

Building and sustaining specialist child and adolescent mental health services

Council Report CR137
June 2006

Royal College of Psychiatrists
London

Approved by Council: October 2005

Due for review: 2008

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Membership of the Working Group

Gillian Davies Consultant Child and Adolescent Psychiatrist, Harvey Jones Adolescent Unit, Cardiff, Wales; gillian.davies@uhw-tr.wales.nhs.uk

Sandra Davies Consultant Child and Adolescent Psychiatrist, Andrew Lang Unit, Selkirk, Scotland; sandra.davies@selkirkhc.borders.scot.nhs.uk

Sue Dinnick Consultant Child and Adolescent Psychiatrist, Sutton CAMHS, Sutton Hospital, Sutton, Surrey; Sue.Dinnick@swlstg-tr.nhs.uk

Clare Lamb (Editor) Consultant Child and Adolescent Psychiatrist, North Wales Adolescent Service, Colwyn Bay, Conwy, North Wales; Clare.Lamb@cd-tr.wales.nhs.uk

Caroline Lindsey Consultant Child and Adolescent Psychiatrist (since retired), Tavistock Hospital, London; DrCLindsey@aol.com

Anne Murray Consultant Child and Adolescent Psychiatrist, Gransha Hospital, Clooney Road, Londonderry, Northern Ireland; amurray@foylebyin-i.nhs.uk

Richard Williams Consultant Child and Adolescent Psychiatrist, St Cadoc's Hospital, Newport, Wales; rjwwilli@glam.ac.uk

Ann York (Editor) Consultant Child and Adolescent Psychiatrist, Child and Family Consultation Centre, Richmond, Surrey; Ann.York@swlstg-tr.nhs.uk

Foreword

Every child and adolescent psychiatrist and other child and adolescent mental health services (CAMHS) practitioners from across England, Ireland, Northern Ireland, Scotland and Wales are deeply immersed in the developing practice policy frameworks, in order to best meet the holistic mental health needs of all young people under the age of 18 years. To a degree that waxes and wanes in individual countries and situations, we all continue to face challenges in recruitment and retention. Traditionally, as CAMHS practitioners, we work both developmentally within multidisciplinary teams and across the agencies of health, social care, education and justice. The document that follows is the attempt of the Faculty of Child and Adolescent Psychiatry to bring together the spirit and mandate of the various child mental health frameworks into the real world of day-to-day practice and how child psychiatrists and specialist CAMHS respond to demand, needs and capacity in the context of New Ways of Working with finite resources (Royal College of Psychiatrists *et al*, 2005). There is an urgent need to liaise with colleagues in transitional and adult mental health services to best deliver services for 16–18-year-olds. During consultation this document was shared with as many practitioners, agencies, policy-makers and commissioners from across the five jurisdictions in order to take things forward in a multidisciplinary, multi-agency context, where the mental health needs of children and families are met, while maintaining the energy and well-being of the workforce.

The original concept for this report came from Ann York, Sue Dinnick and Steve Kingsbury, with the support of the Child and Adolescent Faculty Executive of the Royal College of Psychiatrists.

Sue Bailey
Chair of the Faculty of Child and Adolescent Psychiatry

Preface

CHALLENGES, CAVEATS AND COMING TO CONCLUSIONS

Our journey to find evidence for answering the questions 'what should specialist child and adolescent mental health services (CAMHS) be doing and how many people does it need to do it?' was a difficult and revealing one. Over the years several documents have been produced with possible answers, and CAMHS has evolved, modernised and experienced increased demands. Changes in the nature of the work and focus of partner agencies such as paediatrics, social services, education and youth justice and increasing understanding of the complex nature of and risk factors for mental health problems in young people have led to potentially ever expanding boundaries for specialist CAMHS.

All figures in this paper are necessarily ballpark ones, based on our best attempts at rationalising the different evidence we found. We found that most work had been done for Tiers 2, 3 and 4 CAMHS for a variety of age groups of young people up to 15, 16 or 17 years. We could not find sufficient work on services for 16- to 18-year-olds, learning disability, substance misuse, forensic or infant mental health.

We have given figures based on 100 000 total population rather than child population as the vast majority of evidence is presented in this way. However, we recognise that this means local services must use judgement to make wise use of the figures, taking into account the size of their local child population. Other local factors will also mean that sensible interpretation of the recommendations needs to be undertaken, for example, local deprivation indices, whether the area is rural or urban and the numbers of first and second generation migrant children, refugee children and families where English is not spoken. Other considerations include local partnership arrangements and existing national policy and guidance.

We intend this guidance to be living, evolving support for service development, open to local interpretation based on careful needs assessment and priorities. It should be used wisely, with care and authority, to shape local services to be the best possible for young people.

THE NEED FOR GUIDANCE

All of us involved in writing this report are practising child and adolescent psychiatrists working in CAMHS across the UK and the Republic of Ireland, in a variety of services and locations. As clinicians, we have always been aware of the need for guidance on the clinical workforce and services required for

provision of CAMHS. In our day-to-day work with families, colleagues and commissioners we have wanted and needed access to information that could help us plan and develop our services.

In the past 10 years, there has been a consistent attempt to increase the knowledge about child and adolescent mental health services. The NHS Health Advisory Service report, *Together We Stand: The Commissioning, Role and Management of Child and Adolescent Mental Health Services* (NHS Health Advisory Service, 1995), the Audit Commission Report, *Children in Mind: Child and Adolescent Mental Health Services* (Audit Commission, 1999) and the Department of Health commissioned study of the mental health of children and adolescents in Great Britain and the follow-up study (Meltzer 2000; Meltzer *et al*, 2003) have all contributed to an understanding of the nature and range of services available and the extent of the mental health need.

The National Service Frameworks (NSFs) for Children in England and in Wales go some way to providing such guidance, but are not designed to give detailed advice on workforce and capacity issues for CAMHS (Department of Health, Department for Education and Skills, 2004a; Welsh Assembly Government, 2005). Commissioners in England are to ensure provision of a 'comprehensive' CAMHS by 2006 (Department of Health, 2003). Comprehensive implies a service for all those who require one, provided across Tiers 1–4. Clinicians and commissioners need to know what their service can manage to provide within given resources. Users and carers need to know what to expect from their local service.

In developing this guidance, we made use of a variety of published and unpublished materials from the past 10 years, including those from professional and governmental sources. We examined audits from national and individual services and sought the views of practising CAMHS clinicians of all disciplines. We have used the term 'specialist' CAMHS throughout to mean those services across Tiers 2–4 that are provided by practitioners who have formal mental health training.

We considered a variety of ways of calculating need in our attempt to determine which types of services should be provided, to whom and by whom. For example, epidemiological approaches take into account the predicted number of young people who have mental health problems in a population and the effective treatments that can help. Comparative approaches look at different services in different areas of the country and compare levels of need and service provision. Corporate approaches take into account what local stakeholders want from a service and may not reflect local epidemiological need. A comprehensive CAMHS should provide a service for all children and young people in the community who require one. Therefore we consider that an epidemiological approach should be taken to calculate need and provision. However, we recognise that commissioners may not always be in a position to fund such a truly comprehensive service and so we hope that this guidance will also help clarify what can realistically be provided by their existing specialist CAMHS.

Our aim has been to produce a 'rule of thumb' tool that can be applied to any region of England, Ireland, Northern Ireland, Scotland or Wales.

This guidance is not yet able to provide staffing recommendations for specialist CAMHS for the age range 16–18 years, young people with learning disabilities, substance misuse problems, forensic problems or infant mental health problems due to lack of sufficiently detailed work in this area at the time of writing.

NEXT STEPS

New evidence will need to be incorporated into this guidance as it develops. We only intend the life of this document to be 3 years. Separate guidance needs to be written on services for 16- to 18-year-olds, young people with mental health needs who have learning disability, substance misuse services, forensic services and infant mental health services.

At the time of writing, the Faculty of Child and Adolescent Psychiatry had already made a start on the first mental health services for 16- to 18-year-olds.

ACKNOWLEDGEMENTS

Grateful thanks to Brian Jacobs, Tony Kaplan, Stephen Littlewood, Raphael Kelvin, Margaret Thompson, Eilish Gilvary, Paul Ramchandani, Margaret Murphy, Stephen Stanley, Paul McArdle, Sally Bonnar. Special thanks to Sue Bailey.

Finally, thanks to all those of 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. This could not have been written without you.

Ann York & Clare Lamb
(Editors)

Executive summary

This report provides guidance regarding the capacity and provision of specialist child and adolescent mental health services (CAMHS) by the National Health Service (NHS). Insufficient evidence is currently available to give detailed guidance on services for young people aged 16–18 years, those with learning disability, substance misuse or forensic problems or infant mental health services. However, services should be able to provide for these groups. The recommendations for staffing and remit for services for 0–16-year-olds are necessarily ballpark ones, based on our best attempts at rationalising the differing evidence. We intend this guidance to be living, evolving support for service development, open to local interpretation, based on careful needs assessment and priorities. It should be used wisely, with care and authority, to shape local services to be the best possible for young people.

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, social services, the youth justice system or other agencies. It includes those services whose primary or only function may not be mental healthcare, for example general practice or schools, referred to as Tier 1. Specialist CAMHS (i.e. CAMHS at Tiers 2, 3 and 4) has the primary function in providing mental healthcare for children, young people and their families. They are mainly delivered by a multidisciplinary workforce which has had specialist training and/or experience in child and adolescent mental healthcare. This guidance focuses on NHS specialist CAMHS at Tiers 2, 3 and 4.

