Report of the 2nd Annual Survey of Liaison Psychiatry in England.

Prepared for NHS England and the National Collaborating Centre for Mental Health, part of the the Royal College of Psychiatrists.

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Introduction

Liaison Psychiatry is the branch of psychiatry which concerns itself with the mental health needs of people who also have physical health needs. Usually this means working within the general hospitals - also called acute hospitals - to manage the mental health problems of patients there. This includes patients presenting to the emergency department (ED - also called Accident and Emergency (A&E)) with urgent mental health problems, and also inpatients in the acute hospital with comorbid mental health and physical disorders, or mental health problems caused by physical illness or physical health care. Liaison Psychiatry services commonly see patients after self-harm, with suicidal ideas, dementia, delirium, relapsing psychosis, long term health conditions, mental health symptoms related to substance misuse, medically unexplained symptoms (MUS), treatment refusal, or any situation where mental health expertise is of value to the clinical team.

Mental health problems are common in the general hospital. Over 200,000 cases of self-harm are managed in general hospitals in England each year[1] and it is one of the most frequent reasons for acute hospital admission.[2] Indeed, approximately 5% of ED attendances in England are primarily related to the patient's mental health and around 30% of people who go on to be admitted suffer with comorbid physical and mental health problems.[3] [4] In one case series, 27%

[1] Cooper, J. (2015). Variations in the hospital management of self-harm and ... Retrieved from http://www.sciencedirect.com/science/article/pii/S0165032714007472.

[2] Fernandes, A. (2011). Urgent and emergency care - Royal College of General ... Retrieved from http://www.rcgp.org.uk/policy/~/media/Files/CIRC/Audit/Urgent_emergency_care_whole_system_approach.ashx.

[3] (2013). Liaison psychiatry for every acute hospital - Royal College ... Retrieved July 23, 2015, from http://www.rcpsych.ac.uk/usefulresources/publications/collegereports/cr/cr183.aspx.

of frequent attenders to the general hospital had one or more episodes characterised by medically unexplained symptoms.[5] Also, 13-20% of admissions to hospital are related to alcohol use.[6] Older adults occupy approximately two thirds of NHS inpatient beds, and approximately 60% of these admitted older adults either have an existing mental health problem or develop one during their hospital stay.[7] Approximately 40% of older adult inpatients in the general hospital have dementia, 60% have delirium, and 53% have depression, and these figures are likely to be rising.[8]

Relationships between mental and physical health problems are complex: Physical illnesses increase the risk of developing mental illnesses[9] and mental health problems increase the risk of developing physical illness and significantly reduce life expectancy:[10] [11] Patients who are physically ill are three to four times more likely to develop a mental illness than the healthy population. For example, the prevalence of depression within primary care is approximately 5-10%, however prevalence of depression in diabetes patients is 12-18%, and it is 15-23% for patients with coronary heart disease.[12] Mental illness has been indicated as a predictive factor for poor health outcomes, particularly increased mortality and reduced independence.[8]

Mental health problems, quite apart from their deleterious effects on patients, also adversely affect healthcare systems: They impede the treatment of physical health problems,[13] and healthcare costs are therefore higher for these patients.[14] For example, the treatment costs for

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[4] "Healthy mind, healthy body - Royal College of Psychiatrists." 2010. 16 Jul. 2015 <https://www.rcpsych.ac.uk/pdf/Healthmindhealthbody.pdf>

[5] Reid, S. (2001). Medically unexplained symptoms in frequent ... - BMJ. Retrieved from http://www.bmj.com/content/322/7289/767.

[6] Fernandes, A. (2011). Urgent and emergency care - Royal College of General ... Retrieved from http://www.rcgp.org.uk/policy/~/media/Files/CIRC/Audit/Urgent_emergency_care_whole_system_approach.ashx.

[7] Parsonage, M. "Economic evaluation of a liaison psychiatry service - fade ..." 2012. <http://www.fadelibrary.org.uk/wp/wp-content/uploads/downloads/2012/01/An-economic-evaluation-of-a-liaison-psychiatry-service.pdf>

[8] "Healthy mind, healthy body - Royal College of Psychiatrists." 2010. 16 Jul. 2015 <https://www.rcpsych.ac.uk/pdf/Healthmindhealthbody.pdf>

[9] Patten, S. B. (2001). Long-term medical conditions and major depression in a Canadian population study at waves 1 and 2. *Journal of affective disorders*, *63*(1), 35-41.

[10] (2012). liaison mental health services to acute hospitals - Royal ... Retrieved July 15, 2015, from https://www.rcpsych.ac.uk/pdf/JCP-MH%20liaison%20(march%202012).pdf.

[11] Chang, Chin-Kuo et al. "All-cause mortality among people with serious mental illness (SMI), substance use disorders, and depressive disorders in southeast London: a cohort study." *BMC psychiatry* 10.1 (2010): 77.

