

Summary
TIER 4 ADOLESCENT MENTAL HEALTH NEEDS ASSESSMENT FOR THE NORTH OF SCOTLAND

Introduction

The needs assessment has been commissioned by the North of Scotland Planning Group at the request of the Chief Executives through the Child and Adolescent Mental Health Project Board and from the North of Scotland Public Health Network. The needs assessment is presented with Key Messages which summarise findings in each section, Principle Findings which are the interpretations drawn, and Recommendations to suggest how this piece of work is used to inform the strategic decision making that will be required to secure investment in and development of Tier 4 services for inpatient and community based adolescent mental health services across the North of Scotland Boards.

This report will be presented to the North of Scotland CAMHS Project Board in June 2010 and will inform development of the outline business case for the regional Tier 4 network and Inpatient Unit.

Tier 4 child and adolescent mental health services (CAMHS) are required to meet the needs of young people with the most complex, severe or persistent mental health problems. Young people meeting the criteria of need for a Tier 4 service are profoundly unwell and very vulnerable. At times young people will be in contact with education and social work services with very high levels of mental health need but these needs will not necessarily be well met by a Tier 4 CAMH service as what is required is intensive social support or learning disability services/forensic services.

For the purposes of this report, Tier 4 mental health need (North of Scotland Planning Group 2009) has been defined as:

Young people with mental health difficulties *and* one or more of:

- too high risk to attempt to treat with usual outpatient resources e.g. suicidal, psychotic with disorganisation, self harm or violent behaviour
- need intensive assessment or treatment (equivalent of more than weekly outpatient contact and more than one CAMHS professional)
- not responding to usual outpatient treatment – which may be because they need reassessment, or more intensive input

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This needs assessment focuses on the requirements of young people aged 12-17 inclusive, whose level of need requires a level of specialist input that can only be met through what has been defined as a Tier 4 level of service where age appropriate care is available in a general psychiatric inpatient unit, paediatric or adult mental health bed or through intensive community services.

This exercise uses an epidemiologically-based healthcare assessment of needs (Stevens & Rafferty, 1994) and seeks to describe and quantify the level of healthcare need based on that which people, in this case young people and their families, will benefit from. The report covers the following key areas:

- The strategic policy context for Tier 4 CAMHS in Scotland
- Mapping CAMHS service and consideration of the human geography of the North of Scotland
- A review of the epidemiology of Tier 4 conditions
- Quantifying need for Tier 4 CAMHS across the North of Scotland
- Consideration of remote and rural issues in relation to Tier 4 CAMHS
- Reviewing the evidence for Tier 4 CAMHS service models
- A review of engaging and involving users of Tier 4 CAMHS services

Defining Tier 4 Need: The challenges

Epidemiology seeks to inform us of who will get what disorder and where. It is therefore necessary to define the conditions for which such services are relevant. The greatest challenges to the epidemiological assessment of Tier 4 need are: it is not represented as a mutually exclusive list of mental health conditions; the mental health conditions which are likely to benefit from Tier 4 services have a continuum of severity and it is only the more complex or severe manifestations that are relevant; and the inter-relationship with Tier 3 services - referrals to Tier 4 are often determined by what is available within Tier 3 and it has not been possible within this piece of work to distinguish true need for Tier 4 from need as a consequence of lack of Tier 3 capacity.

Types of disorder common to Tier 4

The definition of mental health difficulties provided earlier as relevant to Tier 4 can be related to any one or more psychiatric disorder defined by internationally recognised diagnostic criteria (e.g. ICD 10 or DSM IV), and particularly the combination of psychiatric illness with co-morbidity, and illness with a number of confounding factors

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that may affect the complexity of presentation and associated dysfunction. Factors leading to referral to a Tier 4 CAMHS are not only based on severity and complexity, but also lack of treatment response, unusual clinical features, breakdown in therapeutic relationships, unavailability of local treatment options, increased vulnerability due to personal circumstances (i.e. in local authority care, youth justice system) and patient choice. (Specialist Services National Definitions Set 2010). The full set of tables and wider discussion can be found in the main report of the Tier 4 Adolescent Mental Health Needs Assessment for the North of Scotland.

Severity at presentation can be assessed in terms of various dimensions and other markers of severity including any associated risk factors within the individual, within the family or within social circumstances

Numbers in the North of Scotland

The expectation is that Tier 4 CAMHS services will be concerned with children with two or more co-morbid conditions such as a psychiatric disorder and a conduct disorder as well as a number of risk factors. This does not preclude significant impairment resulting from a single severe psychiatric disorder which would also benefit from or be appropriate to the Tier 4 service.