Application and development of the four-tier CAMHS has created a common language for describing and commissioning services across the UK and Republic of Ireland. However, it is increasingly recognised that neither children and adolescents nor services meeting local need fit neatly into a structural interpretation of the tiers. Children's journeys involve movement through services as their condition is recognised as more complex or as and when conditions are ameliorated. Some children need to utilise a number of services that can involve and span each or all of the CAMHS tiers at the same time. Therefore, in this document, we return to the original functional tiered strategic framework.

Currently, specialist CAMHS are functioning at levels at which demand greatly exceeds their capacity and this accounts for many of the difficulties with waiting times and lists for assessment and treatment, stress and burnout in staff and difficulties with recruitment and retention. Users greatly value continuity of care, clinician flexibility, reliability and continuing support. Effective multi-agency working requires times to liaise and plan. It is crucial that specialist CAMHS is properly resourced for all these reasons.

These findings, as well as severe limitations of the capacity and capability of CAMHS at Tier 1, requires all specialist CAMHS to be clear about their core business. Evidence from the Office of National Statistics (ONS) and from service users and carers suggests that specialist CAMHS should agree their core business and demand management mechanisms with their commissioners in order to ensure that services are as responsive as they can be and do not assign potential individuals to substantial waiting lists for services that are not most appropriate to their needs.

The jurisdictions of England, Ireland, Northern Ireland, Scotland and Wales have each produced CAMHS strategies that are at different stages of development and implementation. There are no significant differences in the prevalence and types of mental health problems experienced by children under the age of 15 years in England, Wales or Scotland. Hence there is no justification for inequity of service provision. Ireland and Northern Ireland have a higher percentage of young people in their populations and require a higher number of whole time equivalent (wte) clinicians in their teams. CAMHS must be equitable across the jurisdictions and it is important that practitioners and policy-makers share practice and learn from each other. The five jurisdictions all have services that are currently stretched. Issues of geography, recruitment and retention are particularly difficult in many areas.

SPECIALIST CAMHS AT TIERS 2 AND 3

We recommend that Tier 2 and Tier 3 services are very closely linked and that young people and their families are able to experience seamless transition between the two tiers as necessary. This may be achieved by Tiers 2 and 3 being provided by the same service with a single point of entry.

Many current Tier 2/3 CAMHS only see young people up to the age of 16 years. Psychiatric disorders increase in frequency above this age and specialist CAMHS that end at the 16th birthday will require significant extra resources to extend services to the age of 18 years.

Capacity calculations based on providing an epidemiologically needs-based service for 0- to 16-year-olds suggest that current specialist CAMHS are overburdened. Team capacity should be set at 40 new referrals per wte per year. This will enable specialist CAMHS to respond quickly, flexibly and offer evidence-based treatments for long enough periods of time for them to be effective. However, commissioners may prefer to choose to use existing capacity in specific ways such as setting the number of new cases that are seen in a 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 could not be provided.

Matching demand and capacity is essential to ensure efficient service provision. Much can be done to ensure the patient journey is smooth and that delays are kept to a minimum. A service that has streamlined operations has a team capacity of 40 new referrals per wte per year. For a specialist Tier 2/3 CAMHS of 10 wte this means a team capacity of 400 new referrals a year.

Clinician keyworker 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 which impact on their job plan.

Specialist CAMHS work with Tier 1 professionals is best provided by dedicated primary mental health workers, ideally working as a team and

employed by or operationally linked to, and supervised within, specialist Tier 2/3 CAMHS.

Specialist Tier 2/3 CAMHS require a minimum of 20 wte clinicians per 100 000 total population up to the 16th birthday. Skill mix in teams must ensure a range of clinical professionals who are able to deliver cognitive, behavioural, psychodynamic and systemic skills, complemented by psychiatric medical skills. Exact proportions of each skill will vary according to local need and commissioning arrangements. Each profession must have access to uniprofessional supervision and training and, ideally, never be the only professional from that discipline in the team.

Specialist Tier 2/3 CAMHS should be commissioned to provide mental health services for children and young people up to their 18th birthday, including:

- liaison with, and consultation to other agencies
- assessment and treatment of psychiatric and neurodevelopmental disorders including:
 - psychosis
 - depressive disorders
 - attention-deficit hyperactivity disorder (ADHD)
 - autistic-spectrum disorders
 - Tourette’s syndrome and complex tic disorders
 - self-harm and suicide attempts
 - eating disorders
 - obsessive-compulsive 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 services can also be provided exclusively by specialist Tier 2/3 CAMHS, but in some areas may be provided by other agencies and specialists, such as community 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 (provided by health visitor, sleep and behaviour clinics)
- mental health problems associated with learning disability (provided by multi-agency teams)
- disruptive behaviour and conduct disorders (provided by youth offending teams and local authority services)
- adjustment disorders (provided by voluntary sector services dealing with parental separation)
- elective mutism (provided by speech and language therapy services)
- elimination problems (provided by paediatric and health visitor services).

The total workforce requirement is 20 wte per 100 000 total population for services up to the age of 16 years, of which 5 wte should be primary mental health workers.

Services should be commissioned up to the 18th birthday but it is not yet possible to recommend the increased level of staffing required for the age range 16–18 years.

It is important to note that services for young people with learning disability, substance misuse problems and dual diagnosis, forensic problems and infant mental health services are currently very limited. Additional staffing will be required in these circumstances, however, it is not possible yet to give guidance on staffing levels for such services. These services require development following local needs assessment and in most cases should be embedded within specialist CAMHS.

SPECIALIST CAMHS AT TIER 4

Tier 4 NHS mental health 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 specialist CAMHS. There is a need for coherent development and provision of comprehensive Tier 4 services across the five jurisdictions based on national plans, with particular focus on the provision of CAMH in-patient services. Plans should be developed within a multi-agency, integrated commissioning agenda.

TIER 4 IN-PATIENT BED NUMBERS

There are 20–40 in-patient CAMHS beds per 1 million total population required to provide mental health services for young people aged up to 18 years 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.

The recognised optimal maximum number of beds for an adolescent in-patient unit is in the region of 10–12. There is no minimum number of beds but it is difficult for a stand alone unit to be clinically and financially viable below 6–7 beds. Bed occupancy should be at 85% to ensure availability of emergency beds.

Staffing of in-patient units is influenced by skill mix, task demands of a particular shift, case dependency/acuity and case mix.

TYPES OF PROBLEMS SEEN AT TIER 4

The following disorders are those most commonly treated in Tier 4 CAMHS in-patient units:

- severe eating disorder
- severe affective disorder
- severe anxiety/emotional disorder
- severe obsessive–compulsive psychotic 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:

- learning disability with comorbid mental illness and/or challenging behaviour
- severe eating disorders
- complex neuropsychiatric problems
- sensory handicaps
- rare paediatric disorders
- head injury/brain injury
- mother and baby in-patient provision
- severe/complex substance misuse problems and dual diagnosis.

In addition specialist Tier 4 multidisciplinary teams should be commissioned to provide:

- second opinion service
- expert witness service
- parenting assessment in complex cases.

PROVIDING INTENSIVE TREATMENT

Intensive community treatment should be developed in the context of, and closely linked with, well-resourced Tier 3 services and accessible age-appropriate Tier 4 in-patient facilities. Such provision includes day units; crisis teams, intensive community support teams, outreach teams, home treatment teams; enhanced paediatric ward, specialist adolescent ward; liaison/transition community mental health teams for 16–18-year-olds.

PROVIDING CAMHS OUT-OF-OFFICE HOURS

There is currently little guidance on out-of-hours provision by CAMHS clinicians. Where out-of-hours cover exists it is generally provided by the consultant psychiatrist. In some cases other senior members of the multidisciplinary team provide an out-of-hours service. In most areas of the UK, due to the low number of CAMHS psychiatrists, it is neither possible nor appropriate for CAMHS to provide a first on-call psychiatric service. In some areas telephone consultation is made available to paediatric and adult mental health clinicians in the general hospital. In these cases, joint protocols are agreed between the relevant professionals to ensure that children and adolescents receive the best possible care. It is vital that detailed discussions take place between commissioners, CAMHS and adult mental health in order to explore creative solutions in the light of the limited capacity of CAMHS psychiatrists to provide comprehensive out-of-hours cover.

Defining CAMHS

THE FOUR TIER STRATEGIC CONCEPT

The tiered concept, now in common parlance, was articulated most publicly by the Health Advisory Service, however, there were many people who contributed to its generation and it is now owned by everybody. It is re-stated and a little redefined in the English National Service Framework (NSF) (Department of Health, Department for Education and Skills, 2004a). The NHS Health Advisory Service (1995) promulgated this model '... to produce a strategic approach ...'. Its intentions were '... 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 necessarily 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. For example, the distinction between Tier 2 and Tier 3 is used differently in England and Wales and there are discussions about within which tier day services sit (Department of Health, Department for Education and Skills, 2004a; Welsh Assembly Government, 2003). Arguably, these differences are less important than achieving clarity about the functions required of services and the effective commissioning of comprehensive CAMHS that are tailored to the needs of children, young people and families locally.

