	0.8	0.5	1.6	3.0
East Flanders	276 506	12.6%	4.5	3.0	2.1	2.5	8.3	12.9	1.0	0.7	2.1	3.8
Limburg	160 546	7.3%	2.6	1.7	1.2	1.4	4.8	7.5	0.6	0.4	1.2	2.2
Walloon Brabant	84 361	3.8%	1.4	0.9	0.6	0.8	2.5	3.9	0.3	0.2	0.6	1.1
Hainaut	278 899	12.7%	4.5	3.0	2.1	2.5	8.3	13.0	1.0	0.7	2.1	3.8
Liege	221 269	10.1%	3.6	2.4	1.7	2.0	6.6	10.3	0.8	0.5	1.7	3.0
Luxembourg	61 948	2.8%	1.0	0.7	0.5	0.6	1.9	2.9	0.2	0.2	0.5	0.8
Namur	101 819	4.6%	1.7	1.1	0.8	0.9	3.0	4.7	0.4	0.2	0.8	1.4
Total	2 194 507	100.00%	35.8	23.9	16.8	19.6	65.7	102.1	8.0	5.3	16.4	29.8

5.3.5 Results of the queueing models

5.3.5.1 Basic scenario

Beds

Table 5.3 presents the results of an M/M/s queueing model for the number of required beds, in order to obtain an expected waiting time of approximately one day or less. The exercise is done separately for the highly secured beds and for the regular beds. In Table 5.3 the resulting bed needs are presented per province (assuming one pool of highly secured beds and one pool of regular beds per province and for Brussels). In order to guarantee an expected waiting time of approximately one day or less, Brussels would need 6 highly secured beds, resulting in an expected waiting time of 0.94 days and an average occupancy rate of these beds of 62%. Compared to the theoretical benchmark of 3.7 (see Table 5.2), in case of perfectly planned interventions and an occupancy rate of 100%, this implies a standby capacity of 2 beds. For the province with the smallest number of minors (Luxembourg), 3 highly secured beds are needed to obtain an average waiting time of 0.45 days. The excess capacity needed is 2 beds, implying an average occupancy rate of 34%.

Table 5.4 illustrates the effect of pooling arrivals and beds in a common structure. Three situations, all regarding the 0.56 arrivals per day for highly secured beds in Antwerp (see Table 5.3), are compared: (1) all arrivals are distributed over a commonly managed pool of beds; (2) two centres each separately deal with half of the arrivals and (3) three centres each separately treat one third of the arrivals.

If the aim is that the average waiting time of getting access to a bed should be (approximately) less than one day, this objective can be met with 8 beds in 1 centre. The resulting occupancy rate will be 70%. On the other hand, to meet this target with two separately operating centres of identical size, two times 5 beds would be needed. The average occupancy rate of these beds will decrease to 56%. Spreading the inflow over three separate centres would require 4 beds in each centre, leading to a further reduction in the average occupancy rate. Spreading the admissions over separately operating centres will therefore increase the total number of required beds. Consequently, occupancy rates will decline.

For Belgium, assuming one pool of highly secured beds and one pool of regular beds per province, this would result in a need of 61 highly secured beds with an average occupancy rate of 59% and 41 regular beds with an average occupancy rate of 58%. This implies a standby capacity of 25 highly secured beds and 17 regular beds.

Staff

A similar exercise can be made for the required FTE (EPC-team and child psychiatrist). Since the service times for staff members are smaller (a new inpatient arrival occupies a bed for 10 days, during 100% of time, but he only “uses” a staff member for short periods (e.g. 2 hours per day)), relatively high occupancy of the staff members rates can be obtained, while keeping the expected waiting time below one day (in most provinces the occupancy rates for the EPC-team exceed 90%). In addition, it could be assumed that a new arrival (and thus the first contact moment) is unpredictable, but consecutive consultations during the remainder of one or two weeks can (to a certain degree) be scheduled. It is also assumed that the EPC function can assess and provide care for all types of patients (i.e. patient requiring a highly secured bed, patients requiring a regular bed and ambulatory patients). Consequently, less standby capacity (in terms of staff members) will be required, compared to standby capacity for beds. The results are presented in Table 5.5. Similarly to the pooling assumption for beds, we hypothesised that the EPC functions are pooled per province (and one additional pool for Brussels).

For Belgium 112 FTE would be needed to staff the EPC-teams and 37 FTE child psychiatrists would be needed. For Antwerp (the largest province in terms of interventions), approximately 4 new interventions (ambulatory as well as inpatient hospital admissions) per day would require 17 FTE EPC-members (excluding child psychiatrist) and 5 FTE child psychiatrists for EPC. Expected waiting time would be less than one day, while occupancy rates would exceed 90%. For the smallest province (Luxembourg), the occupancy rate would be 72% for EPC-team members and 84% for the child psychiatrist, in order to assure expected waiting times of less than one day.

It should be noted that these calculated FTE only refer to the (additional) EPC function, i.e. the 2 FTE staff per bed that is required to provide individual guidance during daytime and supervision at night is not included. Based on the estimated number of required beds (61 highly secured and 41 regular beds) 204 FTE would be needed for regular nursing functions.

In addition, it should be stressed that the FTE for EPC functions are only based on direct patient or context related care per intervention and do not include (the unknown) transport time.

Table 5.3: Minimum number of beds in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario I

	Inpatient beds: Highly secured						Inpatient beds: Regular					
	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative
Brussels	0.37	6	0.94	0.62	2.3	1.60	0.83	4	0.63	0.62	1.5	1.60
Antwerp	0.56	8	1.13	0.70	2.4	1.43	1.24	5	1.06	0.74	1.3	1.34
Flemish Brabant	0.35	6	0.71	0.59	2.5	1.69	0.79	4	0.51	0.59	1.6	1.69
West Flanders	0.36	6	0.82	0.59	2.4	1.68	0.79	4	0.51	0.59	1.6	1.68
East Flanders	0.45	7	0.87	0.64	2.5	1.55	1.00	5	0.35	0.60	2.0	1.66
Limburg	0.26	5	0.52	0.52	2.4	1.91	0.58	3	0.78	0.58	1.3	1.72
Walloon Brabant	0.14	3	1.26	0.46	1.6	2.18	0.30	2	0.76	0.46	1.1	2.18
Hainaut	0.45	7	0.87	0.65	2.5	1.54	1.01	5	0.37	0.60	2.0	1.65
Liege	0.36	6	0.82	0.60	2.4	1.66	0.80	4	0.54	0.60	1.6	1.66
Luxembourg	0.10	3	0.45	0.34	2.0	2.97	0.22	2	0.37	0.34	1.3	2.97
Namur	0.17	4	0.47	0.41	2.3	2.41	0.37	3	0.19	0.37	1.9	2.71
Total	3.6	61		0.59	25.2	1.70	7.9	41		0.58	17.1	1.72

Table 5.4: Illustration of pooling beds versus spreading interventions over 2 or 3 centres (Antwerp, 0.56 arrivals per day for highly secured beds) : scenario I

All patients in 1 centre (or common pool of beds)			Patients spread over 2 separate centres (results per centre)			Patients spread over 3 separate centres (results per centre)		
Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate
6	20.57	0.93	3	43.83	0.93	2	67.59	0.93
7	3.47	0.80	4	3.57	0.70	3	3.39	0.62
8	1.13	0.70	5	0.86	0.56	4	0.67	0.47
9	0.42	0.62	6	0.24	0.47	5	0.15	0.37
10	0.16	0.56	7	0.06	0.40	6	0.03	0.31

Table 5.5: Minimum number of FTE in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 1

	Pooled (inpatient for highly secured beds + inpatient for regular bed + ambulatory by the same team)						
		EPC-team			Child psychiatrists		
	Arrivals per day	FTE-EPC for Wq<1	Wq (in days)	Occup. rate EPC	FTE-psych for Wq<1	Wq (in days)	Occup. rate psych.
Brussels	2.73	11	1.05	0.97	4	0.07	0.78
Antwerp	4.09	17	0.27	0.94	5	0.27	0.93
Flemish Brabant	2.59	11	0.31	0.92	4	0.5	0.74
West Flanders	2.61	11	0.36	0.93	4	0.05	0.74
East Flanders	3.29	14	0.23	0.92	4	0.39	0.94
Limburg	1.91	8	0.58	0.93	3	0.07	0.73
Walloon Brabant	1.00	5	0.19	0.78	2	0.05	0.57
Hainaut	3.32	14	0.27	0.93	4	0.46	0.95
Liege	2.63	11	0.42	0.94	4	0.06	0.75
Luxembourg	0.74	4	0.16	0.72	1	0.59	0.84
Namur	1.21	6	0.15	0.79	2	0.1	0.69
Total	26.1	112			37		

5.3.5.2 *Alternative scenarios*

In addition to the basic scenario (scenario 1) described above, results of a number of alternative scenarios are presented, in order to illustrate the effects of changing some of the assumptions. Changes were made to the average length of stay and the average time investment of staff. Table 5.1 summarises the changes that were made, compared to the basic model.

A first alternative (scenario 2) is to assume that approximately 95% of the hospitalised patients stays 14 days or less (in a highly secured bed) or 7 days or less (in a regular bed). This results in an average length of stay of 5 days in a highly secured bed and 2 days in a regular bed. Time investment of staff is also reduced accordingly (proportionally, compared to the basic scenario). The results of this scenario are presented in Tables 5.6 – 5.9. Due to the reduction in average length of stay and staff time the theoretical minimum number of beds and FTE will be lower, compared to scenario 1. The results are presented in Table 5.6. Accounting for variability in interarrival times and service times and allowing for an average expected waiting time of approximately 1 day or less, leads to the results presented in Table 5.7 : 41 highly secured beds and 29 regular beds would be needed nationally (compared to 61 and 41 in the basic scenario). Due to the smaller number of beds, average occupancy rates will be lower. The impact of jointly managing beds versus spreading interventions over 2 or 3 centres each separately dealing with half or one third of the arrivals is illustrated in Table 5.8. Staff needs are reported in Table 5.9 : 103 FTE would be needed for the EPC-teams (compared to 112 in the basic scenario). Finally, 31 child and adolescent psychiatrists (compared to 37 in the basic scenario) are needed in scenario 2.

For a second alternative (scenario 3) we assume that 10% of the hospitalised patients stays more than 14 days in a highly secured bed or that 10% of the patients stays more than 7 days in a regular bed. The results of scenario 3 are presented in Tables 5.10 – 5.13. Due to an increased average length of stay, compared to scenario 2 (one additional day, both for regular and highly secured beds), the required number of beds and FTE will be higher than in scenario 2, but still lower than in scenario 1.

Finally, in Tables 5.14 – 5.17 the results for a maximalist scenario (scenario 4) are reported. In this scenario it is assumed that the average length of stay is 14 days in a highly secured bed and 7 days in a regular bed. Consequently this scenario will generate the highest number of beds and FTE.

5.3.6 Discussion on queueing results

Standby capacity and pooling

Results from queueing theory show that an empty bed/place cannot just be considered as a waste of resources or as source of inefficiency. Unused beds (and staff) are (up to a certain degree) necessary to provide a certain level of quality to ensure that patients have access to an EPC function or bed/place within an acceptable period of time. Given a target maximum probability of having to refuse immediate treatment to a patient or a target average acceptable delay, it is possible to determine the minimum number of beds or the maximum occupancy rate that is needed to achieve this target.

Setting uniform targets of occupation will often lead to different levels of expected waiting times, depending on size (of capacity) and on the rotation rate of the patients. In general, smaller EPC units will need more standby capacity in order to guarantee a waiting time that is less than the desired threshold. If on the other hand relatively uniform target waiting times were a policy objective, the target occupation rates should vary with size and rotation rates.

Leaving aside the transport of patients and staff, pooling capacity is important for efficiency reasons. It should be noted that the actual beds do not necessarily need to be located in the same physical place (e.g. one hospital per province). It is however important that there is a common structure or system that administers the interventions and allocates them to a bed/place available from the pool. However, the impact of the increased transport due to pooling was not examined in this exercise.

Another issue is that a common system of administration of a pool of beds only affects the supply side and does not guarantee control over the demand side. Patients may refuse admission to a particular (e.g. further away) unit which has available beds and may prefer to wait for a bed in a unit of their choice.

Data limitations

The presented results need to be interpreted with caution for a number of reasons. This chapter introduces a methodology rather than precise results. The output of the queuing model depends fully on the input parameters and these are still highly uncertain. A systematic and accurate registration of various characteristics of EPC interventions is required to perform more detailed, reliable and sophisticated analyses that could be useful for future policy purposes.

Limitations of the scenarios

The scenarios are not considering a possible change in the use of beds, e.g. a number of patients could be transferred after a few days in the EPC trajectory from highly secured beds to regular beds. The presented model does not take this potential transfer of patients into account (and therefore the number of required highly secured beds may be overestimated and the number of regular beds may be underestimated).

Methodological reflections

The model proposed is a M/M/s model, which implies Poisson (or exponentially distributed) arrivals and processing times, with s servers. The exponential distribution for health care could be questioned though. In case an M/M/s model is used, the underlying distributions of the parameters should be validated. Alternatively G/G/s models could be used, based on general distributions. There are well known steady state equations known in the literature for G/G/s models. These expressions are well tested and accepted approximations in the scientific literature.¹⁶¹

The model proposed in this report is a single queue, single stage, multiple server model. In chapter 2, it is argued that EPC is a function holding a process of care with clearly different steps: registration, triage, assessment, disposition, treatment, referral & follow-up. The model we proposed however is single stage. Consequently, the model is very aggregated and details are lost. Modelling a multi stage network is however much more complicated and requires accurate data for all aspects considered.

Finally, simulation can be used instead of queuing models. It allows more detailed modelling reflecting the dynamics of a process. The model used in the scientific report is a basic queueing model. These methodological limitations can be considered as suggestions for further research.

Total versus incremental resource requirements

Estimates for *total* resource needs per province were made. Ideally, this analysis would be complemented with an analysis of *incremental* resource requirements, i.e. compared to the current situation. The goal of such *incremental* analysis is not to determine the total number of beds required, but rather the extra beds needed, taking into account that a number of beds are currently already used for emergency psychiatric child care. The same accounts for identifying operational resources. Instead of knowing the required number of nurses for providing EPC, an incremental analysis would reveal the extra requirements, compared to the current staffing of the existing departments offering EPC. However, such incremental analysis is not possible as it is currently not precisely known to what extent beds and staff resources are currently used for emergency psychiatric care for children and adolescents and to what extent there is a need for additional resources and beds. Consequently, it is not possible to generate reliable incremental resource requirements.

Monetary assessment

We did not develop a monetary assessment of the resource estimates, because of the uncertainties of data. The assessment of resources is only a first, albeit important, step in cost calculations. In a second step, monetary values need to be attached to each of the resources (e.g. each personnel FTE needs to be multiplied by the cost of the specific personnel category). However, this second step was not considered useful in this project given the large uncertainty around the resource estimates.

