Admission and discharge criteria for adolescents requiring inpatient or residential mental health care: A scoping review

Introduction
This review will scope the literature relating to the admission and discharge criteria for adolescents over eleven and under nineteen years old that receive inpatient or residential mental health care. For ease of understanding the term ‘adolescents’ will be used but it is acknowledged that other terms, ‘youth’, ‘young adults’ ‘teenagers’ and ‘young people’ are used within the literature. An inpatient service is defined as a unit with ‘hospital beds’ that provides 24-hour nursing care.\(^1\) Residential treatment centers usually house youths with significant psychiatric, psychological, behavioral, or substance abuse problems for whom outpatient treatment has been unsuccessful.\(^2\)

In the United Kingdom (UK), it is estimated that one in ten children and adolescents aged between five and sixteen has a diagnosable mental health problem.\(^3\) This is also an area of international concern.\(^4\) Children and adolescents with the highest levels of need are cared for in hospital but there is a high demand for these beds and a general lack of agreement regarding what are the criteria for admission to such units. For example, there were 720 admissions during 2013 into Mc-Master Children’s Hospital’s child and adolescent psychiatry unit, Ontario, Canada.\(^5\) What are the criteria for admission to such units. For example, there were 720 admissions during 2013 into Mc-Master Children’s Hospital’s child and adolescent psychiatry unit, Ontario, Canada\(^6\) and a study in New Zealand\(^6\) showed an marked increase in admissions by 80% for children aged 4-17 following the Canterbury earthquakes. In a European survey of provision of child and adolescent mental health services it was found that there is a considerable difference between 28 countries, with fewer than two beds per 100 000 adolescents in Portugal and Sweden to more than 50 beds per 100 000 adolescents in Germany and the Netherlands.\(^7\) Typically, decisions on who to admit to inpatient child and adolescent mental health services (CAMHS) in the UK take place within limited bed capacity, with perceptions of ‘risk’ uppermost but can vary upon external triggering factors and context for example suicidal attempts. Negotiating access to inpatient beds for adolescents can be fraught with difficulties\(^8\) and with the development of effective community based interventions for common mental health presentations in adolescents, the focus and function of inpatient care is changing.\(^9\) Inpatient care is often currently selected because the round-the-clock availability of nursing staff makes it possible to keep adolescents safe while assessments and interventions of their mental health is addressed.

The Royal College of Psychiatrists in the UK is currently engaged in a piece of work to create a guidance document that can advise on the scope and criteria to warrant admissions to adolescent inpatient mental health units the UK. This will have international applicability given the challenges over access and demand for services are similar across Canada, Australasia and Europe.\(^7,10\) There are a number of
sources of good practice to which CAMHS inpatients can refer\textsuperscript{11,12} but there is now an opportunity to ensure that any further guidance documentation produced is supported by an underpinning robust evidence base.

The Quality Network for Inpatient CAMHS (QNIC) standards, developed by the Royal College of Psychiatrists were introduced in the UK 2001 and have been reviewed biannually since. They provide service standards against which inpatient CAMHS units can elect to be audited.\textsuperscript{11} One of the sections in this audit document covers access and admission. Within this category, one statement is that senior clinical staff members make decisions over the admission of an adolescent and this can be moderated if safety or therapeutic activity will be affected in their view. There is a further statement that adolescents at severe risk can be admitted as emergencies. There are standards relating to process for exceeding bed capacity, for not admitting and for effective discharge planning. What is absent are specific criteria about what adolescents present with that determine whether admission is required. Similarly there is a lack of agreed criteria for when discharge is indicated.