Application of the rates from national surveys (Meltzer et al 2000, Green et al 2005) predict that there could be 10,000 young people aged 12 to 17 years living in the North of Scotland with a clinically diagnosable mental disorder some of whom will either be taking up CAMHS services or who would potentially benefit from them. Around 1,250 will have multiple disorders i.e. two or more. However, determining the need for Tier 4 CAMHS is more difficult because of the overlapping and inter-related nature of disorders, risks and severity factors.

The conditions selected as most relevant to CAMHS Tier 4 are from the categories of severe eating disorders, psychosis and major depression. The main report details information from the literature to estimate numbers of young people affected in the north, summarised for the more specific conditions that may be more relevant to tier 4 CAMHS, viz. anorexia nervosa, early onset psychosis and bipolar disorder in Table 1 with predictions into the future which take account of:

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1. the likely projections of historical trends in morbidity of the relevant mental disorders
2. the likely changes in the level of risk factors e.g. socio-economic circumstances
3. demographic changes i.e. population structural changes (age and sex)

Table 1 summarises the indicative numbers of 12-17 year olds across the North of Scotland for specific mental disorders in 2010. A full review of the epidemiology of Tier 4 mental health need, illness and disorder can be found in main report which details a review of a range of studies that use differing measures of need (incidence/prevalence).

The following caveats need to be considered when considering this data as Kurtz (2005) in Glover et al (2005) has indicated that the numbers arrived at on this basis are likely to be in the order of 7 to 10 times higher than those known to the specialist CAMHS service. The differential should not be assumed to be a measure of unmet need because of the following considerations:

- The numbers based on application of morbidity rates relate to those with a particular condition or category of problem. These are not mutually exclusive with multiple mental health disorders and problems being usual
- The natural history of these conditions can be episodic with periods of intensity between possibly long periods of remission. This means that point prevalence estimates need not reflect an actual need at that particular time
- There is a broad spectrum of severity in these conditions in which specialist services for those at the milder end are not appropriate
- There are always reasons why application of rates measured within the research environment such as from population surveys may not reflect the population of interest's true burden of morbidity. This may be because of differences in the relative susceptibility to mental health problems e.g. affluent populations versus inner city socio-economically disadvantaged populations

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Table 1: Predicted numbers of adolescents with specific mental disorders in 2010

| | Grampian | Highland C | Tayside | Island Boards ⁶ | NoS |
|---|------------|------------|------------|----------------------------|-------------|
| Anorexia Nervosa Point prevalence ¹ | 65 | 27 | 49 | 9 | 149 |
| Early onset psychoses ³ year prevalence ² | 25 | 10 | 18 | 3 | 57 |
| Bipolar disorder point prevalence ³ | 195 | 80 | 144 | 25 | 444 |
| Incidence of Schizophrenia ⁴ | 3 | 1 | 2 | 0 | 6 |
| Major depression point prevalence ⁵ | 750 - 1880 | 320 - 800 | 560 - 1390 | 100 - 260 | 1700 - 4300 |

| | | | | | |
|---|---|--|--|--|--|
| 1 | Point prevalence of 300 females per 100,000 aged 12 to 18 years (Hoek HW et al 2003) | | | | |
| 2 | 3 year prevalence of 50 per 100,000 in all aged 10-17 years (Boeing L et al, 2007) | | | | |
| 3 | Point prevalence of 0.6% all aged 14-18 years (Lewinsohn PM et al, 1996) | | | | |
| 4 | Annual incidence, 5 per 100,000 & 10 per 100,000 females & males respectively aged 15-19 years (Takei N et al 1996) | | | | |
| 5 | Point prevalence of major depression of 2-5% all aged 12-17 years (Olsson GI & van Knorring, 1999) | | | | |
| 6 | The sum of NHS Shetland, Western Isles and Orkney | | | | |

The epidemiology detailed in this section is just one of a range of approaches that are required to give an informed view of the level of service required to address Tier 4 mental health need across the North of Scotland.

Key Messages from the epidemiology

- Tier 4 adolescent mental health need is complex, multi faceted and uncommon
- Adopting a purely numerical approach to defining Tier 4 need is insufficient

What services are required to meet Tier 4 need?