Table 5.6: Minimum number of beds and FTE (all interventions are perfectly scheduled and beds and staff have occupancy rate of 100%) : scenario 2

			Number of beds		Number of required FTE for EPC (excluding child psychiatrist)				Number of required FTE for EPC (child psychiatrist)			
			Highly secured	Regular	Inpatient highly secured	Inpatient normal	Ambulatory	Total	Inpatient highly secured	Inpatient normal	Ambulatory	Total
Brussels	229 420	10.5%	2.3	1.5	1.4	1.7	6.9	10.0	0.5	0.3	1.7	2.6
Antwerp	343 166	15.6%	3.4	2.3	2.1	2.5	10.3	14.9	0.8	0.5	2.6	3.8
Flemish Brabant	217 367	9.9%	2.1	1.4	1.3	1.6	6.5	9.4	0.5	0.3	1.6	2.4
West Flanders	219 206	10.0%	2.2	1.4	1.4	1.6	6.6	9.5	0.5	0.3	1.6	2.4
East Flanders	276 506	12.6%	2.7	1.8	1.7	2.0	8.3	12.0	0.6	0.4	2.1	3.1
Limburg	160 546	7.3%	1.6	1.1	1.0	1.2	4.8	7.0	0.4	0.2	1.2	1.8
Walloon Brabant	84 361	3.8%	0.8	0.6	0.5	0.6	2.5	3.7	0.2	0.1	0.6	0.9
Hainaut	278 899	12.7%	2.7	1.8	1.7	2.1	8.3	12.1	0.6	0.4	2.1	3.1
Liege	221 269	10.1%	2.2	1.5	1.4	1.6	6.6	9.6	0.5	0.3	1.7	2.5
Luxembourg	61 948	2.8%	0.6	0.4	0.4	0.5	1.9	2.7	0.1	0.1	0.5	0.7
Namur	101 819	4.6%	1.0	0.7	0.6	0.7	3.0	4.4	0.2	0.1	0.8	1.1
Total	2 194 507	100.00%	21.6	14.4	13.6	16.1	65.7	95.4	4.8	3.2	16.4	24.5

Table 5.7: Minimum number of beds in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 2

	Inpatient beds: Highly secured						Inpatient beds: Regular					
	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative
Brussels	0.45	4	0.69	0.56	1.7	1.77	0.75	3	0.32	0.50	1.5	1.99
Antwerp	0.67	5	1	0.67	1.6	1.48	1.12	4	0.27	0.56	1.7	1.77
Flemish Brabant	0.43	4	0.58	0.53	1.9	1.87	0.71	3	0.26	0.47	1.6	2.10
West Flanders	0.43	4	0.58	0.54	1.8	1.85	0.72	3	0.28	0.48	1.6	2.08
East Flanders	0.54	5	0.37	0.54	2.3	1.84	0.91	3	0.62	0.60	1.2	1.65
Limburg	0.32	3	0.98	0.53	1.4	1.90	0.53	2	0.78	0.53	0.9	1.90
Walloon Brabant	0.17	2	1.1	0.41	1.2	2.41	0.28	2	0.17	0.28	1.4	3.61
Hainaut	0.55	5	0.4	0.55	2.3	1.82	0.91	3	0.62	0.61	1.2	1.64
Liege	0.43	4	0.58	0.54	1.8	1.83	0.72	3	0.28	0.48	1.5	2.06
Luxembourg	0.12	2	0.49	0.30	1.4	3.28	0.20	1	1.33	0.41	0.6	2.46
Namur	0.20	3	0.23	0.33	2.0	2.99	0.33	2	0.24	0.33	1.3	2.99
Total	4.3	41		0.53	19.4	1.90	7.2	29		0.50	14.6	2.01

Table 5.8: Illustration of pooling beds versus spreading interventions over 2 or 3 centres (Antwerp, 0.67 arrivals per day for highly secured beds): scenario 2

All patients in 1 centre (or common pool of beds)			Patients spread over 2 separate centres (results per centre)			Patients spread over 3 separate centres (results per centre)		
Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate
4	5.12	0.84	2	11.75	0.84	2	2.26	0.56
5	1.00	0.67	3	1.14	0.56	3	0.32	0.37
6	0.28	0.56	4	0.22	0.42	4	0.05	0.28
7	0.09	0.48	5	0.05	0.34	5	0.01	0.22
8	0.03	0.42	6	0.01	0.28	6	0.00	0.19

Table 5.9: Minimum number of FTE in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 2

	Pooled (inpatient for highly secured beds + inpatient for regular bed + ambulatory by the same team)						
		EPC-team			Child psychiatrists		
	Arrivals per day	FTE-EPC for Wq<1	Wq (in days)	Occup. rate EPC	FTE-psych for Wq<1	Wq (in days)	Occup. rate psych.
Brussels	2.73	11	0.26	0.91	3	0.17	0.85
Antwerp	4.09	16	0.26	0.93	4	0.55	0.96
Flemish Brabant	2.59	10	0.58	0.94	3	0.12	0.81
West Flanders	2.61	10	0.7	0.95	3	0.12	0.82
East Flanders	3.29	13	0.29	0.92	4	0.06	0.77
Limburg	1.91	8	0.24	0.87	2	0.41	0.90
Walloon Brabant	1.00	4	0.98	0.92	2	0.03	0.47
Hainaut	3.32	13	0.33	0.93	4	0.06	0.78
Liege	2.63	10	0.9	0.96	3	0.13	0.82
Luxembourg	0.74	3	1.05	0.90	1	0.23	0.69
Namur	1.21	5	0.5	0.89	2	0.05	0.57
Total	26.1	103			31		

Table 5.10: Minimum number of beds and FTE (all interventions are perfectly scheduled and beds and staff have occupancy rate of 100%) : scenario 3

			Number of beds		Number of required FTE for EPC (excluding child psychiatrist)				Number of required FTE for EPC (child psychiatrist)			
	minors number	minors share	Highly secured	Regular	Inpatient highly secured	Inpatient normal	Ambulatory	Total	Inpatient highly secured	Inpatient normal	Ambulatory	Total
Brussels	229 420	10.5%	3.1	2.1	1.9	1.7	6.9	10.4	0.7	0.5	1.7	2.9
Antwerp	343 166	15.6%	4.6	3.1	2.8	2.5	10.3	15.6	1.0	0.7	2.6	4.3
Flemish Brabant	217 367	9.9%	2.9	2.0	1.8	1.6	6.5	9.9	0.7	0.4	1.6	2.7
West Flanders	219 206	10.0%	3.0	2.0	1.8	1.6	6.6	10.0	0.7	0.4	1.6	2.7
East Flanders	276 506	12.6%	3.7	2.5	2.2	2.0	8.3	12.6	0.8	0.6	2.1	3.5
Limburg	160 546	7.3%	2.2	1.4	1.3	1.2	4.8	7.3	0.5	0.3	1.2	2.0
Walloon Brabant	84 361	3.8%	1.1	0.8	0.7	0.6	2.5	3.8	0.3	0.2	0.6	1.1
Hainaut	278 899	12.7%	3.8	2.5	2.2	2.1	8.3	12.7	0.8	0.6	2.1	3.5
Liege	221 269	10.1%	3.0	2.0	1.8	1.6	6.6	10.0	0.7	0.4	1.7	2.8
Luxembourg	61 948	2.8%	0.8	0.6	0.5	0.5	1.9	2.8	0.2	0.1	0.5	0.8
Namur	101 819	4.6%	1.4	0.9	0.8	0.8	3.0	4.6	0.3	0.2	0.8	1.3
Total	2 194 507	100.00%	29.7	19.8	17.7	16.2	65.7	99.6	6.6	4.4	16.4	27.5

Table 5.11: Minimum number of beds in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 3

	Inpatient beds: Highly secured						Inpatient beds: Regular					
	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative
Brussels	0.52	5	0.85	0.62	1.9	1.61	0.69	4	0.3	0.52	1.9	1.94
Antwerp	0.77	7	0.61	0.66	2.4	1.51	1.03	5	0.41	0.62	1.9	1.62
Flemish Brabant	0.49	5	0.65	0.59	2.1	1.70	0.65	3	1.2	0.65	1.0	1.53
West Flanders	0.49	5	0.65	0.59	2.0	1.69	0.66	3	1.28	0.66	1.0	1.52
East Flanders	0.62	6	0.58	0.62	2.3	1.61	0.83	4	0.63	0.62	1.5	1.61
Limburg	0.36	4	0.7	0.54	1.8	1.84	0.48	3	0.42	0.48	1.6	2.07
Walloon Brabant	0.19	3	0.4	0.38	1.9	2.63	0.25	2	0.49	0.38	1.2	2.63
Hainaut	0.63	6	0.63	0.63	2.2	1.59	0.84	4	0.66	0.63	1.5	1.59
Liege	0.50	5	0.71	0.60	2.0	1.67	0.66	3	1.28	0.66	1.0	1.50
Luxembourg	0.14	2	1.29	0.42	1.2	2.39	0.19	2	0.27	0.28	1.4	3.58
Namur	0.23	3	0.73	0.46	1.6	2.18	0.30	2	0.76	0.46	1.1	2.18
Total	4.9	51		0.58	21.3	1.72	6.6	35		0.56	15.2	1.77

Table 5.12: Illustration of pooling beds versus spreading interventions over 2 or 3 centres (Antwerp, 0.77 arrivals per day for highly secured beds) : scenario 3

All patients in 1 centre (or common pool of beds)			Patients spread over 2 separate centres (results per centre)			Patients spread over 3 separate centres (results per centre)		
Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate
5	12.90	0.92	3	5.21	0.77	2	8.74	0.77
6	2.00	0.77	4	0.92	0.58	3	1.03	0.51
7	0.61	0.66	5	0.22	0.46	4	0.20	0.39
8	0.21	0.58	6	0.06	0.39	5	0.04	0.31
9	0.07	0.51	7	0.01	0.33	6	0.01	0.26

Table 5.13: Minimum number of FTE in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 3

	Pooled (inpatient for highly secured beds + inpatient for regular bed + ambulatory by the same team)						
		EPC-team			Child psychiatrists		
	Arrivals per day	FTE-EPC for Wq<1	Wq (in days)	Occup. rate EPC	FTE-psych for Wq<1	Wq (in days)	Occup. rate psych.
Brussels	2.73	11	0.54	0.95	3	0.79	0.96
Antwerp	4.09	16	0.82	0.97	5	0.1	0.86
Flemish Brabant	2.59	11	0.22	0.90	3	0.32	0.91
West Flanders	2.61	11	0.25	0.90	3	0.36	0.92
East Flanders	3.29	13	0.75	0.97	4	0.15	0.87
Limburg	1.91	8	0.4	0.91	3	0.05	0.67
Walloon Brabant	1.00	5	0.16	0.77	2	0.04	0.53
Hainaut	3.32	13	1.04	0.97	4	0.16	0.87
Liege	2.63	11	0.28	0.91	3	0.41	0.92
Luxembourg	0.74	4	0.14	0.70	1	0.37	0.78
Namur	1.21	5	0.85	0.92	2	0.07	0.64
Total	26.1	108			33		

Table 5.14: Minimum number of beds and FTE (all interventions are perfectly scheduled and beds and staff have occupancy rate of 100%) : scenario 4

			Number of beds		Number of required FTE for EPC (excluding child psychiatrist)				Number of required FTE for EPC (child psychiatrist)			
			Highly secured	Regular	Inpatient highly secured	Inpatient normal	Ambulatory	Total	Inpatient highly secured	Inpatient normal	Ambulatory	Total
Brussels	229 420	10.5%	7.2	4.8	3.1	2.6	6.9	12.6	1.6	1.1	1.7	4.4
Antwerp	343 166	15.6%	10.8	7.2	4.7	3.9	10.3	18.9	2.4	1.6	2.6	6.6
Flemish Brabant	217 367	9.9%	6.9	4.6	3.0	2.5	6.5	11.9	1.5	1.0	1.6	4.2
West Flanders	219 206	10.0%	6.9	4.6	3.0	2.5	6.6	12.1	1.5	1.0	1.6	4.2
East Flanders	276 506	12.6%	8.7	5.8	3.8	3.2	8.3	15.2	2.0	1.3	2.1	5.3
Limburg	160 546	7.3%	5.1	3.4	2.2	1.8	4.8	8.8	1.1	0.8	1.2	3.1
Walloon Brabant	84 361	3.8%	2.7	1.8	1.1	1.0	2.5	4.6	0.6	0.4	0.6	1.6
Hainaut	278 899	12.7%	8.8	5.9	3.8	3.2	8.3	15.3	2.0	1.3	2.1	5.4
Liege	221 269	10.1%	7.0	4.7	3.0	2.5	6.6	12.2	1.6	1.0	1.7	4.3
Luxembourg	61 948	2.8%	2.0	1.3	0.8	0.7	1.9	3.4	0.4	0.3	0.5	1.2
Namur	101 819	4.6%	3.2	2.1	1.4	1.2	3.0	5.6	0.7	0.5	0.8	2.0
Total	2 194 507	100.00%	69.2	46.1	29.9	25.1	65.7	120.6	15.5	10.3	16.4	42.2

Table 5.15: Minimum number of beds in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 4

	Inpatient beds: Highly secured						Inpatient beds: Regular					
	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative	Arrivals per day	Beds req. for Wq<1	Waiting time (in days)	Occup. rate beds	Standby capacity # of beds	Relative
Brussels	0.52	11	0.56	0.66	3.8	1.52	0.69	7	0.92	0.69	2.2	1.45
Antwerp	0.77	14	1.18	0.77	3.2	1.29	1.03	10	0.64	0.72	2.8	1.39
Flemish Brabant	0.49	10	0.9	0.68	3.1	1.46	0.65	7	0.65	0.65	2.4	1.53
West Flanders	0.49	10	0.9	0.69	3.1	1.45	0.66	7	0.71	0.66	2.4	1.52
East Flanders	0.62	12	0.93	0.72	3.3	1.38	0.83	8	1	0.72	2.2	1.38
Limburg	0.36	8	0.82	0.63	2.9	1.58	0.48	6	0.4	0.56	2.6	1.78
Walloon Brabant	0.19	5	0.96	0.53	2.3	1.88	0.25	4	0.37	0.44	2.2	2.26
Hainaut	0.63	12	1.05	0.73	3.2	1.36	0.84	8	1.09	0.73	2.1	1.36
Liege	0.50	10	1.03	0.70	3.0	1.43	0.66	7	0.71	0.66	2.3	1.50
Luxembourg	0.14	4	1.13	0.49	2.0	2.05	0.19	3	0.75	0.43	1.7	2.30
Namur	0.23	6	0.66	0.53	2.8	1.87	0.30	4	0.73	0.53	1.9	1.87
Total	4.9	102		0.68	32.8	1.47	6.6	71		0.65	24.9	1.54

Table 5.16: Illustration of pooling beds versus spreading interventions over 2 or 3 centres (Antwerp, 0.77 arrivals per day for highly secured beds) : scenario 4

All patients in 1 centre (or common pool of beds)			Patients spread over 2 separate centres (results per centre)			Patients spread over 3 separate centres (results per centre)		
Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate	Beds	Waiting time	Occupancy rate
12	7.28	0.90	6	16.89	0.90	4	27.00	0.90
13	2.66	0.83	7	3.70	0.77	5	4.06	0.72
14	1.18	0.77	8	1.24	0.67	6	1.14	0.60
15	0.55	0.72	9	0.46	0.60	7	0.35	0.51
16	0.27	0.67	10	0.17	0.54	8	0.11	0.45

Table 5.17: Minimum number of FTE in order to have an expected waiting time of +/-1 day or less (queueing model) : scenario 4

	Pooled (inpatient for highly secured beds + inpatient for regular bed + ambulatory by the same team)						
		EPC-team			Child psychiatrists		
	Arrivals per day	FTE-EPC for Wq<1	Wq (in days)	Occup. rate EPC	FTE-psych for Wq<1	Wq (in days)	Occup. rate psych.
Brussels	2.73	13	0.86	0.97	5	0.16	0.88
Antwerp	4.09	20	0.24	0.94	7	0.28	0.94
Flemish Brabant	2.59	13	0.25	0.92	5	0.1	0.84
West Flanders	2.61	13	0.29	0.93	5	0.11	0.84
East Flanders	3.29	16	0.37	0.95	6	0.14	0.89
Limburg	1.91	10	0.2	0.88	4	0.08	0.77
Walloon Brabant	1.00	5	0.86	0.93	2	0.26	0.81
Hainaut	3.32	16	0.46	0.96	6	0.15	0.89
Liege	2.63	13	0.34	0.94	5	0.12	0.85
Luxembourg	0.74	4	0.44	0.85	2	0.07	0.60
Namur	1.21	6	0.77	0.93	3	0.05	0.65
Total	26.1	129			50		

Key points

- **Since emergencies are to a large extent unpredictable, queueing theory is proposed as a method for calculating the required resources**
- **This chapter only illustrates results from queueing theory as a method, but does not present precise estimates of resources required.**
- **Information to generate reliable estimates on the required resources to organise EPC is to a large extent unreliable, incomplete or unavailable**
- **Queueing theory helps to argue that pooling resources minimises the required resources in order to guarantee an acceptable maximum waiting time with a minimum of standby capacity. If necessary data are available, the approach allows to consider geographical distribution and accessibility issues**

6 FINANCING OPTIONS FOR EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS

6.1 AIMS OF THIS SECTION

This section focuses on financing mechanisms that could be considered for EPC. A first part focuses on a literature review on financing mechanisms and cost studies of services providing emergency and crisis care for adolescents and children.