[12] Katon, W. (2011). Epidemiology and treatment of depression in patients with ... Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3181964/.

[13] Evans, D. (2005). Mood disorders in the medically ill: scientific review and ... Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/16084838.

[14] Unützer, J. (2009). Healthcare Costs Associated with Depression in Medically ... Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2008.02134.x/abstract.

diabetes are higher in patients with additional mental health problems than those for diabetes alone.[15] Also, general hospital inpatients with comorbid depression have a longer length of hospital stay than non-depressed patients.[16] Further, users of mental health services use acute hospital services (inpatient, outpatient and emergency) approximately 2.3 times more frequently than other people.[17] Untreated or undertreated mental health problems in general hospital inpatients are thought to lead to risky, burdensome and unnecessary re-attendances at EDs too.[18] In the elderly, mental illness has been indicated as a predictive factor for longer hospital stays and higher institutionalisation rates.[19] It is noted that patients with dementia often experience delays in discharge, even when there is no substantive medical reason for delay.[20] [21] There are other issues for elderly patients including acute staff not detecting delirium in approximately 50% of cases[19], and patients with dementia still being prescribed certain antipsychotics despite the release of a Medicines and Healthcare Products Regulatory Agency (MHRA) warning about the risks of antipsychotic use in patients with dementia.[22]

Mental health problems are so common and so severely affect trajectories of care in the general hospitals that an integrated treatment approach for physical and mental health has been proposed for general hospitals.[23]

The primary aims of Liaison Psychiatry services are; to reduce prevalence and attributable mortality of comorbid mental and physical disorders; to provide appropriate care and management to patients who are at risk of harming themselves or others; and to reduce

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[15] Simon, GE. "Cost-effectiveness of systematic depression treatment ..." 2007. <http://www.ncbi.nlm.nih.gov/pubmed/17199056>

[16] Aoki, T., Sato, T., & Hosaka, T. (2004). Role of consultation–liaison psychiatry toward shortening of length of stay for medically ill patients with depression. *International journal of psychiatry in clinical practice*, *8*(2), 71-76.

[17] (2014). HES-MHMDS Data Linkage Report, Summary Statistics. Retrieved July 27, 2015, from http://www.hscic.gov.uk/catalogue/PUB14803/hes-mhmds-link-summ-stat-may14.pdf.

[18] (2012). liaison mental health services to acute hospitals - Royal ... Retrieved July 15, 2015, from https://www.rcpsych.ac.uk/pdf/JCP-MH%20liaison%20(march%202012).pdf.

[19] "Healthy mind, healthy body - Royal College of Psychiatrists." 2010. 16 Jul. 2015 <https://www.rcpsych.ac.uk/pdf/Healthmindhealthbody.pdf>

[20] Parsonage, M. "Economic evaluation of a liaison psychiatry service - fade ..." 2012. <http://www.fadelibrary.org.uk/wp/wp-content/uploads/downloads/2012/01/An-economic-evaluation-of-a-liaison-psychiatry-service.pdf>

[21] (2013). Improving service and support for people with dementia. Retrieved July 23, 2015, from http://www.nao.org.uk/wp-content/uploads/2007/07/0607604.pdf.

[22] McIlroy, G. (2015). Full Text (HTML) - Journal of Public Health - Oxford Journals. Retrieved from http://jpubhealth.oxfordjournals.org/content/37/2/346.full.

[23] (2013). Whole-person care: from rhetoric to reality Achieving parity ... Retrieved July 27, 2015, from https://www.rcpsych.ac.uk/pdf/OP88summary.pdf.

patients' length of stay in the acute hospital, including ED and inpatient beds, thus minimising cost to healthcare providers and burden to primary and secondary care.[24]

There is evidence to suggest that liaison psychiatry services can meet these aims,[25] [26] and in addition can improve the clinical outcomes and quality of care of patients, optimise patient care and reduce healthcare costs, reduce re-attendances and re-admissions by managing the mental health problem in the first instance, and treat and reduce distress in patients with MUS and self-harm.[27] Within the last decade there has been a 50% rise in the use of EDs.[28] Liaison Psychiatry services can assist with the progress of patients along the system, particularly as evidence suggests that the earlier that a patient receives a psychiatric consultation, the shorter their length of hospital stay is likely to be.[29] [30] [31]

More specifically, Liaison Psychiatry services can also provide more direct access to mental healthcare for patients in acute settings, especially elderly patients and those who might otherwise be less able to access mental health services. Also provision of comprehensive knowledge of psychiatric illness to other clinicians within the general hospital, the management and limitation of risk of adverse events within patients with psychiatric presentations; and ensuring legal responsibilities regarding Mental Health Act and Mental Capacity Act are being discharged. In addition to this, the Liaison Psychiatry team can make judgements regarding capacity to consent to treatment, and also by providing staff training.