THE MEANING OF THE TERM 'CAMHS'

The term CAMHS is used in two different 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, social services or other agencies. Hence, it includes those services whose primary or only function may not be mental healthcare (for example, 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 child and adolescent mental health services, provided at Tiers 2, 3 and 4, mainly by the NHS or by the independent healthcare sector funded by NHS monies, but also including specialist social care, educational, voluntary and independent mental health services. For these services, the provision of mental healthcare to children and young people is their primary function. They are mainly composed of a multidisciplinary workforce with specialist training in child and adolescent mental health. CAMHS in Tiers 2, 3 and 4 are commonly referred to as 'specialist CAMHS'.

CAMHS 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 (for example, consultative advice to another agency) or direct (direct therapeutic work with an individual child or family).

Current services may have tiers that are structural or functional or both and each tier may be more or less developed relative to the others. For example, 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. Tiers 2 and 3 are considered together in this document.

TIER 1

Tier 1 CAMHS is provided by professionals whose main role and training is not in mental health, for example general practitioners, health visitors, paediatricians, social workers, teachers, youth workers and juvenile justice workers. *Together We Stand: The Commissioning, Role and Management of Child and Adolescent Mental Health Services* (NHS Health Advisory Service, 1995) proposed a new type of CAMHS worker, i.e. the primary mental health worker, who would work across Tiers 1 and 2/3, providing consultation and direct work with young people and families. Primary mental health workers are still not prevalent across the UK but are highly developed in some areas.

TIER 2

Tier 2 CAMHS is provided by specialist trained mental health professionals, working primarily on their own, rather than in a team. They see young people with a variety of mental health problems that have not responded to Tier 1 interventions. They usually provide consultation and training to Tier 1 professionals. They may provide specialist mental health input to multi-agency teams, for example for children looked after by the local authority.

The Office of National Statistics showed that the majority of younger people are seen by single professionals who are members of multidisciplinary specialist teams. Therefore, in Wales, Tier 2 also consists of those practitioners and services from specialist CAMHS that provide initial contacts and 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 more complex mental health problems than those seen at Tier 2. In many areas the movement of young people and families between Tier 2 and 3 is fluid and seamless, with the same professionals working within 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 the needs of children and young people 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. They also include day care and residential facilities provided by sectors other than the NHS, such as residential schools, and very specialised residential social care settings including specialised therapeutic foster care. Tier 4 services are an integral part of overall CAMHS delivery and depend on good relationships with successful Tier 2/3 services.

The reality of current services

Specialist CAMHS vary in their eligibility and threshold criteria, professional mix, models of service delivery, levels of local morbidity and commissioning arrangements. Many struggle to meet waiting-time targets and to provide the full range of assessments and treatments demanded of them. Funding has historically been provided for new project work rather than for core services and has been subject to tight guidelines and targets, for example, work with children looked after by the local authority.

Currently, most specialist CAMHS are commissioned using corporate approaches. Local commissioning arrangements mean that services are provided in different ways in different parts of the country. Most areas have developed according to the tiered model described in *Together We Stand* (NHS Health Advisory Service, 1995).

The quality and range of specialist CAMHS varies according to the quality of informed commissioning and variety of services provided by partner agencies. Local commissioners need to agree eligibility and threshold criteria for entry into specialist CAMHS, informed by local priorities. These arrangements must include agreements to balance demand and capacity to ensure high level service provision with short waiting times for assessment and treatment and the use of evidence-based practice. However, anecdotal evidence suggests that demand and capacity are rarely taken into account in commissioning, resulting in overburdened services that, in England, struggle to meet Department of Health waiting times for first appointments without developing long treatment waiting lists.

Service capacity is complex and fluid and varies with fluctuations in demand for the service. Lack of clarity about service capacity has led specialist CAMHS workers of all disciplines to feel as if impossible demands are put on them with consequent stress and concerns about the quality of service provision. In a recent survey, 66% of consultant child and adolescent psychiatrists felt that their service was inadequately resourced and reported high rates of psychological distress and burnout (Littlewood *et al*, 2003). In another survey, one third of a sample of community child and adolescent psychiatrists felt that pressure on CAMHS and lack of resources had led to increased prescribing of medication to children (Doerry & Kent, 2003).

User views, collated as part of developing the NSF for Children's services in England, support the need for CAMHS to be able to provide a range of flexible services (Baruch & James, 2003). There were clear requests for CAMHS to be provided in a variety of settings, including home. The quality of the relationship between the clinician and the young person and/or their family was seen by users 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.

These 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 demand and capacity.

CAMHS across the jurisdictions

England, Ireland, Northern Ireland, Scotland and Wales have each produced CAMHS strategies which (at the time of writing) are at different stages of development and implementation. A survey by the Office of National Statistics in England, Wales and Scotland found no significant differences in the prevalence and type of mental health problems experienced by children under the age of 15 years (Meltzer *et al*, 2000). Hence there can be no justification for inequity of service provision. CAMHS must be equitable across these jurisdictions and it is important that practitioners and policy-makers share practice and learn from each other.

ENGLAND

In England, the annual CAMHS mapping, involving every service, began in 2002. It aims to provide a picture of CAMHS and their users and includes details of the workforce, workload, waiting times, activity and interventions used as well as information about age range, specific services, on-call, costs and funding (for more information visit www.dur.ac.uk/camhs.mapping/).

The Children's National Taskforce, set up in the aftermath of the Bristol Enquiry, spearheaded the development of the *NSF for Children, Young People and Maternity Services*, published in September 2004 (Department of Health, Department for Education and Skills, 2004a). The NSF sets standards for promoting the health and well-being of children and young people and for providing high quality services that meet their needs. Ministers have publicly stated that their implementation is mandatory.

The NSF is intended to be implemented through the Every Child Matters: Change for Children Programme and is dually sponsored by the Department of Health and the Department for Education and Skills (Department for Education and Skills, 2004). Workforce development, education and training are key to the successful implementation of the NSF and a range of initiatives have been set up to address the issues including a CAMHS workforce and training board. Eleven regional development workers have been appointed by the Department of Health to provide a national CAMHS support service in implementing the NSF.

The Department of Health Priorities and Planning Framework sets the expectation that a comprehensive CAMHS will be available in all areas of England by 2006. This was reiterated in the priorities for 2005/6 to 2007/8, which emphasise the need to maintain the levels of services achieved through the 2003–6 planning round. The most recent CAMHS Public Service Standard (Department of Health, 2004) states: 'improve life outcomes of children with mental health problems by ensuring that all individuals who

need them have access to a comprehensive CAMHS', as defined in the NSF. The CAMHS mapping will be used to provide a baseline to measure improvement.

New funding has been allocated for CAMHS through the CAMHS grant to local authorities for 2003/4/5/6 and NHS revenue to primary care trusts from 2004/5/6. NHS capital has been allocated to strategic health authorities in 2004/5/6, which may be used for buildings. The total amounts to £318 million.

IRELAND

Ireland has a higher percentage of young people than the other jurisdictions, therefore, the figures for an Irish total population of 66000 equate approximately to a UK total population of 75000. Services are severely stretched and there are only two functioning in-patient units.

The Department of Health in Ireland has undertaken to implement the recommendations of the Working Group on Child and Adolescent Psychiatric Services (Irish Department of Health and Children, 2001) and has provided additional revenue funding of over €7.5m to provide additional consultants, enhance existing consultant-led multidisciplinary teams and to establish further teams. The population of Ireland means that 59 consultant-led specialist CAMHS teams are needed for age 0–16-years services. The current provision is less than 40. Services for 16- to 18-year-olds and for attention-deficit hyperactivity disorder are to be developed.

The Irish Health Strategy 2001 recommends teams for 0- to 15-year-olds to be 14.6 wte per 100000 equivalent total UK population (36.5 wte per 250000 equivalent UK total population).

The Irish College of Psychiatrists has produced a detailed policy statement detailing specific issues for CAMHS and guidance for service development (The Irish College of Psychiatrists, 2005).

NORTHERN IRELAND

Northern Ireland has a total adult population in the region of 1.6 million with a 0–19-year-old population that is 29.6% of the total adult population. Out of the total population of Northern Ireland 24% is under 16 years compared to 20% in the UK. Northern Ireland has an integrated health and social services.

Northern Ireland has been living with the 'Troubles' and the aftermath since 1969. Higher levels of socio-economic deprivation, ongoing civil strife and a higher prevalence of psychological morbidity than either England or Scotland distinguish Northern Ireland. It has been estimated that the mental health needs of men and women are potentially 21% and 29% higher respectively in comparison with England.

A number of studies have highlighted the significant impact of the 'Troubles'. The chief medical officer's report of 1999 estimated that more than 20% of young people are suffering significant mental health problems by their 18th birthday. Young people in Northern Ireland have, on average, experienced twice the number of negative life events and report much higher stress scores than adolescents in other countries. Many of Northern Ireland's children and young people have either spent or continue to spend their formative years in environments characterised by confrontation and violence.

Having had devolved government for a short period as a result of the Good Friday Agreement, direct rule was re-instigated when this process collapsed. A political vacuum followed. Political talks commenced in September 2004 but, at the time of writing, there is continuing uncertainty about the future of the Northern Ireland Assembly.

The Department of Health, Social Services and Public Safety is currently engaged in a number of strategic planning initiatives, including the development of a 20-year strategy for health and social services, a shorter term, 3-year strategy for services for children in need and a regional review of mental health and learning disability.