In the national mapping of the CAMHS inpatient units across England\textsuperscript{12} it was highlighted that there was high demand and limited capacity to provide inpatient mental health care for this population, suggesting as a solution for the patient flow the introduction of a pre-admission assessment. A preliminary search for existing scoping and systematic reviews was conducted looking for admission criteria for adolescent inpatient mental healthcare. The search was conducted on the following databases: Campbell Collaboration Library of Systematic Reviews; Cochrane Database of Systematic Reviews, Evidence for Policy and Practice Information Centre databases; JBI Database of Systematic Reviews and Implementation Reports, International Prospective Register of Systematic Reviews (PROSPERO); Social Care Institute for Excellence database; CINAHL and PsycINFO. There are two reviews registered on PROSPERO that are looking at characteristics of inpatient CAMHS and treatment outcomes\textsuperscript{13,14} but neither are addressing admission criteria. In the Campbell Collaboration database, there was one published review looking at the effectiveness of treatment foster care for adolescents, but not specifically criteria for admission.\textsuperscript{15}

This proposed scoping review will therefore fill in the gap in the literature while at the same time providing the evidence base for the Royal College of Psychiatrists guidance document.

**Review Question**

The question of this review is

What are the admission and discharge criteria for adolescents to mental health inpatient care?

The objectives will be

- To identify the criteria for admission to mental health inpatient or residential care for adolescents
To identify the criteria for discharge from mental health inpatient or residential care for adolescents
To identify the criteria for not admitting adolescents to mental health inpatient or residential care

Keywords
Adolescents; mental health, admission, discharge

Inclusion Criteria
Participants
This scoping review will consider all studies that focus on adolescents between the ages of eleven and nineteen years, presenting with mental health difficulties suggestive of meeting diagnostic criteria i.e DSM V and ICD 10 on admission to an inpatient mental health unit or residential treatment centres and is inclusive and may encompass psychosis, eating disorders and mood disorders.

Concept
Reason for admission to inpatient mental health care; for example severe self-harming behaviour.
Reason for discharge from inpatient mental health care, for example no longer an immediate risk to self.
Reason for not admitting to inpatient mental health care, for example can be managed safely at home.

Context
This scoping review will consider studies that have been conducted in facilities that provide mental health inpatient or residential care for adolescents. This will include hospitals, independent health units and residential treatment centres.

Types of studies
This scoping review will consider quantitative and qualitative and textual and opinion data

Quantitative
This scoping review will consider both experimental and quasi-experimental study designs including randomized controlled trials, non-randomized controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case-control studies and analytical cross-sectional studies will be considered for inclusion.

This review will also consider descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies for inclusion.

Qualitative
This scoping review will consider studies that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research and feminist research.

Textual and opinion

This scoping review will consider standards for clinical care, consensus guidelines, narrative case reports, literature reviews including expert opinion, published discussion papers, government policy reports or reports accessed from web pages of professional organizations.

Studies published in the English language will be included. Studies published from 2009 to the present will be included. In 2009 Kurtz published a review for the UK Department of Health identifying the ‘Evidence Base for Tier 4 CAMHS’ (inpatient provision) drawing on the evidence available at that point. In this review, Kurtz identified that the inpatient services were developing from not only inpatient services, but to develop complex outpatient ‘wrap around services’ for adolescents, and that the inpatient services should be reserved for ‘highly specialist assessment in a controlled environment and away from the family’. The review recognized that although there may be benefits in this approach, it would not necessarily be the best intervention for all adolescents and recommended a comprehensive pre-admission evaluation of the child’s suitability for treatment in a psychiatric inpatient setting before admission. This scoping review will consider studies published since the publication of this 2009 report.

Exclusion Criteria

The exclusion criteria for this scoping review are as follows:

- Papers that do not report empirical studies.
- Studies that focus primarily on children (under the age of eleven) or adults (over the age of nineteen).
- Studies that focus on alternatives to inpatient care.
- Services specifically for learning disabilities only and forensic services

Methods

The proposed scoping review will be conducted in accordance with the Joanna Briggs Institute methodology for scoping reviews.

Search Strategy

The search strategy will aim to locate both published and unpublished studies. An initial limited search of PsycINFO and CINAHL has been undertaken followed by analysis of the text words contained in the titles and abstract, and of index terms used to describe the articles. This informed the development of a search strategy which will be tailored for each information source. A full search strategy for PsycINFO is detailed
The search strategy, including all identified keywords and index terms will be adapted for each included information source. The reference list of all included studies selected for will be screened for additional studies.

