CR182

# Building and sustaining specialist CAMHS to improve outcomes for children and young people

Update of guidance on workforce, capacity and functions of CAMHS in the UK

November 2013

COLLEGE REPORT

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# Acknowledgements

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We are grateful to Professor Susan Bailey and the members of the Royal College of Psychiatrists' Faculty of Child and Adolescent Psychiatry Executive Committee.

We especially thank all our multidisciplinary CAMHS colleagues, non-CAMHS colleagues, commissioners, children, young people and families, who have stimulated our ideas, supported our processes and committed themselves to supporting the building of sustainable specialist CAMHS.

# Abbreviations

| | |
|---|---|
| ADHD | attention-deficit hyperactivity disorder |
| CAMHS | child and adolescent mental health services |
| CAPA | Choice and Partnership Approach |
| CHYPIE | Children and Young Person's In-patient Evaluation Study |
| CROMS | clinician-rated outcome measures |
| CYP-IAPT | Children and Young People's Improving Access to Psychological Therapies Project |
| DHSSPSNI | Department of Health, Social Services and Public Safety, Northern Ireland |
| GAIN | Guidelines and Audit Implementation Network |
| NHS | National Health Service |
| NICAPS | National In-patient Child and Adolescent Psychiatry Study |
| NICE | National Institute for Health and Care Excellence |
| ONS | Office for National Statistics |
| PROMS | patient-rated outcome measures |
| SIFT | Special Increment For Teaching |
| SIGN | Scottish Intercollegiate Guidelines Network |
| WTE | whole time equivalent |

# Foreword

It is extremely timely in a period of economic austerity, changing demographies, treatments and public expectations that this guidance on workforce capacity and functions of child and adolescent mental health services (CAMHS) in the UK has undergone expert revision.

We should all be in the business of meeting the mental health needs of children, young people and their families. To do this we need to ensure effective partnership working across all agencies, at all levels of service, with a focus on emotional well-being, early intervention and prevention, and building resilience in children, families and communities. In an era of unprecedented policy change we have a duty to ensure that services are effective and efficient. As professionals, our first priority must be the delivery of value-based care that puts young people and the family at the heart of what we are doing. We live with the frustration that demands on us are organisationally led. We are there to offer patient-centred care and to offer young people the best integrated pathway of care whatever the nature and degree of their difficulty at any one point in time.

Across the UK there can be no justification for any inequity in service provision, i.e. parity of esteem for the mental health and the physical health of all children.

Clinicians should all welcome a lifespan approach for the best delivery of mental health services where there is a strong evidence base for prevention and early intervention, given that half of mental health disorders have their onset by the age of 14.

This document has covered all the key areas to assist service commissioners: it defines CAMHS and the reality of the world in which we all practice, it defines good outcome measures and takes into account the needs of vulnerable patient groups and those needing highly specialist care. It recognises the importance of providing good 24-hour care to children and young people in distress and there is a strong emphasis on listening to the views of young people and working with them to develop services. To safely make our workforce and capacity projections, we now need new research on the prevalence of mental disorders in young people, so that guidance can continue to be evidence based as circumstances of children change and new treatments become available.

The authors are to be congratulated on this constructive, easy-to-read report that will be invaluable to commissioners, service providers and all professionals across health and social care, education and justice sectors.

*Professor Sue Bailey*
*President, Royal College of Psychiatrists*

# Executive summary

This report is an update of *Building and Sustaining Specialist Child and Adolescent Mental Health Services* (College Report CR137; Royal College of Psychiatrists, 2006), which provided guidance regarding the capacity and provision of specialist CAMHS in the UK. Specialist CAMHS are part of the multi-agency system, working to meet the mental health needs of children, young people and their families. The current report does not attempt to address the differences in multi-agency partnerships or context in different jurisdictions. Irrespective of the political context, it is assumed that we need to ensure effective partnership-working across all agencies and at all levels of service, with a commitment to promote emotional well-being and the development of resilience, intervene early where problems occur, and ensure the interventions are effective.

This current document provides indicative figures for workforce capacity and function of specialist CAMHS at Tier 2, 3 and 4. It is important that you take into account the context of your individual services and the impact of your local partnership arrangements.

The purpose of this report is to help colleagues working in specialist CAMHS to be clear with those planning/commissioning services (as well as service providers and partner agencies) about the workforce/resources required to meet the needs of a population of children and young people. This is key to improving outcomes for children and young people in the UK. Child and adolescent mental health service clinicians and managers can also use this report to support discussions as to what is achievable within a particular resource allocation.

This report is written at a time of financial austerity and significant changes in health policy. As we reflected on what is helpful in these circumstances, we were clear that the focus needed to be on how we improve the situation for children, young people and their families. How do we really put them at the heart of what we do? How do we work in a truly collaborative way? How do we ensure we focus on the right goals, make choices available and have outcomes that are meaningful?

We need to provide services that are as effective and efficient as we can make them. We must always ask, 'Does this add value to the child, young person and their family?' So many of the demands on us are organisationally led – yet our key aim must be to improve outcomes for children and young people. Refocusing ourselves continually on our core task and values, and checking with children, young people and their families that we have 'got it right', will help us design services that work and are robust, even in challenging times.

The evidence presented here – which gives quantitative guidance on the core work of specialist CAMHS – has changed very little since the last report, but we have expanded into some new areas and included

recommendations for specialist CAMHS for 16- and 17-year-olds, CAMHS for children and young people with intellectual disabilities, and those with forensic and substance misuse problems. We have also included recommendations for alternatives to hospital admission. We do not yet know the impact on effectiveness and efficiency of newer innovations and changes to our services. When we do, then this guidance will change again.

Our aim has been to produce a 'rule of thumb' tool that can be applied to any region in any jurisdiction of the UK. We hope you find this updated guidance a helpful place to start.

# The need for guidance

It is the responsibility of specialist CAMHS to address and alleviate the mental health problems of children and young people. Specialist CAMHS also have the skills and responsibility to give advice, based on specialist knowledge, on how to ensure mental health and psychological well-being in children and young people, and how to support their families. Professionals in specialist CAMHS thus have the dual role of providing direct help and treatment to children, young people and families, as well as providing support and advice to other professionals who contribute to the mental well-being of children and young people through their everyday work. In order to be able to undertake these core tasks effectively, CAMHS teams must have sufficient numbers of appropriately trained staff, working within accessible services that can deliver effective interventions.

Clinicians and commissioners need to know what their service can provide within a given resource. Children and young people and their families need to know what they can expect from their local service. They greatly value continuity of care, clinician flexibility, reliability and ongoing support (Street, 2004; Department of Health & Department for Education and Skills, 2004; Garcia *et al*, 2007). Effective multi-agency working requires liaison and planning between partner agencies, all of which takes time. It is crucial therefore that specialist CAMHS are appropriately staffed to fulfil these core responsibilities effectively.

## Reality of current services

Currently, specialist CAMHS continue to function in an environment where demand frequently exceeds capacity. There are often concerns about access thresholds being set too high, the inability of services to offer an appropriate range of evidence-based interventions, and a 'clinic-bound' approach. Teams vary in their eligibility and threshold criteria, professional mix, models of service delivery and commissioning arrangements. As a result of capacity shortage, many struggle to meet waiting-time targets and to implement recommendations set out in clinical guidelines and government directives.

The quality and range of specialist CAMHS varies according to the quality of informed commissioning and planning, and the quality and range of services provided by partner agencies. Commissioning and provider arrangements must include agreements to balance demand and capacity to ensure timely assessment and intervention and the use of evidence-based practice.

# Specialist CAMHS across the UK jurisdictions

Epidemiological studies point to there being no difference in the types of disorder experienced by children and young people across the UK (Wallace *et al*, 1997; Meltzer *et al*, 2000). However, prevalence is affected by population levels of risk factors, including deprivation. Regional differences in the proportion of the general population who are under 18 years old also affect prevalence of disorders and demand for services. Child and adolescent mental health services across the UK are currently overstretched and there are geographical differences in resource allocation and access. It is vital that children and young people do not experience inequality of access to CAMHS on the basis of where they live.

Across the four jurisdictions of the UK we have seen the emergence of new National Health Service (NHS) mental health strategies, each focusing on a lifespan approach based on early intervention and prevention and functional integration with social care (Department of Health, 2011*a*; Department of Health, Social Services and Public Safety, 2011; Scottish Government, 2012; Welsh Government, 2012*a*). In addition, across all the jurisdictions there is a move away from centralised process measures of CAMHS performance, to outcome performance measures and the acknowledgement that children and young people must be involved in the evaluation of their outcome. The national strategies for CAMHS in the different jurisdictions are being implemented in different NHS contexts, particularly in England following the passing of the Health and Social Care Act 2012. However, the core business of specialist CAMHS is the same across the UK and this guidance is designed to be applicable across all jurisdictions.

The focus of this report is to provide guidance on workforce capacity and function. It should be read in conjunction with other key documents including the respective UK jurisdiction mental health strategy documents (see citations above). In England, this guidance can be linked with the guidance for commissioners of child and adolescent mental health services (Joint Commissioning Panel for Mental Health, 2012) and the Royal College of Psychiatrists' work on CAMHS payment by results (Royal College of Psychiatrists, 2012a), which ministers propose to introduce for CAMHS in England. In Wales, the CAMHS service planning guidance (Welsh Government, 2013) and service delivery plan for the national strategy (Welsh Government, 2012b) are relevant to the current report. In Scotland, it can be linked to the generic CAMHS integrated care pathways, comprising standards set out by the Scottish government for quality provision of specialist CAMHS (Healthcare Improvement Scotland, 2011) and to the *Competence Framework for Child and Adolescent Mental Health Services*

(Roth *et al*, 2011). In Northern Ireland, the Bamford Review of Mental Health and Learning Disability set the vision for comprehensive CAMHS (Department of Health, Social Services and Public Safety, 2006). The 2010 review of CAMHS by the Regulation and Quality Improvement Authority highlighted key areas for improvement (Regulation and Quality Improvement Authority, 2011) and the recently published *Child and Adolescent Mental Health Services: A Service Model* outlines a model for commissioning based on a stepped care approach (Department of Health, Social Services and Public Safety, 2012).

Other important cross-jurisdictional guidance from the Royal College of Psychiatrists which can be read alongside this College report include *Safe Patients and High-quality Services* (Royal College of Psychiatrists, 2012*b*) and the service standards produced by the Quality Network for Community CAMHS (Barrett *et al*, 2012) and the Quality Network for In-patient CAMHS (Bacon *et al*, 2008). This updated College report aims to complement but not replicate the content of these documents.

RECOMMENDATION

- There are no significant differences in the types of mental health problems experienced by children across the UK jurisdictions. However, there are local differences in prevalence between communities relating to levels of population risk factors including deprivation. Children should not be disadvantaged as a consequence of where they live. Commissioners and service providers need to take into account the proportion of the population under 18 years old and relative levels of risk factors at a local level. Child and adolescent mental health services should be equitable across the UK and it is important that practitioners and policy makers share practice and learn from each other.

# Where we are now

## Defining CAMHS

The term CAMHS is a broad concept embracing all services that contribute to the mental healthcare of children and young people, whether provided by health, education or social services, or other agencies.

College Report CR137 (Royal College of Psychiatrists, 2006) referred to CAMHS delivery through reference to the system of four 'tiers' of service (NHS Health Advisory Service, 1995). The application and development of a four-tier CAMHS has created a common language for describing functions and planning of services across the UK. There has been a move away from this terminology in England and Wales to the descriptive terms 'universal', 'targeted' and 'specialist' (Department of Health, 2008). However, the tiers' terminology remains in use both in clinical services and at local and national policy level, and for that reason this report continues to make use of it to describe the functions of the stepped care approach inherent in CAMHS. The terminology is described in more detail in Appendix 1.

Tier 1 CAMHS includes those services whose primary function is not to provide specialist mental healthcare, but which have a general role in meeting the emotional and mental health needs of children and young people (e.g. general practice or schools, universal services).

Specialist CAMHS are services with a core remit and responsibility to provide specialist mental healthcare. Such services may be provided by mental health professionals working as part of Tier 2 or targeted services, for example for looked after children, or as part of the specialist service of a Tier 3 community multidisciplinary CAMHS team. Tier 4 services are generally provided at a regional or supra-regional level and include in-patient and highly specialist out-patient services. This guidance document focuses on Tier 2, 3 and 4 specialist CAMHS.

A child's or young person's journey may involve movement through tiers/levels of service in a stepped care approach, as their condition is recognised as more complex or as and when conditions are ameliorated. Some children and young people will receive services from more than one of the tiers at the same time.

## Caveats and coming to conclusions

In developing this guidance we made use of a variety of published and unpublished materials from professional and governmental sources.

We considered a number of ways of calculating need in our attempt to determine which services should be provided, to whom and by whom;

for example, the epidemiological approach, which takes account of the predicted number of children and young people who have mental health problems in a population and the resource required to deliver evidence-based treatments. An alternative is a comparative approach, which examines services in different parts of the country and compares levels of need and service provision. Finally, a corporate approach, which takes into account what local stakeholders want from a service, and which may or may not reflect estimated need taking into account the epidemiology.

A comprehensive CAMHS should provide a service for all the children and young people in a community who need one; therefore we recommend that an epidemiological approach should be used to estimate need and the required service capacity. Unfortunately, commissioners and planners of specialist CAMHS may not always be in a position to fund a truly comprehensive service. We hope that this guidance will help clarify what can realistically be provided by their existing specialist CAMHS.

This report provides guidance on the workforce, capacity and functions necessary to provide comprehensive specialist CAMHS to children and young people up to their 18th birthday. All figures in this paper are necessarily ballpark, based on the best evidence available. Figures are based on 100 000 total population rather than child population. When making use of the figures, services need to take into account the size of their local under-18-year-old population and other local demographic factors including deprivation indices, stability of population, ethnic mix and whether in a rural or inner-city area. The quality and range of services provided by partner agencies in health, social care, education and the third sector should also be taken into account.

Our recommendations are based on the epidemiology of mental disorders in childhood and adolescence, the likely referral fractions and the evidence from care pathways, National Institute for Health and Care Excellence (NICE) guidance and evidence-based practice tariffs taking into account severity and complexity. They include tariff workforce calculations for a wide range of conditions including eating disorders, early-onset psychosis, attention-deficit hyperactivity disorder (ADHD) and autism, personality disorders, psychosomatic disorders, moderate and severe depression and anxiety, as well as services for young people who self-harm, assertive outreach services, and crisis resolution and home treatment services.

This updated guidance is intended to be a living, evolving guide for service development across the UK jurisdictions and open to local interpretation based on careful needs assessment and priorities. It should be used wisely, with care and authority, to shape the best possible outcome-focused services for our children and young people.

# Evidence-based practice and outcome-focused CAMHS

## National clinical guidance

The National Institute for Health and Care Excellence provides evidence-based clinical guidelines for England and Wales. In Scotland, clinical guidelines are produced by the Scottish Intercollegiate Guidelines Network (SIGN). In Northern Ireland, the Department of Health, Social Services and Public Safety (DHSSPS) have a formal link with NICE, and all NICE guidance is reviewed after its publication and then endorsed for implementation. Additionally, the Northern Irish Guidelines and Audit Implementation Network (GAIN) is responsible for developing regional audit and publication of best-practice guidelines.