Inpatient care

Child and adolescent inpatient care has been shown to be effective. Findings from an increasing number of multi-centre prospective studies of adolescent psychiatric hospitalisation affirm the value and importance of inpatient care to address Tier 4 need so inpatient care remains a necessary part of a comprehensive child and adolescent mental health service (O’Herlihy et al 2001, Green et al 2007)

The literature is clear that a small number of children and adolescents will require inpatient care, and reasons for admission may include:

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- deterioration in psychological functioning despite community treatment
- high risk to self or others, including suicidality and aggressive behaviour towards others
- family difficulties in the context of mental disorder making treatment difficult
- the need for 24 hour assessment or care

Key messages from the literature for Tier 4 inpatient care

The literature indicates that:

- Inpatient admission allows for detailed assessment in a controlled environment and away from the family. The individualised assessment and intensive educational input can make a major difference to young people whose social adaptation within their community has broken down and who have a history of school failure.
- The individualised assessment and intensive specialist treatment in an inpatient unit can lead to more effective use of other services post discharge.
- Removal from social difficulties in the external environment and exposure to the inpatient milieu can produce rapid gains in functioning (socialisation, and academic achievement). However, young people with significant social impairments may not be able to make effective use of such a socially orientated therapeutic environment, highlighting the need for comprehensive pre admission assessment.

Outpatient intensive community services

Community based Tier 4 services offer a wide range of types of intervention. Though they are usually associated with inpatient units, the use of alternatives to inpatient care for certain groups of young people with mental health problems suggests that treatment effects are of similar size to residential treatment and may be sustained longer after follow up. The advantages for adolescents have been identified as follows:

- Flexibility of care
- Work with family and foster/parental care
- A focus on education
- Prevention of dependency on inpatient beds
- Reduction of stigma.

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Key messages from the literature for community Tier 4 care

There is an emerging evidence base for the effectiveness of intensive community based services. Key component parts of intensive community services are as follows:

- Treatment at home or reduced length of stay in hospital
- Small caseloads
- 24 hour rapid response
- Multi modal treatment strategies
- Close involvement of partner agencies
- Individually tailored treatment
- Flexible working practices
- Systemic basis
- Strong partnership with young person and their family or carers
- Prevention of family breakdown

Key Messages from the literature for Tier 4 service provision

The provision of Tier 4 services will require a mixed economy approach

- Access to inpatient psychiatric beds is a pre requisite of a comprehensive child and adolescent mental health service
- The capacity, skills and service models available in community Tier 3 services influence the demand for Tier 4 inpatient beds
- There is a growing evidence base for Tier 4 community services provided through a variety of models, in particular, for multi systemic therapy, assertive outreach and treatment foster care
- The literature offers indicative options for how intensive community based services could be developed, however, these tend to be based in urban areas where there are significant populations and good transport infrastructure
- Multi disciplinary comprehensive pre admission assessment is a pre requisite for the provision of a Tier 4 service as an inpatient or in the community
- The independent sector often provides a stop gap for the lack of access to inpatient beds and there may be funding diverted to these services that could offset costs to the NHS
- Tier 4 inpatient services need to be developed in conjunction with Tier 4 community based services

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Remote and rural north of Scotland: additional implications for Tier 4 services

The north of Scotland NHS Boards cover 61% of the Scottish land mass and incorporate the majority of the inhabited island communities in Scotland. The populations of the island Boards, 99% of Highland residents and 48% of Grampian residents live over a two hour drive from the central belt from where the majority of tertiary services for Scotland are accessed, and from Dundee where the current inpatient unit is sited. This presents a particular set of issues when designing and delivering highly specialist services.

Only 28% of the 12-17 population live within an hour's drive of the Dudhope inpatient unit while 51% live within a two hour drive, and limited trunk road infrastructure along with the need for ferries for island populations clearly adds significant travel times for many young people and their families. These travel challenges would also exist for some of the North of Scotland population if the only inpatient beds were to be located anywhere in the north of Scotland in either Aberdeen or Inverness.

Key messages from the literature for remote and rural CAMHS Tier 4 need

Access to specialist Tier 4 services in remote and rural geographies need to take account of the following:

- It is important to understand and acknowledge what it means to live in remote and rural areas when designing services
- There are varying views amongst users of services as to whether highly specialist mental health services for adolescents should be available locally
- The development of managed networks is an acknowledged approach to supporting the delivery of specialist services in remote and rural areas
- Barriers to mental health service utilisation affect decisions to access help and their ability to engage effectively with mental health services over time
- The lack of anonymity in rural areas can make the stigma surrounding mental health need and disorder more profound
- Lack of access to services may result in extreme behaviours to enable access to a service