Liaison Psychiatry services in England exist in many different forms and sizes. Largely, services are not provided by the acute trust, but by the local mental health trust. This can pose organisational problems within the general hospital and can make integrated care more difficult. However if the service is based on site at the acute general hospital, these difficulties may be

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[24] (2012). liaison mental health services to acute hospitals - Royal ... Retrieved July 15, 2015, from https://www.rcpsych.ac.uk/pdf/JCP-MH%20liaison%20(march%202012).pdf.

[25] Tyrer, P. (1990). Liaison psychiatry in general practice: the comprehensive ... Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0447.1990.tb05464.x/abstract.

[26] George, M. (2014). EPA-1223 – An evaluation of the effectiveness of a geriatric ... Retrieved from http://www.sciencedirect.com/science/article/pii/S0924933814784676.

[27] "Healthy mind, healthy body - Royal College of Psychiatrists." 2010. 16 Jul. 2015 <https://www.rcpsych.ac.uk/pdf/Healthmindhealthbody.pdf>

[28] "Developing Models for Liaison Psychiatry Services - Mental ..." 2014. 16 Jul. 2015 <http://mentalhealthpartnerships.com/wp-content/uploads/sites/3/3-developing-models-for-liaison-psychiatry-services.pdf>

[29] Lyons, J. S., Hammer, J. S., Strain, J. J., & Fulop, G. (1986). The timing of psychiatric consultation in the general hospital and length of hospital stay. *General hospital psychiatry*, *8*(3), 159-162.

[30] Ormont, M. A., Weisman, H. W., Heller, S. S., Najara, J. E., & Shindledecker, R. D. (1997). The timing of psychiatric consultation requests: utilization, liaison, and diagnostic considerations. *Psychosomatics*, *38*(1), 38-44.

[31] Kishi, Y., Meller, W. H., Kathol, R. G., & Swigart, S. E. (2004). Factors affecting the relationship between the timing of psychiatric consultation and general hospital length of stay. *Psychosomatics*, *45*(6), 470-476.

mitigated. The optimal location of the service is to be based on site as this allows relationships to flourish and Liaison Psychiatry staff to work alongside general hospital staff.[32]

Liaison Psychiatry teams should be multidisciplinary, ideally incorporating nursing, psychiatry, psychology, occupational therapy,and social work, with the primary and psychiatric input coming from a consultant liaison psychiatrist who also supervises risk. Some acute hospitals have therapeutic psychological input into physical health problems with specialist teams such as diabetes, oncology, rheumatology, teams working with pain management and chronic fatigue, teams providing psychosocial support to cancer patients, and cardiac and pulmonary rehabilitation teams. Liaison Psychiatry services offer a broader range of care than these services and usually see the patients with more severe difficulties.[33]

Adults of working age (ages 18-64) account for 43% of inpatient admissions but only 30% of inpatient bed-days, whereas older adults account for 45% of inpatient episodes but 65% of bed-days.[34] Further, it is estimated that older adults may account for 80% of all adult hospital bed-days of patients with comorbid physical and mental health problems. This indicates a particular need for Liaison Psychiatry services to focus on caring for older adults. This is of particular policy relevance because mental health services for working age adults are conventionally divided from services for older adults, with any of the staff having different training, qualifications and experience. For example, the training pathways for consultants in working age adult psychiatry are different to those for consultants in old age psychiatry.

To assist with describing and specifying levels of service provision in Liaison Psychiatry, four models, outlined below, were developed for commissioners to consider, based on evidence from two recent initiatives to establish new Liaison Psychiatry services and an existing service: The Birmingham Rapid Assessment, Interface and Discharge (RAID) model[35] and the North West London Optimal Liaison Psychiatry model.[36] [37] The existing service was the very well developed Liaison Psychiatry service in Leeds.

RAID was launched in December 2009 in City Hospital, Birmingham, a 600 bed acute hospital, with approximately 3000 emergency admissions per month. The RAID service delivers a 24

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[32] "Healthy mind, healthy body - Royal College of Psychiatrists." 2010. 16 Jul. 2015 <https://www.rcpsych.ac.uk/pdf/Healthmindhealthbody.pdf>

[33] (2012). liaison mental health services to acute hospitals - Royal ... Retrieved July 15, 2015, from https://www.rcpsych.ac.uk/pdf/JCP-MH%20liaison%20(march%202012).pdf.

[34] (2015). Liaison psychiatry in the modern NHS - Centre for Mental ... Retrieved July 27, 2015, from http://www.centreformentalhealth.org.uk/liaison-psychiatry-nhs.

[35] Tadros, G. (2013). Impact of an integrated rapid response psychiatric liaison ... Retrieved from http://pb.rcpsych.org/content/37/1/4.

[36] (2012). Liaison psychiatry can bridge the gap - Health Service Journal. Retrieved July 27, 2015, from http://www.hsj.co.uk/resource-centre/best-practice/qipp-resources/liaison-psychiatry-can-bridge-the-gap/5051771.article.