The National Institute for Health and Care Excellence has produced clinical guidance on many conditions relevant to specialist CAMHS (Appendix 2). However, in many areas of the country, specialist CAMHS do not have the capacity or skills to implement the guideline recommendations. For example, there are not enough trained therapists in some areas to carry out cognitive–behavioural therapy, recommended by NICE for the treatment of depression. In England, the introduction of the Children and Young People's Improving Access to Psychological Therapies Project (CYP-IAPT) has improved this situation (www.iapt.nhs.uk/cyp-iapt).

## Outcome-focused CAMHS

Across the UK there are moves to develop and use more clinically meaningful outcome indicators which measure the outcomes that are important to children, young people and their families, and which measure the health gain experienced rather than simply focusing on aspects of process such as whether a particular intervention has been delivered. Such outcome indicators incorporate the use of clinician-rated outcome measures (CROMS), patient-rated outcome measures (PROMS) and patient experience measures. These outcome measures should be used to inform clinical decisions.

In England, the Children and Young People's Health Outcomes Forum (Department of Health, 2012) recommended introducing the use of routine outcome measurement in CAMHS, building on the approach taken in the CYP-IAPT pilots (www.iapt.nhs.uk/cyp-iapt) and the work of the CAMHS

Outcomes Research Consortium (www.corc.uk.net). This followed broad consultation with children, young people and parents as well as with a wide range of stakeholders, and the recommendations have been encompassed in the English government report *Improving Children and Young People's Health Outcomes* (Department of Health, 2013).

In Northern Ireland, the high-level 10-year strategic framework *Our Children and Young People – Our Pledge* (Department of Health, Social Services and Public Safety, 2011) sets out an outcomes-focused, whole-child approach to public services and a commitment to developing preventive CAMHS.

The NHS Scotland Specialist CAMHS Balanced Scorecard (Healthcare Improvement Scotland, 2011) provides a common core set of clear performance indicators for use across all NHS boards in Scotland. Development of individual care plans is included explicitly within the Balanced Scorecard as one of the key development areas that will contribute to achieving good clinical outcomes and person-centred services.

In Wales, individual care and treatment planning is intrinsic to the 2010 mental health measures legislation (Welsh Government, 2010) and the implementation of the 2012 mental health strategy (Welsh Government, 2012*a*). It requires the establishment of a core minimum data-set and a focus on the routine monitoring of clinical outcomes, with a strong emphasis on PROMS across the age range.

RECOMMENDATIONS

- Child and adolescent mental health services need to provide evidence-based interventions. Estimates of the workforce capacity and skills required to meet the needs of a particular population should include analysis of what is needed to implement the recommendations of relevant evidence-based clinical guidelines.

  There is a need to monitor individual outcomes through the use of:

  - CROMS
  - PROMS
  - patient experience measures.

# Minority ethnic groups

Child and adolescent mental health service providers need to take account of diverse cultural, religious and social mores and how they might affect individual experiences. In the national survey of child and adolescent mental disorder (Meltzer *et al*, 2000), approximately 10% of White children, 12% of Black children, 8% of Pakistani and Bangladeshi children and 4% of Indian children were assessed as having a mental health problem. However, there is some evidence that there are lower rates of access to mental health services for children and young people from some ethnic minorities. Studies have shown a 'statistically significant bias in relation to the referral route to CAMHS and ethnicity of children' (Malek & Joughin, 2004), resulting in lower referral rates for children and young people from Black and minority ethnic groups when compared with their White peers.

Child and adolescent mental health services and service planners need to understand the profile and particular needs of the population they serve and develop appropriate models of service. In addition, language may present a barrier for parents and children from some minority ethnic groups. There are particular issues for the delivery of psychological treatments for parents, children and young people whose first language is not English. In these circumstances specialist training of interpreters and other staff is required (Malek & Joughin, 2004).

The Race Relations (Amendment) Act 2000 requires that all NHS services put into effect an equalities policy. This includes the ethnic monitoring of patients. This information should be used to adapt services to meet the diverse need of the population served. Recent research suggests that few existing CAMHS are structured to communicate with or meet the particular service needs of the diverse Black and minority ethnic populations in Britain. Particular difficulties in relation to access to services may be experienced by children, young people and their families from gypsy and traveller communities, asylum seekers and refugees.

Malek & Joughin (2004) make a number of recommendations concerning mental health services for children and young people from minority ethnic groups, including that services are developed and evaluated in collaboration with members of Black and minority ethnic groups.

RECOMMENDATION

- The needs of Black and minority ethnic groups must be taken into account in the planning and development of CAMHS. Particular attention must be paid to the accessibility of CAMHS for parents and children from minority ethnic backgrounds as well as asylum seekers and refugees.

# Calculating capacity of specialist CAMHS

Over the years, CAMHS have evolved, modernised and experienced increased demand. Changes in the nature of the work and focus of partner agencies (such as paediatrics, Social Services, education and youth justice), as well as increased understanding of the complex nature and risk factors for mental health problems in children and young people, have led to potential expansion of the remit of specialist CAMHS. After a period of expansion in the latter part of the past decade, we have now entered a period of relative austerity, where children's and young people's mental health problems are likely to increase but resources and investment are diminishing.

Service capacity is complex and fluid, and varies with fluctuations in demand. Lack of clarity about service capacity has often resulted in specialist CAMHS workers of all disciplines feeling that impossible demands are placed on them, with consequent stress and concerns about the quality of service provision. In turn, referrers, children, young people and their families may feel frustrated by what they perceive to be an inadequate response.

Over recent years many services have worked to introduce systems to manage demand and capacity. The most widely implemented system is the Choice and Partnership Approach (CAPA; www.capa.co.uk), developed by Ann York and Steve Kingsbury, two child psychiatrists in England (York & Kingsbury, 2009). CAPA is a clinical system that has been implemented by many CAMHS teams in the UK, Ireland, Australia, Belgium, Canada and New Zealand, and in adult mental health in New Zealand. It is informed by demand and capacity theory and has links with Lean Thinking (NHS Institute for Innovation and Improvement, www.institute.nhs.uk/building_capacity/general/lean_thinking.html), New Ways of Working (Morris & Nixon, 2009), CYP-IAPT and the You're Welcome standards (Department of Health, 2011*b*).

The CAPA service transformation model combines collaborative and participatory practice with children, young people and their parents/carers to enhance effectiveness, leadership, skills modelling and demand and capacity management. It improves the service provided to children and young people by:

- focusing on engagement, therapeutic alliance, choice, strengths, goals and care planning
- improving access by ensuring timely appointments that are fully booked (i.e. no waiting lists)
- ensuring patients are seen by a clinician with the right skills
- using outcome measures

- facilitating commissioning and provision of CAMHS by transparency of capacity and services.

Any service running CAPA will be able to demonstrate what they are providing and to whom. They will be able to provide data on their capacity and activity. Pathways will be clearer and it should be easier to make commissioning choices in light of the transparent processes.

# BENEFITS OF CAPA

- Evaluation shows that patients are seen quickly, feel listened to and involved.
- Waiting times and non-attenders are reduced when compared with CAMHS that have not implemented CAPA.
- Staff describe increased job satisfaction, higher morale and improved team working.

An independent evaluation of implementation of CAPA in England in 2009 recommended CAPA to the Department of Health and proposed that a national support system be put in place (National CAMHS Support Service & Mental Health Foundation, 2009). Although this national support system was not implemented, basic awareness of CAPA is included in the NHS England CYP-IAPT curriculum as one way to improve services.

Across the UK, services remain stretched and many continue to manage their response to increased demand or reduced capacity by varying eligibility and threshold criteria. The comprehensiveness of a service depends on the skills and capacity of the team and the model of working.

The reality is that it may be some time before CAMHS become more adequately resourced for demand, especially in the light of current cuts to funding. Development and expansion will inevitably take time and careful planning. Resources will always be limited and increased funds may not be forthcoming.

In these circumstances CAMHS should ensure that:

- clinical effectiveness is maximised by having streamlined processes for assessing and managing young people's health needs
- the capacity of the service is calculated so that choices can be made to expand capacity to meet demand or to restrict demand to fit capacity
- resources are prioritised to deliver interventions with a good evidence base.

Methodology on streamlining and process-mapping specialist CAMHS is described in Appendix 3.

Guidance on calculating capacity adjusted for number of sessions seen is described in Appendix 4.

# Guidance for provision of specialist CAMHS

## Generic community specialist CAMHS

### *A needs-based approach to calculating capacity*

Goodman (1997) describes the staffing needed for a service restricted to primarily psychiatric disorders for a total population of 250 000. Kelvin (2005) (Appendices 5 and 6) uses similar methods (based on best evidence-based practice, NICE guidelines and Office for National Statistics (ONS) epidemiology) to calculate staffing for a needs-based service delivering evidence-based practice from birth to the 17th birthday, using his locality as an exemplar of a typical locality population of 380 000. He uses a wider range of mental health problems than Goodman. Davey & Littlewood (1996) have described the capacity required to address different mental health problems (Appendix 7). The different staffing levels for the different services described by Davey & Littlewood, Goodman and Kelvin are summarised in Appendix 8.

Since the publication of CR137 (Royal College of Psychiatrists, 2006), Kelvin has calculated the evidence-based staffing for a needs-based specialist CAMHS extending to the 18th birthday (Lamb *et al*, 2008) (Appendix 9). He calculated that the staffing required to provide comprehensive Tier 3 CAMHS for children aged 0 to their 17th birthday for a general population of 100 000 is 16.0 whole time equivalent (WTE) for a non-teaching centre and 20.0 WTE for a teaching centre (Kelvin, 2005). The figures for a CAMHS extending an extra year to the 18th birthday is 19.3 WTE for a non-teaching centre and 24.2 WTE for a teaching centre. Both these sets of figures do not include youth offending or substance misuse work. According to Kelvin's calculations, the staffing required for specialist CAMHS (including youth offending and substance misuse) at age 16 and 17 years only for 100 000 general population is 12.0 WTE for a non-teaching centre and 15.3 WTE for a teaching centre (Appendix 9).

The higher staff ratios for the older age group reflect the increase in incidence of severe mental disorder and increase in comorbidity in this age group. (Please note: care must be taken in noting the difference in data between a service offering comprehensive care for substance misuse and youth offending and one that does not.)

A teaching service (i.e. a service attached to a university teaching hospital) will require time for training (e.g. medical students). In some cases, SIFT (Special Increment For Teaching) payment might be used to compensate for the shortfall in clinical time.

Overall, Kelvin's model and Davey & Littlewood's four-star service (Appendix 8) are probably closest to the current reality of service demanded of most existing Tier 2/3 specialist CAMHS, i.e. about 15.0–20.0 WTE per 100 000 total population. However, it is important to note that the Davey & Littlewood paper was published in 1996, at a time when the epidemiology of ADHD, autism spectrum disorders and bipolar disorder was much less defined, and before NICE guidance recommendations.

## *Calculating the capacity of an individual clinician*

An example of calculating the capacity of a WTE clinician adjusted for number of sessions seen is described in Appendix 4. If we assume that many cases will be treated in less than 1 year (many evidence-based treatments last about 20 sessions), then it follows from the capacity calculations (Appendix 4) that 1 WTE clinician can hold a key worker case-load of 40. However, if a clinician is working mainly with complex cases or those requiring more intensive treatments (e.g. children/young people with eating disorders), then the case-load will reduce. This may especially be the case for consultant child and adolescent psychiatrists and other senior clinicians, who may also have their capacity further reduced due to management responsibilities. For those clinicians who mainly practise brief therapies with less complex cases, case-load could be higher, although administration may increase due to faster turnover. The key determinant of the safe and effective clinical capacity of an individual clinician is an appropriate, mutually agreed job plan (Royal College of Psychiatrists, 2012*b*). The skills of the individual clinician (and the team) will define the interventions that can be delivered.

## *Calculating needs-based service capacity*

York (York & Kingsbury, 2009) and Kelvin (2005) agree that a 0–18th birthday service of 20.0 WTE per 100 000 general population is able on average to manage 40 new referrals per WTE clinician per year in an average UK population (i.e. in a locality of average deprivation indices where 20% of the general population is under 18 years old). If the percentage of under-18-year-olds or the deprivation indices in a local general population are higher or lower than the ONS average, then the capacity figures should be adjusted up or down slightly to address the higher or lower prevalence of child and adolescent mental disorder. For example, if your local area has 25% of the population under 18 years old, then add a factor of $5/20 \times 100 = 25\%$ to account for this variation.

Kelvin has developed a method which allocates a relative weighting to a borough deprivation impact on prevalence of mental disorder, by comparing how relatively far that borough is from the median ranking borough on index of deprivation (R. Kelvin, personal communication, 2013). The assumption is that for the median-ranked boroughs, the prevalence rates will be around the national average as recorded in the broad percentage data given by the ONS. The relative distance from the median deprivation index increases or decreases the prevalence according to whether the borough is more or less deprived. The ONS contains data enabling similar estimates by comparing inner cities with other areas and localities. Services could use this to estimate impact of deprivation in broad terms by comparing their demographics to those modelled in the ONS surveys.

## *Calculating the existing capacity of a service*

Capacity calculation models differ in levels of sophistication and accuracy from those based on audit and research to those based on guestimates and what 'feels' right. The most accurate are the NHS Modernisation Agency model (based on research in a variety of health sectors) and calculations based on service audit (York & Kingsbury, 2009). These models enable an individual service to calculate existing capacity and take into account variations in professional practice, skill mix, job plans and types of referrals. Service audit calculations of capacity do not take into account evidence-based practice, but merely describe the existing clinical time that is available. They provide clarity regarding how much time is available that can then be used in other ways. For example, existing clinical capacity may be calculated to allow assessment and treatment of ten cases of anorexia nervosa a year but no more. Commissioners can choose what to purchase for the capacity available in the service. In this way a service can calculate the impact of changing models of service delivery. For example, if a service was to offer most patients 6 sessions totalling 10 h (including administration), then 62 new cases per WTE per annum could be seen. For a 10-session treatment package, capacity per WTE can be calculated to reduce to 39 new cases a year (Appendix 4). This restriction on treatment may limit the use of evidence-based practice for patients who require more than very brief interventions, but may be chosen by commissioners as the best way of meeting overwhelming demand for a current specialist CAMHS.

It is important for planners and service providers to note that in a smaller multidisciplinary team that only has the capacity to see, for example, 25% of the new referrals that would be seen by an average comprehensive CAMHS, the new referrals seen will be skewed to an increase in severity, complexity and risk. The result is a change in the nature of the referral base and only the 'most severe' will be seen. In addition, a reduced multidisciplinary team tends to result in a move away from the effective delivery of evidence-based psychological interventions. This in turn is likely to lead to an increase in the proportion of medical time needed by the team – a smaller-than-recommended multidisciplinary team will likely require a disproportionately higher amount of psychiatrist time. As the capacity and sophistication of a community specialist CAMHS team decreases, there is a risk that the ability of the team to deliver effective interventions and/or manage complex cases is reduced, and that referrals for in-patient admissions increase.

The capacity implications for reduced WTE per specialist multi-disciplinary CAMHS team are shown in Table 1.

## *Skill mix required*

There is some professional guidance available for the number of each type of professional per basic 0- to 16-year-old service per 100 000 total population: if added together this calculates at 12.0 WTE (rounded) professionals per 100 000 population, but is restricted to psychiatry, psychology, nursing and psychotherapy (Wallace *et al*, 1997; British Psychological Society, 2001; Royal College of Psychiatrists, 2012*b*) (Appendices 5 and 6). The figures have been calculated without reference to the need for other professionals in a team.