The Department of Health, Social Services and Public Safety report (2001), *Commissioning In-patient Psychiatric Services for Children and Young People in Northern Ireland*, has recommended that there should be 25 adolescent in-patient beds, split into two units, supported by an appropriate level of community infrastructure, including day hospitals and that one of these should have a secure treatment capability.

Recruitment and retention is a significant problem for all disciplines in specialist CAMHS.

SCOTLAND

A powerful driver of CAMHS development in Scotland is the 2003 Scottish Needs Assessment Programme (SNAP) Review of Child and Adolescent Mental Health (Public Health Institute of Scotland, 2003). It recommends development of mental health promotion, prevention and care and acknowledges that significant re-design of services will be needed. Improving the mental health of children and young people is seen as a universal responsibility. Specialist CAMHS services are to focus on providing a service for more severe mental health problems and supervision and consultation to enable others in primary care services to support the less severely affected.

Child health commissioners are responsible for the implementation of SNAP and for ensuring key issues are included in local health plans and children service plans. A children's commissioner was appointed in 2004 to represent children's services and needs in the Scottish Executive and £1 million has been allocated for CAMHS development over 2 years, to be targeted on training and development.

There has been a drastic reduction of in-patient Tier 4 CAMHS facilities over the past 10 years, from 58 beds for children and 67 for adolescents in 1994 to 9 for children and 35 for adolescents in 2003.

Scotland has the highest rate of suicide and self-harm among young males in Europe. The 'Choose Life' programme has been developed to target this population.

There is now considerable effort being invested in strategic planning within CAMHS following the publication of two key documents and work on workforce planning. *The Mental Health of Children and Young People: A Framework for Promotion, Prevention and Care* is the document that outlines operational plans for the implementation of the aims and objectives of SNAP (Scottish Executive, 2005). In December 2004 the Child Support Group published a report following the work of the in-patient focus group that makes specific recommendations about the development of three adolescent units in Edinburgh, Dundee and Glasgow with a total of 60 beds. It also emphasises the need for combined development of Tier 3 intensive services

with Tier 4 specialist services. The work of taking these plans forward is being supported by a national programme 'HeadsUp', run by a director supported by a development officer both funded by the National Programme for Improving Mental Health and Well-being.

At the time of writing, a regional planning group is meeting to assess the feasibility of implementing the recommendations of the in-patient focus group and to agree how these will be funded. The CAMHS Multi-agency Workforce Group will be publishing an interim report with recommendations for workforce planning. This will follow after a detailed mapping exercise of individual and spheres of work initially in specialist CAMHS teams. This process is part of the National Workforce Programme, which has already outlined a 10-year plan for development of staffing in the in-patient units. Training is considered a key element of all these plans and it is recognised that none of the staff expansion and developments can go forward without a significant investment in training at all levels within specialist CAMHS teams and in supporting universal services. Training is required to increase the skill base in universal services and to maintain adequate levels of skills in specialist CAMHS teams. It is also a crucial component in improving recruitment. NHS Education for Scotland (2004) has published *Promoting the Well-being and Meeting the Mental Health Needs of Children and Young People*, which sets out a training template to underpin the training initiatives.

WALES

The key document *Child and Adolescent Mental Health Services: Everybody's Business* provides a strategic plan for CAMHS development in Wales (National Assembly for Wales, 2001). It stresses multi-agency, multidisciplinary working, commitment to the four-Tier strategic concept and an approach built on partnership with young people and families. The expectation was that the strategy would be implemented across Wales over a period of 10 years.

Particular issues in Wales include a lower number of adolescent in-patient beds per head of population compared to the rest of the UK, the absence of children's specialist CAMHS Tier 4 in-patient beds, a lack of beds for young people who have eating disorders, virtually no service for children with a learning disability and no emergency adolescent beds in Wales. As in the rest of the UK there are significant issues regarding recruitment and training of the CAMHS workforce.

It has been estimated that implementation of the recommendations in *Everybody's Business* would require around £10 million recurrent additional funding for the first 3 years to cover extra training, development of services and extra personnel. A multi-agency, multidisciplinary All Wales implementation group was charged with delivering the CAMHS strategy, while assessing the level of investment needed. However, the work of this group was suspended in 2002 when work began on the Children's NSF in Wales (Welsh Assembly, 2005). It is expected that the exact role of this group will be clarified in the near future. At present, only a small amount of funding has been made available to take forward the recommendations in *Everybody's Business* and the NSF.

The Children's NSF aims to improve quality and equity of service delivery through the setting of national standards for health and social care. The NSF in Wales follows closely the model developed by the Department of Health in England.

Wales appointed the first children's commissioner in the UK. A key role is to represent the voices of children and young people in Wales to the Welsh Assembly Government.

In Wales, as in England, the Mental Health NSF for adults of working age makes some reference to CAMHS and the mental health needs of adolescents (The National Assembly for Wales, 2002). There are currently no plans in Wales for early intervention services for first-episode psychosis. The All Wales CAMHS strategy and draft version of the Children's NSF for Wales have highlighted the need for age-appropriate mental health services for older adolescents.

Changes have been made in the commissioning arrangements in Wales that were required by the deletion of all 5 health authorities and the creation in their stead of 22 local health boards in April 2003. In addition, commissioning across the statutory agencies (in particular, the NHS and social services and education departments and the youth justice services) should be coordinated at local borough levels through the Children and Young People's Framework Partnerships. Welsh Health Circular 63 (Welsh Assembly Government, 2003) gave government direction on commissioning responsibilities in the NHS for CAMHS.

Commissioning of CAMHS in the NHS at Tier 1 is now the responsibility of local health boards. The 22 local health boards, which are all co-terminous with the local authorities in Wales, are required to establish three CAMHS commissioning networks (CCNs) to commission Tier 2 and 3 services. The local health boards in each of the territories covered by the three regional offices of Welsh Assembly Government should select one board to lead on commissioning Tier 2 and 3 CAMHS. The direction from Welsh Assembly Government also requires Health Commission Wales, an agency of the Welsh Assembly Government to commission directly some specified Tier 3 services (for example, day services) and all Tier 4 on an all Wales basis (Welsh Assembly Government, 2002, 2003).

There are significant numbers of dedicated, enthusiastic and highly skilled professionals from all disciplines currently working in CAMHS in Wales. Organisations are keen to take forward the plans outlined in the all Wales CAMHS strategy and the drafts of the Children's NSF. It is important that the strong political interest in CAMHS expressed by the Welsh Assembly Government is underpinned by timely and realistic funding.

SUMMARY

England, Ireland, Northern Ireland, Scotland and Wales have each produced CAMHS strategies that are at different stages of development and implementation. There are no significant differences in the prevalence or type of mental health problems experienced by children under the age of 15 years in England, Wales or Scotland. Hence there is no justification for inequity of service provision. Ireland and Northern Ireland have a higher percentage of young people in their populations and require a higher number of wte clinicians in their teams. CAMHS must be equitable across the jurisdictions and it is important that practitioners and policy-makers share practice and learn from each other. The jurisdictions all have services that are currently stretched. Issues of geography, recruitment and retention are particular difficulties in many areas.

Black and minority ethnic groups

Providers of CAMHS need to take account of diverse cultural, religious and social mores and how they might affect individual experiences (National Collaborating Centre for Mental Health, 2005).

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 adolescents from 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. It is likely that CAMHS are less responsive to the needs of minority ethnic children.

In order to meet the needs of a diverse cultural group CAMHS should take into account research into the racial identity of mental health practitioners (Carter, 1995). In addition language may present a barrier for some parents and children of Black and minority ethnic groups. There are particular issues for the delivery of psychological treatments for parents, children and adolescents 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 key NHS services put into effect an equalities policy. This includes the ethnic monitoring of service users. This information should be used to adapt services to meet the diverse needs 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 populations in Britain.

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

It is essential that the needs of Black and minority ethnic groups are taken into account in the planning and development of CAMHS. Particular attention is needed with respect to the issue of access to CAMHS by parents and children from other cultures.

Capacity of existing specialist CAMHS

The reality is that it may be some time before specialist CAMHS will become adequately resourced for demand. Development and expansion will inevitably take time and careful planning. Resources will always be limited and increased resources may not always be forthcoming. In these circumstances services should ensure that:

- Quality and effectiveness are maximised by having streamlined processes
- 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.

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 has produced a useful guide to help service redesign to ensure maximum efficiency using existing resources (NHS Modernisation Agency, 2002), and training is also available.

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 due to 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 (contributors of this report) in our own services, with beneficial effects on waiting times without increased workload.

PROCESS MAPPING

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 below) to identify whether the cause is due to a true lack of capacity (see below) or due to inefficient processes. Process mapping is the best place to start when assessing the need for service re-design.

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 service from all sources (including those individuals 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* 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 (Williams *et al*, 2005).

CAPACITY

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

BOTTLENECK

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

BATCHING

This is when work is collected up 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. 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. Non-CAMHS examples are bus lanes; CAMHS examples include designated urgent appointment slots. On the other hand, segmented systems are effective in providing streamlined provision for many individuals. Segmentation occurs when those with similar needs and therefore with similar, predictable pathways are grouped together.