[37] "Developing Models for Liaison Psychiatry Services - Mental ..." 2014. 16 Jul. 2015 <http://mentalhealthpartnerships.com/wp-content/uploads/sites/3/3-developing-models-for-liaison-psychiatry-services.pdf>

hour a day, seven days a week service, which sees adults of working age and older adults and includes a range of specialties such as postnatal and substance misuse workers within one multidisciplinary team.There is also provision for follow-up clinics, and formal and informal training to hospital staff. Targets for response times within the RAID model are one hour for ED assessments and 24 hours for assessments on the wards. The Birmingham RAID team report that during the initial eight month period, they were able to assess 91% of ED referrals within an hour and 89% of ward referrals within 24 hours. They also report that since the implementation of the RAID model, detection and diagnosis of mental illness increased, particularly in diagnosis of eating disorders, anxiety disorders, dementia, alcohol related mental health or behavioural disorders, depression and related mood disorders, and schizophrenia. The number of bed days saved over the eight month period was 9,290 days, which equates to 38 extra beds being unoccupied every day. Of these, 35 were 'unoccupied' by older adults. After seeing RAID, 65% of patients were discharged within 3 days, and 75% were discharged within a week, and the risk of readmission was reduced by 65%. The service costs approximately £1.4 million per year, with a conservative estimate for cumulative savings of £6.4 million per year, which is primarily calculated from the reduced lengths of stay, reduced readmissions, and avoiding admissions to the medical assessment unit (MAU). Other important benefits that RAID has provided include preventing unnecessary inpatient admissions at the ED stage, discharging elderly patients back to their own homes rather than residential homes and increasing the use of other health services through signposting and referrals, which inevitably increases resource demand but may improve health outcomes. The total incremental conservative savings in comparison to the incremental cost of RAID suggest a benefit-to-cost ratio of greater than 4:1.[38]

The North West London Optimal model used the evidence from RAID and adapted the suggested staffing numbers and skill mix for their urban setting, 24 hours a day, seven days a week. The model was piloted in four hospitals and expected to be fully operational within three months, with targets of assessing patients within one hour of referral from ED, cutting the number of ED waiting time breaches, and to provide medicines review for all patients aged over 65 and referred to the Liaison Psychiatry service. During the pilot phase of the model, referral numbers to the service had been consistently high, indicating enhanced expertise of mental health detection from acute staff, and also the one hour target time for ED referrals was met at all sites, with services reducing ED waiting time breaches by 221 over a six month period. Interim figures suggest that length of stay had been reduced by 1.3 days for patients with mental health problems, and reattendances were displaying a downward trend particularly in one of the sites.[39] This model has now been employed in all acute hospitals in North West London and is expected to reduce bed occupancy by 2-10%, and cost £11 million pounds to

[38] Parsonage, M. "Economic evaluation of a liaison psychiatry service - fade ..." 2012. <http://www.fadelibrary.org.uk/wp/wp-content/uploads/downloads/2012/01/An-economic-evaluation-of-a-liaison-psychiatry-service.pdf>

[39] (2012). Liaison psychiatry can bridge the gap - Health Service Journal. Retrieved July 27, 2015, from http://www.hsj.co.uk/resource-centre/best-practice/qipp-resources/liaison-psychiatry-can-bridge-the-gap/5051771.article.

implement across all sites. The annual cost for all sites is estimated to be £6 million, with £13 million of net savings.[40]

The four service models are outlined below:

Core Liaison Psychiatry services provide the minimum that is likely to deliver the system-level benefits of Liaison Psychiatry services. Most commonly these services will see emergencies and urgent care patients. These sites are intended to exist in quieter or smaller centres, where a 24/7 Liaison Psychiatry model would be underutilised. These services tend to operate at working hours or extended hours only, with out of hours cover by an on-call duty psychiatrist or another out of hours service. Elements of this model have been modified from evidence for RAID and the North West London Optimal model. These Core services are expected to provide a small return on investment.

Core 24 Liaison Psychiatry services provide the minimum that is suggested by evidence to be beneficial to patients, in sites where demand for Liaison Psychiatry is constant enough for 24 hour care, seven days a week. These sites will most likely be situated in urban areas. Most commonly these services will see emergencies and urgent care patients. Core 24 services are based on the North West London Optimal model. It is expected that these services will have an investment return similar to that of a RAID service

Enhanced 24 Liaison Psychiatry services provide some enhanced features beyond the Core 24 model, such as specialism in addictions or with learning disabilities, and other population groups such as frail older adults and younger people. These services will also have more consultant liaison psychiatrist time, and include follow-up clinics, which Core 24 services do not provide. These services will see emergencies, acute care pathways, and fill gaps in existing pathways, but also will support some planned care pathways, such as outpatient clinics. Elements of Enhanced 24 services are based on the RAID model, and there is evidence that these services will make a return on investment [41].