**Table 1 Figures for an average general population (i.e. average deprivation indices) and 20% population under 18 years**

| Number of WTE clinicians in a team serving a 100 000 total population | Number of new referrals per WTE per year | Total maximum new referrals per team per year |
|---|---|---|
| 20.0 (equivalent four-star service) | 40 | 800 |
| 10.0 | <40 (referral base with a higher percentage of severe/complex cases, small MDT) | <400 |
| 5.0 (25% psychiatrist time) | <40 (referral base with much higher percentage of severe/ complex cases, smaller MDT) | <200 |

MDT, multidisciplinary team; WTE, whole time equivalent.
Based on Davey & Littlewood (1996) and Kelvin (2005).

Kelvin's recommendations for clinical skill mix and capacity are calculated for a needs-based service delivering evidence-based practice. The figures for 16- and 17-year-olds (Lamb *et al*, 2008) include WTE calculations for psychiatry, family therapy, dietician, psychologist and primary mental health worker (Appendix 9 gives details).

Recommendations for psychiatry input to a CAMHS team vary from 15% to 25%. These differences are related to the size of the service – i.e. the smaller the overall service capacity, the greater the ratio of psychiatry needed. Hence in the tiny 5.0 WTE service described in Davey & Littlewood's data, there is 25% psychiatry time. Appendix 7 gives further details.

There appears to be some agreement between the Goodman and Kelvin models – both recommend that 75% of the skills should be in behavioural, cognitive or systemic therapies. These skills are not specific to one profession.

RECOMMENDATIONS

- Clinician key worker case-load should average at 40 cases per WTE across the service, varying according to the type of cases held and the other responsibilities of the clinician that affect their job plan.
- One specialist CAMHS clinician seeing 40 new referrals per year has the capacity to then offer evidence-based treatments. The service must have enough WTE clinicians to offer the range of skill mix and the service level capacity to meet the comprehensive need. Seventy-five per cent of the skills of the multidisciplinary team should be in behavioural, cognitive or systemic therapies.
- The comprehensive need of a population is defined with reference to the epidemiology, the typology of mental ill health and the proportions of that epidemiology that are of a severity and complexity that require the evidence-based interventions available, including those outlined in NICE, SIGN and GAIN guidance.
- However, commissioners may prefer to choose to use existing capacity in specific ways, such as setting the number of new cases that are seen per year as higher than 40 per WTE, but limiting the number of treatment sessions available. If this is done, it needs to be recognised that some effective treatments cannot be provided, which is likely to result in poor outcomes for some children, young people and their families.

## Specialist CAMHS input into Tier 1 services

In many areas, targeted early intervention and prevention services comprising Tier 2/3 CAMHS clinicians (including primary mental health workers) have successfully ensured that only children and young people who require a specialist mental health service receive one, and have supported Tier 1 (universal) service professionals, particularly school teachers, in treating children and young people with mental health problems (Whitworth & Ball, 2004). There are a variety of models of working, including outreach, primary care-based and team-based (Hickey *et al*, 2008). Each are associated with different effects on referrals to specialist CAMHS (Macdonald *et al*, 2004). These specialist CAMHS clinicians provide a combination of consultation, short-term direct work and training, in various combinations. They may be employed as part of a CAMHS to work with Tier 1 services or may be part of a stand-alone primary mental health team (e.g. Mental Health (Wales) Measure; Welsh Government, 2010). We recommend that where such services are provided separately to Tier 3 CAMHS, they are closely linked to Tier 3 CAMHS to facilitate patient transition between the tiers and to ensure ready availability of professional supervision.

Recommendation

- Although all CAMHS professionals should be trained and have the ability to support, consult to and work with Tier 1 professionals, a more permanent and fruitful relationship may be developed by a primary mental health worker (Tier 2), employed by or operationally linked to and supervised within a specialist CAMHS.

## Specialist CAMHS for under 5-year-olds

It has now been established that both the rate of psychiatric disorder seen and the types of psychiatric disorder identified in under-5-year-olds are very similar to those found in older children, when developmental difficulties are taken into account (Angold & Egger, 2004; Skovgaard, 2010). Treatment options are also similar, although with more emphasis on psychological interventions and, in infants especially, concurrent management of maternal mental health (Durlak & Wells, 1998; Lung *et al*, 2009; Barlow *et al*, 2010; Hirshfeld-Becker *et al*, 2010; Kaplan & McCracken, 2012). However, between 2006 and 2009 (the last year when figures were available) there has been a reduction in 16.5% in the number of 0- to 4-year-old children reported in the England CAMHS mapping process (www.childrensmapping.org.uk).

In a survey of Royal College of Psychiatrists' members carried out by Foreman for the Faculty of Child and Adolescent Psychiatry (D. Foreman, personal communication, 2013), 65% of respondents reported working in services that see 0- to 4-year-old children – 14% in specialist services. Of the respondents working with this age group, 68% reported working in either a specialist local team or a specialist service provided by generic CAMHS. There was a split between the type of service available for 0- to 4-year-old children with intellectual disability and those without. Seventy-three per cent of respondents in specialist services and 93% in non-specialist CAMHS reported that their service saw no more than four 0- to 4-year-old children monthly. Seven per cent of services reported they used to see 0- to 4-year-

old children, but had stopped: the most common reason was insufficient resources after meeting other demands. Of the respondents working in non-specialist services, 58% seeing 0- to 4-year-old children reported that they were given low priority and low resourcing. It is not known whether these children are now being seen by other agencies outside the CAMHS mapping remit (e.g. community paediatrics) or whether they no longer access services for their mental healthcare. It is recommended that commissioners and planners of specialist CAMHS link with partner agencies in a given locality, to ensure the appropriate planning and provision of mental health services for the 0- to 4-year-old population.

RECOMMENDATIONS

- Specialist Tier 2/3 CAMHS for children up to their 17th birthday require 20.0 WTE clinicians per 100 000 total population (including 2.4 WTE psychiatrists and 5.0 WTE primary mental health workers/Tier 2 CAMHS workers) for a service that provides teaching and 16.0 WTE clinicians per 100 000 total population (2.0 WTE psychiatrists) for a non-teaching centre.
- Specialist Tier 2/3 CAMHS for 16- and 17-year-olds only requires 6.6 WTE clinicians (1.45 WTE psychiatrists) per 100 000 total population for a non-teaching service and 8.4 WTE (1.8 WTE psychiatrists) for a service that provides teaching. This equates to 19.3 WTE clinicians per 100 000 total population for a non-teaching CAMHS and 24.2 WTE for a teaching CAMHS up to the 18th birthday. This does not include capacity for severe intellectual disability, youth offending and substance misuse work.
- Liaison to youth offending teams and substance misuse services should nevertheless be regarded as a core function of comprehensive CAMHS provision in all areas, but require additional and significant workforce capacity.
- Skill mix in teams must ensure a range of clinical professionals who are able to deliver recommended evidence-based interventions – cognitive, behavioural, psychodynamic and systemic skills, complemented by psychiatric medical skills.
- It is recommended that commissioners and planners of specialist CAMHS link with partner agencies in a given locality, to ensure the appropriate planning and provision of mental health services for the 0- to 4-year-old population.
- Each profession must have access to uniprofessional supervision and training and, ideally, never be the only professional from that discipline in the team.

## *Problems seen by Tier 2/3 specialist CAMHS*

Goodman (1997), Davey & Littlewood (1996) and Kelvin (2005) have all described the types of mental health problems and age ranges that different types of services could see. These are summarised in Appendix 8. There is broad agreement that specialist CAMHS should provide assessment and treatment services for children and young people with a range of mental disorders and should include psychiatric disorder in the context of intellectual disability, autism spectrum disorder and substance misuse.

Joint work, liaison and consultation with other agencies should also be provided. Specialist CAMHS input to, for example, education, Social Services, paediatrics and youth justice should be included in individual job plans, regarded as specialist service provision and identified as such by providers and commissioners.

Broader services may be commissioned according to local need, including services for milder mental health problems such as behaviour and sleep problems in very young children. Such services may also be provided

by Tier 1 agencies, with input from primary mental health workers (e.g. health visitor-led behaviour clinics, voluntary sector services for families who are experiencing parental separation). Community child health/paediatric services may also provide services for children and young people with ADHD and younger children with behaviour problems.

In some areas, specialist child development teams may provide for those with intellectual disability or autism, with input from specialist CAMHS workers. Specialist CAMHS for children with mental health problems associated with intellectual disability are limited around the UK (see 'CAMHS for children with intellectual disability', pp. 30–31, for guidance).

Substance misuse services for young people are underdeveloped across the UK and are not routinely provided by specialist CAMHS. It is important that specialist CAMHS provide input to address the mental health needs of children and young people with substance misuse problems. We recommend that local needs assessment informs service planning and development in this area (see 'Substance misuse services', pp. 40–41, for guidance).

There is ongoing debate about the role of specialist CAMHS in the treatment of conduct disorder. Many CAMHS teams have not taken on this work. Early-onset conduct disorder is linked with violence and delinquency in adolescence, and offending and a wide range of mental disorders in adulthood. We now know that many children and young people with conduct disorder have a range of comorbidities – mental health disorders and/or intellectual disability – and that specialist services have better outcomes than non-specialist agencies. This supports the case for increased specialist CAMHS involvement, in order to link with relevant agencies to ensure the delivery of high-quality, evidence-based interventions. New NICE guidance has been published on the recognition, intervention and management of children and young people with antisocial behaviour and conduct disorders (National Institute for Health and Care Excellence, 2013).

Tier 2/3 specialist CAMHS should be able to provide assessment, treatment, liaison and consultation to other agencies for:

- psychosis
- affective disorder, including bipolar disorder
- ADHD
- autism spectrum disorder
- Tourette syndrome and complex tic disorders
- self-harm and suicide attempts
- eating disorders
- obsessive–compulsive disorder
- borderline personality disorder
- phobias and anxiety disorders
- mental health problems secondary to abusive experiences
- mental health problems associated with physical health problems and somatoform disorders.

The following mental health problems can also be provided for exclusively by specialist CAMHS, but in some areas may be provided for by

other agencies and specialists such as paediatricians, health visitors and multi-agency teams, with input by specialist CAMHS workers:

- services for under-5-year-olds with milder behaviour or sleep problems (e.g. health visitor-led sleep and behaviour clinics)
- mental health problems associated with intellectual disability (e.g. provided by multi-agency teams)
- autism spectrum disorder, ADHD, Tourette syndrome and tic disorders
- conduct disorder (e.g. youth offending teams and local authority services)
- adjustment disorder (e.g. voluntary sector services dealing with parental separation)
- elective mutism (e.g. speech and language therapy services)
- elimination problems (e.g. paediatric and health visitor services).

## Paediatric mental health liaison services

A significant proportion of paediatric patients have mental disorders (Meltzer *et al*, 2000; Hysing *et al*, 2007) and paediatricians play a significant role in the assessment of children with mental health problems. Studies have shown provision for these children and their families to be patchy (Woodgate & Garralda, 2006) and often unsatisfactory. The rate of mental health disorders is two to five times higher in children and young people with a physical health problem (Glazebrook *et al*, 2003). Children and young people with medically unexplained symptoms require considerable collaboration between CAMHS and the medical team (Weissblatt *et al*, 2011).

There is an increasing incidence of self-poisoning by young people (Wheeler *et al*, 2008), who require combined medical and mental health assessment and management in hospital.

Paediatricans may play a key role in providing services for children with ADHD, autism spectrum disorders and to a lesser extent tic disorders and Tourette syndrome, with specialist CAMHS only becoming involved in severe or complex cases, or where there is a significant mental health comorbidity. It is important these children have access to the multidisciplinary support and psychological therapies recommended for the assessment and management of complex comorbidity. These three broad groups of patients point to the need for close liaison between CAMHS and paediatric services.

The data support the need for robust arrangements with respect to paediatric mental health liaison (Kraemer, 2013). Some of the clinical challenges and the skills required for paediatric liaison are different from generic community CAMHS. Problems include medically unexplained symptoms, joint investigation of brain and metabolic disorders, and management of treatment non-adherence and the psychological effects on child and family of chronic/life-limiting disease (NHS Confederation, 2012). In addition, the differing professional and service cultures and organisation of paediatric services and CAMHS may pose a challenge.

Specialist centres and regional paediatric hospitals frequently provide a designated specialist CAMHS paediatric liaison service. In many areas of the UK outside of large paediatric departments and in relation to community child health services, paediatric liaison is provided by Tier 2/3 CAMHS. The

context and arrangements with respect to paediatric mental health liaison therefore differ greatly across the UK.

RECOMMENDATIONS

- Specialist CAMHS requires the commissioned capacity to provide appropriate specialist consultation and clinical services to paediatric staff and the children and their families in their care (Joint Commissioning Panel for Mental Health, 2013).
- Capacity recommendations are based on an international survey of paediatric liaison services by Hindley & Mohamed (2012).
- All acute hospitals that provide services for children should have easily accessible mental health services. Different clinical contexts need different models. An example of excellent practice is a co-located, multidisciplinary service jointly commissioned and managed with paediatrics. Where this does not exist, the locality specialist CAMHS need to work with their local paediatric service to develop shared protocols of liaison and joint care. Increased levels of staffing in highly specialist paediatric centres reflect greater complexity and higher rates of morbidity in these settings.
- District general hospital paediatric service per 20 beds (covering in-patients and out-patients):
  - 0.2 WTE consultant child and adolescent psychiatrist (usually as part of job plan for generic CAMHS work)
  - 0.2 WTE CAMHS practitioner/nurse
  - 1.0 WTE paediatric psychologist/psychotherapist.
- Designated paediatric liaison service in teaching hospital/regional centre/specialist children's hospital per 80 beds (covering in-patient and out-patients):
  - 1.0 WTE consultant child and adolescent psychiatrist (with psychiatric trainees)
  - 1.0 WTE specialist CAMHS practitioner
  - 3.0 WTE CAMHS practitioners (skill mix: systemic family therapy, mental health nursing and occupational therapy)
  - 8.0 WTE paediatric psychologists per 80 beds.
- Self-harm and other emergency services require additional resources.

# CAMHS FOR CHILDREN WITH INTELLECTUAL DISABILITY

Specialist CAMHS should provide assessment and treatment services for young people with psychiatric disorders in the context of intellectual disability up to their 18th birthday. A report by the Royal College of Psychiatrists (2010) describes the particular service needs of this population and outlines team capacity required to meet these needs. It is recommended that a community mental health team for children and young people with severe intellectual disability comprises 5.0–6.0 WTE professionals. It is recommended that the team includes psychiatrists, psychologists, nurses, speech therapists and occupational therapists, and draws on the wider CAMHS team for other specialist therapists (i.e. physiotherapists, music, art or play therapists). Where there is a high density of a particular minority ethnic group, the team might include bilingual workers. All staff should have appropriate training and experience in working with young people whose mental health problems are complicated by intellectual disabilities (Mental Health Foundation, 1997).