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 models are the NHS Modernisation Agency model (based on research in a variety of health sectors; NHS Modernisation Agency, 2002) and calculations based on service audit. These 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. It gives clarity regarding how much time is available that can then be used in many different ways. For example, existing clinical capacity may be calculated to allow assessment and treatment of 10 cases of anorexia nervosa a year but no more. Commissioners can chose 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 cases 6 sessions totalling 10 hours (including administration), then 62 new cases per wte per annum could be seen. For a 10-session treatment package, capacity can be calculated to reduce to 39 new cases a year (see Appendix I). This restriction on treatment may limit the use of evidence-based practice for those cases that 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.

NEEDS-BASED APPROACH TO CALCULATING CAPACITY

It is possible to use existing models of service provision providing evidence-based treatment to calculate the capacity of an epidemiologically based specialist CAMHS (R. Davey & S. Littlewood, personal communication, 1996; Davey & Littlewood, 1996; Goodman, 1997; Kelvin, 2005). Such calculations show specialist CAMHS capacity should be around 40 new referrals per wte per annum. This fits with the perception by clinicians of numbers that 'feel right' and has face validity (FOCUS mailbase, 2003a) and will enable specialist CAMHS to respond quickly, flexibly and offer evidence-based treatments for long enough for them to be effective.

This capacity is required for a comprehensive evidence-based specialist CAMHS. Most services are not at this level of resource. Commissioners may therefore decide to cope with a current high demand on CAMHS in the face of existing low capacity by commissioning only assessment and very brief interventions for the vast majority of cases. However, this may not allow evidence-based interventions to be implemented and will not support user views that ongoing support and continuity of care be provided.

CLINICIAN CASE-LOAD CAPACITY

If we assume many cases will be treated in less than 1 year, then it follows from the above capacity calculations that one wte clinician can hold a keyworker case-load of 40. However, if a clinician is working mainly with

complex cases or those requiring more intensive treatments, such as 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.

Matching demand and capacity is essential to ensure efficient service provision. Much can be done to ensure the patient journey is smooth and that delays are kept to a minimum. A service that has streamlined its operations has a team capacity of 40 new referrals per wte per year. For a specialist Tier 2/3 CAMHS of 10 wte this means a capacity of 400 new referrals a year.

Guidance for provision of specialist CAMHS

In producing this guidance we have looked at published and unpublished literature and sought the views of practising clinicians in CAMHS via an e-mail discussion forum (FOCUS mailbase, 2003b).

SPECIALIST CAMHS INPUT INTO TIER 1 SERVICES

In many areas primary mental health workers have successfully increased the appropriateness of those that are referred to specialist Tier 2/3 CAMHS (Whitworth & Ball, 2004). There can also be challenges such as the primary mental health worker role being seen as a substitute for the Tier 2/3 team and attracting large numbers of referrals (Gale & Vostanis, 2003). There are a variety of models of working, including outreach, primary-care-based and team-based. Each are associated with different effects on referrals to specialist CAMHS (Macdonald *et al*, 2004). Careful planning is needed to integrate primary mental health workers into specialist services.

Primary mental health workers provide a combination of consultation, short-term direct work and training, in various combinations. They may be employed as part of a Tier 2/3 CAMHS to work with Tier 1 services, or may be part of a stand-alone primary mental health team. We recommend that they be closely linked to Tier 2/3 CAMHS to facilitate patient transition between the tiers and to ensure ready availability of professional supervision.

In their description of a four-star and five-star CAMHS, Davey & Littlewood recommended 5 wte primary mental health workers per 100 000 total population (R. Davey & S. Littlewood, personal communication, 1996). We (the authors of this report) agree with this recommendation.

SPECIALIST CAMHS AT TIERS 2 AND 3

Goodman (1997) describes the staffing required for a service restricted to primarily psychiatric disorders for a total population of 250 000 aged up to 17 years. Kelvin (2005) uses similar methods to Goodman to calculate staffing for a needs-based service for 0- to 17-year-olds in his area (South Cambridgeshire) for a total population of 380 000. He uses a wider range of disorders and mental health problems than Goodman. Davey & Littlewood (R. Davey & S. Littlewood, personal communication, 1996; Davey & Littlewood, 1996) describe different levels of specialist CAMHS, ranging from a consultant-only one-star service to a comprehensive five-star service. They take into account all tiers of service, provision of consultation and preventative services, out-of-hours provision and day-patient services (see Appendices II and III).

Davey & Littlewood's four-star service is broadly equivalent to that described by Kelvin, and recommends similar staffing levels (around 15 wte per 100 000 total population for a service up to the 16th birthday; Kelvin goes on to recommend 20 wte for a service that provides teaching). Their two-star service is similar to that described by Goodman and recommends 5 wte for a 5–15 year service compared to Goodman's 3.2 wte for a 0–15 year service per 100 000 total population. Overall, Kelvin's model and Davey & Littlewood's four-star service are probably closest to the current reality of service demanded of most existing Tier 2/3 specialist CAMHS (i.e. around 15–20 wte per 100 000 total population for a service up to the 16th birthday. There is currently insufficient evidence to determine figures for a service that extends to the 18th birthday. We (the authors) therefore recommend a workforce of 20 wte per 100 000 total population for a service up to the 16th birthday, of whom 5 wte should be primary mental health workers.

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 13 wte (rounded) professionals per 100 000 population, but is restricted to psychiatry, psychology, nursing, psychotherapy and art therapy (Wallace *et al*, 1997; British Psychological Society, 2001; Royal College of Psychiatrists, 2002; British Association of Art Therapists & the Art Therapy Practice Research Network: V. Huet, Personal communication, 2005; see also Appendix IV). Psychiatric services for children and young people with moderate and severe learning disabilities require 0.5 wte psychiatrists per 100 000 total population aged 0–18 years (Royal College of Psychiatrists, 2004). All these have been calculated without reference to the need for other professionals in a team.

Other recommendations for clinical skill mix are based on a needs-based service delivering evidence-based practice. There appears to be some agreement between the Goodman and Kelvin models in that both recommend 75% of the skills should be in behavioural, cognitive, or systemic therapies. These skills are not specific to one profession. Recommendations for psychiatry vary from 15% to 25%, which seems to reflect the extent to which the service is based on a psychiatric model of CAMHS (see Appendix V for further details). Exact proportions of each skill will vary according to local need and commissioning arrangements. Each profession must have access to uniprofessional supervision and training and, ideally, never be the only professional from that discipline in the team.

RANGE OF PROBLEMS SEEN BY SPECIALIST CAMHS AT TIERS 2 AND 3

Davey & Littlewood (R. Davey & S. Littlewood, personal communication, 1996), Goodman (1997) and Kelvin (2005) have all described the types of mental health problems and age ranges that different types of services could be presented with. These are summarised in Appendix III. There is broad agreement that specialist CAMHS should provide assessment and treatment services for young people with severe and persistent psychiatric disorders up to their 18th birthday (see Box 1). Joint work, liaison and consultation to other agencies should be provided.

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 (see Box 2). Such services may also be provided by Tier 1 professionals and Tier 2 paediatric services according to local arrangements, with input from primary mental health workers. In some areas specialist child development teams may provide for those with learning disability or autism, with input from specialist CAMHS workers. Specialist CAMHS for children with mental health services associated with learning disability are limited around the UK.

Substance misuse and dual diagnosis services for young people are very underdeveloped around the UK and are not yet routinely provided by specialist CAMHS. We recommend that local needs assessment informs service planning and development in this area. Commissioning must be within the broader framework of children's services, including CAMHS.

BOX 1 SPECIALIST TIER 2/3 CAMHS PROVISION FOR CHILDREN AND YOUNG PEOPLE UP TO THEIR 18TH BIRTHDAY

- Liaison with and consultation to other agencies.
- Assessment and treatment of psychiatric and neuro-developmental disorder, including:
 - psychosis
 - depressive disorders
 - attention-deficit hyperactivity disorder (ADHD)
 - autistic-spectrum disorders
 - Tourette's syndrome and complex tic disorders.
 - self-harm and suicide attempts
 - eating disorders
 - obsessive-compulsive disorder (OCD)
 - phobias and anxiety disorders
 - post-traumatic stress disorder (PTSD)
 - mental health problems secondary to abusive experiences
 - mental health problems associated with physical health problems and somatoform disorders

BOX 2 SERVICES THAT CAN BE PROVIDED EXCLUSIVELY BY SPECIALIST CAMHS, BUT IN SOME AREAS MAY BE PROVIDED BY OTHER AGENCIES AND SPECIALISTS, WITH INPUT BY SPECIALIST CAMHS WORKERS

PROBLEM	EXAMPLE OF SERVICE PROVIDER
Services for under 5-year-olds with milder behaviour or sleep problems	Health visitor, sleep and behaviour clinics
Mental health problems associated with learning disability	Multi-agency teams
Disruptive behaviour and conduct disorders	Youth offending teams and local authority services
Adjustment disorders	Voluntary sector services dealing with parental separation
Elective mutism	Speech and language therapy services
Elimination problems	Paediatric and health visitor services

TIER 4 CAMHS funded by the NHS

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. There is a need for coherent development and provision of comprehensive Tier 4 services across the five jurisdictions based on national plans. Also, there is need for a particular focus on the provision of child and adolescent mental health in-patient services.

Non-NHS Tier 4 settings include specialist residential schools and social care homes, specialist foster care, enhanced social services residential placements and local authority secure units. Such settings may or may not have mental health as a focus of their work and may or may not have specialist mental health workers in their teams.