A second part introduces a perspective of advantages and disadvantages of financing mechanisms

The third part describes the current variety of financing mechanisms in the Belgian setting.

The fourth part discusses financing options for a new organisational model for EPC for children and adolescents in Belgium.

6.2 LITERATURE REVIEW

The results of the literature search on the organisation of emergency services for mental health care (see chapter 2) were used to identify studies that possibly included financing models and/or cost and resources aspects of organising emergency and crisis services for child and adolescent psychiatry.

An additional literature search in the Econlit-database on payment systems for crisis/emergency psychiatric care for children and adolescents did not yield any result (see Appendix 2 for search strategy and results). Broadening the Econlit-search to financing mechanisms for emergencies in mental health care (i.e. not restricting to children and adolescents) did not lead to the identification of any study dealing with this topic either.

6.3 RESULTS

In general, the results from peer-reviewed literature are poor. The few studies that addressed financing or cost issues primarily have a medical or organisational focus. Consequently, financing and cost aspects are reported very briefly, without explaining methodology, assumptions or cost calculation method. Moreover, these studies are often restricted to a small number of patients in one hospital or one department. Therefore the various reported costs are virtually not comparable and of very limited use for the purpose of this report.

Some studies mention cost savings due to the adoption of a specific crisis intervention program, compared to traditional inpatient care, however without explaining how the various costs are calculated^{61, 109, 117, 162-164}. One study calculates the cost of treating children with mental disorders presenting at the emergency department and finds that, after the implementation of a specific child guidance model, cost are reduced, compared to the traditional emergency department visit¹²⁴. One article studies costs and health gains of inpatient treatment in child and adolescent psychiatry¹³⁷. It should be noted that some of these studies focus on adults, rather than adolescents or children¹⁶³ or are not limited to crisis intervention but study therapy up to 12 months after the initial crisis¹⁶⁴.

However, some articles study the impact of financing mechanisms on a variety of other aspects of mental health care: distributional effects¹⁶⁵, public versus private supply^{166, 167}, community-based services¹⁶⁸, managed care^{167, 168}, service mix^{166, 169, 170}, time-series aspects^{166, 168-172}, utilisation and costs^{167, 169-176}, use of medication¹⁶⁷.

6.4 TYPOLOGY OF PROVIDER PAYMENT SYSTEMS IN HEALTH CARE

One of the aims of this study is to discuss financing options for the organisation of emergency psychiatric care for children and adolescents.

The health economics literature pays abundant attention to payment mechanisms for health care providers in general and more specifically to studies dealing with finance mechanisms and the incentives they generate in the provision of health care. A number of recent OECD-reports indicate that payment systems for physicians (general practitioners and specialists) as well as finance mechanisms for hospitals differ substantially across OECD countries, and that even within countries variations can be observed¹⁷⁷⁻¹⁷⁹. Basically, three payment systems are used for physicians: salaried, capitation and fee-for-service (FFS). These basic payment systems can be mixed in a number of ways, by varying the weights of the single components. Hospital financing systems also exhibit large differences: the OECD-reviews indicate that hospitals may be financed through an annual fixed budget, using per diem payments, fee-for-service or (prospective) payment per case (corrected for case mix).

In this section we summarise a general typology to classify payment systems (according to a number of relevant dimensions) and to discuss their advantages and disadvantages, describing the incentives generated.

Jegers et al. (2002) provide an example of a typology for financing systems for health care markets¹⁸⁰. This typology model classifies payment systems according to two main dimensions: on the one hand fixed versus variable systems and on the other hand retrospective versus prospective systems. An additional dimension considered is the unit of reimbursement. The typology of Jegers et al. is further described in this section.

6.4.1 Closed-end versus open-end

At the macro-level (i.e. the level of the sponsor) closed-end systems in which the (annual) budget is fixed can be distinguished from open-end systems without any budget limits either on a global level or for certain health care expenditures. Between these two extremes a number of mixed forms are also possible (e.g. systems with hard or soft caps).

6.4.2 Variable versus fixed

The micro level is the level of the individual provider (e.g. physician, hospital). The distinction between a fixed and a variable payment system is based on the (absence of a) relationship between activities (production) of a provider and the payment (income) he receives.

In a variable system, the provider has an ability to influence his earnings by varying his activities, contrary to fixed systems where the provider receives a lump sum determined ex ante and not related to his production. In a profit maximising setting, economic theory predicts that providers will produce until marginal revenue equals the marginal cost of production. Production (e.g. number of consultations, activities, technical procedures, laboratory tests, prescriptions, ...) will therefore depend on the fee and on the cost of providing an additional unit. Consequently variable systems with relatively generous fees will probably lead to overproduction.

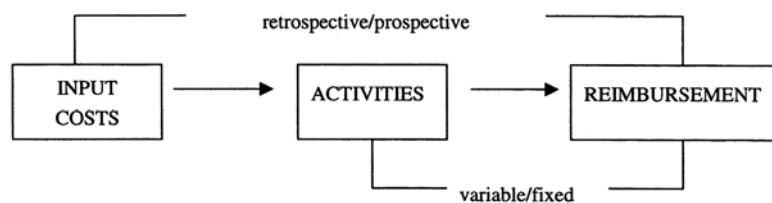
In a fixed payment system where the provider receives a lump sum per unit of payment (e.g. patient, admission, period, ...), marginal benefits of production within the unit are zero. Therefore providers will have strong incentives to reduce marginal cost (e.g. by reducing the number or intensity of activities per unit or by selecting good risks). However, providers can still attempt to increase the number of units in order to gain more income (e.g. increasing activities within a fixed per diem payment does not generate additional payments; however an additional day produces extra income).

6.4.3 Retrospective versus prospective

Another dimension to classify reimbursement mechanisms is the distinction between retrospective and prospective reimbursements, pointing to the link (or absence of a link) between income of the provider and his actual cost of producing a service. In a retrospective system, ex post reimbursement is based on real costs, implying that incentives to reduce costs are very weak. In a prospective payment system reimbursement rates are determined ex ante, without any link to real cost of an individual provider, creating incentives to increase efficiency and contain cost on the one hand and to select good risks and to provide a suboptimal level of care on the other hand.

Figure 6.1 depicts this distinction between the retrospective/prospective and fixed/variable dimension.

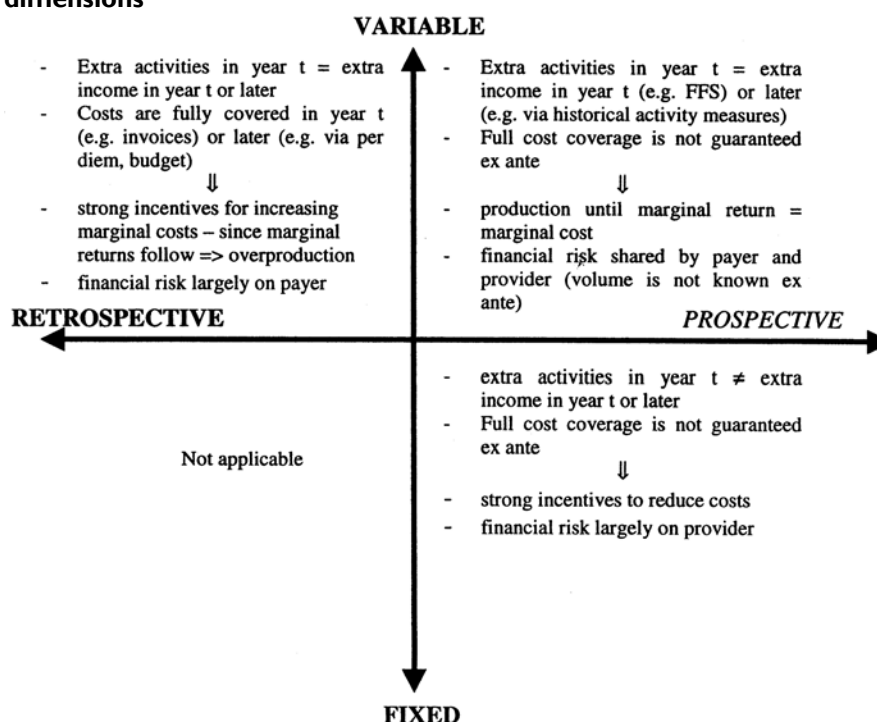
Figure 6.1: Fixed versus variable and retrospective versus prospective payment systems



Source: Jegers, M., et al., A typology for provider payment systems in health care. *Health Policy*, 2002. 60(3): p. 255-273.

Figure 6.2 summarises the main characteristics and incentives (assuming profit maximisation) in payment systems according to the retrospective/prospective and variable/fixed dimensions. It should be clear that not all combinations are possible at the micro level: a fixed payment system is not compatible with retrospective reimbursements.

Figure 6.2: Characteristics and incentives in payment systems according to the retrospective/prospective and variable/fixed dimensions



Source: Jegers, M., et al., A typology for provider payment systems in health care. *Health Policy*, 2002. 60(3): p. 255-273.

6.4.4 Classification according to unit of reimbursement

Payment systems for health care providers can also be classified according to the unit of reimbursement that is used. A careful and clever choice of the unit of reimbursement (e.g. fee-for-service, per diem, case, patient, period, ...) may strengthen (or weaken) the link between the provider's costs and his income; and thus allows to fine-tune the financial incentives generated by the payment system. If for example providers are paid per case, they may have an incentive to increase the number of cases, especially those with lower expected costs, but to reduce the intensity or quality of treatment. On the other hand, FFS payments may lead to more interventions, consultations and prescriptions and possibly to overconsumption of medical care.

Moreover, who is bearing the larger share of the financial risks also heavily depends on the choice of the unit of reimbursement: if the unit of reimbursement is small (e.g. a particular item in a FFS system) the risk for the provider is rather limited. On the other hand, if the unit becomes more extensive (e.g. a capitation system where a physician is paid per patient, irrespective of the amount of care that is needed), the financial risk is to a large extent shifted from the sponsor to the individual provider.

If the macro level is added, further restrictions on different combinations of dimensions emerge. A closed-end system (i.e. fixed macro budget) requires prospective financing and is not achievable with retrospective reimbursements. Regarding the fixed/variable dimension, a fixed reimbursement mechanism at the micro level is not compatible with an open-end macro budget. In addition, a retrospective system is always variable, both on the macro level as well as on the micro level. The possibilities and incompatibilities are summarised in Figure 6.3.

Figure 6.3: Relationship between macro-level, micro-dimensions and unit of reimbursement

		CLOSED-END	OPEN-END
	MACRO		
		FIXED	VARIABLE
	MICRO	<i>Criteria:</i> input output combination other	<i>Unit of activities:</i> item-of-service diem case patient other
		PROSPECTIVE	RETROSPECTIVE

Source: Jegers, M., et al., A typology for provider payment systems in health care. *Health Policy*, 2002. 60(3): p. 255-273.

6.4.5 Advantages and disadvantages of the payment systems and created incentives

Each of the distinct payment systems that were identified in the OECD reports¹⁷⁷⁻¹⁷⁹ (e.g. salaried, capitation, fee-for-service (FFS), fixed (annual) budgets for hospitals, payments per diem, (prospective) payment per case (corrected for case mix), ... or blends of various systems) has its own characteristics and incentives.

A FFS system will often lead to excessive consultations, interventions and prescriptions (as long as the fees exceed the marginal cost of providing the service) while a capitation system could potentially lead to a selection of good risks, implying that (on average) the level of health services provided will be suboptimal. A capitation payment mechanism will create incentives to adopt a cost-conscious way to treat patients.

On the macro level (e.g. government, insurance company, ...) and focussing on policy and budget, it can be argued that the lack of control and accountability in an open-ended system (especially FFS) makes planning difficult and will often lead to a chronic overrunning of the budget. Under (risk-based) capitation financing and supply-side cost-sharing, policy makers should be concerned that the incentives resulting from these mechanisms may distort a physicians' clinical judgement.

Closely related is supplier induced demand (SID). SID exists when the physician influences a patient's demand for care against the physician's interpretation of the best interest of the patient¹⁸¹. It is the amount of demand created by the supplier (doctor), who is acting as agent for the consumer (patient), which exists beyond what a fully informed patient would have chosen freely (it is assumed that the physician who has superior medical information makes treatment decisions on behalf of the uninformed patient. Crucial elements for SID are the existence of asymmetric information regarding the patient's health status and need for health care, combined with an imperfect agency relationship between patient and physician. If physicians then maximise their own profit instead of the utility of the patients, they will induce a shift in the demand curve. Additional favourable conditions for SID are a fee-for-service reimbursement system and excess supply.

Key points

- **At the macro-level (i.e. the level of the sponsor) closed-end payment systems can be distinguished from open-end payment systems**
- **At the micro-level, payment systems can be classified according to a fixed/variable and a prospective/retrospective dimension**
- **Each particular combination generates specific incentives for the providers of health care**
- **The unit of reimbursement allows to further fine-tune the financial incentives and to shift the burden of the financial risk between sponsor and provider**
- **Supplier induced demand may be an issue, especially when there is excess supply and FFS reimbursement**

6.5 FINANCING OPTIONS FOR A NEW ORGANISATIONAL MODEL FOR EPC FOR CHILDREN AND ADOLESCENTS

6.5.1 General considerations on the design of a payment system

Numerous studies indicate that financial incentives are a powerful tool to influence performance of suppliers of health care (in general). However, these incentives may also induce providers to game the system, by concentrating on specific aspects that have a financial impact at the expense of other (important) factors that do not contribute to their income or budget^{182, 183}. A health care provider finance system should thus be chosen with utmost care.

P4Q

In order to avoid some of the mentioned disadvantages of particular payment systems, alternative models have been developed. The health care sector has been witness of the design pay-for-quality (P4Q) payment systems, i.e. offering explicit financial incentives to physicians (or other health care providers) in order to achieve quality targets. The traditional output measures (e.g. consultations, laboratory tests, medical interventions) are replaced by quality indicators. However, the application of P4Q in psychiatric care is difficult given that quality measurement is highly complex.

Considered parameters

The choice of a particular payment system for EPC for children and adolescents should consider a number of parameters, such as objectives and (budgetary) constraints of the sponsor, characteristics of the interventions (ambulatory, inpatient, numbers, length of stay, ...), patient characteristics (relatively homogeneous or rather heterogeneous care needs), the possibility of risk selection, mono- versus multi-disciplinary care, measurability of activities, the unit of funding (patient, treatment process, pathology, ...), the organisational model, type of care, ...

In addition, the financial resources allocated to pay certain procedures or treatments need to be aligned with the costs of providing an optimal amount of these services. Both over-financing as well as under-financing obviously is not desired.