For psychiatry, recommendations are that a community service for severe intellectual disability requires a minimum of two 0.5 days* of consultant psychiatrist clinical time per 100 000 total population. The inclusion of young

*Correction, 11 December 2013. This was incorrectly reported as 'minimum of 2.5 days' in the version of this report published 19 November 2013.

people with mild intellectual disability will require a further three 0.5 days of clinical time. This does not include time for administration or training. Psychiatrists, whether they come from a background in child psychiatry or intellectual disability psychiatry should have skills in working with young people with intellectual disability. Time for additional training, peer support and supervision will be required. Similarly, nurses may be drawn from various backgrounds, including mental health, intellectual disability and child health.

RECOMMENDATIONS

- Tier 2/3 specialist CAMHS for young people with intellectual disability require a multidisciplinary team of 5.0–6.0 WTE per 100 000 total population. A CAMHS for young people with severe intellectual disability requires a minimum of two 0.5 days of clinical input by a consultant psychiatrist for 100 000 total population.
- A specialist CAMHS for children and young people with intellectual disability that also includes young people with mild intellectual disability requires a further three 0.5 days of clinical input by a consultant psychiatrist per 100 000 total population.
- This does not include time for administration or training.

# TIER 4 CAMHS AND ALTERNATIVES TO ADMISSION

Tier 4 CAMHS are very specialised services in residential, day-patient or out-patient settings for children and adolescents with severe and/or complex problems requiring a combination or intensity of interventions that cannot be provided by generic community specialist CAMHS. Tier 4 CAMHS should be commissioned on a subregional, regional or supra-regional basis in line with a national plan for service provision. Ideally, Tier 4 CAMHS should be provided to the smallest critical mass of the general population that is practical and be as geographically close as possible to the community served.

There is a need for coherent development and provision of comprehensive Tier 4 services, including in-patient beds and alternatives to admission. In Wales and Scotland, Tier 4 CAMHS is planned centrally. In England, NHS England is developing a national approach to Tier 4 CAMHS commissioning, which will include national child and adolescent forensic mental health services and other highly specialised provision. (Wales, Scotland and Northern Ireland use medium secure adolescent beds in England due to lack of these facilities in their own jurisdictions.)

Effective use of Tier 4 specialist CAMHS provision is dependent on the development of care pathways, led by local CAMHS. These need to be designed to ensure timely referral to Tier 4 CAMHS teams. For Tier 4 in-patient teams, this requires local involvement in the process of admission and in care planning during admission to facilitate transition back into the community with support from local services (Corbett & Evans, 2002). For the non-admitted care element such as intensive crisis/home treatment teams, this requires joint working with local referrers and clear provision of highly specialised functions. Tier 4 CAMHS must have the capacity to fulfil this role. They need to be developed in the context of both the local community CAMHS development and in the wider, multi-agency children's policy and service development agenda.

Tier 4 CAMHS are an integral part of overall CAMHS delivery. Community CAMHS cannot be considered safe or adequately resourced if they do not have guaranteed access to specialist in-patient facilities and/or a crisis/home treatment team offering a same-day response or admission to hospital for patients with symptoms of severe mental disorder.

The interface between Tier 4 CAMHS and adult mental health services (which in England include early intervention in psychosis services) is important and links should be established with adult in-patient and community mental health teams.

There are few indications for admission of a child or adolescent to an in-patient unit. In England and Wales, national service specifications have been developed for Tier 4 CAMHS. Key reasons for admission include:

- risk to self or others as a result of mental disorder that cannot be safely managed in the community
- intensity of treatment or specialist expertise not available in the community
- on rare occasions, assessment of mental health difficulties if this is not possible in the community
- child or adolescent's development is significantly impaired and interventions have been unsuccessful within Tier 3 CAMHS.

Current evidence suggests that an adolescent in-patient unit has a particular ability to provide stabilisation and rapid reduction of symptoms and risk. Studies of day-unit care demonstrate its flexibility to adapt to different disorders and circumstances. The following disorders are those most commonly treated in Tier 4 CAMHS in-patient units:

- psychotic disorder
- severe eating disorder
- severe affective disorder, including bipolar disorder
- emerging borderline personality disorder
- severe anxiety/emotional disorder
- severe obsessive–compulsive disorder
- other mental illnesses where physical, social and family variables operate to inhibit progress.

In addition, commissioners must ensure that specialist out-patient and in-patient expertise is available in the following circumstances:

- intellectual disability with comorbid mental illness and/or challenging behaviour
- complex neuropsychiatric problems
- sensory handicaps
- rare paediatric disorders
- head/brain injury
- severe/complex substance misuse problems and dual diagnosis, including detoxification services.

In addition, Tier 4 teams should be able to provide a second opinion service and an intensive community-based alternative to admission.

Comprehensive Tier 4 child and adolescent in-patient services must include both acute care provision – which is able to respond to emergency admissions of acutely disturbed or high-risk young people with a mental disorder – and longer-term treatment provision, including rehabilitation programmes for complex presentations requiring intensive treatment and support, but who cannot be managed by an intensive community treatment team. Both types of adolescent in-patient beds should be available for a given population. These are usually provided by the same service in order to ensure close working links between acute care and longer-term in-patient provision, and have the capacity and flexibility for young people to move between the two depending on their needs (Cotgrove *et al*, 2007).

Children's in-patient mental health units provide for children with the most complex difficulties and are a scarce NHS provision. Emergency mental health admissions for under-13-year-olds are not routinely offered in the UK. However, a recent study examining a sample of children routinely admitted as emergencies to a national mental health unit has indicated that emergency admission is an appropriate, clinically indicated and safe alternative to planned admission, and reduced inappropriate delays in children and families accessing in-patient CAMHS (Kyriakopoulos *et al*, 2013). The authors suggest that the wider adoption of this model may benefit those children and their families most in need of an intensive CAMHS care package.

UK national policies for CAMHS are focused on early intervention and prevention and on the NHS, schools, local authorities and general practitioners to work closely together. Surveys show that young people and families want CAMHS to be delivered flexibly and in a variety of settings including the home (Street, 2004; Garcia *et al*, 2007). In addition, young people should receive treatment in the least restrictive setting possible. It is important therefore that each Tier 4 CAMHS should ensure the provision of alternatives to hospital admission (see below).

## *Alternatives to hospital admission*

There are a range of models of care which provide alternatives to hospital admission, including day unit care, intensive community outreach, home treatment and crisis intervention services and enhanced paediatric/adolescent medical wards (McDougall *et al*, 2008; Shepperd *et al*, 2008; Kurtz, 2009; Lamb, 2009). Highly specialist and intensive outreach teams are frequently integrated and provided with Tier 4 CAMHS, others by extension from Tier 3 CAMHS.

Compared with the literature on the care of adults, there is comparatively little research into alternatives to in-patient care for young people requiring intensive treatment of acute or complex severe mental health problems. The available research evidence supports the use of alternatives to in-patient care for certain groups of young people.

Comparative studies indicate that models of assertive community treatment can be effective. They do not replace the need for in-patient care provision but can reduce bed use (prevent some admissions, reduce length of stay). Intensive community treatment works best for individuals with severe and complex needs when a range of treatment modalities are available, including access to specialised hospital care (Darwish *et al*, 2006; McDougall *et al*, 2008; Shepperd *et al*, 2008; Lamb, 2009).

There are Tier 4 CAMHS across the UK that have demonstrated how different models of intensive community treatment can address different

needs (McDougall *et al*, 2008). For example, a crisis resolution model to gatekeep and reduce unnecessary acute admissions, a home treatment model to offer more intensive planned interventions than normally available, or a specific team offering more intense treatment including out-of-hours availability (McDougall *et al*, 2010).

An intensive community treatment service can be hosted by healthcare services alone or through collaboration with Social Services and/or education services. It requires joint work between generic community and Tier 4 CAMHS and effective links with paediatrics and adult mental health services. To function effectively, it will require close links with and support from adequately resourced Tier 3 CAMHS and age-appropriate Tier 4 in-patient beds for children and adolescents. The Quality Network for Community CAMHS, hosted by the Royal College of Psychiatrists, has developed service standards for a CAMHS crisis/intensive response service (Barrett *et al*, 2012).

In summary, research evidence which is mostly qualitative and comprises descriptions of practice, suggests a need for a combination of a variety of complementary models of Tier 4 CAMHS intensive mental healthcare provision, including intensive outreach/home treatment services, crisis intervention teams and specialist out-patient services (e.g. for eating disorders, dialectical behaviour therapy), and age-appropriate day-patient and in-patient care – acute and planned treatment provision (Cotgrove *et al*, 2007; Shepperd *et al*, 2008; Lamb, 2009; McDougall *et al*, 2010). However, there is insufficient evidence to decide on which model is best for which young people and randomised controlled trials are needed. In addition, more evidence is needed on the therapeutic content of interventions delivered within the models of care.

## *Capacity of services providing alternatives to admission*

### Crisis/outreach and intensive community treatment teams

#### Recommendations

- Highly specialist community Tier 4 services should be provided in addition to in-patient beds as an alternative to hospital admission for young people in crisis, and as an alternative to in-patient treatment for suitable cases (e.g. severe self-harm, eating disorders). Examples include Tier 4 CAMHS crisis response teams and home treatment services.
- There are a number of different models for intensive community treatment teams. Staffing levels will depend on whether crisis and out-of-hours services are provided in addition to intensive home treatment. In order to allow crisis response and between three and seven home visits a week per young person, most propose a maximum case-load of between five and ten cases per WTE clinician. This will be lower for a team covering a large geographical area. Local demographics and geography will affect capacity/need. Skill mix will need to address the case-mix, for example dietetics in addition to psychiatry, nursing, psychology and support workers.

### Day units

#### Recommendations

Guidance staffing recommendation for day unit provision based on benchmarking of stand-alone day services in the UK.

5.5 WTE staff per 100 000 total population.

Clinical nurse specialist/community psychiatric nurse: 1.0 WTE
Specialist teacher: 1.0 WTE
Consultant psychiatrist: 1.0 WTE
Clinical psychologist: 1.0 WTE
Occupational therapist: 1.0 WTE
Creative therapies (art/drama therapy), speech and language therapy, physiotherapy and dietician: access to regular designated sessions

## *Tier 4 CAMHS in-patient units*

There are a number of different models of child and adolescent in-patient services and the advantages and disadvantages of the generic *v*. specialist in-patient unit are frequently debated. Generic units cater for all types of mental health disorder, whereas specialist units may take only one type of problem (e.g. eating disorders).

The exact nature of staffing required for a given in-patient unit will depend on the patient group and clinical context. A children's unit for under-12-year-olds may require less consultant psychiatrist time than a generic adolescent admission ward. An adolescent psychiatric intensive care unit is likely to require more psychiatry time than a generic adolescent admission ward. Staffing requirements will also be influenced by the skill mix and experience of the multidisciplinary team, the task demands of a particular shift, case dependency/acuity and case mix.

Standards for in-patient units have been set by the Quality Network for In-patient CAMHS (Bacon *et al*, 2008). In addition, in England, NHS England is developing a standard service specification for Tier 4 CAMHS in-patient provision.

## *Recommendations for number of beds*

The number of in-patient beds required for a given population should be based on a comprehensive, multi-agency needs assessment. This must take into account the known prevalence and incidence of mental disorders as well as geography and local demographics including measures such as the child poverty index and multiple deprivation index for the area concerned. Based on work by Kurtz (2009) and the National In-patient Child and Adolescent Psychiatry Study (NICAPS) (O'Herlihy *et al*, 2001), it is recognised that about 24–40 CAMHS beds are required per 1 million total population up to the age of 18. The Royal College of Psychiatrists recommends 3–4 beds per 1 million total population for young people with severe intellectual disability and 2–3 for those with moderate intellectual disability (Royal College of Psychiatrists, 2010), and 1 low secure bed per 1 million total population (Kurtz, 2009).

The number of beds also needs to take into account the availability of intensive non-bed-based services designed to provide an alternative to admission.

The recognised optimal maximum number of beds for an adolescent in-patient unit is 10–12 (Box 1). This should ensure that the unit is conducive to treatment and is clinically and financially viable. There is no minimum number of beds, but it is difficult for a stand-alone unit to be financially viable below 6–7 beds owing to the irreducible minimum number of staff required to run the unit and provide clinical input.

**Box 1** Guidance staffing levels for 12-bedded CAMHS Tier 4 in-patient unit

The exact nature of staffing required for a given in-patient unit will depend on the patient group and clinical context (e.g. children's unit, generic adolescent admission ward, acute admission ward, adolescent psychiatric intensive care unit). It is influenced by skill mix, task demands of a particular shift, case dependency/acuity and case-mix.

*Ward nursing staff/patient shift ratios*

- High-dependency/high-acuity case: 1:1 to 3:1 for the most highly disturbed
- Medium dependency case (10-minute checks, intensive support at meal-times): 1:2
- General observation/maintenance of safety/therapeutic programme times: 1:3
- Minimum of two registered mental health nurses with relevant child and adolescent experience (Grade 5–8a) per day shift; one at night – this will need to increase depending on numbers of in-patients and acuity of case mix on shift; some children's (<12 years) services might have a general trained nurse with relevant experience as one of the registered nurses

*Ward manager*: 1.0 WTE Band 7+ (or equivalent) registered mental health nurse

*Consultant psychiatrist*: 1.0 WTE (which may be provided by two clinicians in a split post). The number of consultant psychiatrist sessions needed will be influenced by the patient group and clinical context, for example a children's (<12 years) unit may require less, an adolescent psychiatric intensive care unit more consultant psychiatrist time.

*Non-consultant psychiatrist (staff grade/trainee)*: 1.0 WTE (4 h per patient/week)

*Clinical psychologist*: 1.0 WTE

*Social work*: 0.5–1.0 WTE

*Family therapy*: 0.5 WTE as a minimum. However, the task demands with respect to delivery of evidence-based interventions to different groups (e.g. younger children, children and young people with eating disorders) will increase the staffing requirement.

*Therapists trained in psychological interventions with children and young people*: access to regular designated sessions of cognitive–behavioural therapy, dialectical behaviour therapy, psychodynamic psychotherapy, interpersonal therapy, eye movement desensitisation and reprocessing, etc.

*Occupational therapy*: 0.5 WTE

*Dietician*: Formal arrangements to ensure access to regular designated sessions

*Physiotherapy, speech and language therapy*: Formal arrangements to ensure access when required

*Creative therapies (art/drama/music therapy)*: Arrangements to ensure access

*Teachers (including for specialist subjects)*: 1 WTE to 4 students/lesson. Ratio of 1:1 frequently necessary

*Pharmacist*: Regular input to staff

*Duty doctor*: Identified duty doctor to attend unit, including out of hours

There is little guidance on bed numbers for the pre-adolescent group. Results from the CHYPIE study (Royal College of Psychiatrists, 2006) demonstrated clear deficits in in-patient provision and other approaches to managing intensive psychiatric care for children and adolescents with complex needs. The pre-adolescent group admitted to children's units had different problems from young people admitted to adolescent units. The pre-adolescent group had less support from community CAMHS leading up to admission and were a complex group with multiple diagnoses and difficulties. Goodman (1997) makes tentative recommendations of 1 bed for 0- to 15-year-olds per total population of 250 000 if there is good local education and social services provision. Calculations of bed need for 0- to 13-year-olds, based on data from the NICAPS and CHYPIE studies, suggest a total requirement of about 200 beds for England and Wales. This equates to approximately 1 bed for 0- to 13-year-olds per total population of 265 000. (See Appendix 10 for examples of calculations for numbers of in-patient beds for children and adolescents.)

If an in-patient unit is to ensure availability for emergency beds, the recommended bed occupancy is a maximum average of 85%.