Effective use of specialist Tier 4 provision is dependent on the development of care pathways, led by local CAMHS teams. These need to be designed to ensure timely referral of appropriate cases to Tier 4, with 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). It is vital that specialist Tier 4 CAMHS has the capacity to fulfil its role within an overall tiered service. Tier 4 services 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.

The National In-patient Child and Adolescent Psychiatry Study (NICAPS) has shown significant gaps in provision of adolescent in-patient beds and marked geographical variability around the UK (O'Herlihy *et al*, 2003). Availability of CAMHS beds and service gaps continues to be a problem as does staff shortages and problems with recruitment.

Key findings from a number of studies have highlighted a number of problem areas for Tier 4 specialist CAMHS:

- There has been a greatly increased referral rate of children and young people to in-patient CAMHS, including significantly increased numbers of emergency referrals (Street, 2000)
- There is a national shortage of in-patient adolescent beds and a particular lack in a developmentally appropriate provision for those aged 16–19 years (O'Herlihy *et al*, 2001; Street, 2000)
- Services are not able to respond in a timely way to requests for urgent admission. Paediatric and adult psychiatry wards are regularly used as an interim resource (O'Herlihy *et al*, 2001; Street, 2000)
- There are concerns about the level of support for high-risk or acutely disturbed cases and the ability to work safely and effectively with a more demanding client group (Street, 2000; Svanberg & Street, 2003)

- Gaps in provision including long-term therapeutic provision and post discharge services (Street, 2000)
- There are significant problems in recruiting staff, especially nursing staff (O’Herlihy *et al*, 2001; Svanberg & Street, 2003)
- There has been much inter-agency confusion in particular about the needs of children with conduct disorder and challenging behaviours.

Tier 4 services are an integral part of overall CAMHS delivery and depend on good relationships with successful community services. A close working relationship between Tier 3 and Tier 4 CAMHS is key to the delivery of an effective Tier 4 service. CAMHS cannot be considered safe or adequately resourced if it does not have guaranteed access to specialist adolescent in-patient facilities offering same-day admissions for individuals with symptoms of severe mental illness.

Clear guidelines are needed in the absence of age appropriate and consistent mental health services for 16–18-year-olds. The interface between CAMHS and adult mental health must be addressed and links established between Tier 4 CAMHS and adult in-patient and community mental health teams in a given geographical area.

FUNCTIONS OF SPECIALIST CAMHS AT TIER 4

As a tertiary service, a specialist Tier 4 CAMHS is usually commissioned on a sub-regional, regional or supra-regional basis. Ideally it should be provided to the smallest critical mass of general population that is practical and be as geographically close as possible to the community served. The commissioning of a national adolescent forensic mental health secure service now lies with the National Strategic Commissioning Advisory Group (NSCAG).

INTENSIVE TREATMENT

Intensive treatment provides frequent contact and coordinated intensive work with the young person and/or carers by a multidisciplinary team. This can take place as an in-patient, or exclusively as an out-patient in an assertive outreach model or in conjunction with day care provision. The development of additional models of intensive treatment for young people with complex needs should be considered by commissioners.

Intensive treatment can be developed as the result of collaboration between specialist CAMHS and social services or education or all three of these, through joint work between Tier 3 and Tier 4 CAMHS or collaboration between specialist CAMHS and paediatrics or CAMHS and adult mental health. In order to function effectively there needs to be close links with and support from adequately resourced Tier 2/3 specialist CAMHS teams and age-appropriate Tier 4 in-patient beds for children and adolescents.

INTENSIVE CARE

Intensive care is a model that provides close monitoring and treatment of a young person with serious mental health problems by highly specialist staff in an age-appropriate residential acute care setting. The acute care setting should provide a secure and age-appropriate environment with high staff ratios and a range of therapeutic interventions.

The major function of specialist Tier 4 CAMHS is to provide developmentally appropriate in-patient mental health services for children and young people.

Currently, NHS specialist Tier 4 in-patient CAMHS do not normally provide treatment where behavioural problems are driven by learning disability, conduct disorder or substance misuse. These are significant service gaps and consideration of the in-patient needs of young people with these problems must be taken into account in planning Tier 4 services.

It is important that there is an integrated plan to meet the needs of young people with severe substance misuse problems. These adolescents 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.

TYPES OF PROBLEMS SEEN AT TIER 4

Disorders that are most commonly treated in Tier 4 CAMHS in-patient units are listed in Box 3.

BOX 3 DISORDERS COMMONLY TREATED IN TIER 4 CAMHS IN-PATIENT UNITS

- Severe eating disorder
- Severe affective disorder
- Severe anxiety/emotional disorder
- Severe obsessive-compulsive disorder
- Psychotic disorders
- Other mental illnesses where physical, social and family variables operate to inhibit progress

In addition to the disorders in Box 3, commissioners must ensure that specialist out-patient and in-patient expertise is available in a number of circumstances; these are listed in Box 4. Specialist multidisciplinary teams also should provide: second opinion service, expert witness service and parenting assessment in complex cases.

MENTAL HEALTH IN-PATIENT UNITS

Comprehensive Tier 4 child and adolescent in-patient services must include both acute care in-patient provision that is able to respond to emergency admissions of acutely disturbed or high-risk young people with a mental disorder, including those subject to mental health legislation and medium- to long-term planned therapeutic in-patient provision, including rehabilitation programmes. Both types of adolescent in-patient beds should be available for a given population. There must be close working links between the

Box 4 CIRCUMSTANCES THAT REQUIRE SPECIALIST OUT-PATIENT AND IN-PATIENT EXPERTISE

- Learning disability with comorbid mental illness and/or challenging behaviour
- Severe eating disorders
- Complex neuropsychiatric problems
- Sensory handicaps
- Rare paediatric disorders
- Head injury/brain injury
- Mother and baby in-patient provision
- Severe/complex substance misuse problems and dual diagnosis

acute care and medium- to long-term therapeutic in-patient provision and the capacity and flexibility for young people to move between the two as appropriate.

There are a number of different models of child and adolescent in-patient service. There is frequent debate on the advantages and disadvantages of the generic versus specialist in-patient unit. Generic units cater for all types of mental health disorder, whereas specialist units may take only one type of problem (for example, eating disorders). Where the aim is to increase bed capacity with an emphasis on locality services then the generic unit may be the model of choice.

Although there is currently little robust evidence advocating the establishment of specialist in-patient units, a single generic unit can have difficulty in catering for very different needs. This can affect staffing requirements, bed occupancy levels, core provision, safety and rate and quality of recovery of the young person. Some of the shortfalls of the generic model might be addressed by separation into acute in-patient unit and medium- to long-term therapeutic in-patient unit.

RECOMMENDATIONS FOR NUMBER OF BEDS

The NICAPS study showed that current provision of beds is not based on need (O’Herlihy *et al*, 2001). The average was 3.4 beds per 100 000 under 18 years population.

The NICAPS study, led by the Royal College of Psychiatrists Research Unit for the Department of Health, carried out a census of occupied beds in England and Wales. They found 156 beds were occupied by children under the age of 13 years compared with 449 beds occupied by adolescents on the day of the census. They also contacted paediatric wards and adult psychiatric wards. They estimated that there were 75–125 inappropriate admissions to paediatric wards of children and adolescents over a 6-month period and that there were 250–300 inappropriate admissions of adolescents to adult psychiatric wards over the same period.

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 as well as local demographics, including measures such as the child poverty index and multiple deprivation index for the area concerned. Local geography must also be taken into account when planning services. Based on work by Kurtz *et al* and NICAPS it is recognised that around 24–40 CAMHS beds are required per

1 million total population (Kurtz *et al*, 1996). The Royal College of Psychiatrists recommends 3–4 beds for young people with severe learning disability and 2–3 beds for those with moderate learning disability and 1 low-secure bed per 1 million total population (Royal College of Psychiatrists, 2004).

There is little guidance on bed numbers for the pre-adolescent group. However, Goodman (1997) makes tentative recommendations of 1 bed for 0–15-year-olds per total population of 250 000, which may be adequate if there are good local education and social services Tier 4 provision. These figures can only be tentative and the guidance must be considered alongside a multi-agency assessment of local need.

Results from the Children and Young Person's Inpatient Evaluation Study (CHYPIE) (Jacobs *et al*, 2004), demonstrated clear deficits in inpatient 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. They had less support from community CAMHS leading up to admission and were a complex group with multiple diagnoses and difficulties. Calculations of bed need for 0–13-year-olds, based on data from the NICAPS and CHYPIE studies suggest a total requirement of around 200 beds for England and Wales. This equates to approximately one bed for 0–13-year olds per total population of 265 000.

The recognised optimal maximum number of beds for an adolescent in-patient unit is in the region of 10–12. 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 due to the number of staff required to run the unit and provide clinical input. If an in-patient unit is to ensure availability for emergency beds, the recommended bed occupancy is 85% (Corrigall & Mitchell, 2002). We agree with these recommendations. Staffing levels have also been calculated (see below; Royal College of Psychiatrists, 1999).

BED REQUIREMENTS

There are 20–40 in-patient CAMHS beds per 1 million total population required to provide mental health services for young people 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.