Comprehensive Liaison Psychiatry services work within major centres which accept patients regionally, or even supra-regionally. These services will provide a Core 24 model with extra input from specialist liaison mental health nursing staff, psychological therapists, occupational therapists, and many other clinicians. These services will support emergencies and acute care pathways, but also see inpatients and outpatients in other specialties, such as cancer, neurology, gastroenterology, pain and so on. There also may be specialist Liaison Psychiatry inpatient beds. Elements of these services are based on the service in Leeds, and other large

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[40] "Developing Models for Liaison Psychiatry Services - Mental ..." 2014. 16 Jul. 2015 <http://mentalhealthpartnerships.com/wp-content/uploads/sites/3/3-developing-models-for-liaison-psychiatry-services.pdf>

[41] Parsonage, M. "Economic evaluation of a liaison psychiatry service - fade ..." 2012. <http://www.fadelibrary.org.uk/wp/wp-content/uploads/downloads/2012/01/An-economic-evaluation-of-a-liaison-psychiatry-service.pdf>

centres, and are expected to provide a return on investment similar to, or the same as, the RAID model.

Of the above models, all but the 'Core' model are based on existing services. The 'Core' model has been extrapolated downwards from the 'Core 24' model in the North West London services, intended to be more suitable for smaller, less busy centres.

Liaison Psychiatry has gained political attention in recent years and there is a commitment for there to be adequate Liaison Psychiatry provision in every acute hospital in England by 2020.[42] To answer the policy question of how many additional resources are needed by Liaison Psychiatry in England, policymakers must know what provision is necessary and they must know the current provision. The first of these questions is partially addressed by the above service models. In an effort to complete this, a proposal for what is necessary has been made suggesting 12.5% of the acute hospitals should have Enhanced 24 level services, 25% should have Core 24 services and the remaining 62.5% should have Core services[43]. This proposal has no data behind it, as the authors acknowledge. It was created because of the absence of any better figures to use.

The second question, of how much current provision there is of Liaison Psychiatry in England, has been addressed before: The Care Pathways and Packages Project from the Department of Health carried out a survey of Liaison Psychiatry commissioning arrangements in 2013[44], achieving a 21.4% response rate. In addition, a report for the South West Strategic Clinical Network for Mental Health, Dementia and Neurological Conditions[45], attempted to profile Liaison Psychiatry services within the South West of England. Commissioners were asked to complete a survey form, however only one out of the four study sites responded. These surveys, carried out through commissioners and trusts, were not successful. A different approach, of contacting clinicians directly, was undertaken by Naidu and colleagues in London. They achieved a 100% response rate of the 30 target services.[46] In addition, a similar survey (from 2001) of Paediatric Liaison Psychiatry had a 73% response rate.[47]

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[42] "Achieving Better Access to Mental Health Services by 2020." 2014. 31 Jul. 2015 <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/361648/mental-health-access.pdf>

[43] "Impact Assessment - Gov.UK." 2014. 28 Jul. 2015 <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/362051/Impact_Assessment.pdf>

[44] Psychological Medicine Report - June 2013 - Care ... Retrieved July 27, 2015, from http://www.cppconsortium.nhs.uk/admin/files/1374756896Psychological%20Medicine%20Report%20June2013.pdf.

[45] SCN SW Liaison Report, June 2013 - Mental Health ... Retrieved July 27, 2015, from http://mentalhealthpartnerships.com/wp-content/uploads/sites/3/SCN-SW-Liaison-Report-11.8.13.pdf.

[46] "London's liaison psychiatry services: survey of service ..." 2015. 3 Aug. 2015 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4478905/>

[47] Woodgate, M. (2005). Paediatric Liaison Work by Child and Adolescent Mental ... Retrieved from https://www.rcpsych.ac.uk/pdf/paedatric%20liasion%20services%20(2).pdf.

Accordingly, in response to policy need, we were commissioned by NHS England and the National Collaborating Centre for Mental Health to carry out surveys to measure current Liaison Psychiatry provision in acute hospitals in England by directly contacting clinicians and asking them about the local provision of Liaison Psychiatry.

Methods

There were two separate surveys: The first was a survey of Liaison Psychiatry services for working age adults and for older adults. The second was a survey of Liaison Psychiatry services for children and young people.

Services for working age adults and older adults

We downloaded the most up to date list of ED attendance figures for English acute trusts from the NHS England website.[48] This yielded a list of all acute trusts and indicated which had at least one ED, because there was a figure for the number of ED attendances. There are no published figures at the level of the individual hospital, so to check which acute trusts had more than one ED, we visited the websites of all of the acute trusts to establish the names of all the acute hospitals in England with EDs and thereby the list of target acute hospitals for the survey.

We used a list of contacts from a previous survey of Liaison Psychiatry in England carried out by one of the authors (WL) on behalf of the Liaison Faculty of the Royal College of Psychiatrists, to send an email explaining the current survey and asking for clinicians to participate. The email was also sent to a UK Liaison Psychiatry email list.