RECOMMENDATIONS

- 24–40 in-patient CAMHS beds per 1 million total population are required to provide mental health services for children and adolescents up to age 18 with severe mental health problems that require emergency or very intensive treatments. The number of in-patient beds required for a given population must be based on a comprehensive needs assessment.
- Pre-adolescent in-patient services should be age appropriate and in addition to adolescent services. Approximately 1 bed for 0- to 13-year-olds per 265 000 total population is required.
- Bed occupancy should be at a maximum average of 85% to ensure availability of emergency beds.
- 3–4 beds per 1 million total population for young people with severe intellectual disability.
- 2–3 beds per 1 million general population for young people with moderate intellectual disability.

## *CAMHS IN-PATIENT UNITS FOR CHILDREN WITH INTELLECTUAL DISABILITY*

The general-purpose Tier 4 CAMHS in-patient unit should be able to work with children and young people with mild intellectual disability. Younger children with mild and moderate intellectual disability are often admitted to the nearest children's Tier 4 CAMHS in-patient unit. Young children with severe intellectual disability, and adolescents with moderate and severe intellectual disability, require specialist in-patient provision.

There are currently very few units specific to the needs of young people who have intellectual disability in the UK (three NHS units in Newcastle upon Tyne, Solihull and Sheffield, and a similar number of dedicated units in the private sector).

The following factors influence whether a specific learning disability unit is sought.

- *Complex comorbidities*. The majority of children also have autism and many also have ADHD, epilepsy, schizophrenia, depression, etc.
- *The degree of disability*. Young people with severe intellectual disability have high personal care needs, i.e. need help washing, dressing and

may be doubly incontinent. They may demonstrate behaviours such as stripping, faecal smearing, regurgitation and sexually inappropriate behaviours that are hard to manage on a mainstream unit. This requires much higher staffing levels than on a mainstream CAMHS ward.

- *Aggressive and self-injurious behaviours*. The majority of children will have demonstrated aggression and/or self-injury prior to admission and which has often precipitated the admission. All staff on learning disability units must be trained in nationally recognised de-escalation and safe restraint strategies. Most units are situated within a larger hospital site so that back-up from other staff is available in a crisis. The majority of children are detained under the Mental Health Act 1983.
- *Communication difficulties*. Most children have communication difficulties which may underlie behavioural problems. Many have significant sensory issues relating to their autism. As well as nurses (often learning disability trained) and clinical psychology and psychiatry staff, it is essential to have a speech and language therapist and an occupational therapist as part of the team.
- *Greater length of assessment/treatment*. Assessment and treatment almost inevitably takes longer than an average admission to a mainstream CAMHS Tier 4 in-patient unit.

RECOMMENDATIONS

- 3–4 beds per 1 million total population for children with severe intellectual disability.
- 2–3 beds per 1 million general population for children with moderate intellectual disability.

# FORENSIC CAMHS

Highly specialist CAMHS provision should be available for young people under 18 years (whether within or outside the criminal justice system) who have mental health problems and/or intellectual disability, and who present a high risk of harm to others. Forensic CAMHS supplements and enhances community CAMHS and other Tier 4 in-patient and community provision. Forensic CAMHS consists of in-patient medium secure services and a growing number of community forensic CAMHS. Some low secure accommodation exists, but this is as yet not clearly integrated into the forensic CAMHS care pathway.

## *IN-PATIENT FORENSIC CAMHS*

In-patient forensic CAMHS provision is nationally commissioned by NHS England. It is available to all young people in England who meet referral criteria as part of wider NHS provision. There are six medium secure adolescent units (Newcastle, Manchester, Birmingham, London (two) and Southampton), which have a total of about 80 beds for males and females. The units form a national network for referrals of young people with mental health difficulties requiring transfer on mental health grounds

from custodial/secure settings or on grounds of high-risk behaviours (principally harm to others) and mental health difficulties from other residential and community settings. In addition, two units (Newcastle and Northampton) are nationally commissioned within the national network for England to provide ten in-patient adolescent forensic learning disability beds. All nationally commissioned secure treatment units are commissioned specifically to provide in-patient care. Only one national provider (Newcastle) is also currently separately regionally commissioned to provide a dedicated regional service; others have *ad hoc* arrangements for some input to their surrounding areas, but this is variable.

There is no current dedicated forensic CAMHS in-patient provision in Wales or Northern Ireland. Consequently, commissioners in these jurisdictions commission beds principally with independent providers in England. This is also the case for Scotland, except that beds for young people are spot-purchased when possible from the Newcastle nationally commissioned secure treatment unit services. In addition to the above, there are a number of independent sector providers in England who offer secure in-patient care for young people.

All units within the nationally commissioned CAMHS in-patient network are highly staffed with multidisciplinary teams who have specific expertise and training in child and adolescent and forensic mental health. They have high-quality facilities reflecting the enhanced needs of young people detained in a secure environment, often at some distance from home for significant periods of time.

RECOMMENDATION

- 1 secure bed per 1 million total population (Kurtz, 2009). This is considered an underestimate. There are currently approximately 240 secure beds in England, catering for mental health and intellectual disability for young people from England, Scotland, Wales, Northern Ireland and Ireland.

## *COMMUNITY FORENSIC CAMHS*

Highly specialist forensic CAMHS teams have developed over the past 10 years. Some teams in England have received positive Department of Health-funded external evaluations (Thames Valley, Hampshire and Isle of Wight), leading to regional specialist commissioning funding. This model of provision is now well validated and supported by the Department of Health; however, commissioning arrangements in England, Wales and Scotland remain heterogeneous, with large areas having no access to such services (for mapping of such services and a Department of Health-recommended service model, see Dent *et al*, 2012). No dedicated services of this kind exist in Northern Ireland. The Department of Health recommends the development of small, cost-effective, specialist teams which can respond to the needs of young people from their catchment area (or to professionals working with them) irrespective of the young person's current location. Such teams also gatekeep and support entry and discharge from specialist in-patient settings.

In Wales there is a tiered system of forensic CAMHS provision, partially funded by central designated monies. Nurses are embedded in the locality youth offending teams and link with local specialist CAMHS clinicians with a Tier 3 function, including a senior consultant clinician known as the 'mental

health advisor to the youth offending team'. These clinicians work closely with the all-Wales Tier 4 forensic CAMHS team, which is centrally funded and provides consultation, assessment and advice on a national level.

Community forensic CAMHS provision typically offers a range of services including clinical consultation and specialist assessment and interventions for young people with very complex needs across a variety of secure, custodial, residential and community settings. There is a high proportion of looked after children and young people, and liaison and joint working between forensic CAMHS, social care and youth justice agencies is key.

In addition to their clinical role, these specialist services are expected to undertake a range of strategic, service development and training functions. Where they exist, some of these Tier 4 services have emerged as an integral part of CAMHS provision, where they undertake a range of specialist functions. They therefore supplement, coordinate and support rather than replicate local Tier 2, 3 and 4 CAMHS and provision from other agencies that may be available to high-risk young people. As part of comprehensive CAMHS, the services focus on the maintenance of strong links with youth offending teams and associated CAMHS/youth offending team liaison workers, and with custodial and other secure settings. In addition, they establish good working relationships with a variety of other agencies, in particular social care services, who may be involved with young people with highly concerning behaviours and mental health needs who are not in the youth justice system. Regional forensic CAMHS also form a crucial link between local services and nationally commissioned in-patient adolescent forensic in-patient units for young people with mental health and intellectual disabilities.

Recommendations

- Highly specialist forensic CAMHS provision should be available as an integral component of comprehensive CAMHS provision. This should include access to specialist secure in-patient care and the extension of community forensic CAMHS at a regional level to cover all areas.
- A more coherent care pathway for forensic CAMHS overall is likely to result in better service outcomes for young people and more cost-effective coordinated use of existing CAMHS and other provision.

## Substance misuse services

It is important that there is an integrated plan in each locality/region to meet the needs of young people with severe substance misuse problems. These young people generally have multiple and complex difficulties. In many cases their needs can be met by substance misuse expertise embedded in CAMHS. In others, day-care provision or in-patient treatment may be needed, with access to expertise in detoxification and treatment of alcohol and/or drug addiction alongside expertise in treatment of comorbid problems such as psychosis or depression. Specialist skills in substance misuse and detoxification are development needs within most current specialist CAMHS.

The UK 'has amongst the highest rates of young people's cannabis use and binge drinking in Europe' (HM Government, 2010: p. 6). The impact of

substance misuse (particularly alcohol) on mental health, well-being and social functioning is significant, and the indirect impact on violence, accidents and suicides is responsible for considerable injury and occasionally death.

Young people with substance misuse problems require a response from a wide range of medical and psychosocial professionals and services. A sensitive, non-judgemental and collaborative approach is needed to identify risk, assess need and offer help and support. Recently developed practice standards for young people with substance misuse problems (Gilvarry *et al*, 2012) stress the importance of developing trusting relationships, involving young people's families or carers, and working with practitioners who are already engaged with the young person.

Not all young people who experiment with substances develop problem substance misuse. All young people should receive universal prevention services through health promotion and education initiatives. Some require targeted interventions, and a smaller number need more comprehensive, multi-agency interventions, including access to Tier 4 CAMHS beds on occasion. Staff providing universal and targeted services should be trained to identify young people at risk and to carry out brief interventions if indicated or quickly access others that can do so. In addition, staff require access to guidance and training from specialist services.

For young people requiring specialist intervention, integrated care and treatment planning is key to ensure that social, educational, mental and physical health factors and personal circumstances are taken into account. An assertive outreach model in partnership with other agencies is recommended to engage young people requiring specialist substance misuse services (Gilvarry *et al*, 2012).

RECOMMENDATION

- Child and adolescent mental health service planners should develop a regional model for substance misuse services embedded within existing specialist CAMHS. The model should be implemented at locality level and work collaboratively across health (including accident and emergency), social care, family, housing, youth justice, education and employment services. Provision should also be made for access to specialist in-patient care. Substance misuse services should be planned and provided in a way that effectively addresses interrelated issues.

# OUT-OF-HOURS CAMHS PROVISION

All children and young people with mental health disorders must have access to care out of the normal working daytime hours. There is currently little evidence on the demand or effectiveness of out-of-hours specialist CAMHS provision. Availability of out-of-hours advice is far from universal due to either lack of adequate resources and workforce (Royal College of Psychiatrists, 2002) or a reluctance by staff to provide this. Child and adolescent psychiatrists, child mental health nurses, general psychiatrists, paediatricians and other professionals share concern about the availability of on-call services for children and adolescents with mental health disorders.

In many areas the CAMHS out-of-hours service is provided by the consultant child and adolescent psychiatrist. In services with trainee child and adolescent psychiatrists, trainees may provide the first on-call cover, with supervision from CAMHS consultant psychiatrists. However, in most

areas of the UK, trainees are not available and owing to the low number of CAMHS psychiatrists, it is neither possible nor appropriate for CAMHS to provide a first on-call child psychiatrist service. In some areas, telephone consultation is made available to paediatric and adult mental health clinicians, and the first on-call is provided by an adult psychiatry trainee with supervision from the CAMHS consultant psychiatrist. In these cases, joint protocols are agreed between the relevant professionals to ensure that children and adolescents receive the best possible care. In some areas where there are no psychiatric trainees and a paucity of consultant psychiatrists, other senior members of the multidisciplinary team (e.g. psychologists, nurses, social workers) contribute to out-of-hours cover. In other areas, the service may be provided by adult mental health crisis resolution and home treatment teams, with access to telephone advice from CAMHS professionals.

In areas where the capacity of CAMHS psychiatrists to provide comprehensive out-of-hours cover is limited, it is vital that planning takes place between commissioners, CAMHS, adult mental health services and paediatrics in order to explore creative solutions, allowing for the possibility of assessment and consideration for admission in a crisis. In England and Wales, this will include young people taken to a place of safety under Section 136 of the Mental Health Act 1983.

Recommendation

- A CAMHS opinion should be available 24 h a day, 7 days a week. Joint protocols must be agreed between the relevant professionals including adult mental health services – particularly in areas where there are no trainee child psychiatrists – to ensure that children and adolescents receive the best possible care at all times. Mental health professionals should not be on call out of hours more than 1 in 4 days, unless such work is part of their weekly shift work.

## Transitions and youth mental health services

Transitions take place at the interface between services and at the interface of different parts or branches of a service. It is important that pathways of care are defined from primary care into and out of specialist CAMHS, between the tiers of specialist CAMHS and between CAMHS and adult mental health services.

Particular attention should be given to the transition between community specialist CAMHS and Tier 4 CAMHS in-patient units. The days following discharge from an in-patient psychiatric unit are a time of increased risk, and close collaboration and transition planning between Tier 3 CAMHS, the young person and their family/carers and Tier 4 CAMHS is vital. In England, this process is structured by the implementation of the care programme approach, and in Wales by the care and treatment planning process of the Mental Health (Wales) Measure (Welsh Government, 2010).

It is clear from available research that significant improvements are required across the UK jurisdictions in the implementation of high-quality policy and practice around transition from CAMHS to adult mental health services (Muñoz-Salomando *et al*, 2010; Brodie *et al*, 2011; Birchwood & Singh, 2013; Lamb & Murphy, 2013). The challenges and difficulties of this transition for young people, their families and the clinicians involved in

their care are complex and well documented (Lamb *et al*, 2008; Singh *et al*, 2010). Despite the fact that adolescents and young adults have the highest incidence and prevalence of mental illness across the lifespan, and bear a disproportionate share of the burden of disease associated with mental disorder, there is evidence that their access to mental health services is the poorest of all age groups (McGorry *et al*, 2013).

Joint transition protocols must be agreed and implemented between CAMHS and adult services. Transitions of care must be planned and involve the young person and their family. In England, teams will apply the care programme approach for more complex cases requiring Tier 3 and Tier 4 CAMHS and transition to adult services. In Wales, the care and treatment planning process of the Mental Health (Wales) Measure performs a similar role. The problem of transition of young people who meet criteria of current adult services should be solved by improved working between current service providers. However, the problem of how to improve the experiences of young people with transition trajectories that do not meet current eligibility criteria for adult services is challenging for our current service structures. This includes young people with neurodevelopmental problems, personality disorders and moderate/severe anxiety and affective disorders (Meier, 2011).

Different services have employed different solutions to improve the process of transition and quality of care received by young people, and policy and commissioning guidance includes examples of good practice (Lamb *et al*, 2008; Appleton & Pugh, 2011; Joint Commissioning Panel for Mental Health, 2012). In England, the introduction of early intervention in psychosis services has played an important part in improving care to the transition age group. Some clinicians and researchers argue that service redesign is required to improve the accessibility and the range of mental health interventions available to young people, and to avoid problematic and damaging transitions at critical points in their development. There is increasing evidence of the effectiveness of youth mental health services in engaging and providing interventions to older adolescents and young adults up to 25 years (McGorry, 2007; McGorry *et al*, 2013). Some areas in England have established youth mental health services which cross traditional age boundaries in order to provide comprehensive mental health services for older adolescents and young adults (e.g. Youthspace in Birmingham, www.youthspace.me).

In the UK, it is vital to involve both adult mental health services and CAMHS in service developments for 16- to 25-year-olds (as well as young people themselves), and to ensure that the introduction of new youth services does not result in raised eligibility criteria for 16- to 18-year-olds or reduction in services for younger children (Lamb & Murphy, 2013). In all circumstances, if we are to improve transitions and provide interventions to meet the needs of young people not currently eligible for adult services, new resources and different commissioning structures will be required. In addition, it is important for services to ensure effective collaborative links with primary care and other agencies working with young people.