The recognised optimal maximum number of beds for an adolescent in-patient unit is in the region of 10–12. There is no minimum number of beds but it is difficult for a stand-alone unit to be clinically and financially viable below 6–7 beds.

Bed occupancy should be at 85% to ensure availability of emergency beds.

Staffing of in-patient units is influenced by skill mix, task demands of a particular shift, case dependency/acuity and case mix.

STAFFING RECOMMENDATIONS FOR A TIER 4 10–12 BEDDED

IN-PATIENT UNIT

The exact nature of staffing required for a given unit will depend on the particular patient group it is serving (total minimum 7.1 wte plus teachers).

Ward 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 mealtimes): 1:2
- basic observation/maintenance of safety/therapeutic programme times: 1:3

Minimum of 2 registered mental health nurses (Grade E, F, G or H) per day shift; 1 at night.

Ward Manager: 1 wte G or H grade registered mental health nurse

Consultant psychiatrist: 1 wte (which may be provided by two clinicians in a split post)

Non-consultant psychiatrist (staff grade/trainee): 4 hours per patient per week

Clinical psychologist: 1 wte for adolescent units. 0.8 wte for children's units

Social work: 0.5 to 1.0 wte

Psychotherapy: 0.5 wte

Family therapy: 0.5 wte

Occupational therapy, speech therapy and dietician: access to regular designated sessions

Teachers: 1 wte to 4 students/lesson. Ratio of 1:1 frequently necessary.

STAFFING RECOMMENDATION FOR DAY UNIT PROVISION

5.5 wte staff per 100000 total population for a day treatment service:

Clinical nurse specialist: 1 wte

Specialist teacher: 1 wte

Consultant psychiatrist: 1 wte

Clinical psychologist: 1 wte

Occupational therapist: 1 wte

Art therapist: 1 wte.

CRISIS TEAMS/INTENSIVE COMMUNITY SUPPORT TEAMS

There are a number of different models for community intensive treatment teams. Most propose a maximum case-load of between 5 and 10 cases per clinician.

ENHANCED PAEDIATRIC WARD/ADOLESCENT WARD

Staffing levels will depend on staff skill mix, training and number of cases. Regular designated sessions by a consultant psychiatrist, CAMHS nurse and clinical psychologist are required.

EMERGENCY PROVISION

There are 3 main types of problems that commonly present as an emergency often needing admission within 24 hours:

- 1 Where there is an identified serious mental health problem, for example, psychosis, depression, serious risk of self-harm and rarely

very serious eating disorder. For the latter, the risk may be due to physical deterioration and require medical admission.

- 2 Young people presenting to a general hospital ward via accident and emergency department following an episode of deliberate self-harm. The treatment needs are less clear in this group and in most cases admission to a paediatric ward followed by assessment and follow-up by Tier 2/3 CAMHS is appropriate.
- 3 Children and adolescents with conduct disorders, out-of-control and challenging behaviour, where there is often inter-agency confusion and disagreement.

A number of Tier 4 services have sought to develop models to improve access and increase the range of response in the light of the increase of crisis presentations and seriousness of the complexity of the difficulties presented. It is recognised that improvement in provision for children and young people at specialist Tier 2/3 CAMHS will impact positively and prevent some requiring Tier 4 services. In other cases improved Tier 3 provision and closer links between Tiers 3 and 4 will promote inter-agency working and increased flexibility of service. This could help to facilitate movement of the young person through the tiers of CAMHS.

TRANSITION

There is a need for clear pathways of care both into and out of Tier 4 services. Models of ways of improving the links between Tier 3 and 4 services include the development of posts that bridge both in-patient and community services. These include social work, psychology, nursing, consultant psychiatrists and other posts. These developments have helped improve post-discharge care and ongoing work in the community. In particular some Tier 4 units have developed assertive outreach teams or intensive treatment teams that support young people before or after an in-patient stay.

Services for early intervention in psychosis have developed close working links with providers of some residential services. There is a clear opportunity to link adolescent Tier 4 services with emerging services for early intervention in psychosis. The relationship with adult community mental health teams is vital in cases of older adolescents particularly with the transition to adult mental health services. Some Tier 4 services are developing link posts with a specific remit to provide regular input into the local Tier 3 teams and adult community mental health team. There is a need for flexible protocols between CAMHS and adult services for 16–17-year-olds.

COMMISSIONING TIER 4 SERVICES

There is a need for coherent development and provision of comprehensive Tier 4 services, especially in-patient services, based on a national plan. Commissioning of a national adolescent forensic mental health secure service has been moved to the National Strategic Commissioning Advisory Group (NSCAG).

- 1 A comprehensive joint agency needs assessment should be performed in order to establish the range and capacity of Tier 4 services required in a given region. The three key agencies of health, education and social care must work in partnership along with significant others, including the youth justice system and housing organisations in order to achieve this. It should address needs across all tiers and include a prospective audit of CAMHS Tier 4 cases in the independent sector.
- 2 Plans must be developed within a multi-agency, integrated commissioning agenda. A whole system approach is required. There needs to be an emphasis on continuity of care within a culture of shared inter-agency responsibility for developing and providing an effective Tier 4 service.
- 3 The care pathway into Tier 4 services of children and adolescents with high-risk, complex mental health needs must be defined. In most cases referral to CAMHS Tier 3 services should provide the initial assessment and consultation with the child and family. In general the Tier 3 service will remain involved with the young person in order to ensure continuity of care, maintain local community and family links and facilitate the resettlement of the child back into the community as they move from care in a Tier 4 service. Tier 4 services will need to work with the key agencies involved with children and young people to define the supported care pathways back into the local community.
- 4 Clear guidelines are needed in the absence of age-appropriate and consistent mental health services for 16–18-year olds. The interface between CAMHS and adult mental health must be addressed and links established between Tier 4 specialist CAMHS and adult community mental health teams as well as Tier 3 CAMHS.
- 5 Workforce planning and training must be addressed on a regional level and a work force plan drawn up concomitantly with business plans for new services.
- 6 The views of children, young people and their carers should actively be sort by clinicians, managers and commissioners and incorporated into strategies of service delivery. Mechanisms must be put in place to ensure this process is ongoing.

Out-of-hours CAMHS provision

There is currently little evidence on the demand or effectiveness of out-of-hours specialist CAMHS provision. Availability of out-of-hours advice is variable due to lack of adequate resources and workforce (Royal College of Psychiatrists, 2002). This means that it is not possible to recommend how provision of out-of-hours CAMHS should be provided at the present time. However, all children and young people with mental health disorders must have access to care out of the normal working daytime hours.

Child and adolescent psychiatrists, child mental health nurses, general psychiatrists, paediatricians and other agencies share concern about the availability of on-call services for children and adolescents with mental health disorders. In many areas where CAMHS out-of-hours services are available this is provided by the consultant psychiatrist. However, in services with trainee child and adolescent psychiatrists the latter may provide the first on-call cover, with supervision from CAMHS consultant psychiatrists. Where such trainees are not available the first on-call may be provided by the adult psychiatry trainee on-call with supervision from the CAMHS consultant psychiatrist. In some areas other senior members of the multidisciplinary team (for example, psychologists, nurses, social workers) contribute to out-of-hours cover. In all cases, joint protocols must be agreed between paediatricians, adult psychiatry and specialist CAMHS to ensure children and adolescents receive the best possible care. It is vital that commissioners, CAMHS and adult mental health meet together to explore creative and realistic solutions to providing adequate and appropriate out-of-hours cover to this vulnerable group of young people. In the first instance, workforce, in-patient resources and investment must be addressed.

In most areas of the UK, due to the low number of CAMHS psychiatrists, it is neither possible nor appropriate for specialist CAMHS to provide a first on-call psychiatric service. In these cases joint protocols must be agreed between the relevant professionals to ensure that children and adolescents receive the best possible care.

Commissioning

CAMHS professionals have an important role in influencing the commissioning process by ensuring that they participate in 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 in order to maximise the success of service development and design. Although gaining service users' opinions about the service and potential improvements can be complex and time consuming, their views are crucial and can help to create innovative service solutions.

Research and development needs

As a community of clinicians, researchers and research active clinicians, we wish to see an approach to research that ensures that 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 users 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 to prepare this guidance, it is evident that there is an urgent need for research on:

- the relationship between existing specialist CAMHS skill mix, demand, capacity, waiting times and clinical outcomes
- 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
- effectiveness of alternative models of care for those young people with chronic disorders such as ADHD
- outcomes of those young people with mental health problems who are never seen by specialist CAMHS due to non-referral or non-engagement
- effectiveness of alternative models of care for young people and families from different cultural and ethnic groups, including refugees and asylum seekers
- 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 children looked after teams
- a definition and description of consultation methods and their relationship to demand for specialist CAMHS
- user experiences and views on need and demand for specialist CAMHS
- user experiences and views on the use of evidence-based treatments, short- and longer-term interventions and restrictions on treatments to brief interventions as a method of increasing capacity
- user views on alternative models of service delivery.

Conclusions

Specialist Tier 2/3 and 4 CAMHS are currently in need of development and expansion to ensure sustainable, high-quality services are available to all children and young people with mental health disorders. The tiered model of service provision needs to continue to be developed in a flexible way, taking into account the patient pathway and ensuring seamless transitions between the tiers.