To maximise the response rate, the email and the questions asked in the survey were created to place minimal burden on clinicians. First, the number of questions was kept small and the survey and email were piloted for acceptability and clarity. Second, the questions were restricted to themes a clinician working in a service would themselves know. Third, to make responding unburdensome, the questions were included in the body of the email rather than in an attachment: Respondents simply replied to the email and typed their answers after each question in the included text. This also meant all the responses were free-text so respondents could annotate their answers to clarify their meaning. Fourth, we accepted responses in email form, by phone or by other means.

The survey opened on 14th Jan 2015 and closed on 30th April 2015. We had two additional responses and one clarification after this date which we included. We sent a number of reminder emails which listed services from which we had no responses and mentioned the percentage of the way through the process we were. Late in the process we telephoned a number of services for which we had telephone contact details. The questions asked of services can be seen in Table 1.

[48] "A&E Data - NHS England." 2015. 28 Jul. 2015 <http://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2014/04/2014-15-Q3-by-provider1.xls>

Table 1: Questions asked of working age adult and older adult services.

1	What is the name of your Liaison Psychiatry service (if it has one)?
2	What is the name of the Acute Hospital(s) you are based in?
3	What is the name of the Acute Trust(s) you are based in?
4	Does the Acute Trust(s) have more than one site with inpatient beds? If so, please name them.
5	Does the Acute Trust(s) have more than one A&E? if so, please name them.
6	Does your Liaison Psych service provide services to all the sites?
7	If not, can you give us a contact details of the other liaison psychiatry service(s) please?
8	What is the provider of your service? (Usually this is the mental health trust)
9	Is psych liaison in your Acute Trust provided by one or many providers? If many, which?
10	If the above questions do not capture details of your service, please explain.
11	What services do you provide, and to whom? (Some only see self-harms, some see anyone in the whole hospital, others are in-between. Some look after alcohol problems, some not, some do LD, some not, etc.) What are the age-criteria for your service(s)?
12	Do you support anything other than the acute care pathway? Are there any clinics, etc. If so, can you outline the nature of the work?
13	Number of FTE nurses and their bands?
14	Number of FTE doctors and their grades?
15	Number of FTE admins and their grades?
16	Number of other clinicians and their grades if known?
17	Number of other non-clinicians and their grades if known?
18	Of the above, who is substantive and who is a locum, part of winter pressures. fixed term appointments, etc?
19	What is your service's budget, if known? (Leave out the medics (or just junior medics) if necessary).
20	How much of that that budget is permanent and how much is temporary (if known)?
21	What are your service's hours of operation? (Out Of Hours SHO cover does not mean your service is 24/7).
22	Does your service do all the work contained in all the referrals? (eg is some passed on to other services? Please explain. (This question is about things like requests for psych opinions from wards, which are sometimes passed straight on to the duty SHO)
23	Are there other mental health workers in your acute trust who are not part of your service?(eg counsellors, psychologists)
24	Have you undertaken any research (published or not) to support the development of your service? If so, can you describe it please?
25	Is your service better resourced than it was a year ago? If so, how? If worse, please also explain.
26	If the services are separate, how do people transfer from CAMHS to Working Age Adults and from Working Age Adults to Older Persons? (This is usually age cut-offs plus exceptions and complications. There seems to be huge variety in this and we would like to catalogue it.)
27	Does your service have a response time standard and is that time agreed with referrers and/or commissioners?

Note: FTE = Full Time Equivalent.

The questions were a combination of questions asked in the previous survey which were largely about staffing levels as a device for 'grading' services (see below) (q13-q17 and q21) and administrative questions to assist with the mechanics of the survey (q2-q10), plus some additional questions.

These additions were:
Q1, which was prompted by an observation in the previous survey that many services were named 'RAID' but were not resourced to the same degree the original RAID service.
Q11-12 and q22, which were efforts to characterise specific activities.
Q18-20, which were budgetary questions requested to be added by NHS England.
Q24 and q27, which were about research and response times and were also requested by NHS England.
Q23, which was about non-liaison mental health workers of whom a few were detected incidentally in the prior survey.
Q25, which was for triangulation of changes in provision between the prior survey and this one.
Q26, which was prompted by one of the authors' experiences of tremendous variability of criteria by which patients are allocated to particular teams.

All the responses took the form of either emails or of telephone conversations. The telephone conversations were documented in emails which, when complete, were sent to the respondent for comments or corrections. The corrected returned email (or the original email record of the telephone conversation if there were no corrections offered by the respondent) was treated as an email response, unifying the process by which responses were collated.

Data processing involved manually reading each response and creating one or more variables for each question in the master dataset. Data were double processed by two experienced researchers. Consensus was reached over discrepancies.