### Recommendations

- Transition of care must involve the young person and their family/carers, and close working between the professionals involved. These principles are important in the transition back to primary care/general practitioner from specialist CAMHS, and in particular in the transition from Tier 4 in-patient units back to Tier 3 CAMHS.

- All clinicians working in mental health services must meet and agree protocols to ensure that when a young person becomes an adult at 18 years or requires a different tier or branch of specialist CAMHS, the transition is planned well in advance with minimal disruption to the care that best meets the young person's needs.
- Consideration should be given to the development of models of youth mental health services that bridge the traditional age boundary. Services must ensure that where this happens, it does not result in raised eligibility criteria for 16- to 18-year-olds or reduction of services for younger children.

## Patient and carer involvement

Patient views, collated as part of developing the National Service Framework for Children, Young People and Maternity Services in England, support the need for CAMHS to be able to provide a range of flexible services (Department of Health & Department for Education and Skills, 2004). There were clear requests for CAMHS to be provided in a variety of settings, including in the home. The quality of the relationship between the clinician and the young person/family was seen by patients and families as crucial to service satisfaction and effectiveness. In particular, the clinician needed to be consistent, reliable and able to provide continuity of care and ongoing support. The findings are supported by the work of YoungMinds (YoungMinds, 2011) and others (e.g. Funky Dragon, www.funkydragon.org) who have sought the views of young people and their families.

It is recommended that services are developed and evaluated in collaboration with children, young people and their families. However, currently patient and carer views on the running of services are sought inconsistently. In England, CYP-IAPT sets a core value of including young people in the design and delivery of services. This is also an expectation of the respective mental health strategies in Scotland (Scottish Government, 2012)and Wales (Welsh Government, 2012*a*).

For patient and carer involvement to be effective, a member of staff needs to be allocated to ensure that not only are patient and carer views of the service they received routinely sought, but also that patients and carers are consulted on the style of service provision. For this work to be carried out effectively, designated sessions with a member of staff are required. Methods of involving young people and their families in CAMHS are described by YoungMinds and Funky Dragon, and discussed by Barrett (2010).

Patient and carer needs can only be met if clinicians have sufficient time to do their job properly. This requires services to be adequately resourced, with a good match between workload and capacity.

### Recommendation

- Child and adolescent mental health services should ensure effective involvement of young people and their families in the design and delivery of services and in the implementation of their care.

# Commissioning

There are different commissioning structures across the UK jurisdictions. CAMHS professionals have an important role in influencing the commissioning and provider process. Clinicians need to ensure that they participate fully in their children and young people's local strategic partnerships or the equivalent, and make a contribution to the development of the local CAMHS strategy. Active involvement offers the opportunity for discussion of local CAMHS priorities and may prevent the focus of commissioning being decided by only one of the commissioning partners. Children's commissioners may feel inexperienced in dealing with the complexity of child mental health. CAMHS professionals should work in partnership with commissioners/planners in order to maximise the success of service development and design. It is vital to gain patients' opinions about the service and potential improvements. Their views are crucial and can help to create innovative service solutions.

In England, the guidance for commissioners of child and adolescent mental health services (Joint Commissioning Panel for Mental Health, 2012) is key to successful commissioning of CAMHS. In addition, the proposed CAMHS payment by results framework (Royal College of Psychiatrists, 2012*a*) has the potential to serve service provision. Tier 4 CAMHS is commissioned by NHS England.

In Northern Ireland, the Department of Health, Social Services and Public Safety publish service frameworks, and CAMHS is then commissioned accordingly by the Health and Social Care Board, although associated local commissioning groups are expected to have increasing influence in the future. The recent publication of *Child and Adolescent Mental Health Services: A Service Model* (Department of Health, Social Services and Public Safety, 2012) outlines a stepped care approach as the model for the commissioning and delivery of CAMHS. An implementation plan will be developed and the Health and Social Care Board trusts' performance managed accordingly.

In Scotland, the generic integrated care pathways for CAMHS comprises standards set out by the Scottish government for quality provision of specialist CAMHS (Healthcare Improvement Scotland, 2011).

In Wales, a centralised specialist CAMHS planning network will guide the local health boards to ensure the provision of sustainable specialist CAMHS across the tiers in line with the national CAMHS planning guidance (Welsh Government, 2013) and the service delivery plan of *Together for Mental Health* (Welsh Government, 2012*b*). In addition, there is consideration at a national level of ways in which services for older adolescents and young adults might be configured differently to combine the resources and skills of CAMHS and adult mental health services.

In all UK jurisdictions, commissioners and providers are focusing on improving outcomes for children, young people and their families. This requires clinician capacity to engage in the measurement and recording of CROMS and PROMS, including goal-based outcomes reported by the young person and their family, overall patient experience and disorder-specific outcomes (see 'Outcome-focused CAMHS', pp. 17–18).

# Teaching and training

Teaching and training are essential to the future delivery of any service, and essential to the maintenance and continued improvement of current services (Berwick, 2013). Teaching, training and supervision are an important part of the work of specialist CAMHS practitioners. In some cases, SIFT payment might be used to compensate for the shortfall in clinical time. All professionals require time to ensure they keep up to date in the skills required for their roles, and senior clinicians need time to mentor and train others including doctors in training, students and members of the multidisciplinary team. Excellent knowledge and therapeutic skills are required to pursue a better understanding of the problems presented by young people and their families, and to deliver effective treatments.

# Research and development

There is an urgent need to establish more research on mental disorders and interventions in children and adolescents, in order to answer the questions posed by gaps in current evidence. As a community of clinicians, researchers and research-active clinicians, we wish to see an approach to research that ensures that the studies undertaken inform practice across all tiers of CAMHS, across transitions from childhood into adulthood, and across multi-agency services. Research must embrace the views and experience of patients and carers with their active involvement throughout the process, identifying what children and families define and experience as valued outcomes from service involvement and interventions.

In studying the evidence it is clear that there is an urgent need for research looking at:

- the relationship between existing specialist CAMHS skill mix, demand, capacity, waiting times and clinical outcomes
- the ability of specialist CAMHS to deliver evidence-based interventions in line with, for example, NICE and SIGN
- demand and capacity guidance for Tiers 1 and 4, including assertive outreach and day services
- effectiveness and efficiency of different models of service delivery at all tiers
- the relationship between capacity at all four tiers of service and the effect on demand for specialist CAMHS
- the effectiveness of alternative models of care for young people with chronic disorders such as ADHD
- the outcomes of young people with mental health problems who are never seen by specialist CAMHS due to non-referral or non-engagement
- the effectiveness of alternative models of care for older adolescents/young adults and young people and their families from different cultural and ethnic groups, including refugees and asylum seekers
- the effect on demand for specialist CAMHS of increasing recognition of mental health problems in the community as a result of increased

public and professional awareness, and identification of mental health problems by specialist CAMHS professionals attached to services such as youth offending teams and looked after children teams

- patient experiences and views on need and demand for specialist CAMHS
- patient experiences and views on the use of evidence-based treatments, short- and long-term interventions and restrictions on treatments to brief interventions as a method of increasing capacity
- patient views on alternative models of service delivery.

# Conclusions

Child and adolescent mental health services are currently in need of development to ensure sustainable services are available to all children and young people with mental disorders. Models of service provision need to be developed in flexible ways, in collaboration with young people and their families. Pathways of care need to ensure timely access to services and to facilitate seamless transitions between services and tiers of intervention. Services must be outcome focused, working to achieve excellent clinical outcomes and to support young people to meet their personal goals. Services must aim to offer the right treatment at the right time in the right place.

Child and adolescent mental health services can only function adequately as part of a comprehensive tiered service that includes high-quality universal (Tier 1) preventive provision. Informed commissioning must ensure provision of a tiered CAMHS that provides for the full range of mental health problems up to the age of 18 years. Clear transition protocols must be in place for transfer to adult mental health services. Development of new models of care should be considered to meet the needs of young people aged 16–18 years, including youth services that work across CAMHS and adult mental health services, ensuring this does not result in raised eligibility criteria for 16- to 18-year-olds or reduction of services for younger children.

Community specialist CAMHS must target services for young people with more complex mental health disorders that need specialist services. However, it is important to retain an emphasis on early intervention and prevention, and to work closely with and support non-mental health Tier 1 practitioners and multi-agency services that provide universal mental healthcare for the majority of young people. Robust, evidence-based and outcome-focused Tier 2/3 specialist CAMHS are a vital resource. In addition, however much excellent work is done in community settings, there will always be children and young people who require highly specialist help in high-quality residential settings.

Tier 4 CAMHS must be comprehensively commissioned to ensure a range of services, including in-patient acute and intensive care beds, planned treatment beds and alternatives to hospital admission (e.g. intensive outreach/home treatment teams).

We must ensure the provision of specialist CAMHS to young people with intellectual disability and those with forensic and/or substance misuse problems. Further consideration is needed with respect to meeting the mental health needs of infants.

Out-of-hours services for young people presenting with severe psychiatric disorders must be in place. This requires creative solutions to ensure appropriate provision in the context of a shortage of CAMHS clinicians.

Service capacity is required for teaching, training and management tasks, including measuring and recording outcomes, in addition to delivering high-quality clinical interventions.

There is recognition across the UK jurisdictions that a safe, high-quality service depends on the establishment of a staff group with the skills and capacity to deliver the service, and the opportunity for ongoing growth and development. In CAMHS it is vital that we listen and respond to the views of young people and their families and engage them routinely in our service developments. These aims are reflected in the recent report on NHS England (Berwick, 2013). We hope this report provides some of the evidence required to support our aims for high-quality mental health services for children and young people across the UK.

# Appendix 1 Definitions

## The meaning of the term CAMHS

The term CAMHS is used in two ways. One is a broad concept embracing all services that contribute to the mental healthcare of children and young people, whether provided by health, education or social services, or other agencies. Hence, it includes those services whose primary or only function may not be mental healthcare (e.g. general practice or schools), referred to as Tier 1. In Wales, this wider approach is called 'the CAMHS concept'.

The other applies specifically to specialist CAMHS provided at Tier 2, 3 and 4, mainly by the NHS or by the independent healthcare sector. For these services, the provision of mental healthcare to children and young people is their primary function. They are composed of a multidisciplinary workforce with specialist training in child and adolescent mental health. Child and adolescent mental health services in Tier 2, 3 and 4 are commonly referred to as specialist CAMHS.

Child and adolescent mental health services cover all types of provision and intervention, from mental health promotion and primary prevention through to very specialist care as provided by in-patient units for young people with mental illness (Tiers 1–4). Interventions may be indirect (e.g. consultative advice to another agency) or direct (e.g. therapeutic work with an individual child or family).

## The four tiers

The NHS Health Advisory Service (1995) promulgated this model 'to produce a strategic approach[...]to integrate the many elements of a truly comprehensive service for children, adolescents and young people into an understandable whole'. It is intended 'through encouragement of the development of service networks, to support those working with children, young people and families so that they are enabled in their work and their skills are increased', with a view to reducing 'staff of specialist services being overwhelmed by referral of problems that may be more helpfully addressed in the community by other service components'.

The tiered approach was not intended to refer to particular service structures or locations, or groups of children, disorders, problems or staff, but to focus on:

- strategy rather than organisational matters
- planned diversity of functions to meet the needs of the population

- the nature of the assessments, interventions and other work that children and young people require
- promoting flexible and responsive working patterns.

The tiered concept has provided a language that has bridged different sectors of care and different professions, and enabled focused discourse around which services should be provided, for whom, and by whom.

There are differing interpretations of the tiered strategic approach. As examples, the distinction between Tier 2 and Tier 3 is used differently in England and Wales (National Assembly for Wales, 2003; Department of Health & Department for Education and Skills, 2004). Some specialist CAMHS have combined Tier 2 and 3 services with a single referral point, whereas others may provide Tier 2 services as stand-alone. Arguably, these differences are less important than achieving clarity about the functions required of services and effective commissioning of comprehensive CAMHS that are tailored to the needs of children, young people and their families locally. Tier 2 and 3 are considered together in this document as a comprehensive community CAMHS.

## *Tier 1*

Tier 1 CAMHS is provided by professionals whose main role and training is not in mental health, such as general practitioners, health visitors, paediatricians, social workers, teachers, youth workers and juvenile justice workers. *Together We Stand* (NHS Health Advisory Service, 1995) proposed a new type of CAMHS worker – the primary mental health worker – who would work across Tier 1 and 2/3, providing consultation and direct work with young people and their families. The primary mental health worker is a highly skilled mental health practitioner (Hickey *et al*, 2008).

## *Tier 2*

Tier 2 CAMHS is provided by specialist trained mental health professionals, working primarily on their own rather than in a team, although they are an integral member of their host CAMHS. They see young people with a variety of mental health problems, who have not responded to Tier 1 interventions. Tier 2 describes the work of practitioners from specialist CAMHS that provide comprehensive mental health assessments of children and young people and their families.

## *Tier 3*

Tier 3 services are provided by a multidisciplinary team who aim to see young people with designated complex mental health problems such as ADHD, autism spectrum disorder, eating disorders or mental disorders associated with intellectual disability. If the young person's needs require movement between Tier 2 and 3, this should be fluid and seamless, often with the same professionals working at both tiers.

In Wales, the term Tier 3 is reserved for those more specialised services provided by multidisciplinary teams or by teams assembled for a specific purpose on the basis of the complexity and severity of children's and young people's needs or the particular combinations of comorbidity found on specialist assessment.

## TIER 4

Tier 4 services are very specialised services in residential, day-patient or out-patient settings for children and adolescents with severe and/or complex problems requiring a combination or intensity of interventions that cannot be provided by Tier 3 CAMHS. Tier 4 services are usually commissioned on a subregional, regional or supra-regional basis. Tier 4 services are an integral part of overall CAMHS delivery and depend on good relationships with successful Tier 2/3 services.

# Appendix 2 NICE guidance

The National Institute for Health and Care Excellence has produced evidence-based clinical guidance for England and Wales on a number of topics with relevance to CAMHS practice. The following list is correct as of September 2013.