Policy objectives

The financing options should be evaluated along some general and specific policy objectives. The following criteria could be considered:

- ensure sufficient availability of (emergency psychiatric care) beds
- incorporate the right incentives for providers to ensure good quality of care provided in general, and specifically:
 - to generate incentives to provide care in ambulatory or outreaching form, whenever possible

- enable integrated approach for ambulatory and residential care
- discourage risk selection, ensuring hospitals do not prefer lower need patients
- incorporate incentives to contain overall costs
- provide incentives for intersectoral and intra- and interhospital collaboration (if possible)

6.5.2 Closed-end/open-end

From a government point of view and aiming at controlling budgets a closed-end macro budget with a prospective financing system is preferable. The main advantage for the sponsor is that the total budget is known ex ante and that it generates incentives for cost containment. In what follows, we will assume that one of the objectives of government is cost containment and that government would therefore probably prefer a closed-end budget on the macro level. Consequently, a retrospective reimbursement system is ruled out.

6.5.3 Fixed/variable and unit of reimbursement

Financing of EPC function (excluding medical acts of the psychiatrist) can theoretically be fully fixed or can be a combination of fixed and variable. The latter approach is probably a more viable approach: If payment per patient or per diem is used providers may be incentivized to treat more patients or increase length of stay; In case of a payment per service providers may provide more services than needed in order to break even. Since EPC is characterized by a considerable amount of fixed costs, at least a share of financing should be fixed.

Fixed financing

A fixed envelope may integrate different components of care in one fixed reimbursement package and thereby covering staff needs, vehicles, protection of beds and overhead. This fixed envelope per hospital could vary in function of the reach of a hospital and/or in function of the number of EPC beds (for bed related resources).

Advantages:

- A fixed envelope allows providers to cover costs that are difficult to measure and to register (e.g. coordination). Since a substantial share of the typical activities of an EPC-function and the child psychiatrist providing EPC belong to this category (e.g. coordination, consultation with parents and school, organising transfer of a child to a more appropriate organisation, consultation with other providers that will continue care after the emergency or crisis, ...), this may be an important consideration.
- Payment systems that are to a large extent fixed and prospective may transfer a substantial share of the financial risk from sponsor to provider. (Variable payment systems are also compatible with a closed-end budget, but this requires adjustment of the variable fee in function of the national activity)

Disadvantages:

- Since a fixed reimbursement transfers the financial risk from the sponsor to the provider of EPC, it does not generate direct incentives to provide high quality of care. There may be a risk of underprovision of services. Ideally the fixed financing part equals the actual fixed costs and the variable part equals the variable costs. As such, the financial incentives for over- or underprovision of care are limited.
- Besides providing a suboptimal level of care, providers may also be induced to select good risks in order to avoid financial losses. If the expected patient mix is to a large extent unpredictable and patients are heterogeneous regarding psychopathology and the type and intensity of care they require, a uniform (i.e. irrespective of the type and amount of care that is needed) payment for EPC beds would generate a strong

incentive to select good risks and to redirect high cost patients to other institutions. The scale (i.e. the number of patients) of the EPC service is an important factor in determining the risk: an increase in the number of patients (i.e. a smaller number of services in a given region) reduces the variance of the patient mix and thus diminishes the financial risk for the EPC service. A sufficient scale will be necessary to reduce the variability of patient inflow and hence the financial risk.

- When (part of) the financing is fixed, activity levels should be monitored and extra attention should be paid to quality control as the fixed financing part does not vary in function of activities. Possible options include an obligatory submission of activity reports which are effectively reviewed by the sponsor, or alternatively a system of peer-review (in which hospitals are reviewing the quality of other hospitals). Amongst other, it could be monitored whether the staff is effectively mobilized for EPC and what is the proportion of patients treated outside the hospital (to create an incentive to treat patients in ambulatory setting).

Combination of fixed and variable

EPC functions could be financed using a fixed lump sum payment per year to cover the basic fixed costs (such as the rooms for consultation, overhead, administrative support and cost of a vehicle) in combination with a variable financing part. This variable part could be an amount per patient, per diem and/or per service/intervention (FFS) (e.g. per mobile intervention / intervention for a hospitalised patient in a highly secured bed / intervention for a hospitalised patient in a regular bed). Alternatively the variable part could be a prospective amount per patient, in function of the patient needs. However, this last option is not possible (yet) in the Belgian context.

Advantages of a mixed financing:

- Financing is in function of activities. There is less risk for underprovision of services.
- By providing more interesting financing for the ambulatory EPC than for residential care, hospitals may be encouraged to provide as much ambulatory EPC as possible.

Disadvantages of mixed financing:

- A variable payment may induce the providers to optimize their financing in function of the unit of payment:
 - A payment per patient may incentivize providers to reduce the duration and intensity of treatment per patient and increase readmission rates (the “revolving-door”-phenomenon in psychiatry).
 - With a payment per diem (for hospitalized patients), this is not the case, but providers may then be incentivized to increase the length of stay.
 - Providing higher fees to the hospital for the first few days of hospitalization would stimulate hospitals to discharge earlier, however, they may induce again the revolving-door phenomenon (earlier discharge in combination with higher readmission rates).
- Unless when there is a reimbursement in function of the patient needs, the risk for risk selection by the provider remains. A uniform payment per EPC patients, diem, or service/intervention also generates a strong incentive to select good risks and to redirect high cost patients to other institutions. In order to avoid this unwanted behaviour, it is recommended that reliable systems to classify patients according to their needs and to adapt financing accordingly.
- In the Belgian context it is not possible yet to introduce reimbursement in function of the patient mix and the resource intensity required by the patients. In the context of psychiatry, in contrast to other medical fields, this requires a patient classification system which does not merely take

into account the diagnosis but the patient's needs. These needs are determined by the intensity of the problem behaviour and the availability and strength of the context, rather than the diagnosis. Patient classification for children and adolescents EPC should be conceived as part of a general patient classification for psychiatric patients. At this stage, there is no such national patient classification system yet.

6.5.4 Financing of functions versus beds

A first option is to specifically finance the EPC function, i.e. not directly related to hospital beds. Financing of the EPC function should cover

- a team of professionals,
- room for consultation and assessment,
- the vehicles,
- communication equipment,
- infrastructure for a number of beds specifically dedicated to EPC, required general nursing staff and overhead per EPC bed,
- required extra nursing staff for EPC patients using beds in other departments (the number of FTEs per bed in these departments is generally lower than the proposed number of FTEs for EPC beds)
- extra infrastructure costs related to the protection of beds
- other operational costs incurred by the EPC function not covered yet by the BFM
- infrastructural needs associated with creating units for highly secured beds (may require construction of a new or renovation of an existing building)

As such, the EPC team would have access to a number of specifically dedicated EPC beds (financed as part of the EPC function) on top of the beds in other departments currently already used for EPC (with regular bed financing).

The financing of EPC functions could, for example, be channelled via the B4 component of the BFM (or a convention with RIZIV/INAMI). Several specific costs and functions are already covered by the B4 component (e.g. MUG (Mobile Urgentiegroep)/SMUR (Service Mobile d'Urgence et de Réanimation), mobile nursing team, children's oncology unit, ...). The mobile EPC teams can be deployed when an emergency presents at the emergency department of a hospital and continue EPC during a short period when the patient is hospitalised. When the team decides that a patient does not need to be hospitalised but can be treated ambulatory, the same team can take care of this type of care too.

The main advantage is that financing EPC-functions allows for an integrated approach, enabling to provide care both inside as well as outside the hospital. It also leaves room for flexibility to the hospitals to choose a configuration which is most suited to their organisation. Furthermore it enables collaboration between hospitals to provide a joint EPC function. Finally this approach does not require formal recognition or conversion of beds (which increases the complexity for introducing new financing).

An alternative approach is that financing for EPC for hospitalised patients would mimic the actual system to finance beds in hospitals, i.e. predominantly based on the B2 and A1 component of the Budget of Financial Means (BFM) which covers the cost of nursing staff and building infrastructure. Consequently, a ratio of FTE staff per EPC bed needs to be determined. The financing for the EPC-service members would then be included in the financing of each EPC bed. Either new beds could be created or existing beds could be converted into these EPC beds. However, beds currently used for EPC have FTE/bed ratios below the 2 FTE per bed that were proposed for nursing. Consequently, the increase in the staff/bed ratio should be sufficient in order to induce hospitals to convert beds.

The main disadvantage is that this system can only be applied to hospitalised patients and that a separate system has to be set up to finance the ambulatory EPC. Consequently, is it also not compatible with the pooling recommendation (EPC function should be able to provide care for hospitalised as well as for ambulatory patients) that was made earlier in this chapter. An integrated approach of care is hampered as there is no financing for teams of professionals having the possibility to deliver care outside the hospital. A related disadvantage is that separate channels and EPC functions for hospitalisation and ambulatory EPC imply a smaller number of interventions for each team. Queueing theory predicts that the higher variability of the patient inflow implies that more FTE will be needed than in the pooling model.

As it is common in Belgium to finance physicians on a FFS basis, compensation for the child and adolescent psychiatrist could predominantly be based on a fixed amount per type of intervention, not only covering direct patient care, but also time for coordination and consultation with other professionals and taking into account 24 hours availability. An alternative is to provide a fixed yearly financing per psychiatrist.

It makes sense to combine the required resources and financing with those for the emergency function (SGA, crisis, outreaching) for which the government recently provided additional resources and beds. The currently financed resources are limited to patients under a juridical measure, but neither the literature nor the focus groups have indicated that a separate function is required for this particular patient group.

Key points

- **Integrating different components of care in one fixed reimbursement package allows providers to cover costs that are difficult to measure and to register (e.g. coordination). However, fixed reimbursement requires stricter monitoring of activity levels and quality control.**
- **Combining fixed and variable financing is most in line with the cost structure of the EPS. It reduces the risk of underprovision of services.**
- **A sufficient scale of an EPC function will reduce the variability of patient inflow and hence the financial risk for the care provider**
- **EPC functions can be financed without creating separately financed EPC beds. This enables an integrated approach for provision of both ambulatory and inpatient EPC. Alternatively, EPC for inpatient care could be financed mimicking the current bed financing, but the disadvantage is that a separate system needs to be developed to finance ambulatory care**
- **Creating units for highly secured beds may require construction of a new or renovation of an existing building**

6.6

SUMMARY

The assumptions underlying viable EPC for children and adolescents pertain to the target population, the aim, the content and the functional aspects of emergency care. EPC primarily focuses on children and adolescents that present an acute danger to themselves or others, or live in a dangerous educational context. The first aim of EPC is to ensure a patient's safety, taking into account that the development of children and adolescents is influenced strongly by the context. In addition, EPC should provide containment of anxiety or behavioural problems to enable further specialist assessment. It is inherently ambulatory or outreaching and should involve not only the child or youngster, but also the relevant context. However, in some cases a (secured) residential setting may be required. The type of EPC depends on the type and intensity of the problem behaviour, and the availability and strength of the context and would generally last a maximum of two weeks.

Accessibility, competence and availability of beds are vital conditions for EPC, which could be viewed a separate function with specific organization and control. EPC should be provided by competent and mobile professionals, where child and adolescent psychiatric expertise is fundamental, and who have immediate access to a range of beds, including continuously available highly secured beds within a child- and adolescent psychiatric setting. It is preferentially linked to and embedded in the existing system of emergency care (cq. emergency services and emergency telephone numbers), reserving a crucial role for the child and adolescent psychiatric department.

Regarding the financing of EPC, it should be noted that information to reliably estimate the required resources is to a large extent unreliable, incomplete or unavailable. Information on the number (and type of) interventions, the duration, the intensity of care, transport requirements, etc. are not readily available. Based on rough estimates on a number of parameters, an example for calculating beds and staff per province is presented. Since arrivals of emergencies are to a large extent unpredictable, queueing theory is proposed as an appropriate method for calculating the required resources. Queueing theory helps to argue that pooling resources minimises the required resources in order to guarantee an acceptable maximum waiting time with a minimum of standby capacity. Pooling does not necessarily imply that all resources should be located in the same physical place. It is however important that the patient inflow and the available resources are managed by a common structure or system that allocates patients to an EPC function available from the pool.

In order to assess the actual and potential future systems to finance EPC, a typology, allowing to classify payment systems, was presented. At the macro-level closed-end systems can be distinguished from open-end systems. At the micro-level, payment systems can be classified according to a fixed/variable and a prospective/retrospective dimension, each generating specific incentives.

Currently there is no specific financing dedicated to the provision of integrated EPC for children and adolescents. Hospitals providing EPC for children and adolescents rely on the general hospital financing system. The beds that are currently used for EPC are not necessarily highly protected. In addition, availability may be problematic since normative occupancy rates are relatively high. An integrated approach of care is hampered as there is no financing for teams of professionals having the possibility to deliver care outside the hospital.

Actual hospital financing is closed-end at the macro level. At the micro level, the financing of hospital beds is to a large extent fixed and prospective, while medical fees are predominantly fee-for-service. Some projects for crisis units (intended for adults) in hospitals are financed via specific Royal Decrees and receive a fixed and prospective lump sum payment per year. Rehabilitation centres for addiction problems providing EPC facilities (intended for adults) are financed via RIVIZ/INAMI conventions receive a fixed and prospective per diem. In Flanders, organisations participating in a "Network Crisis help" (Integrale Jeugdhulp) receive a small incentive fee per intervention, guidance or admission, while in the French Community, budgets for the "SOS enfants" teams are to a large extent fixed and prospective.

The choice of a future payment system to cover the costs of organising EPC depends on the objectives and constraints of the sponsor, on organisational structure, patient characteristics and type and intensity of care. From a government point of view and aiming at controlling total expenditures, a closed-end macro budget with a prospective financing system is preferable.

Provided that the fixed financing part equals the fixed costs and the variable financing part equals the variable costs, a combined fixed-variable financing system creates reduces the incentives for over- or underprovision of care. Fixed financing also allows providers to cover costs that are difficult to measure and to register (e.g. coordination). Payment systems that are to a large extent fixed and prospective may transfer a substantial share of the financial risk from sponsor to provider. However, this type of financing requires quality control and monitoring of activity levels as there is no link between activities and financing. When a large portion of financing is fixed, a sufficient scale of an EPC function will be necessary to reduce the variability of patient inflow and hence the financial risk. Combining fixed and variable financing is most in line with the cost structure of the EPC. It reduces the risk of underprovision of services. However, as long as the variable fee is not differentiated according to the needs of different patient groups, the risk of risk selection by the providers remains a potential issue.

Looking to the specific context of Belgian hospital financing, one option is to finance specific EPC functions, enabling an integrated approach that allows providing both ambulatory EPC as well as EPC for hospitalised patients. The main advantage is that financing EPC functions allows an integrated financing of both ambulatory as well as inpatient care. An alternative option is to finance EPC for inpatient care per bed (or per diem), similarly to the actual finance mechanism of the B2 component of the BFM. The main disadvantage of this approach is that a separate system needs to be developed to finance ambulatory care.

7 OVERALL SUMMARY

Although literature and data are not always readily available, this study highlighted several aspects of emergency psychiatric care for children and adolescents. The main questions to be answered were:

- How can emergency psychiatric care in children and adolescents be defined operationally?
- What are the characteristics of emergency psychiatric care for children and adolescents?
- Is there a need for emergency psychiatric care for children and adolescents in Belgium?
- How can emergency psychiatric care in Belgium be developed and organised?
- How can emergency psychiatric care for children and adolescents be financed?

7.1 AN OPERATIONAL DEFINITION OF EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS

Research on the content and form of mental health care for children and adolescents, and more specifically emergency psychiatric care, is a relatively new field of research that is still fragmented and mainly Anglo-Saxon in origin.

Literature findings (chapter 2) show that theoretically, as well as in terms of goals and processes, emergency psychiatric (medical) care may be distinguished from crisis intervention. The former is generally considered hospital based, the latter community based. However, both literature and qualitative data indicate that this distinction seems to be less clear in case of children and adolescents.