To account for the differing service approaches to services for adults of working age and services for older adults, all the returns for a single hospital's Liaison Psychiatry services for adults were collated into one return, and therefore into a single row in the final dataset and considered a single service for the purposes of this survey. This was irrespective of whether there was a single 'ageless' service for all adults, two separate services which divide patients by age, complexity of care needs, co-morbidities, frailty, organicity, or other criteria, or whether there are specialist sub services within a single service.

Additionally, each acute hospital's service was assessed and assigned a service model as above (Core, Core 24, Enhanced 24, or Comprehensive), if any. Services not so assigned were assigned the designation 'Subcore'. Each service model has detailed descriptions of the number of clinical and administrative staff of different disciplines and seniorities applicable to that model.

[49] A service was considered to qualify as an example of a Core service if it met the medical and nursing specifications. For Core 24, Enhanced 24 and Comprehensive service models, services were considered to be an example of that model if they most closely resembled that model, even if the exact specifications were not met or exceeded. Additionally, the descriptions of the service models were for acute hospitals of particular sizes (eg 500 beds), but the services in the survey served hospitals of all sizes. Accordingly, the service model specifications were scaled to the number of inpatient beds in each hospital.

Services for children and young people

This survey was undertaken in a different way. We made contact with the Liaison Psychiatry lead in the Child and Adolescent Psychiatry Faculty of the Royal College of Psychiatrists and we were informed that the number of Liaison Psychiatry services was small and most acute hospitals with EDs had no Liaison Psychiatry service for young people.

Our previous experience has shown that identifying the absence of a Liaison Psychiatry service is problematic because in a setting where there is no Liaison Psychiatry, people presenting with mental health problems are still seen, but they are seen by off-site teams, often after delay. This means referring clinicians may consider that there is a paediatric Liaison Psychiatry service even though what is available meets no established definition.

Accordingly, for the survey of Liaison Psychiatry services for children and young people, we contacted each service known to the Faculty of the Royal College, and asked each respondent about any services they knew about and any acute hospitals they knew had no service. As above, we accepted information by email or telephone. We also used a mailing list for Liaison Psychiatry for Children and Young People and we spoke to the chair of the British Psychological Society's division of Paediatric Liaison. The survey opened on 13th July 2015 and closed on 29th July 2015, though a number of late responses were also included.

The questions asked of clinicians were piloted at a meeting of paediatric liaison psychiatrists in June 2015 and changes made in response to feedback. The questions asked of services can be seen in Table 2.

[49] "Developing Models for Liaison Psychiatry Services - Mental ..." 2014. 16 Jul. 2015 <http://mentalhealthpartnerships.com/wp-content/uploads/sites/3/3-developing-models-for-liaison-psychiatry-services.pdf>

Table 2: Questions asked of services for children and young people.

1	What is the name of your Paediatric Liaison Psychiatry service (if it has one)?
2	What is the name of the Acute Hospital(s) you are based in, and where is your team located within the hospital?
3	What is the name of the Acute Trust(s) you are based in (if relevant)?
4	a) Does your Paediatric Liaison service provide services to more than one site with an A&E? b) What other sites does your Paediatric Liaison service provide services to (if any)?
5	What is the provider of your service? Usually this is the mental health trust
6	Is Paediatric Liaison in your Acute Trust provided by one or many providers? If many, which?
7	Who commissions your service?
8	To capture the size of your Paediatric department, could you please say: How many Paediatric beds there are within the hospital? How many Consultant Paediatricians there are within the hospital?
9	To help us capture all Paediatric Liaison services.. …please name any acute hospitals which you know **do** have a Paediatric Liaison service, and… …please name any acute hospitals which you know **do NOT** have a Paediatric Liaison service.
10	What are the age-criteria for your service(s)? (We are aware this can be very complicated but we want to know all the details please, including whether it is different for known vs unknown patients, criteria about full time education, etc)
11	How are referrals processed, and is this different when urgent and non-urgent?
12	What services do you provide, and to whom? eg Self-Harm, Other ED presentations, Inreach to hospital wards (ward work), Short term follow up clinics (after people on caseload have been discharged),Clinics with other specialties which take outpatient referrals, Standalone clinics which take outpatient referrals Substance misuse, any additional services.
13	Do you take part in any MDTs or do any other joint clinical work?
14	Do you provide any staff support or any staff training groups?
15	Number of trained nurses and their bands? (Please give both the number of 'bodies' and the number of FTE posts)
16	Number of doctors and their grades (including training grades for juniors)? (Please give both the number of 'bodies' and the number of FTE posts)
17	Number of psychologists and their bands? (Please give both the number of 'bodies' and the number of FTE posts)
18	Number of other clinicians and their bands? (Please give both the number of 'bodies' and the number of FTE posts)
19	Number of admins and their bands? (Please give both the number of 'bodies' and the number of FTE posts)
20	Number of other non-clinicians and their bands? (Please give both the number of 'bodies' and the number of FTE posts)
21	Of the above, who is substantive and who is locum, part of winter pressures, fixed term, etc.?
22	Are there any other paediatric mental health workers in your acute trust who are not part of your service? (e.g. counsellors)
23	What is your service's budget, if known? (Leave out the medics, or just junior medics, if necessary)
24	How much of that budget is permanent and how much is temporary (if known)?
25	What are your service's hours of operation?
26	What happens outside of these hours? (Is there an on call SHO, or another service?)
27	Does your service do all the work contained in all the referrals or is some passed on to other services? Please explain. (This question is about things like requests for psych opinions from wards, which are sometimes passed straight onto the duty SHO)
28	Have you undertaken any research (published or not) to support the development of your service? If so, can you describe it please?
29	Is your service better resourced than it was a year ago? If so, how? If worse, please also explain.
30	Does your service have a response time standard and is that time agreed with referrers and/or commissioners?