- Eating disorders (CG9)
- Self-harm (CG16)
- Anxiety (CG22)
- Violence (CG25)
- Post-traumatic stress disorder (PTSD) (CG26)
- Depression in children and young people (CG28)
- Obsessive–compulsive disorder (OCD) and body dysmorphic disorder (BDD) (CG31)
- Bipolar disorder (CG38)
- Antenatal and postnatal mental health (CG45)
- Drug misuse: psychosocial interventions (CG51)
- Chronic fatigue syndrome/myalgic encephalomyelitis (CG53)
- Attention-deficit hyperactivity disorder (ADHD) (CG72)
- Antisocial personality disorder (CG77)
- Borderline personality disorder (BPD) (CG78)
- Schizophrenia (update) (CG82)
- When to suspect child maltreatment (CG89)
- Depression with a chronic physical health problem (CG91)
- Nocturnal enuresis – the management of bedwetting in children and young people (CG111)
- Generalised anxiety disorder and panic disorder (with or without agoraphobia) in adults (CG113)
- Alcohol dependence and harmful alcohol use (CG115)
- Psychosis with coexisting substance misuse (CG120)
- Autism in children and young people (CG128)
- Self-harm (longer-term management) (CG133)

- Conduct disorders in children and young people (CG158)
- Social anxiety disorder (CG159)
- Four commonly used methods to increase physical activity (PH2)
- Interventions to reduce substance misuse among vulnerable young people (PH4)
- School-based interventions on alcohol (PH7)
- Physical activity and the environment (PH8)
- Maternal and child nutrition (PH11)
- Social and emotional well-being in primary education (PH12)
- Social and emotional well-being in secondary education (PH20)
- School-based interventions to prevent smoking (PH23)
- Alcohol-use disorders: preventing harmful drinking (PH24)
- Health and well-being of looked after children and young people (QS31)
- Insomnia – newer hypnotic drugs (TA77)
- Attention-deficit hyperactivity disorder (ADHD) – methylphenidate, atomoxetine and dexamfetamine (review) (TA98)
- Structural neuroimaging in first-episode psychosis (TA136)
- Domestic violence and abuse – identification and prevention (in progress)

These guidelines have an impact on interventions to be delivered by CAMHS. Currently in many areas, specialist CAMHS do not have the capacity or skills to deliver the guideline recommendations. For example, there are not enough trained therapists in some areas to carry out cognitive–behavioural therapy recommended by NICE for the treatment of depression. In England, the CYP-IAPT is expected to go some way to address this particular issue.

# Appendix 3 Methodology on streamlining and process-mapping specialist CAMHS

## Streamlining processes

An important place to start is to ensure that any existing service is organised as efficiently as possible to maximise capacity. This applies to any tier of CAMHS. Much is known about how to maximise the efficiency of health services through demand and capacity management. The NHS Modernisation Agency and NHS Institute for Innovation and Improvement (www.institute.nhs.uk) have produced useful guides and online tools to help service redesign to ensure maximum efficiency using existing resources (e.g. www.improvement.nhs.uk). Imbalance between demand and capacity leads to waiting lists (or 'queues'). There is often an assumption that increasing resources and thus capacity will reduce waiting lists. This may be true if a waiting list is due to a true mismatch between demand and capacity, but many queues are as a result of problems in patient 'flow'. Simply increasing resources will not necessarily stop waiting lists developing if flow is poorly managed.

The key processes that can be modified to maximise capacity are summarised below. Such techniques have been used by several of us in our own services, with beneficial effects on waiting times without increased workload.

Process-mapping involves detailed examination of the steps a patient takes on the 'journey' from referral to discharge, or for different parts of their journey, such as only from referral to first appointment. The task time is the time it takes for the patient to complete that part of the journey. Process-mapping is particularly useful at bottlenecks (see p. 56) to identify whether the cause is due to a true lack of capacity (see p. 56) or due to inefficient processes. Process-mapping is the best place to start when assessing the need for service redesign.

## Demand

This is the amount of time it takes to process a referral from start to finish. In its strictest sense, all requests for a given service from all sources, including those who should be referred but are not seen, are included. However, to calculate existing demand then the requests for the service is

equal to the number of referrals, multiplied by the amount of time a case 'consumes'. Williams *et al* (2005) have provided a comprehensive review of the research into the nature of demand for CAMHS and the mechanisms that have been reported to better and more effectively manage demand so as to produce more responsive services that receive appropriate referrals.

## Capacity

This is the amount of clinical time available to meet demand. There are two types of capacity: skill and kit. Skill capacity is that available from clinicians for clinical work. Kit capacity relates to equipment (e.g. psychometric testing tools) or space (e.g. the availability of rooms). Capacity is limited by the smaller of the two.

## Bottleneck

This is a constraint to the smooth flow of the patient through their journey. A bottleneck is usually identified by a queue in front of it; for example, a waiting list for treatment because of a lack of clinical capacity. Bottlenecks may be functional (e.g. due to inefficient processes) or skill based (e.g. due to lack of clinical time).

## Batching

This is when work is collected for attention at a later date instead of being dealt with straight away. Batching leads to increased process times.

## Carve-out and segmentation

Carve-out occurs when a certain amount of capacity is reserved for a specific purpose, for example designated urgent appointment slots. It is an effective way of ensuring good provision for those who can access the carved-out capacity but overall is inefficient for the whole service. On the other hand, segmented systems are effective in providing streamlined provision for many patients. Segmentation occurs when those with similar needs – and therefore with similar, predictable pathways – are grouped together.

# Appendix 4 Specialist CAMHS capacity adjusted for number of sessions seen

## Example of time available per WTE clinician[1]

7-hour day × 5 days a week = 35 h a week
Minus holidays (6 weeks) and study leave (1 week) = 52 – 7 = 45 weeks
Therefore, 35 h × 45 weeks = 1575 h available per year

Minus other meetings:
Supervision (1 h)
Team meeting (2 h)
One other (1 h) = 4 h a week
Weekly continuing professional development = 3.5 h a week

Meetings plus continuing professional development: 7.5 h a week
7.5 × 45 weeks = 337.5 h a year

Therefore actual time available for clinical work:
1575 h a year – 337.5 h = 1237.5 h a year

Time consumed if a typical case uses 6 sessions: 6 sessions of 1 h = 6 h
Assume 1 h administration for assessment and closure:
0.5 h administration per session on top = 0.5 × 6 = 3 h
Therefore, 6 + 1 + 3 = 10 h minimum

Time used if 10 sessions: 10 + 1 + (0.5 × 10) = 16 h minimum
Time used if 15 sessions: 15 + 1 + (0.5 × 15) = 23.5 h minimum

In specialist CAMHS, each case may be seen by more than one clinician (e.g. on average two clinicians working jointly), so capacity calculates:

If seen for 6 sessions: 1237.5/10 × 0.5 = 62 cases per year per WTE
If seen for 10 sessions = 1237.5/16 × 0.5 = 39 cases per year per WTE
If seen for 15 sessions = 1237.5/23.5 × 0.5 = 26 cases per year per WTE

1. Not based on a real CAMHS audit.

Child and adolescent mental health service mapping data from England show 50% of time is spent in direct work.

Several assumptions are mad:

- time needed for administration, including liaison, per session (assumed to be 0.5 h per 1 h, but in actual service audit may show more)
- co-work rate (assumed to average at two clinicians per case, but audit may show more or less)
- meeting times (assumed to be 4 h a week).

If service audit reveals different levels of time spent, then capacity calculations will vary accordingly.

# Appendix 5 Professional guidance on skill mix in Tier 2/3 specialist CAMHS up to the 16th birthday

| Professional group | WTE per 100 000 total population | WTE per 250 000 total population | Source |
|---|---|---|---|
| Consultant child and adolescent psychiatrists | 2.4 (for a teaching service) | 4.8 (for a teaching service) | Royal College of Psychiatrists (2012*b*) |
| Clinical psychologists | Tier 2: 2.0<br>Tier 3: 2.0<br>Learning disability: 1.3<br>Paediatric liaison: 1.0 | Tier 2: 5.0<br>Tier 3: 5.0<br>Learning disability: 3.3<br>Paediatric liaison: 2.5 | British Psychological Society (2001) |
| Child psychotherapists | 1.25 | 3.1 | Wallace *et al* (1997) |
| Community psychiatric nurses | 2.0 per consultant child and adolescent psychiatrist (i.e. 5.0) | 12.5 | Wallace *et al* (1997) |
| Family therapists | No guidance found | | |
| Mental health social workers | No guidance found | | |
| Art therapists[1] | 1.2 | 3.0 | |
| Other therapists (e.g. occupational therapy) | No guidance found | | |

1. These data were correct as per College Report CR137 (Royal College of Psychiatrists, 2006); recent data are not available.

# Appendix 6 Examples of skill mix in Tier 2/3 specialist CAMHS WTE per 100 000 total population (per 250 000)

| | Davey & Littlewood (1996) Star service | | | | | Goodman (1997) | Kelvin (2005) |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| Consultant child and adolescent psychiatrists | 1.0 | 1.0 (2.5) | 1.0 (2.5) | 1.5 (3.75) | 1.5 (3.75) | 1.3 (3.25) | 2.5 (6.25) |
| Clinical psychologists | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Neuropsychologists | 0 | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Play therapists | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Family therapists | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | 1.4 (3.5) | – |
| Nurses | 0 | 1.0 (2.5) | 2.0 (5.0) | 2.0 (5.0) | 2.0 (5.0) | – | – |
| Social workers | 0 | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Speech therapists | 0 | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Child psychotherapists | 0 | 0 | 1.0 (2.5) | 1.0 (2.5) | 1.0 (2.5) | – | – |
| Primary mental health workers | 0 | 0 | 0 | 5.0 (12.5) | 5.0 (12.5) | – | 1.5 (3.75) |
| Occupational therapists | – | – | – | – | – | – | – |
| Behavioural, cognitive and interpersonal therapists | – | – | – | – | – | 2.6 (9.0) | – |
| Other therapists | – | – | – | – | – | – | – |
| Multidisciplinary junior staff | | | | | | | 10.8 (27.0) |
| Non-medical B grades | | | | | | | 1.7 (4.25) |

# Appendix 7 Summary of a 'five-star' CAMHS*

## Five-star comprehensive service

- Age 0–18 years
- 10.0 WTE out-patient multidisciplinary team plus 2 multidisciplinary day-patient services with 6.0 WTE each shared with another district
- Includes day-service provision and primary mental health workers
- Open referrals system, wide range of assessments and treatments, including input into school and Social Service settings: consultation, teaching, research and audit
- 400–800 new referrals a year

## Four-star extended intermediate service

- Age 0–15 years
- 15.5 WTE multidisciplinary clinicians
- Includes primary mental health workers but no day service
- 600 new referrals a year

## Intermediate basic service

- Age 0–16 years
- 6.0 WTE multidisciplinary clinicians
- Limited range of assessments and treatments, consultation, etc.
- 250 new referrals a year

*As described by Davey & Littlewood (1996).

## Three-star intermediate service

- Age 0–15 years
- 10.0 WTE multidisciplinary clinicians, no primary mental health workers
- No service for children with intellectual disability
- Referrals from professionals only
- More limited range of assessments and treatments, more limited consultation, teaching, research and audit
- 400 new referrals a year

## Two-star basic service

- Age 5–15 years
- 5.0 WTE multidisciplinary clinicians
- No service for children with intellectual disability
- Referrals from health professionals only for serious mental disorders
- 250 new referrals a year

## One-star minimal service

- Age 0–16 years
- 1.0 WTE consultant psychiatrist
- Urgent psychiatrist assessment only
- Very limited therapeutic service
- 50 new referrals a year

## One-star consultant-only service

- Age 5–15 years
- 1.0 WTE consultant child and adolescent psychiatrist
- Referrals from general practitioners and paediatricians only
- Urgent psychiatric assessments only
- No service for children with intellectual disability
- Very limited therapeutic service
- 50 new referrals a year

# Appendix 8 Service descriptions of differing Tier 2/3 specialist CAMHS

| | Goodman (1997) | Kelvin (2005) | Davey & Littlewood (1996) | |
|---|---|---|---|---|
| | | | Two-star service | Four-star service |
| Age, years | 0–17 | 0–17 | 5–15 | 0–15 |
| WTE/100 000 total population | 5.3 | 16.0 | 5.0 | 15.5 |
| Attention-deficit hyperactivity disorder | Yes | Yes | | Yes |
| Obsessive–compulsive disorder | Yes | Yes | | Yes |
| Eating disorder | Anorexia nervosa | Yes | 'Serious mental health problems' | Yes |
| Depression | Yes | Yes | | Yes |
| Anxiety disorder | Specific or social phobias | | | |
| General anxiety and separation anxiety | Yes, including PTSD | | Yes | |
| Psychosis | Yes | Yes, including bipolar disorder | | Yes |
| Autism spectrum disorder | Yes | PDD +/– intellectual disability | | |
| Preschool mental health problems | Yes | Yes | Not included | Yes |
| Self-harm | | Yes | Yes | Yes |
| Conduct disorder/oppositional defiant disorder | | Yes | Not mentioned | Not mentioned |
| Effects of abuse | | Yes | Yes | Yes |
| Adjustment disorder | | Yes | Not included | Yes |
| Specific intellectual disability and developmental difficulties | | Yes | Not mentioned | Not mentioned |
| Somatoform disorder/chronic fatigue | | Yes | Yes | Yes |
| Effects of chronic illness | | Yes | Yes | Yes |
| Tourette syndrome | | Yes | | |
| Elective mutism | | | Not included | Yes |
| Attachment and infant mental health problems | | Yes | Not mentioned | Not mentioned |
| Encopresis | | Yes | Not mentioned | Not mentioned |
| Hard-to-specify emotional disturbance | | Yes | Not mentioned | Not mentioned |
| Severe intellectual disability only | Yes | Not included | Not included | Yes |
| Teaching | Yes | No (20.0 WTE if teaching) | No | Yes |
| Consultation | Yes | Yes | Limited | Yes |

PDD, pervasive developmental disorder; PTSD, post-traumatic stress disorder; WTE, whole time equivalent.

# Appendix 9 Calculations for CAMHS for 16- and 17-year-olds

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Depression | 4% 16- to 17-year-olds | 89 | At 30%, 27<br>10% needing extra intensive support in transition | Routine care/CBT/ IPT/PPT: 100%<br>+/– Medication: 70%<br>Family therapy: 40% | 1–2 assessments<br>Attend 9 sessions<br>Did not attend 10%<br>+ 1<br>2–4 family meetings<br>10 h per case for liaison, CPA meetings, handover process | Medical assessments in 50%<br>MDT assessments in 50%<br>1.5 h per assessment meeting<br>Average 2.5 h per assessment<br>14 cases × 2.5 h = 35 h medic<br>13 cases × 2.5 h = 32.5 h MDT<br>*Treatments*<br>10 individual sessions<br>10 × 1 h × 27 = 270 h MDT<br>Medication sessions:<br>6 additional sessions for 70%<br>19 cases × 6 × 0.45 h = 51 h medic<br>*Family therapy*<br>11 cases at 3 sessions each of 1.5 h = 49.5 h family therapy<br>3 × 10 = 30 h (15 h MDT, 15 h medic) |
| Self-harm | 7% | 156 | At 35%, 55 | Urgent assessment and follow-up: 1–3 times | 1 assessment<br>2 follow-ups | Self-harm assessor on call<br>55 cases × 3.5 h = 192 h<br>70% assessed in normal hours = 134 h mixed medic/MDT time, depends on organisation, e.g. 50% each (67 h medics, 67 h MDT)<br>Daytime on-call rota only<br>Out of hours: 58 h need per annum (29 h medic, 29 h MDT) |
| Repeated self-harm, evolving personality disorder/ borderline personality disorder, complex PTSD | 1%<br>Allow for MDD and PTSD, crises, adjustment reactions | 22 | At 95%, 21 | May need family therapy, individual therapy, DBT, PPT, CBT | Individual therapy: 25–40 sessions per year for e.g. 10 years<br>Family therapy: 5 per year for 10 years | Individual therapy: 10 cases × 30 h = 300 h mixed medic/MDT (50 h medic, 250 h MDT)<br>Family therapy: 10 cases × 5 × 1.5 h = 75 h |