Compared to adults, development of children and youth is influenced more strongly by the personal and ecological context of the child or adolescent. Emergency psychiatric care should therefore also take non-medical aspects into consideration:

- the (legal) responsibility of parents, the role of parents, family or larger social context in decompensation and intervention,
- the children's rights (e.g. confidentiality) and the legal framework with respect to child protection.

Emergency psychiatric care emerges as a particular component in an overall care process aiming to facilitate further development. Emergency psychiatric care may be considered as a separate function within the global care spectrum for children and adolescents.

The demand for as well as the effectiveness of emergency psychiatric care is largely determined by the overall care spectrum, not only in preventive and curative health care but also in education and youth welfare. Especially for children and adolescents with multiple problems or disorders and living in multi-problem context, collaboration focused on the needs of these children, adolescents and their families is essential. In these cases, emergency psychiatric care is only a very small aspect of the care they need, although often, emergency psychiatric care will be a (first) opportunity to install care for a child or adolescent and its context.

Based on the literature findings (chapter 2) as well as the results from the qualitative research (chapter 4), we propose the following operational definition:

- Emergency psychiatric care focuses primarily on children and adolescents that present an acute danger to themselves or others. Children and adolescents generally present for emergency psychiatric care when their actions, behaviour or suffering becomes intolerable or unmanageable to the people who care for them. In addition, emergency psychiatric care is indicated in children in a dangerous social context.
- Psychopathologies underlying a psychiatric emergency may include: Suicidality/depression, hypomania, anorexia, panic disorder, symptoms related to trauma, escalation of symptoms related to developmental or conduct disorders, psychosis, substance abuse/intoxication, somatoform disorders or adverse drug effects.
- The primary aim of emergency psychiatric care is to ensure a patient's safety: immediate danger must be controlled. Further, emergency psychiatric interventions aim to improve the situation to allow the children and their context to get a grip and to maintain themselves.

7.2 CHARACTERISTICS OF EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS

Primarily, emergency psychiatric care for children and adolescents involves: an assessment to inform and contribute to the initially required intervention; an acute risk assessment; taking into account the outcome of the initial intervention(s), the development and implementation of a robust risk management plan; and referral to appropriate care.

The type and intensity of the problem behaviour, and the availability and strength of the context (family, school, installed care) determines the type of emergency care to be delivered.

The most important features of emergency psychiatric care for children and adolescents are (chapters 2 and 4):

- **Accessibility:** Emergency psychiatric care should be easily accessible to everyone, 24 hours a day, 7 days a week, throughout the year. This requires permanent availability of (mobile) staff to either answer incoming telephone calls or receive patients that present in person.
- **Competence:** Staff should be highly competent in many fields such as: experienced in working with children/youth and their context, have extensive knowledge of child development, developmental psychopathology, gender and culture specific aspects, crisis intervention, and medical-psychiatric issues, knowledgeable of the social map (i.e. available care).
- **Flexibility:** based on the needs of child and context.
- **Availability of (a range of) beds:** taking into account the patient's age and required level of security and supervision.
- **Process components of the care include:** registration, advice, stabilization, assessment, disposition, treatment and referral.
- **Emergency psychiatric care should last a maximum of two weeks.** Further care should no longer be considered emergency care.
- **Neither in the literature nor in the qualitative research, arguments are presented to offer or organize emergency psychiatric care on a categorical basis (i.e., based on either psychopathology or judicial state).**

7.3 NEED FOR EMERGENCY PSYCHIATRIC CARE FOR CHILDREN AND ADOLESCENTS IN BELGIUM

Utilization patterns of health care may be explained by either the need or the demand for care. Need refers to the amount of care required to bring the public health to a standard 'healthy' level, given the state of medical knowledge and technology¹⁴⁶. The demand for health care is the amount of health care a person wants (to buy).

Currently, there are no reliable data available on the need for (specialised) mental health care, such as crisis intervention or urgent psychiatric care in children and adolescents.

The number of referrals, admissions or interventions within a certain time frame usually defines the demand for care. Crisis intervention for children and adolescents is offered by different services of both child welfare and child and adolescent mental health. There are no aggregated data available on this topic of demand on a national or regional level in Belgium. The hospital registration system and evaluation reports of 'Integrale Jeugdhulp' on the recently started project 'Crisis network' were the only data available (chapter 3).

In the compulsory registration systems operating respectively in all general hospitals (MCD/MKG/RCM) and in all psychiatric hospitals and psychiatric units of general hospitals (MPD/MPG/RPM), no specific registration of emergency psychiatric care items is included. Therefore, we considered an admission of 14 days or shorter for psychological or psychiatric problems to define emergency linked admissions to estimate the numbers of psychiatric emergency admissions. These short term admissions increase from 1997 to 2004 but tend to stabilize thereafter.

Based on the data on 2007, there were 4198 admissions of 14 days or shorter for psychiatric reasons, or 19/10.000 minors.

Based on the data on the crisis network of Integrale Jeugdhulp in Flanders, there were 1407 minors presenting in crisis in 2008 compared to 2684 in 2009. This is approximately 12/ 10.000 minors in 2009.

This lack of a systematic and accessible registration system makes it hard to picture (in both a reliable and validated manner) the availability and utilization of emergency psychiatric care. This report is based on rough estimations.

7.4 DEVELOPMENT OF EMERGENCY PSYCHIATRIC CARE IN BELGIUM

This report conceptualises emergency psychiatric care as a "function", rather than a particular organisational entity. Different organisational configurations could contribute in the fulfilling of this function. This function should be conceptually embedded in all other functional components of child and adolescent mental health care (such as acute and chronic care functions).

Both the literature and the qualitative research learn that emergency psychiatric care is preferentially linked to or embedded in the existing general hospital based emergency care, a system familiar to most people and institutions such as e.g. police. Within this emergency system, registration, stabilization and assessment could at least partially take place. This presumes, however, strengthening existing competencies, provision of the required spatial accommodation, and availability of professionals with strongly developed psychiatric skills.

An emergency psychiatric intervention team consists of several types of professionals, including: child- and adolescent psychiatrists (24h availability), competent nursing professionals, psychologists,... and administrative support. In addition, 2FTE nursing functions per bed are considered necessary..

Highly secured beds should specifically be located within a child and adolescent psychiatric department or unit. Other departments can play a role in emergency psychiatric care, as long as they fulfil the required criteria to provide qualitative care. Nursing staff in these departments that is particularly assigned for psychiatric emergency tasks can be (temporarily) utilized for support, depending on the needs elsewhere (e.g. offer temporary crisis support at patients' home or in another institution, in close collaboration with a crisis intervention professional and a child and adolescent psychiatrist).

Minimally, an emergency psychiatric care function thus assumes a close collaboration between a specialised emergency service (well-known entrance), a child and adolescent psychiatric department and a paediatric department.

A child and adolescent psychiatric department may play a crucial role in emergency psychiatric care, but collaboration across sectors with other services that can and will take part in developing the function of emergency psychiatric care for children and adolescents (e.a. Bijzondere Jeugdbijstand / Aide al la jeunesse) ambulatory mental health services) is needed.

A rough estimation is made to provide in the emergency psychiatric care function for children and adolescents: An emergency function is proposed for a population of 150.000 minors and at least one per province (other relevant geographical entities could be considered if easy accessibility (including distance) is maintained as a core criterion and if the whole of Belgium is adequately covered). The calculation of resources is based on a number of assumptions (chapter 4)

These assumptions were used to introduce a methodology using queuing theory rather than precise results. Queuing theory helps to argue that pooling resources minimises the required resources in order to guarantee an acceptable maximum waiting time with a minimum of standby capacity. Pooling does not necessarily imply that all resources should be located in the same physical place.

The output of the queuing model depends fully on the input parameters and these are still highly uncertain. Moreover several limitations were discussed, all indicating that a further reflection and elaboration of the methodology would be needed to make more precise estimates. 4 scenarios were presented each leading to different estimations of the number of beds staff and infrastructure. The scenarios did not consider aspects of transport (time) which would become an important issue when pooling beds. The scenarios are not considering a possible change in the use of beds either, e.g. a number of patients could be transferred after a few days in the EPC trajectory from highly secured beds to regular beds. Moreover, estimates for *total* resource needs per province were made note making an analysis of *incremental* resource requirements, (i.e. compared to the current situation). An *incremental* analysis focuses more on the *extra* beds needed, taking into account that a number of beds are currently already used for emergency psychiatric child care.

Considering all the methodological limitations a "base scenario" for Belgium estimates, assuming one pool of highly secured beds and one pool of regular beds per province, a need of 61 highly secured beds with an average occupancy rate of 59% and 41 regular beds with an average occupancy rate of 58%. This implies a standby capacity of 25 highly secured beds and 17 regular beds. 112 FTE cares would be needed to staff the EPC-teams and 37 FTE child psychiatrists. Alternative scenarios were estimated too, as this base scenario cannot be put forward as the most plausible.

Theoretically it would be possible to complement the scenario's with a monetary assessment of the resource estimates, but this exercise would only be relevant if more reliable and valid data would be available.

7.5 FINANCING OF EMERGENCY PSYCHIATRIC CARE IN BELGIUM

In chapter 5, several financing options have been discussed. Since emergency psychiatric care falls in the system of health care rather than in welfare, financing options within the health care system were used as a starting point. The conceptual starting point used for this discussion is EPC as a function, meaning that it is not solely bound on specific beds or organisations.. The main advantage is that financing EPC-functions allows for an integrated approach, enabling to provide care both inside as well as outside the hospital.

Financing of the EPC function should cover a team of professionals, room for consultation and assessment, the vehicles, communication equipment, infrastructure for a number of beds specifically dedicated to EPC, required general nursing staff and overhead per EPC bed, required extra nursing staff for EPC patients using beds in other departments, extra infrastructure costs related to the protection of beds, other operational costs incurred by the EPC function not covered yet by the BFM, infrastructural needs associated with creating units for highly secured beds (may require construction of a new or renovation of an existing building).

The financing of EPC functions could, for example, be channelled via the B4 component of the BFM (or a convention with RIZIV/INAMI). An alternative approach is that financing for EPC for hospitalised patients would mimic the actual system to finance beds in hospitals, i.e. predominantly based on the B2 and A1 component of the Budget of Financial Means (BFM) which covers the cost of nursing staff and building infrastructure. The main disadvantage is that this system can only be applied to hospitalised patients and that a separate system has to be set up to finance the ambulatory EPC. Consequently, is it also not compatible with the pooling recommendation (EPC function should be able to provide care for hospitalised as well as for ambulatory patients).

Financing specific EPC functions should enable an integrated approach that allows providing both ambulatory EPC as well as EPC for hospitalised patients. A possibility would be the B4 of BFM. An alternative option is to finance EPC for inpatient care per bed (or per diem), similarly to the actual finance mechanism of the B2 component of the BFM. The main disadvantage of this approach is that a separate system needs to be developed to finance ambulatory care.

8 BIBLIOGRAPHY

1. Baren JM, Mace SE, Hendry PL, Dietrich AM, Grupp-Phelan J, Mullin J. Children's mental health emergencies-part I: challenges in care: definition of the problem, barriers to care, screening, advocacy, and resources. *Pediatric Emergency Care*. 2008;24(6):399-408.
2. Kaplan T. *Emergency department handbook: Children and Adolescents with mental health problems.*: RCPsych Publications; 2009.
3. Goldstein AB, Horwitz SM. Child and adolescent psychiatric emergencies: the need for a clear research agenda. *Pediatric Emergency Care*. 2006;22(4):282.
4. Horowitz L, Kassam-Adams N, Bergstein J. Mental health aspects of emergency medical services for children: summary of a consensus conference. *Journal of Pediatric Psychology*. 2001;26(8):491-502.
5. Bruffaerts R, Demyttenaere K, Claes S. Urgentiepsychiatrie in België; een uitdaging voor de geestelijke gezondheidszorg. *Tijdschrift voor Psychiatrie*. 2008(50):35-9.
6. Bruffaerts R, Demyttenaere K. Psychiatric emergency services in Belgium. *Emergency Psychiatry*. 2005;summer 2005:16-9.
7. Callahan J. Defining crisis and emergency. *Crisis*. 1994;15(4):164-71.
8. Parker KCH, Roberts N, Williams C, Benjamin M, Cripps L, Woogh C. Urgent adolescent psychiatric consultation: from the accident and emergency department to inpatient adolescent psychiatry. *Journal of Adolescence*. 2003;26(3):283-93.
9. Speranza M, Laudrin S, Guillemet I, de Guillenchmidt C, Jallade C, Epelbaum C. Emergency and crisis intervention in child and adolescent psychiatry. *Neuropsychiatrie de l'Enfance et de l'Adolescence*. 2002;50(8):pp.
10. Goldstein AB, Horwitz SM. Child and adolescent psychiatric emergencies in nonsuicide-specific samples: the state of the research literature. *Pediatric Emergency Care*. 2006;22(5):379-84.
11. Chan A, Noone J. *Emergency Mental Health. Educational Manual*. Mheccu. University of British Columbia. Vancouver; 2000. Available from: http://www.carmha.ca/publications/resources/pub_emhem/Emergency%20Mental%20Health%20Educational%20Manual%20%5B2000%5D.pdf
12. Breslow RE. Structure and function of psychiatric emergency services. In: Allen MH, editor. *Emergency psychiatry (Review of Psychiatry Series)*: American Psychiatric Publishing; 2002. p. 1-34.
13. Hoyle J, White L. *Pediatric Mental Health emergencies: Summary of a consensus panel*. In; 2003.
14. Allen MH, Forster P, Zealberg J, Currier G. Report and recommendations regarding psychiatric emergency and crisis services. A review and model program descriptions. APA Task Force on Psychiatric Emergency Services. APA 2002. Available from: http://archive.psych.org/edu/other_res/lib_archives/archives/tfr/tfr200201.pdf
15. Huxley P, Kerfoot M. Social services response to psychiatric emergencies. *Psychiatric Bulletin*. 1993;17:282-5.
16. Claassen C, Hughes C, Gilfillan S, McIntire D, Roose A, Lumpkin M, et al. Toward a redefinition of psychiatric emergency. *Health Services Research*. 2000;35(3):735-54.
17. De Fruyt J. Urgentiepsychiatrie: zoekend naar een eigen plaats, woordenschat en middelen. In: *De agenda Psychiatrie*; 2003.
18. Kienhorst I. Crisis intervention and a suicidal crisis in adolescents. *Crisis*. 1995;16(4):154-6.
19. Halamandaris PV, Anderson TR. Children and adolescents in the psychiatric emergency setting. *Psychiatric Clinics of North America*. 1999;22(4):865-74.
20. Rosen A. Crisis management in the community. In: *The Medical Journal of Australia*.; 1998.
21. Cotgrove AJ, McLoughlin R, O'Herlihy A, Lelliott P. The ability of adolescent psychiatric units to accept emergency admissions: Changes in England and Wales between 2000 and 2005. *Psychiatric Bulletin*. 2007;31(12):pp.
22. Bonyng E, Lee R, Thurber S. A profile of mental health crisis response in a rural setting. *Community Mental Health Journal*. 2005;41(6):675-85.