**Information Sources:**

The databases to be searched will include:

On the OVID platform:
- MEDLINE
- EMBASE
- PsycINFO

On the EBSCO platform:
- CINAHL
- ERIC

On the ProQuest platform
- British Nursing index
- ASSIA
- ProQuest Dissertations & Thesis

The trial registers to be searched include:
- Cochrane Central Register of Controlled Trials

The search for unpublished studies and other gray literature will include:
- OpenGrey
- e-thesis online service for the British Library (Ethos)
- Websites of professional organisations; for example Royal College of Psychiatrists, Royal College of Nursing, International Society for Psychiatric Nursing, Headspace, Canadian Mental Health Association.

Contacting authors, experts and organisations active within the phenomenon of interest to attempt to identify further published, un-published and ongoing studies.

**Study Selection**

Following the search, all identified citations will loaded into Endnote V7.7.1 (Clarivate Analytics, PA, USA) and duplicates removed. Titles and abstracts will then be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant studies will be retrieved in full and their citation details imported into the Joanna Briggs Institute’s System for the Unified Management,
The full text of selected citations will be assessed in detail against the inclusion criteria by two
independent reviewers. Reasons for exclusion of full text studies that do not meet the inclusion criteria will
be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at
each stage of the study selection process will be resolved through discussion, or with a third reviewer.
The results of the search will be reported in full in the final report and presented in a Preferred Reporting
Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram, or will be replaced with
PRISMA-ScR checklist when it becomes available.

**Data Extraction**
The data extracted will include specific details about the populations, study methods and outcomes of
significance to the review question and specific objectives. The template data extraction instrument from
the JBI Reviewers Handbook chapter on scoping reviews will be adapted to suit this scoping review.
This is in line with charting the data as outlined in stage four of Arksey and O'Malley's framework for
conducting scoping reviewers and updated by Levac et al. Any disagreements that arise between the
reviewers will be resolved through discussion or with a third reviewer. Authors of papers will be contacted
to request missing or additional data where required.

**Data Presentation**
Findings, where possible, will be synthesised and presented in a tabular summary with the aid of
narrative and figures where appropriate. The approach described by Arksey and O'Malley and Levac et
al. will be followed with an overview of all the included material which will be summarized in tables and
charts which map the literature. Literature will be tabulated using the following headings related to
research design, geographical location, year of publication, characteristics of study population and the
research outcomes. A narrative summary will accompany the tabulated results, this will describe how
the results relate to the review objectives and question.

**Conflicts of Interest**
There is no conflict of interest to report regarding this scoping review.

**References**
1. The NHS Confederation. Defining mental health services. Promoting effective commissioning and
   supporting QIPP. The NHS Confederation, 2012 [Internet]. [cited 2018 May 16] Available from
   http://www.nhsconfed.org/~/media/Confederation/Files/Publications/Documents/Defining_mental_hea
   lth_services.pdf


### Appendix I – Initial search strategy for PsycINFO

<table>
<thead>
<tr>
<th>Question part</th>
<th>Question term</th>
<th>Search terms</th>
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<tbody>
<tr>
<td>Population</td>
<td>Adolescents presenting with mental health difficulties</td>
<td>(Adolescen* OR Teen* OR Youth OR) AND (Mental adj1 health OR Mental adj1 illness OR Psychiatr* OR Mental Disorders/MESH OR Mental Health/MESH) OR adolescent psychiatry/MESH OR child psychiatry/MESH) AND</td>
</tr>
<tr>
<td>Concept</td>
<td>Reason for admission or discharge</td>
<td>Admit* OR Admission* OR Discharge* OR Facility admission/MESH OR Hospital Admission/MESH OR Psychiatric Hospital Admission/MESH or Facility Discharge /MESH OR Hospital Discharge/MESH OR Psychiatric Hospital Discharge/MESH OR Discharge Planning/MESH) AND</td>
</tr>
<tr>
<td>Context</td>
<td>Facilities that provide mental health inpatient or residential care for adolescents</td>
<td>Inpatient OR In-patient OR Residen* OR Psychiatric Hospitalization/MESH OR Psychiatric Hospitals/Mental Health Services/MESH OR Residential Care Institutions OR Community Mental Health Services/MESH OR treatment facilities/MESH</td>
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