*Continued*

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Attention-deficit hyperactivity disorder | 1% | 22 | At 70%, 15<br>10% needing extra intensive support in transition | Medication: 100%<br>Reviews including time for diet, behaviour, systemic consultation, education links<br>Family meetings: 20%<br>Newly referred cases either transferred from elsewhere or newly detected: 2 per year<br>Intensive transition support to adult services: 2 cases per annum | Medication reviews: 3 per year<br>Family work: 3–5 meetings for 3 cases per year<br>Assessment: 2 × 1.5 h<br>Medication starting up: further 5 sessions in first year<br>10 h per case for liaison, CPA meetings, handover process | Medication: 15 cases × 1 h × 3 = 45 h medic<br>Family therapy: 3 cases × 1.5 h × 4 = 18 h<br>2 cases × 1.5 h × 2 = 6 h medic<br>Additional start-up medication sessions: 2 cases × 2 × 1 h = 4 h medic<br>Other: 2 × 10 = 20 h (10 h MDT, 10 h medic) |
| Anxiety disorder: separation anxiety, phobias, panic, agoraphobia, PTSD, GAD, other | 8%, but allowing for multiple comorbidities as anxiety often co-occurs with depression and ADHD, and will be treated together<br>Work best on the basis of 5% (SAD 0.5–1%, GAD 1–2%, panic disorder 1%, social phobia 1%, specific phobia 2%, PTSD 3%) | 111 | At 30%, 33<br>10% needing extra intensive support in transition | Psychotherapy (CBT/IPT/PPT/group work): 100%<br>Family therapy: 50%<br>Occasionally medication: 10–15%<br>Intensive transition support to adult services: 3 cases per annum | Psychotherapy: 1 assessment, 10 sessions of individual or group therapy for 33 cases<br>Family therapy: 3–4 meetings for 16 cases<br>Medication process: 7–8 sessions per year for 4 cases<br>10 h per case for liaison, CPA meetings, handover process | Psychotherapy: 33 cases × 1.5 h = 49.5 h MDT; 33 cases × 1 h × 10 sessions = 330 h MDT<br>Family therapy: 16 cases × 1.5 h × 4 = 96 h<br>Medication process: 4 cases × 8 × 1 h = 32 h medic<br>Other: 3 × 10 = 30 h (15 h MDT, 15 h medic) |

*Continued*

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Obsessive–compulsive disorder | 1.5% | 33 | At 50%, 17<br>10% needing extra intensive support in transition | CBT: 100%<br>Medication: 50%<br>Family therapy/ meetings: 30%<br>Intensive transition support to adult services: 2 cases per annum | CBT: 1–2 assessments, 6–18 sessions (mean 12)<br>Medication process: 8 sessions per year per case<br>Family therapy: 3–5 sessions<br>10 h per case, for liaison, CPA meetings, handover process | CBT: 12 × 17 × 1 = 204 h MDT<br>Medication process: 9 cases × 8 × 1 h = 72 h medic<br>Family therapy: 5 cases × 4 sessions × 1.5 h = 30 h<br>Other: 2 × 10 = 20 h (10 h MDT, 10 h medic) |
| Pervasive developmental disorder | 1% all forms<br>0.3% for core autism<br>0.7% for Asperger syndrome/ atypical autism<br>These data will track the Asperger syndrome/ atypical autism cases, as the core autism cases will be part of a children's learning disability service requiring separate data | At 0.7%, 16 | At 80%, 13 | 10 cases already known to service so need follow-up not assessment | 10 cases known review meetings and consultation 2–3 times per year | 10 × 1 h × 2 = 20 h MDT staff per annum |
| | | | | 3 new cases presenting per annum, ADI[2]/ADOS[3] and feedback | 10 h per assessment plus 2–3 reviews | 3 new cases ADI/ADOS<br>3 × 10 = 30 h ADI/ADOS (15 h medic/15 h psychologist)<br>3 reviews × 1 × 3 = 9 h (4.5 h MDT/4.5 h medic) |
| | | | | 2 cases in severe impairment category plus severe comorbidity | 10 treatment sessions per annum | 10 × 1 h = 10 h medic |
| | | | | Social skills and behaviour therapy: 60%<br>Occasional medication | 2 new cases<br>6–8 sessions each | 2 × 7 × 1.5 h = 21 h MDT |
| | | | | Extra transition work to adult services for 20% most severe cases (3 cases per year)<br>Family meetings: 20% | 10 h liaison work per case | 10 × 3 = 30 h (20 h MDT, 10 h medic) |

*Continued*

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Substance misuse disorder | 7% (best estimate, very weak database) | 155 | At 10%, 15 | MST | 3–6 months<br>3 × 12–24 = 36–72 sessions at 3 sessions per week per case, taking mid-point of 54 sessions per case | Based on the Cambridgeshire MST project, each case requires about 0.2 WTE (MDT staff per annum), therefore at 10%, presentation rates = 15 cases × 0.2 = 3.0 WTE MDT = 2025 h<br>Plus medic time to address detoxifications and related issues at 10% of MDT time = 0.3 WTE medic for the 10% presentation = 168 h |
| Conduct disorder, oppositional defiant disorder | ODD 6–10%<br>CD 3–5% | 178<br>89 | At 15%, 27<br>At 15%, 13 | Parent training/ functional family therapy<br>*plus*<br>individual problem-solving and emotion regulation | 1–2 assessments plus 12 parent training/ functional family therapy<br>4–6 individual problem-solving sessions | Assessment: 15% = 40 cases 40 × 3 h = 120 h MDT<br>Family therapy: 50% take up of therapy = 20 × 12 × 1.5 = 360 h<br>Problem-solving sessions: 50% take up = 20 × 5 sessions = 100 h MDT |
| Very severe conduct disorder | 1% | 22 | At 70%, 15 | MST | 3–6 months<br>3 × 12–24 = 36–72 sessions at 3 sessions per week per case<br>Taking mid-point of 54 sessions per case = 648 sessions per year | Based on the Cambridgeshire MST project, each case requires about 0.2 WTE MDT staff per annum<br>Therefore at 10%, presentation rates = 15 cases × 0.2 = 3.0 WTE MDT = 2025 h |
| Adjustment disorder, hard-to-specify emotional and behavioural disturbance | 4% | 89 | At 5%, 4 | Assess and advise brief treatment | 1 assessment *plus* 3–4 sessions therapy *plus* 1 interagency consultation | Assessment: 4 × 1.5 h = 6 h MDT<br>Advice and treatment: 4 × 1 h × 3 sessions = 12 h MDT |

*Continued*

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Specific intellectual disability and developmental difficulties | 8–10% | 200 | Referred with emotional disorder secondary to specific intellectual disability | Assessment usually in another category | 2–3 psychometry sessions in selected cases | 20 cases from the different categories × 3 × 1.5 h = 90 h psychologist |
| Somatoform disorder, chronic fatigue syndrome/ neurasthenia, conversion disorder, abnormal illness behaviour | 8% | 178 | At 10%, 18<br>10% needing extra intensive support in transition | 1–3 assessments<br>20–30 sessions per year: CBT/IPT/family therapy<br>Intensive transition support to adult services: 2 cases per annum | Assessment: 1–3 sessions<br>Treatment: 20–40 sessions per year<br>10 h per case, for liaison, CPA meetings, handover process | Assessment: 15 × 2 × 1.5 h = 45 h medic<br>Treatment: 12 × 25 sessions × 1 h = 300 h MDT (60 h family therapy, 240 h individual therapy)<br>Other: 2 × 10 = 20 h (10 h MDT, 10 h medic) |
| Tourrette syndrome | 0.5% | 10 | At 2%, 2 | 1–2 assessments<br>Medication<br>6–8 CBT sessions | Assessment: 1–2 sessions<br>Medication: first year, 6 reviews; then 2–3 reviews yearly<br>CBT: 6–8 sessions | Assessment: 2 × 3.0 h = 6 h medic<br>Medication: 6 sessions × 0.45 h × 2 = 5.4 h medic<br>CBT: 1 × 7 h = 7 h MDT |
| Eating disorder | 1.3% | 29 (anorexia nervosa or bulimia nervosa) | At 80%, 23 | Assessment and intermittent review<br>Individual CBT/ psychotherapy<br>Family therapy<br>Transition support | Assessment: 1–2 sessions<br>Review: 6 sessions per year<br>Individual therapy: 12–20 sessions<br>Family therapy: 5–8 sessions<br>Liaison: 7 h per case | Assessment: 7 × 3 × 1 = 21 h medic<br>Medication: 7 × 13 × 0.45 h = 41 h medic<br>Individual therapy: 7 × 25 × 1 h = 175 h MDT<br>Family therapy: 7 × 9 × 1.5 h = 95 h<br>Transition support: 6 × 7 h = 42 h MDT |

*Continued*

**Table 1 Analysis of clinical need and raw data-set for staff hours per 100 000 population all ages[1]**

| ICD-10 disorder or problems/ symptoms/ risks | Prevalence | Number per 2222 16- to 17-year-olds | Attendance fraction per annum | Treatment guideline | Average input per case per annum | Staff needed WTE |
|---|---|---|---|---|---|---|
| Bipolar affective disorder and psychosis | 0.3% | 7 | At 90%, 7 | Assessment<br>Medication management<br>Individual support/ psychoeducation and psychological therapy in some cases<br>Family psychoeducation<br>Therapy support<br>Transition support | Assessment: 2–3 sessions<br>Medication: 8–12 sessions per annum per case<br>Individual therapy: 20–30 sessions per case<br>Family therapy: 8–10 sessions per annum per case<br>Liaison: 7 h per case | Assessment: 7 × 3 × 1 = 21 h medic<br>Medication: 7 × 13 × 0.45 h = 41 h medic<br>Individual therapy: 7 × 25 × 1 h = 175 h MDT<br>Family therapy: 7 × 9 × 1.5 h = 95 h<br>Transition support: 6 × 7 h = 42 h MDT |

ADHD, attention-deficit hyperactivity disorder; ADI, Autism Diagnostic Interview; ADOS, Autism Observational Diagnostic Interview; CBT, cognitive–behavioural therapy; CD, conduct disorder; CPA, care programme approach; DBT, dialectical behaviour therapy; GAD, generalised anxiety disorder; IPT, interpersonal therapy; MDD, major depressive disorder; MDT, multidisciplinary team; medic, medical staff; MST, multisystemic therapy; ODD, oppositional defiant disorder; PPT, psychodynamic psychotherapy; PTSD, post-traumatic stress disorder; SAD, social anxiety disorder; WTE, whole time equivalent.

1. Multidisciplinary team (clinicians) includes all non-medical staff with usual specialist child and adolescent mental health service basic skills plus identified additional skills/ specialisms (e.g. CBT, PPT, IPT, group therapy, DBT, parent training, family therapy).
2. LeCouteur *et al* (1989).
3. Lord *et al* (1989).

**Table 2 Translating raw hour data from Table 1 into balanced service development for 16- and 17-year-olds[1]**

| Staff group | Raw data from Table 1, hours | Raw data from Table 1, hours | Raw WTE derived from raw hour data | WTE allowing for balanced staff mix of senior/junior grades | |
|---|---|---|---|---|---|
| | | | | Non-teaching centre | Teaching centre[2] |
| Medic (consultant) | 32.5, 15, 67, 29 (out of hours), 50, 72, 10, 45, 6, 4, 10, 32, 15, 15, 4.5, 10, 10, 168, 45, 10, 6, 5.4, 69, 138, 21, 41 | 901.4<br>*Plus*<br>29 on-call for self-harm<br>? on call for all other crises (e.g. psychosis) | 1.45<br>Plus on-call services | 1.45<br>Plus on-call services | 1.8<br>Plus on-call services |
| MDT (individual/ family skills) | 35, 270, 15, 67, 29 (out of hours), 250, 204, 10, 49.5, 330, 15, 20, 21, 20, 2025, 120, 100, 2025, 12, 240, 10, 7, 264, 105, 175, 42 | 6431.5<br>*Plus*<br>29 for self-harm<br>? on call for all other crises (e.g. psychosis) | 7.6 all junior grades | 1.0 consultant level<br>7.0 junior-level MDT | 1.25 consultant level<br>8.75 junior-level MDT |
| Family therapy specifically | 49.5, 75, 30, 18, 96, 360, 60, 144, 95 | 927.5 | 1.1 | 0.15 consultant level<br>1.0 junior level | 0.2 consultant level<br>1.25 junior level |
| Dietician | 150 | 150 | 0.2 | 0.2 | 0.25 |
| Psychologist | 15, 4.5, 90 | 109.5 | 0.13 | 0.02 consultant level<br>0.11 junior level | 0.3 consultant level<br>0.14 junior level |
| **Subtotal** | **8528.9 per annum** | **8528.9 per annum** | **10.48** | **10.93** | **13.9** |
| Primary mental health worker at 10% of totals for all other clinicians | 852.9 per annum | 852.9 per annum | 1.0 | 1.1 | 1.4 |
| **Total** | **9381.8 per annum** | **9381.8 per annum** | **11.48** | **12.0** | **15.3** |
| Administration staff | | | | 4.8 | 6.1 |
| IT data support staff | | | | 0.8 | 0.8 |

MDT, multidisciplinary team; WTE, whole time equivalent.
1. Multidisciplinary team (clinicians) includes all non-medical staff with usual specialist child and adolescent mental health service basic skills plus identified additional skills/specialisms (e.g. cognitive–behavioural therapy, psychodynamic psychotherapy, interpersonal therapy, group therapy, dialectical behaviour therapy, parent training, family therapy).
2. Add 25%.

# Appendix 10 Examples of calculating number of in-patient beds for children and adolescents

There are clear deficits in provision for both adolescents and children in in-patient services and for other approaches to managing intense psychiatric care for children and adolescents with complex mental health needs. Patients admitted to children's units have different problems from those admitted to adolescent units. They have had less support from CAMHS leading up to admission and they have complex multiple diagnoses and difficulties. Dr Brian Jacobs (CHYPIE study; Royal College of Psychiatrists, 2006) has suggested that bed need could be calculated based on length of stay as follows.

In CHYPIE, the mean length of stay did not differ between children's units (mean 107 days, s.d. = 91) and adolescent units (mean 128 days, s.d. = 84) based on a robust ANOVA allowing for clustering by unit. The NICAPS study (O'Herlihy *et al*, 2001) found a slightly shorter length of stay of 106 days.

These figures can only be tentative and in addition to calculations based on the figures below, the number of in-patient beds required for a given population must be based on a comprehensive, multi-agency needs assessment. This must take into account the known prevalence and incidence of mental health problems in children and adolescents, as well as local demographics including measures such as the child poverty index and multiple deprivation index for the area concerned. It must also take into account the availability of alternatives to hospital admission, such as intensive community treatment teams. Local geography must also be taken into account when planning services.

## Proposed calculations for children's beds

156 beds occupied on day of NICAPS census + 50 beds estimated on paediatric wards over 6 months × 107/182 (length of stay (days)/6 months) × 100/85 (aimed for occupancy)

That is:

156 + 35 (i.e. 191 beds as a minimum) and 156 + 68 (i.e. 224 as a maximum).

The figures depend on what proportion of those on paediatric wards are taken to be child admissions *v*. adolescent admissions. Jacobs has taken 50 admissions as a minimum and 100 of 125 admissions as a maximum.

## Proposed calculations for adolescent beds

$449 + ((50 + 250) \times 128/182) \times 100/85$ as a minimum
$449 + ((100 + 300) \times 128/182) \times 100/85$ as a maximum

Therefore, 250–300 children and adolescents admitted to adult wards, i.e. 697–780 adolescent beds for England and Wales combined are needed.

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