23. AEAC. Information sharing in mental health crisis situations. In: Final report of the mental health Crisis Intervention Ad Hoc Advisory Group cip, police and mental health services, Mental Health and Special Programs Branch, Commonwealth Dept. of Health and Aged Care., editor.; 2000.
24. RNAO. Crisis Intervention. Ontario: Registered Nurses Association Ontario; 2006. Nursing best practice guideline Available from: www.rnao.org
25. Byford S, Harrington R, Torgerson D, Kerfoot M, Dyer E, Harrington V, et al. Cost-effectiveness analysis of a home-based social work intervention for children and adolescents who have deliberately poisoned themselves: Results of a randomised controlled trial. *British Journal of Psychiatry*. 1999;174(Jan):56-62.
26. Healy E, Saha S, Subotsky F, Fombonne E. Emergency presentations to an inner-city adolescent psychiatric service. *Journal of Adolescence*. 2002;25(4):397-404.
27. Kennedy A, Cloutier P, Glennie JE, Gray C. Establishing best practice in pediatric emergency mental health: a prospective study examining clinical characteristics. *Pediatric Emergency Care*. 2009;25(6):380-6.
28. Starling J, Bridgland K, Rose D. Psychiatric emergencies in children and adolescents: an Emergency Department audit. *Australasian Psychiatry*. 2006;14(4):403-7.
29. Berthaut E, Marcelli D. [Psychiatric emergencies in adolescents]. *Revue du Praticien*. 2003;53(11):1191-6.
30. Blondon M, Perisse D, Unni S, Wilson A, Mazet P, Cohen D. Child and adolescent psychiatric emergencies: Evolution over twenty years in a public university hospital. *Neuropsychiatrie de l'Enfance et de l'Adolescence*. 2007;55(1):pp.
31. Pumariega AJ, Winters NC. Trends and shifting ecologies: Part II. *Child & Adolescent Psychiatric Clinics of North America*. 2003;12(4):779-93.
32. Falsafi N. Pediatric psychiatric emergencies. *Journal of Child & Adolescent Psychiatric Nursing*. 2001;14(2):81-8.
33. Londino DL, Mabe PA, Josephson AM. Child and adolescent psychiatric emergencies: family psychodynamic issues. *Child & Adolescent Psychiatric Clinics of North America*. 2003;12(4):629-47.
34. Alvin P, Gasquet I, de Tournemire R, Nouyrigat V, Speranza M. Adolescents and emergency care. A survey conducted at the Assistance Publique-Hopitaux de Paris. *Neuropsychiatrie de l'Enfance et de l'Adolescence*. 2002;50(8):pp.
35. Baker AJ, Piotrkowski CS, Mincer C. Behavioral Predictors of Psychiatric Emergency in a Child Welfare Residential Treatment Center. *Residential Treatment for Children & Youth*. 2003;21(1):pp.
36. Sadka S. Psychiatric emergencies in children and adolescents. *New Directions for Mental Health Services*. 1995(67):65-74.
37. Vidailhet C. [Pediatric psychiatric emergencies in a hospital for children]. *Archives de Pediatrie*. 1995;2(12):1131-4.
38. Edelsohn GA, Gomez J-P. Psychiatric emergencies in adolescents. *Adolescent Medicine Clinics*. 2006;17(1):183-204.
39. Edelsohn GA, Braitman LE, Rabinovich H, Sheves P, Melendez A. Predictors of urgency in a pediatric psychiatric emergency service. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2003;42(10):1197-202.
40. Emmery P, De Corte J. Crisisopname in de jeugdpsychiatrie: evaluatie van een project. *TOKK*. 2003;28:154-64.
41. Ferrari P, Speranza M. [Child psychiatric emergencies: experiences in the creation of a reception and an emergency unit within CHU in Bicetre]. *Archives de Pediatrie*. 1999;6 Suppl 2:471s-4s.
42. Cotgrove A. Emergency admissions to a regional adolescent unit: piloting a new service. *Psychiatric Bulletin*. 1997;21:604-8.
43. Kutash K, V. R. Effectiveness of children's mental health services: a review of the literature. In: *Education & Treatment of children*; 1995.

44. Baker AJ, Archer M, Melnick D. An Alternative to Hospitalizing Youth in Psychiatric Crises: The Children's Village Crisis Residence Model. *Residential Treatment for Children & Youth*. 2004;22(1):pp.
45. Goldstein AB, Findling RL. Assessment and evaluation of child and adolescent psychiatric emergencies. In: *Psychiatric Times*; 2006.
46. Dereau J, Deschietter G, Danailova M, Passelecq A, de Becker E. Urgences psychiatriques infanto-juvéniles: revue systématique de trois années de dossiers. *Louvain Médicale*. 2009;128(5):170-6.
47. Pumariega AJ, Rothe E. Cultural considerations in child and adolescent psychiatric emergencies and crises. *Child & Adolescent Psychiatric Clinics of North America*. 2003;12(4):723-44.
48. Dolan MA, Mace SE. Pediatric mental health emergencies in the emergency medical services system. *Pediatrics*. 2006;118(4):1764-7.
49. Soto EC, Frederickson AM, Trivedi H, Le A, Eugene MC, Shekher M, et al. Frequency and correlates of inappropriate pediatric psychiatric emergency room visits. *Journal of Clinical Psychiatry*. 2009;70(8):1164-77.
50. Stapczynski JS. Children with mental health issues in the emergency department. In: *ED Legal letter*; 2009.
51. Sater N, Constantino JN. Pediatric emergencies in children with psychiatric conditions. *Pediatric Emergency Care*. 1998;14(1):42-50.
52. Smith WG, Collings A, Degraaf A. Young people admitted on a Form 1 to a general hospital: A worrisome trend. *Paediatrics & Child Health*. 2004;9(4):228-34.
53. Hoyle JD, Jr., White LJ, Emergency Medical Services for Children. Health Resources Services Administration. Maternal and Child Health Bureau. National Association of EMS. Treatment of pediatric and adolescent mental health emergencies in the United States: current practices, models, barriers, and potential solutions. *Prehospital Emergency Care*. 2003;7(1):66-73.
54. Atlas JA. Crisis and acute brief therapy with adolescents. *Psychiatric Quarterly*. 1994;65(2):79-87.
55. Ayoun P. L'hospitalisation à temps complet des adolescents et ses indications en psychiatrie. *L'information Psychiatrique*. 2008;84(701-707).
56. Balkin RS, Roland CB. Identification of differences in gender for adolescents in crisis residence. *Journal of Mental Health*. 2005;14(6):pp.
57. Gould M, Greenberg T, Munfakh J, Kleinman M, Lubell K. Teenagers' attitudes about seeking help from telephone crisis services (hotlines). *Suicide and Lifethreatening Behavior*. 2006;36(6):601-13.
58. Greenfield B, Larson C, Hechtman L, Rousseau C, Platt R. A rapid-response outpatient model for reducing hospitalization rates among suicidal adolescents. *Psychiatric Services*. 2002;53(12):1574-9.
59. Payne F. Utilization of out-of-hours services by patients with mental health problems. *Journal of Public Health Medicine*. 2000;22(3):302-6.
60. Stewart C, Spicer M, Babl FE. Caring for adolescents with mental health problems: challenges in the emergency department. *Journal of Paediatrics & Child Health*. 2006;42(11):726-30.
61. Blumberg SH. Crisis intervention program: an alternative to inpatient psychiatric treatment for children. *Mental Health Services Research*. 2002;4(1):1-6.
62. Balkin RS, Roland CB. Reconceptualizing Stabilization for Counseling Adolescents in Brief Psychiatric Hospitalization: A New Model. *Journal of Counseling & Development*. 2007;85(1):pp.
63. Behar LJ, Shrier DK. Child and adolescent psychiatric emergencies: referral and discharge patterns. *New Jersey Medicine*. 1995;92(4):236-9.
64. Boothroyd RA, Kuppinger AD, Evans ME, Armstrong MI, Radigan M. Understanding respite care use by families of children receiving short-term, in-home psychiatric emergency services. *Journal of Child and Family Studies*. 1998;7(3):pp.
65. Christodulu KV, Lichenstein R, Weist MD, Shafer ME, Simone M. Psychiatric emergencies in children. *Pediatric Emergency Care*. 2002;18(4):268-70.

66. Christy A, Kutash K, Stiles P. Short term involuntary psychiatric examination of children in Florida. *Administration & Policy in Mental Health*. 2006;33(5):578-84.
67. Evans ME, Boothroyd RA. A comparison of youth referred to psychiatric emergency services: police versus other sources. *Journal of the American Academy of Psychiatry & the Law*. 2002;30(1):74-80.
68. Evans ME, Boothroyd RA, Armstrong MI. Development and implementation of an experimental study of the effectiveness of intensive in-home crisis services for children and their families. *Journal of Emotional and Behavioral Disorders*. 1997;5(2):pp.
69. Evans ME, Boothroyd RA, Greenbaum PE, Brown E, Armstrong MI, Kuppinger AD. Outcomes associated with clinical profiles of children in psychiatric crisis enrolled in intensive, in-home interventions. *Mental Health Services Research*. 2001;3(1):35-44.
70. Giggie MA, Olvera RL, Joshi MN. Screening for risk factors associated with violence in pediatric patients presenting to a psychiatric emergency department.[see comment]. *Journal of Psychiatric Practice*. 2007;13(4):246-52.
71. Goldstein AB, Silverman MAC, Phillips S, Lichenstein R. Mental health visits in a pediatric emergency department and their relationship to the school calendar. *Pediatric Emergency Care*. 2005;21(10):653-7.
72. Grupp-Phelan J, Harman J, Kelleher K. Trends in mental health and chronic condition visits by children presenting for care at US Emergency departments. *Public Health Reports*. 2007;122:55-61.
73. Grupp-Phelan J, Mahajan P, Foltin GL, Jacobs E, Tunik M, Sonnett M, et al. Referral and resource use patterns for psychiatric-related visits to pediatric emergency departments. *Pediatric Emergency Care*. 2009;25(4):217-20.
74. Santiago LI, Tunik MG, Foltin GL, Mojica MA. Children requiring psychiatric consultation in the pediatric emergency department: epidemiology, resource utilization, and complications. *Pediatric Emergency Care*. 2006;22(2):85-9.
75. Muroff J, Edelsohn GA, Joe S, Ford BC. The role of race in diagnostic and disposition decision making in a pediatric psychiatric emergency service. *General Hospital Psychiatry*. 2008;30(3):269-76.
76. Grupp-Phelan J, Delgado SV, Kelleher KJ. Failure of psychiatric referrals from the pediatric emergency department. *BMC Emergency Medicine*. 2007;7:12.
77. Hacker K, Drainoni ML. Mental health and illness in Boston's children and adolescents: one city's experience and its implications for mental health policy makers. *Public Health Reports*. 2001;116(4):317-26.
78. Snowden LR, Masland MC, Libby AM, Wallace N, Fawley K. Racial/ethnic minority children's use of psychiatric emergency care in California's Public Mental Health System. *American Journal of Public Health*. 2008;98(1):118-24.
79. Edelsohn GA, Rabinovich H, Portnoy R. Hallucinations in nonpsychotic children: findings from a psychiatric emergency service. *Annals of the New York Academy of Sciences*. 2003;1008:261-4.
80. Sills MR, Bland SD. Summary statistics for pediatric psychiatric visits to US emergency departments, 1993-1999. *Pediatrics*. 2002;110(4):e40.
81. Carballo JJ, Oquendo MA, Garcia-Moreno M, Poza B, Giner L, Baca E, et al. Demographic and clinical features of adolescents and young adults with alcohol-related disorders admitted to the psychiatric emergency room. *International Journal of Adolescent Medicine & Health*. 2006;18(1):87-96.
82. Gillig PM. Child & adolescent psychiatry: An adolescent crisis service in a rural area. *Psychiatric Services*. 2004;55(12):1363-5.
83. Bishop EG, McNally G. An in-home crisis intervention program for children and their families. *Hospital & Community Psychiatry*. 1993;44(2):pp.
84. Baren J, Mace S, Hendry P, Dietrich A, Goldman R, Warden C. Children's mental health emergencies-part 2: Emergency department evaluation and treatment of children with mental health disorders. *Pediatric Emergency Care*. 2008;24(7):485-98.

85. Baren JM, Mace SE, Hendry PL. Children's mental health emergencies-part 3: Special situations: Child maltreatment, violence, and response to disasters. *Pediatric Emergency Care*. 2008;24(8):569-77.
86. Peterson BS, Zhang H, Santa Lucia R, King RA, Lewis M. Risk factors for presenting problems in child psychiatric emergencies. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1996;35(9):1162-73.
87. Evans ME, Boothroyd RA, editors. Family preservation services for families with children who have mental health problems. Washington, DC: American Psychiatric Association; 1997.
88. Goldstein AB, Frosch E, Davarya S, Leaf PJ. Factors associated with a six-month return to emergency services among child and adolescent psychiatric patients. *Psychiatric Services*. 2007;58(11):1489-92.
89. Goldman H, Thelander S, Westrin C. Organizing mental health services: an evidence based approach. *The Journal of Mental Health Policy and Economics*. 2000;3:69-75.
90. Joy C, Adams C, Rice K. Crisis intervention for people with severe mental illnesses. In: *Cochrane database of systematic reviews (Online)*; 2006.
91. Brown JF. Psychiatric emergency services: a review of the literature and a proposed research agenda. *Psychiatric Quarterly*. 2005;76(2):139-65.
92. Currier GW, Allen M. Organization and function of academic psychiatric emergency services. *General Hospital Psychiatry*. 2003;25:124-9.
93. Ayliffe L, Lagace C, Muldoon P. The use of a mental health triage assessment tool in a busy Canadian tertiary care children's hospital. *Journal of Emergency Nursing*. 2005;31(2):161-5.
94. Woo B, Chan V, Ghobrial N, Sevilla C. Comparison of two models for delivery services in psychiatric emergencies. *General Hospital Psychiatry*. 2007;29:489-91.
95. Sullivan AM, Rivera J. Profile of a comprehensive psychiatric emergency program in a New York City municipal hospital. *Psychiatric Quarterly*. 2000;71(2):123-38.
96. Nordentoft M, Bjarking L, Hemmingsen R. Psychiatric emergency outreach: a report on the first 2 years of functioning in Copenhagen. *Nordic Journal of Psychiatry*. 2002;56(6):399-405.
97. Henggeler SW, Rowland MD, Halliday-Boykins C, Sheidow AJ, Ward DM, Randall J, et al. One-year follow-up of multisystemic therapy as an alternative to the hospitalization of youths in psychiatric crisis. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2003;42(5):543-51.
98. Greenham SL, Bisnaire L. An outcome evaluation of an inpatient crisis stabilization and assessment program for youth. *Residential Treatment for Children & Youth*. 2008;25(2):pp.
99. Meunier-Sham J. Increased volume/length of stay for pediatric mental health patients: one ED's response. *Journal of emergency nursing*. 2003;29(3):229-39.
100. Brooker C, Ricketts T, Bennett S, Lemme F. Admission decisions following contact with an emergency mental health assessment and intervention service. *Journal of Clinical Nursing*. 2007;16(7):1313-22.
101. Evans ME, Boothroyd RA, Armstrong MI, Greenbaum PE, Brown EC, Kuppinge AD. An experimental study of the effectiveness of intensive in-home crisis services for children and their families: Program outcomes. *Journal of Emotional and Behavioral Disorders*. 2003;11(2):pp.
102. Horowitz LM, Wang PS, Koocher GP, Burr BH, Smith MF, Klavon S, et al. Detecting suicide risk in a pediatric emergency department: development of a brief screening tool. *Pediatrics*. 2001;107(5):1133-7.
103. Brimblecombe N, O'Sullivan G, Parkinson B. Home treatment as an alternative to inpatient admission: characteristics of those treated and factors predicting hospitalization. *Journal of Psychiatric and Mental Health Nursing*. 2003(10):683-7.
104. Rudolph C, Lakin KC, Oslund JM, Larson W. Evaluation of outcomes and cost-effectiveness of a community behavioral support and crisis response demonstration project. *Mental Retardation*. 1998;36(3):187-97.
105. Olshaker J, Browne B, Jerrard D, Prendergast H, Stair T. Medical clearance and screening of psychiatric patients in the emergency department. *Academic Emergency Medicine*. 1997;4(2):124-8.