Specialist CAMHS can only function adequately as part of a comprehensive tiered service that includes high quality Tier 1 provision. Informed commissioning must ensure provision of a tiered CAMHS that provides for the full range of mental health problems and disorders up to the age of 18 years. Clear transition protocols must be in place for transfer to adult mental health services.

Specialist Tier 2/3 CAMHS must re-target services on those young people with more complex mental health disorders that need specialist services. They must work closely with and support non-mental health Tier 1 practitioners and multi-agency services that provide universal support and prevention for the majority of young people.

Specialist Tier 4 CAMHS must be comprehensively commissioned to ensure a range of services, including specialist out-patient, in-patient acute and intensive care and planned treatment beds. Out-of-hours services for those young people presenting with severe mental disorders must be in place. This requires creative solutions to ensure appropriate provision in the context of a national shortage of CAMHS clinicians.

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Appendix I Tier 2/3 specialist CAMHS capacity adjusted for number of sessions seen

EXAMPLE OF TIME AVAILABLE PER WHOLE TIME EQUIVALENT (WTE) CLINICIAN

7 h per day x 5 days a week = 35 h per week
minus holidays (6 weeks) and study leave (1 week)
= 52-7 = 45 weeks
35 h x 45 weeks = 1575 h available per year
minus other meetings: supervision (1 h), team meeting (2 h),
one other (1 h) = 4 h per week
weekly continuing professional development (CPD) = 3.5 h per week
Meetings plus CPD = 7.5 h per week
= 7.5 x 45 weeks = 337.5 h per year
Therefore, actual time available for clinical work:
1575 h per year minus 337.5 h = 1237.5 h per 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 x 6 = 3 h
6 + 1 + 3 = 10 h minimum.

TIME USED IF 10 SESSIONS

10 + 1 + (0.5 x 10) = 16 h minimum.

TIME USED IF 15 SESSIONS

15 + 1 + (0.5 x 15) = 23.5 h minimum
In specialist CAMHS each case may be seen by more than 1 clinician (say on average 2 clinicians working jointly), so capacity calculates, if seen for:
6 sessions = $1237.5/10 \times 0.5 = 62$ cases per year per wte
10 sessions = $1237.5/16 \times 0.5 = 39$ cases per year per wte
15 sessions = $1237.5/23.5 \times 0.5 = 26$ cases per year per wte.

Note: this is an example only and not based on a real CAMHS audit. CAMHS mapping data from England shows 50% of time is spent in direct work. Several assumptions are made: time needed for administration, including liaison, per session is assumed to be 0.5 h per 1 h (but in actual service audit may show more); co-work rate is assumed to average at 2 clinicians per case (but audit may show more or less); meeting times are assumed to be 4 h per week).

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

Appendix II Summary of a 'five-star service'

FIVE-STAR COMPREHENSIVE SERVICE AS DESCRIBED BY DAVEY & LITTLEWOOD (1996)

- Age: 0–18 years
- 10 wte outpatient multidisciplinary team plus 2 multidisciplinary day patient services, with 6 wte, each shared with another district
- Open referrals system, wide range of assessments and treatments, including input into schools and social services settings. Consultation, teaching, research and audit
- 400 new referrals a year

FIVE-STAR COMPREHENSIVE SERVICE (R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION, 1996)

- Age: 0–18 years
- 21 wte
- Includes day service provision and primary mental health workers
- Open referral system and comprehensive range of assessments and treatments and consultation in a variety of settings
- 800 new referrals a year

FOUR-STAR EXTENDED INTERMEDIATE SERVICE (R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION, 1996)

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

INTERMEDIATE BASIC SERVICE (DAVEY & LITTLEWOOD, 1996)

- Age: 0–16 years
- 6 wte
- Limited range of assessments and treatments, consultation, etc
- 250 new referrals a year

THREE-STAR INTERMEDIATE SERVICE (DAVEY & LITTLEWOOD, 1996)

- Age: 0–15 years
- 10 wte, no primary mental health workers
- No service for children with a learning 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 (R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION, 1996)

- Age: 5–15 years
 - 5 wte
 - No service for children with a learning disability
 - Referrals from health professionals only for serious mental disorders
- 250 new referrals a year

ONE-STAR BASIC SERVICE (DAVEY & LITTLEWOOD, 1996)

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

ONE-STAR CONSULTANT-ONLY SERVICE (R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION 1996)

- Age: 5–15 years
- 1 wte consultant child and adolescent psychiatrist
- Referrals from GPs and paediatricians only
- Urgent psychiatric assessments only
- No service for children with learning disability
- Very limited therapeutic service
- 50 new referrals a year

Appendix III Tier 2/3 specialist CAMHS descriptions

EXAMPLES OF TEAM SIZES AND SERVICE DESCRIPTIONS OF DIFFERING TYPES OF TIER 2/3 SPECIALIST CAMHS			
0-17 YEARS (GOODMAN, 1997) 5.3 WTE PER 100 000 TOTAL POPULATION	5-15 YEARS (KELVIN, 2005) 16.0 WTE PER 100 000 TOTAL POPULATION	5-15 YEARS (TWO STAR, R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION 1996) 5 WTE PER 100 000 TOTAL POPULATION	0-15 YEARS (FOUR STAR, R. DAVEY & S. LITTLEWOOD, PERSONAL COMMUNICATION 1996) 15.5 WTE PER 100 000 TOTAL POPULATION
ADHD	ADHD		ADHD
OCD	OCD	'Serious mental health problems'	OCD
Anorexia nervosa	Eating disorders		Eating disorders
Depression	Depression		Depression
Specific or social phobias	Anxiety disorders, including PTSD		Anxiety disorders
General anxiety and separation anxiety			
Psychosis	Psychosis and bipolar disorder		Psychosis
ASD	PDD +/- learning disability		-
Preschool mental health problems	Preschool mental health problems	Excluded	Preschool mental health problems
-	Self-harm	Self-harm	Self-harm
-	Conduct disorder/ODD		
-	Effects of abuse	Effects of abuse	Effects of abuse
-	Adjustment disorders	Excluded	Adjustment disorders
-	Specific learning difficulties and developmental difficulties	-	-
-	Somatoform/chronic fatigue	Somatoform/chronic fatigue	Somatoform/chronic fatigue
-	Effects of chronic illness	Effects of chronic illness	Effects of chronic illness
-	Tourette's syndrome	Excluded	Tourette's syndrome
-	Elective mutism	-	-
-	Attachment and infant mental health problems	-	-
-	Encopresis	-	-
-	Hard to specify emotional disturbance	-	-
Severe learning disability only	Excluded	Excluded	Learning disability
Teaching	No teaching (20 wte if teaching)	No teaching	Teaching
Consultation	Consultation	Limited consultation	Consultation

-, not mentioned; ADHD, attention-deficit hyperactivity disorder; ASD, autistic-spectrum disorder; OCD, obsessive-compulsive disorder; ODD, oppositional defiant disorder; PDD, pervasive developmental disorder; PTSD, post-traumatic stress disorder; wte, whole time equivalent

Appendix IV Guidance on skill mix in specialist Tier 2/3 CAMHS

PROFESSIONAL GUIDANCE ON SKILL MIX IN SPECIALIST TIER 2/3 CAMHS					
PROFESSIONAL GROUP	WTE PER 100 000 POPULATION	TOTAL	WTE PER 250 000 POPULATION	TOTAL	SOURCE
Consultant child & adolescent psychiatrists	1.5		3.75		Royal College of Psychiatrists (2002)
Clinical psychologists	Tier 2: 2 Tier 3: 2 Disabilities: 1.3 Paediatric liaison: 1		Tier 2: 5 Tier 3: 5 Disabilities: 3.3 Paediatric liaison: 2.5		British Psychological Society (2001)
Child psychotherapists	1.25		3.1		Wallace <i>et al</i> (1997)
Community psychiatric nurses	2 per consultant child & adolescent psychiatrist (i.e. 3)		7.5		Wallace <i>et al</i> (1997)
Family therapists	No guidance found				
Mental health social workers	No guidance found				
Art therapists	1.2		3		British Association of Art Therapists; V. Huet (personal communication, 2005)
Other therapists (e.g., occupational therapists)	No guidance found				

Appendix V Skill mix in specialist Tier 2/3 CAMHS

	Davey & Littlewood (personal communication, 1996)					Goodman (1997)	Kelvin (2005)	Irish Health Strategy (2001)
	One-star	Two-star	Three-star	Four-star	Five-star			
Consultant child & adolescent psychiatrists	1	1 (2.5)	1 (2.5)	1.5 (3.75)	1.5 (3.75)	1.3 (3.25)	2.5 (6.25)	2.7 (6.75)
Clinical psychologists	0	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)		2.7 (6.75)
Neuropsychologists	0	0	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)		
Play therapists	0	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)		1.3 (3.25)
Family therapists	0	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1.4 (3.5)		
Nurses	0	1 (2.5)	2 (5.0)	2 (5.0)	2 (5.0)			2.7 (6.75)
Social workers	0	0	1 (2.5)	1 (2.5)	1 (2.5)			2.7 (6.75)
Speech therapists	0	0	1 (2.5)	1 (2.5)	1 (2.5)			1.3 (3.25)
Child psychotherapists	0	0	1 (2.5)	1 (2.5)	1 (2.5)			
Primary mental health workers	0	0	0	5 (12.5)	5 (12.5)		1.5 (3.75)	
Occupational therapists								1.3 (3.25)
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)	