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Principle findings

1. National policy affirms the importance of developing comprehensive CAMHS across all Tiers and that there is a need for approaches that work across the continuum of promotion, prevention and care with a focus where possible on early intervention. Services need to be provided that are age appropriate and match the level of need and intensity with appropriately qualified staff
2. The geography of the North of Scotland means that there are particular challenges in providing highly specialist services due to dispersed populations and the challenges from remote and island populations and related transport infrastructure
3. The epidemiology informs us of:
 - a. The complexity and severity of mental health disorder and illness where there is Tier 4 need
 - b. That all North of Scotland Boards can expect to have young people with a Tier 4 level of need and that therefore community based CAMHS services should be resourced to provide this level of service
4. Service utilisation information tells us that:
 - a. Not all young people requiring an inpatient bed can access one when they need it
 - b. Some young people will access care in paediatric or adult environments that may not be appropriate to their developmental needs, though appropriate use of paediatric or adult facilities can be constructed as clinically and contextually appropriate within a network approach
 - c. Others historically have required admission to private or independent facilities diverting funding away from CAMHS services
 - d. Admission out of region can mean that young people are even further away from family and peer groups if admitted
 - e. Where CAMH services are not resourced to provide Tier 4 services, when Tier 4 need arises it diverts a resource away from Tier 3 service provision. This will become an increasing pressure for community CAMHS as we move to a HEAT target for access to CAMHS
5. The review of Tier 4 service models tells us that :
 - a. There is an indisputable need for inpatient beds and that inpatient care works for young people with a Tier 4 level of need

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- b. There is an emerging evidence and knowledge base for the provision of intensive and community based services where there is a Tier 4 level of need
 - c. The range of community services available will influence the need for and use of inpatient Tier 4 services
6. The views of young people tells us that:
- a. They recognise that an inpatient admission may be required and may be beneficial at times
 - b. They would appreciate choice
 - c. Being away from family and friends when admitted can be challenging
 - d. Services need to be able to demonstrate that the views of young people have influenced service design delivery

In addition, the needs assessment process has affirmed much of the direction of travel of the Service Modelling and Workforce Planning Group.

This leads us to make the following recommendations to the Project Board. These are not listed in any order of priority:

Recommendation 1

The literature is clear that there is a need for a mixed economy of investment, across a spectrum of care that includes both inpatient and community based Tier 4 services.

Recommendation 2

Access to inpatient psychiatric beds is a prerequisite of a comprehensive child and adolescent mental health service. The proposal to develop the inpatient bed capacity in the North of Scotland to 12 beds is appropriate on the basis that there will be related investment by all North of Scotland Boards in local, community based Tier 4 service delivery with the development of an integrated network model of delivery equating to an investment in 16 inpatient beds as designated by the Scottish Government (2005).

Recommendation 3

The use of and access to Tier 4 child and adolescent mental health services through the obligate network by different Boards should be kept under review and length of stay inpatient facilities and moves to prompt discharge when appropriate should also be

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reviewed. Consideration should be given to benchmarking length of stay and discharge arrangements with other inpatient services in Scotland.

Recommendation 4

Thought should be given as to how the staffing for a 12 bedded unit could be used flexibly to provide expertise and consultation to community CAMHS services across the North of Scotland to support the Tier 4 network.

Recommendation 5

In order to make best use of the inpatient resource there is a related need to invest in local community based Tier 3/4 services. This to be achieved by continuing to work to the Royal College of Psychiatry recommendations for Tier 3 community services (20 wte posts for 100,000 of population where CAMHS services work to the age of 16 and to 24 wte posts per 100,000 population where CAMHS services address 0-18 services) and to consider how there may be additional investment into local Tier 4 services through the regional network and inpatient unit linked to the Dundee Unit through an obligate network.

Recommendation 6

The balance of investment across the Tier 4 network (inpatient and intensive community services) should be kept under review in the coming years. It may well be that over time, different needs for inpatient and community services emerge depending on local needs, service strengths and capacity. The focus on the development of a Tier 4 network and the associated integrated care pathway will underpin this direction of travel.

Recommendation 7

All North of Scotland Boards should work with local integrated children's service partners to build capacity across CAMHS services, and in particular, education, social work and the third sector, to ensure that they work preventively with young people who are known to be at particular risk of developing mental health disorder and illness.

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Recommendation 8

The needs assessment exercise has affirmed the direction of travel of the Service Model and Workforce Planning Group who lead on the development of Tier 4 services and related models across the North of Scotland.

This report will be presented to the North of Scotland CAMHS Project Board in June 2010 and will inform the development of the outline business case for the regional Tier 4 network and inpatient unit.

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