106. Gutterman EM. Is diagnosis relevant in the hospitalization of potentially dangerous children and adolescents? *Journal of the American Academy of Child & Adolescent Psychiatry*. 1998;37(10):1030-7; discussion 8-40.
107. Thomas LE. Trends and shifting ecologies: Part I. *Child & Adolescent Psychiatric Clinics of North America*. 2003;12(4):599-611.
108. Woolston JL. The administration of hospital-based services. *Child & Adolescent Psychiatric Clinics of North America*. 2002;11(1):43-65.
109. Ruffin JE, Spencer HR, Abel A, Gage J, Miles L. Crisis stabilization services for children and adolescents: a brokerage model to reduce admissions to state psychiatric facilities. *Community Mental Health Journal*. 1993;29(5):433-40.
110. Corrigan R, Mitchell B. Service innovations: rethinking in-patient provision for adolescents. A report from a new service. *Psychiatric Bulletin*. 2002;26:388-92.
111. Holdsworth N, Guy W. Problems of service assessment ab intra: research and evaluation relating to a new early intervention community psychiatric nursing service. *Journal of Advanced Nursing*. 1994;19(2):290-8.
112. Pigott HE, Trott L. Translating research into practice: The implementation of an in-hone crisis intervention triage and treatment service in the private sector. *American Journal of Medical Quality*. 1993;8(3):138-44.
113. Feiguine RJ, Ross-Dolen MM, Havens J. The New York Presbyterian Pediatric Crisis Service. *Psychiatric Quarterly*. 2000;71(2):139-52.
114. Geller J, Biebel K. The premature demise of public child and adolescent inpatient psychiatric beds. *Psychiatry Quarterly*. 2006;77:251-71.
115. Shulman DA, Athey M. Youth emergency services: Total community effort, a multisystem approach. *Child Welfare Journal*. 1993;72(2):pp.
116. Fortunati FG, Jr., Zonana HV. Legal considerations in the child psychiatric emergency department. *Child & Adolescent Psychiatric Clinics of North America*. 2003;12(4):745-61.
117. Schweitzer R, Dubey DR. Scattered-site crisis beds: an alternative to hospitalization for children and adolescents. *Hospital & Community Psychiatry*. 1994;45(4):351-4.
118. Auguste A, Franko E, Cau D, Danel P, Nmugard T. [Collaboration of child psychiatric nurses with pediatric emergencies]. *Archives de Pediatrie*. 1999;6 Suppl 2:475s-6s.
119. Nicholson J, Young SD, Simon L, Fisher WH, Bateman A. Privatized Medicaid Managed care in Massachusetts: disposition in child and adolescent mental health emergencies. *Journal of Behavioural Health Services & Research*. 1998;25(3):279-92.
120. Vanderploeg J, Schroeder J, Franks R. Emergency mobile psychiatric services: Recommendations for model enhancement. 2008. Available from: http://www.ct.gov/dcf/lib/dcf/behavioral_health/pdf/emps_ccep.pdf
121. Arfken C, Zeman L, Koch A. Perceived impact by administrators of psychiatric emergency services after changes in a state's mental health system. *Community Mental Health Journal*. 2006;42(3):281-90.
122. Goeminne M, Leroi C, Schoenaers M. Crisiswerking in de jeugdpsychiatrie: evenwichten zoeken en valkuilen vermijden. *Tijdschrift Klinische Psychologi*. 2007;39(1):61-7.
123. Breslow RE, Erickson BJ, Cavanaugh KC. The psychiatric emergency service: where we've been and where we're going. *Psychiatric Quarterly*. 2000;71(2):101-21.
124. Mahajan P, Thomas R, Rosenberg D, Leleszi J, Leleszi E, Mathus A, et al. Evaluation of a child guidance model for visits for mental disorders to an inner-city pediatric emergency department. *Pediatric Emergency Care*. 2007;23(4):212-7.
125. Kates N, Eaman S, Santone J, Didemus C, Steiner M, Craven M. An integrated regional emergency psychiatry service. *General Hospital Psychiatry*. 1996;18:251-6.
126. O'Hagan M. The acute crisis: Towards a recovery plan for acute mental health services in New Zealand. *Mental Health Commission*; 2006.
127. Lamb CE. Alternatives to admission for children and adolescents: providing intensive mental healthcare services at home and in communities: what works? *Current Opinion in Psychiatry*. 2009;22(4):345-50.

128. Walter UM, Petr CG, Davis S. Informing best practices for children in psychiatric crises: Perspectives and insights from families. *Families in Society*. 2006;87(4):pp.
129. Kurtz Z. The evidence base to guide development of Tier 4 CAHMS. In: Department of Health. *Children YpaFP*, editor.; 2009.
130. Henggeler SW, Rowland MD, Randall J, Ward DM, Pickrel SG, Cunningham PB, et al. Home-based multisystemic therapy as an alternative to the hospitalization of youths in psychiatric crisis: clinical outcomes. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1999;38(11):1331-9.
131. Rowland MD, Henggeler SW, Gordon AM, Pickrel SG, Cunningham PB, Edwards JE. Adapting multisystemic therapy to serve youth presenting psychiatric emergencies: Two case studies. *Child Psychology & Psychiatry Review*. 2000;5(1):pp.
132. McDougall T, Worrall-Davies A, Hewson L, Richardson G, Cotgrove A. Tier 4 CAHMS - inpatient care, day services and alternatives: an overview of Tier 4 CAHMS provision in the UK. *Child and Adolescent Mental Health*. 2008;13(4):173-80.
133. O'Herlihy A, Worrall A, Lelliott P, Jaffa T, Hill P, Banerjee S. Distribution and characteristics of in-patient child and adolescent mental health services in England and Wales.[see comment]. *British Journal of Psychiatry*. 2003;183:547-51.
134. MSZVL. Advies inzake de operationalisering van de inhoud en organisatie van de dringende psychiatrische crisishulpverlening. In: Ministerie van Sociale Zaken VeL, editor.; 2001.
135. Broers P, Depla M, Donker M. De 7x24-uursdiensten van RIAGG's: impressies van de kwaliteit. *Tijdschrift voor Psychiatrie*. 1996(38):3-8.
136. Bakker S. *Spoedeisende psychiatrie Amsterdam. Jaarverslag*. In; 2008.
137. Green J, Jacobs B, Beecham J, Dunn G, Kroll L, Tobias C, et al. Inpatient treatment in child and adolescent psychiatry-a prospective study of health gain and costs. *Journal of Child Psychology and Psychiatry*. 2007;48(12):1259-67.
138. Shepperd S, Doll H, Gowers S, James A, Fazel M, Fitzpatrick R, et al. Alternatives to inpatient mental health care for children and young people. *Cochrane Database of Systematic Reviews*. 2009(2):CD006410.
139. Roberts AR, Everly GS, Jr. A meta-analysis of 36 crisis intervention studies. *Brief Treatment and Crisis Intervention*. 2006;6(1):pp.
140. Cotton M, Johnson S, Bindmann J, Sandor A, White I, Thornicroft G, et al. An investigation of factors associated with psychiatric hospital admission despite the presence of crisis resolution teams. In: *BMC Psychiatry*; 2007. p. 52.
141. IJH. *Werkmap jeugdhulp*. In; 2010.
142. IJH. *Praktijkrapport hulpprogramma's crisisjeugdhulp IJH in Vlaanderen over de periode 01-01-2009 tot 31-12-2009*. In; 2010.
143. Fallon T, Pumariega AJ. CASII: Child and adolescent service intensity instrument. *American Academy of Child and Adolescent Psychiatry* 2001.
144. Janssens A, Deboutte D, Millsaps U, Pumariega AJ. Level of care determination: The CASII Dutch version. In: 56th annual meeting of the American Academy of Child and Adolescent Psychiatry. Honolulu, HI.; 2010.
145. Reder S, Quan L. Emergency mental health care for youth in Washington State. *Pediatric emergency care*. 2004;20(11):742-8.
146. Deboutte D, De Graee D, Van Tendenloo I. *De inhoud en gezondheidseconomische vertaling van Geestelijke Gezondheidszorg Jeugd*. Universitair Centrum Kinder-en Jeugdpsychiatrie Antwerpen; 2002.
147. Grietens H, Hellinckx W. Mental health of children in counselling institutions: Empirical findings from Flanders (Belgium). *International Journal of Child and Family Welfare*. 2004;2-3:116-33.
148. Janssens A, Deboutte D. *Even bijpass-en*. Collaborative Antwerp Psychiatric Research Institute (CAPRI)/Youth mental Health, Antwerp University; 2007.
149. Onkelinx L, Vandeurzen J, Vanackere S, Donfut D, Gentges B, Fonck C. Aanhangel bij het protocol gesloten tussen de Federale Regering en de overheden bedoeld in de artikelen 128, 130, 135 en 138 van de Grondwet, over de organisatie van een zorgtraject voor jongeren met een psychiatrische problematiek die vallen onder de toepassing van artikel 36, 4° en artikel 52

- van de wet van 8 april 1965 betreffende de jeugdbescherming, het ten laste nemen van minderjarigen die een als misdrijf omschreven feit hebben gepleegd en het herstel van de door dit feit veroorzaakte schade, als onderdeel van een globaal zorgprogramma voor kinderen en jongeren In: Federale overheidsdienst volksgezondheid vvdvel, editor.: Belgisch Staatsblad, 2009-01-16; 2009.
150. Crisis intervention program: An alternative to inpatient psychiatric treatment for children (Brief record). NHS Economic Evaluation Database (NHSEED). 2002;Other economic studies:bibliographic details. 2009 Issue 4.
 151. Sermeus W. De Belgische ziekenhuisfinanciering ontcijferd. Leuven / Voorburg: Acco; 2006.
 152. Integrale Jeugdhulp. Werkmap integrale jeugdhulp. In: Welzijn Volksgezondheid en Gezin, editor.; 2009. p. 252.
 153. Décret relatif à l'Aide aux enfants victimes de maltraitance, 2004.
 154. Arrêté du Gouvernement de la Communauté française relatif à l'agrément et au subventionnement des équipes SOS Enfants en application du décret du 12 mai 2004 relatif à l'aide aux enfants victimes de maltraitance, 2004.
 155. McKee M, Priest P, Ginzler M, Black N. How representative are members of expert panels? *International Journal for Quality in Health Care*. 1991;3:89-94.
 156. Scott E, Black N. When does consensus exist in expert panels? *J Public Health Med* 1991;13:35-9.
 157. Strauss A, Corbin J. Basics of qualitative research: Grounded theory procedures and techniques. . London: Sage; 1990.
 158. Green L, Soares J, Giglio JF, Green RA. Using Queuing Theory to Increase the Effectiveness of Emergency Department Provider Staffing. *Academic Emergency Medicine*. 2006;January.
 159. Hillier FS, Lieberman GJ. Introduction to operations research. 8th ed.: McGraw-Hill Higher Education; 2005.
 160. Kiekens C, Van Rie K, Leys M, Cleemput I, Smet M, Kesteloot K, et al. Organisatie en Financiering van Musculoskeletale en Neurologische Revalidatie in België. Brussels: Belgian Health Care Knowledge Centre (KCE), KCE Reports 57A; 2007. Health Services Research (HSR)
 161. Stefan Creemers ML. Modelling a hospital queuing network. In: Dijk RBNv, editor. *Queuing Networks : A fundamental Approach*: Springer Science; 2010 (to appear). p. pp767-98.
 162. Bishop EEG, McNally G. An In-Home Crisis Intervention Program for Children and Their Families. *Hosp Community Psychiatry*. 1993;44(2):182-4.
 163. Rosset N, Andreoli A. Crisis intervention and affective disorders: a comparative cost-effectiveness study. *Social Psychiatry & Psychiatric Epidemiology*. 1995;30(5):231-5.
 164. Sheidow AJ, Bradford WD, Henggeler SW, Rowland MD, Halliday-Boykins C, Schoenwald SK, et al. Treatment costs for youths receiving multisystemic therapy or hospitalization after a psychiatric crisis. *Psychiatric Services*. 2004;55(5):548-54.
 165. Zechmeister I, Osterle A. Distributional Impacts of Mental Health Care Financing Arrangements: A Comparison of the UK, Germany and Austria. *Journal of Mental Health Policy and Economics*. 2006;9(1):35-44.
 166. Williams RFG, Doessel DP, Scheurer RW, Whiteford H. Some Economic Dimensions of the Mental Health Jigsaw in Australia. *International Journal of Social Economics*. 2006;33(11-12):808-31.
 167. Bloom JR, et al. Use of Antipsychotic Medications in Treating Schizophrenia among Different Financing and Delivery Systems. *Journal of Mental Health Policy and Economics*. 2003;6(4):163-71.
 168. Provan KG, Isett KR, Milward HB. Cooperation and Compromise: A Network Response to Conflicting Institutional Pressures in Community Mental Health. *Nonprofit and Voluntary Sector Quarterly*. 2004;33(3):489-514.
 169. Chou AF, Wallace N, Bloom JR, Hu T-W. Variation in Outpatient Mental Health Service Utilization under Capitation. *Journal of Mental Health Policy and Economics*. 2005;8(1):3-14.

170. Catalano R, Libby A, Snowden L, Cuellar AE. The effect of capitated financing on mental health services for children and youth: the Colorado experience. *Am J Public Health*. 2000;90(12):1861-5.
171. Bloom JR, et al. Mental Health Costs and Outcomes under Alternative Capitation Systems in Colorado: Early Results. *Journal of Mental Health Policy and Economics*. 1998;1(1):3-13.
172. Dwyer DS, Mitchell OS, Cole R, Reed SK. Evaluating Mental Health Capitation Treatment: Lessons from Panel Data. National Bureau of Economic Research Inc NBER Working Papers: 5297; 1995. Available from: [URL:<http://www.nber.org/papers/w5297.pdf>] URL
173. Cromwell J, Drozd EM, Gage B, Maier J, Richter E, Goldman HH. Variation in Patient Routine Costliness in U.S. Psychiatric Facilities. 2005;8(1):15-28.
174. Leslie DL, Rosenheck R, White WD. Capitated Payments for Mental Health Patients: A Comparison of Potential Approaches in a Public Sector Population. *Journal of Mental Health Policy and Economics*. 2000;3(1):35-44.
175. Machnes Y. Incentives and Production of Mental Health Services. *European Journal of Political Economy*. 1996;12(3):459-66.
176. Sturm R, et al. Mental Health Care Utilization in Prepaid and Fee-for-Service Plans among Depressed Patients in the Medical Outcomes Study. *Health Services Research*. 1995;30(2):319-40.
177. Docteur E, Oxley H. Health-Care Systems: Lessons from the Reform Experience. OECD, Directorate for Employment, Labour and Social Affairs; 2003 Dec. OECD Health Working Papers 9 Available from: <http://ideas.repec.org/p/oec/elsaad/9-en.html>
178. Simoens S, Hurst J. The Supply of Physician Services in OECD Countries. OECD, Directorate for Employment, Labour and Social Affairs; 2006 Jan. OECD Health Working Papers 21 Available from: <http://ideas.repec.org/p/oec/elsaad/21-en.html>
179. Fujisawa R, Lafortune G. The Remuneration of General Practitioners and Specialists in 14 OECD Countries: What are the Factors Influencing Variations across Countries? OECD, Directorate for Employment, Labour and Social Affairs; 2008 Dec. OECD Health Working Papers 41 Available from: <http://ideas.repec.org/p/oec/elsaad/41-en.html>
180. Jegers M, Kesteloot K, De Graeve D, Gilles W. A typology for provider payment systems in health care. *Health Policy*. 2002;60(3):255-73.
181. McGuire TG. Physician Agency. In: Culyer AJ, Newhouse JP, editors. *Handbook of health economics*. Amsterdam: Elsevier; 2000. p. 461-536.
182. Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, et al. Impact of payment method on behaviour of primary care physicians: a systematic review. *Journal of Health Services & Research Policy*. 2001;6(1):44-55.
183. Gosden T, Pedersen L, Torgerson D. How should we pay doctors? A systematic review of salary payments and their effect on doctor behaviour. *Qjm-Monthly Journal of the Association of Physicians*. 1999;92(1):47-55.

This page is left intentionally blank.

Dépôt légal : D/2010/10.273/50

KCE reports

1. Efficacité et rentabilité des thérapies de sevrage tabagique. D/2004/10.273/2.
2. Etude relative aux coûts potentiels liés à une éventuelle modification des règles du droit de la responsabilité médicale (Phase I). D/2004/10.273/4.
3. Utilisation des antibiotiques en milieu hospitalier dans le cas de la pyélonéphrite aiguë. D/2004/10.273/6.
4. Leucoréduction. Une mesure envisageable dans le cadre de la politique nationale de sécurité des transfusions sanguines. D/2004/10.273/8.
5. Evaluation des risques préopératoires. D/2004/10.273/10.
6. Recommandation nationale relative aux soins prénatals: Une base pour un itinéraire clinique de suivi de grossesses. D/2004/10.273/14.
7. Validation du rapport de la Commission d'examen du sous financement des hôpitaux. D/2004/10.273/12.
8. Systèmes de financement des médicaments hospitaliers: étude descriptive de certains pays européens et du Canada. D/2004/10.273/16.
9. Feedback: évaluation de l'impact et des barrières à l'implémentation – Rapport de recherche: partie I. D/2005/10.273/02.
10. Le coût des prothèses dentaires. D/2005/10.273/04.
11. Dépistage du cancer du sein. D/2005/10.273/06.
12. Etude d'une méthode de financement alternative pour le sang et les dérivés sanguins labiles dans les hôpitaux. D/2005/10.273/08.
13. Traitement endovasculaire de la sténose carotidienne. D/2005/10.273/10.
14. Variations des pratiques médicales hospitalières en cas d'infarctus aigu du myocarde en Belgique. D/2005/10.273/12
15. Evolution des dépenses de santé. D/2005/10.273/14.
16. Etude relative aux coûts potentiels liés à une éventuelle modification des règles du droit de la responsabilité médicale. Phase II : développement d'un modèle actuariel et premières estimations. D/2005/10.273/16.
17. Evaluation des montants de référence. D/2005/10.273/18.
18. Utilisation des itinéraires cliniques et guides de bonne pratique afin de déterminer de manière prospective les honoraires des médecins hospitaliers: plus facile à dire qu'à faire.. D/2005/10.273/20
19. Evaluation de l'impact d'une contribution personnelle forfaitaire sur le recours au service d'urgences. D/2005/10.273/22.
20. HTA Diagnostic Moléculaire en Belgique. D/2005/10.273/24, D/2005/10.273/26.
21. HTA Matériel de Stomie en Belgique. D/2005/10.273.28.
22. HTA Tomographie par Emission de Positrons en Belgique. D/2005/10.273/30.
23. HTA Le traitement électif endovasculaire de l'anévrisme de l'aorte abdominale (AAA). D/2005/10.273.33.
24. L'emploi des peptides natriurétiques dans l'approche diagnostique des patients présentant une suspicion de décompensation cardiaque. D/2005/10.273.35
25. Endoscopie par capsule. D2006/10.273.02.
26. Aspects médico-légaux des recommandations de bonne pratique médicale. D2006/10.273/06.
27. Qualité et organisation des soins du diabète de type 2. D2006/10.273/08.
28. Recommandations provisoires pour les évaluations pharmacoéconomiques en Belgique. D2006/10.273/11.
29. Recommandations nationales Collège d'oncologie : A. cadre général pour un manuel d'oncologie B. base scientifique pour itinéraires cliniques de diagnostic et traitement, cancer colorectal et cancer du testicule. D2006/10.273/13.
30. Inventaire des bases de données de soins de santé. D2006/10.273/15.
31. Health Technology Assessment : l'antigène prostatique spécifique (PSA) dans le dépistage du cancer de la prostate. D2006/10.273/18.
32. Feedback: évaluation de l'impact et des barrières à l'implémentation - Rapport de recherche: partie II. D2006/10.273/20.
33. Effets et coûts de la vaccination des enfants Belges au moyen du vaccin conjugué antipneumococcique. D2006/10.273/22.
34. Trastuzumab pour les stades précoces du cancer du sein. D2006/10.273/24.

35. Etude relative aux coûts potentiels liés à une éventuelle modification des règles du droit de la responsabilité médicale – Phase III : affinement des estimations. D/2006/10.273/27.
36. Traitement pharmacologique et chirurgical de l'obésité. Prise en charge résidentielle des enfants sévèrement obèses en Belgique. D/2006/10.273/29.
37. Health Technology Assessment Imagerie par Résonance Magnétique. D/2006/10.273/33.
38. Dépistage du cancer du col de l'utérus et recherche du Papillomavirus humain (HPV). D/2006/10.273/36
39. Evaluation rapide de technologies émergentes s'appliquant à la colonne vertébrale : remplacement de disque intervertébral et vertébro/cyphoplastie par ballonnet. D/2006/10.273/39.
40. Etat fonctionnel du patient: un instrument potentiel pour le remboursement de la kinésithérapie en Belgique? D/2006/10.273/41.
41. Indicateurs de qualité cliniques. D/2006/10.273/44.
42. Etude des disparités de la chirurgie élektive en Belgique. D/2006/10.273/46.
43. Mise à jour de recommandations de bonne pratique existantes. D/2006/10.273/49.
44. Procédure d'évaluation des dispositifs médicaux émergents. D/2006/10.273/51.
45. HTA Dépistage du Cancer Colorectal : état des lieux scientifique et impact budgétaire pour la Belgique. D/2006/10.273/54.
46. Health Technology Assessment. Polysomnographie et monitoring à domicile des nourrissons en prévention de la mort subite. D/2006/10.273/60.
47. L'utilisation des médicaments dans les maisons de repos et les maisons de repos et de soins Belges. D/2006/10.273/62
48. Lombalgie chronique. D/2006/10.273/64.
49. Médicaments antiviraux en cas de grippe saisonnière et pandémique. Revue de littérature et recommandations de bonne pratique. D/2006/10.273/66.
50. Contributions personnelles en matière de soins de santé en Belgique. L'impact des suppléments. D/2006/10.273/69.
51. Besoin de soins chroniques des personnes âgées de 18 à 65 ans et atteintes de lésions cérébrales acquises. D/2007/10.273/02.
52. Rapid Assessment: Prévention cardiovasculaire primaire dans la pratique du médecin généraliste en Belgique. D/2007/10.273/04.
53. Financement des soins Infirmiers Hospitaliers. D/2007/10 273/06
54. Vaccination des nourrissons contre le rotavirus en Belgique. Analyse coût-efficacité
55. Valeur en termes de données probantes des informations écrites de l'industrie pharmaceutique destinées aux médecins généralistes. D/2007/10.273/13
56. Matériel orthopédique en Belgique: Health Technology Assessment. D/2007/10.273/15.
57. Organisation et Financement de la Réadaptation Locomotrice et Neurologique en Belgique D/2007/10.273/19
58. Le Défibrillateur Cardiaque Implantable.: un rapport d'évaluation de technologie de santé D/2007/10.273/22
59. Analyse de biologie clinique en médecine général. D/2007/10.273/25
60. Tests de la fonction pulmonaire chez l'adulte. D/2007/10.273/28
61. Traitement de plaies par pression négative: une évaluation rapide. D/2007/10.273/31
62. Radiothérapie Conformationnelle avec Modulation d'intensité (IMRT). D/2007/10.273/33.
63. Support scientifique du Collège d'Oncologie: un guideline pour la prise en charge du cancer du sein. D/2007/10.273/36.
64. Vaccination HPV pour la prévention du cancer du col de l'utérus en Belgique: Health Technology Assessment. D/2007/10.273/42.
65. Organisation et financement du diagnostic génétique en Belgique. D/2007/10.273/45.
66. Drug Eluting Stents en Belgique: Health Technology Assessment. D/2007/10.273/48.
67. Hadronthérapie. D/2007/10.273/51.
68. Indemnisation des dommages résultant de soins de santé - Phase IV : Clé de répartition entre le Fonds et les assureurs. D/2007/10.273/53.
69. Assurance de Qualité pour le cancer du rectum – Phase I: Recommandation de bonne pratique pour la prise en charge du cancer rectal D/2007/10.273/55
70. Etude comparative des programmes d'accréditation hospitalière en Europe. D/2008/10.273/02
71. Recommandation de bonne pratique clinique pour cinq tests ophtalmiques. D/2008/10.273/05
72. L'offre de médecins en Belgique. Situation actuelle et défis. D/2008/10.273/08

73. Financement du programme de soins pour le patient gériatrique dans l'hôpital classique : Définition et évaluation du patient gériatrique, fonction de liaison et évaluation d'un instrument pour un financement approprié. D/2008/10.273/12
74. Oxygénothérapie Hyperbare: Rapid Assessment. D/2008/10.273/14.
75. Guideline pour la prise en charge du cancer oesophagien et gastrique: éléments scientifiques à destination du Collège d'Oncologie. D/2008/10.273/17.
76. Promotion de la qualité de la médecine générale en Belgique: status quo ou quo vadis ? D/2008/10.273/19.
77. Orthodontie chez les enfants et adolescents D/2008/10.273/21
78. Recommandations pour les évaluations pharmacoéconomiques en Belgique. D/2008/10.273/24.
79. Remboursement des radioisotopes en Belgique. D/2008/10.273/27.
80. Évaluation des effets du maximum à facturer sur la consommation et l'accessibilité financière des soins de santé. D/2008/10.273/36.
81. Assurance de qualité pour le cancer rectal – phase 2: développement et test d'un ensemble d'indicateurs de qualité. D/2008/10.273/39
82. Angiographie coronaire par tomographie à émission de positons 64-détecteurs chez les patients suspects de maladie coronarienne. D/2008/10.273/41
83. Comparaison internationale des règles de remboursement et aspects légaux de la chirurgie plastique D/2008/10.273/44
84. Les séjours psychiatriques de longue durée en lits T. D/2008/10.273/47
85. Comparaison de deux systèmes de financement des soins de première ligne en Belgique. D/2008/10.273/50.
86. Différenciation de fonctions dans les soins infirmiers :possibilités et limites D/2008/10.273/53
87. Consommation de kinésithérapie et de médecine physique et de réadaptation en Belgique. D/2008/10.273/55
88. Syndrome de Fatigue Chronique : diagnostic, traitement et organisation des soins. D/2008/10.273/59.
89. Evaluation des certains nouveaux traitements du cancer de la prostate et de l'hypertrophie bénigne de la prostate. D/2008/10.273/62
90. Médecine générale: comment promouvoir l'attraction et la rétention dans la profession ? D/2008/10.273/64.
91. Appareils auditifs en Belgique: health technology assessment. D/2008/10.273/68
92. Les infections nosocomiales en Belgique : Volet I, Etude Nationale de Prévalence. D/2008/10.273/71.
93. Détection des événements indésirables dans les bases de données administratives. D/2008/10.273/74.
94. Soins maternels intensifs (Maternal Intensive Care) en Belgique. D/2008/10.273/78.
95. Implantation percutanée des valvules cardiaques dans le cas de maladies valvulaires congénitales et dégénératives: A rapid Health Technology Assessment. D/2007/10.273/80.
96. Construction d'un index médical pour les contrats privés d'assurance maladie. D/2008/10.273/83.
97. Centres de réadaptation ORL/PSY : groupes cibles, preuves scientifiques et organisation des soins. D/2009/10.273/85.
98. Évaluation de programmes de vaccination généraux et ciblés contre l'hépatite A en Belgique. D/2008/10.273/89.
99. Financement de l'hôpital de jour gériatrique. D/2008/10.273/91.
100. Valeurs seuils pour le rapport coût-efficacité en soins de santé. D/2008/10.273/95.
101. Enregistrement vidéo des interventions chirurgicales par endoscopie : une évaluation rapide. D/2008/10.273/98.
102. Les infections nosocomiales en Belgique: Volet II: Impact sur la mortalité et sur les coûts. D/2009/10.273/100.
103. Réformes dans l'organisation des soins de santé mentale : étude d'évaluation des 'projets thérapeutiques' - 1er rapport intermédiaire. D/2009/10.273/05.
104. Chirurgie assistée par robot: health technology assessment. D/2009/10.273/08
105. Soutien scientifique au Collège d'Oncologie: recommandations pour la pratique clinique dans la prise en charge du cancer du pancréas. D/2009/10.273/11
106. Imagerie par résonance magnétique : analyse de coûts. D/2009/10.273/15
107. Indemnisation des dommages résultant de soins de santé. Phase V: impact budgétaire de la transposition du système français en Belgique. D/2009/10.273/17

108. Le Tiotropium dans le traitement des BronchoPneumopathies Chroniques Obstructives: Health Technology Assessment. D/2009/10.273/19
109. A propos de la valeur de l'EEG et des potentiels évoqués dans la pratique clinique. D/2009/10.273/22
110. La tomographie par émission de positrons en Belgique: une mise à jour. D/2009/10.273/25
111. Interventions pharmaceutiques et non pharmaceutiques dans la maladie d'Alzheimer : une évaluation rapide. D/2009/10.273/28
112. Politiques relatives aux maladies orphelines et aux médicaments orphelins. D/2009/10.273/31
113. Le volume des interventions chirurgicales et son impact sur le résultat : étude de faisabilité basée sur des données belges. D/2009/10.273/34.
114. Valves endobronchiales dans le traitement de l'emphysème pulmonaire avancé: un rapid Health Technology Assessment. D/2009/10.273/38
115. Organisation des soins palliatifs en Belgique. D/2009/10.273/41
116. Evaluation rapide des implants inter-épineux et des vis pédiculaires pour la stabilisation dynamique de la colonne vertébrale lombaire. D/2009/10.273/45
117. Utilisation des coagulomètres portables chez les patients sous anticoagulants oraux: Health technology Assesment. D/2009/10.273/48.
118. Avantages, désavantages et faisabilité de l'introduction de programmes "P4Q" en Belgique. D/2009/10.273/51.
119. Douleur cervicales atypiques: diagnostic et traitement. D/2009/10.273/55.
120. Comment assurer l'autosuffisance de la Belgique en dérivés stables du plasma? D/2009/10.273/58.
121. Étude de faisabilité de l'introduction en Belgique d'un système de financement « all-in » par pathologie. D/2010/10.273/02
122. Le financement des soins infirmiers à domicile en Belgique. D/2010/10.273/06
123. Réformes dans l'organisation des soins de santé mentale: etude d'évaluation des 'projets thérapeutiques' – 2ème rapport intermédiaire. D/2010/10.273/09
124. Organisation et financement de la dialyse chronique en Belgique. D/2010/10.273/12
125. Impact du visiteur médical indépendant sur la pratique des médecins de première ligne. D/2010/10.273/15
126. Le système du prix de référence et les différences socio-économiques dans l'utilisation des médicaments moins onéreux. D/2010/10.273/19.
127. Rapport coût-efficacité du traitement antiviral de l'hépatite B chronique en Belgique. Partie I: Examen de la littérature et résultats d'une étude nationale. D/2010/10.273/23.
128. Un premier pas vers la mesure de la performance du système de soins de santé belge. D/2010/10.273/26
129. Dépistage du cancer du sein entre 40 et 49 ans. D/2010/10.273/29.
130. Critères de qualité pour les lieux de stage des candidats-médecins généralistes et candidats-spécialistes. D/2010/10.273/34.
131. Continuité du traitement médicamenteux entre hôpital et domicile. D/2010/10.273/38.
132. Faut-il un dépistage néonatal de la mucoviscidose en Belgique? D/2010/10.273/42.
133. Optimisation du fonctionnement du Fonds Spécial de Solidarité. D/2010/10.273/45.
134. Indemnisation des victimes transfusionnelles du virus de l'hépatite C ou du VIH. D/2010/10.273/48.
135. L'urgence psychiatrique pour enfants et adolescents. D/2010/10.273/50.