These questions were based on those which were asked of the Liaison Psychiatry services for adults of working age and services for older adults, above. The main differences were made in response to feedback during piloting.

Process matters were undertaken similarly to the adult survey, with telephone conversations documented in an email and sent to respondents for comment, and approved emails being processed the same way as responses returned by email. Data cleaning was undertaken and a final dataset was created and locked.

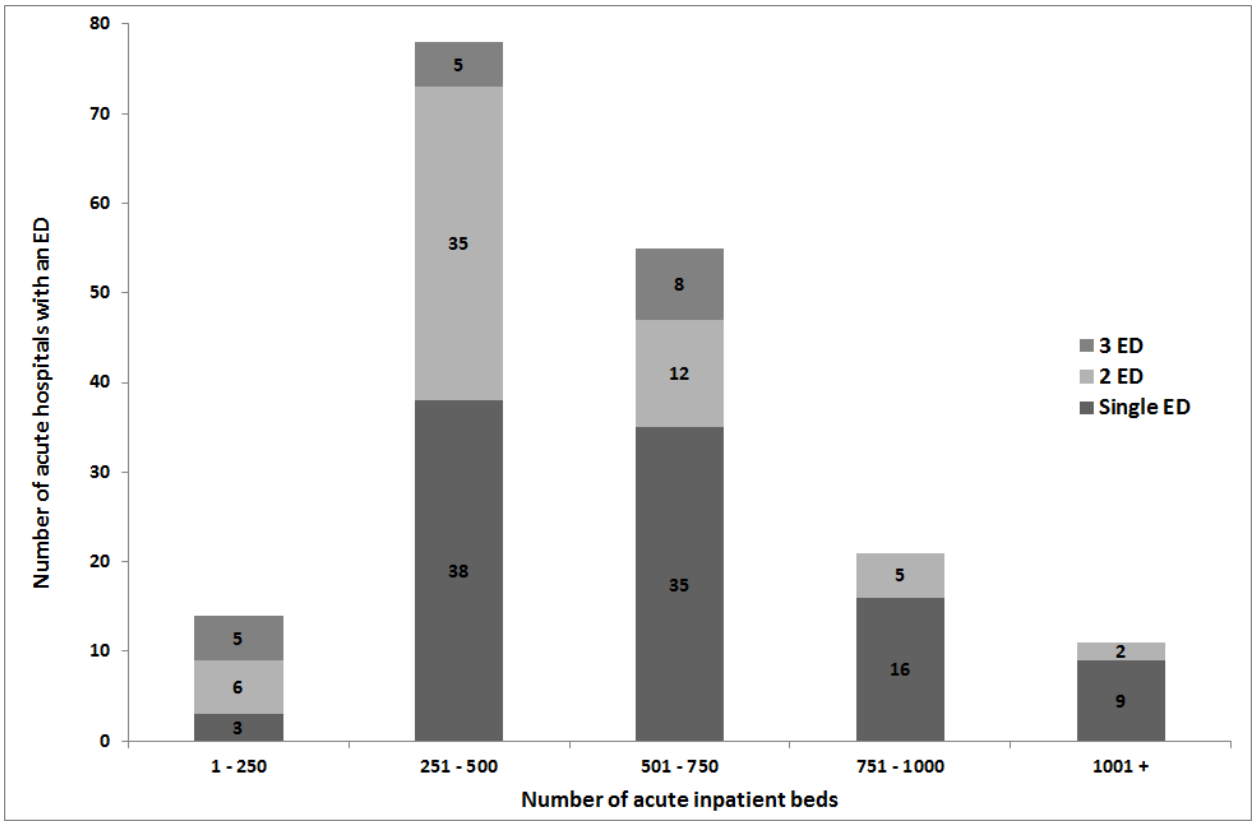
In the absence of defined service model specifications, we created a model reflecting the mean provision of Paediatric Liaison Psychiatry professionals per acute paediatric bed. Unfortunately there are no published data of which we know about acute paediatric beds so we undertook a two-stage estimation process. First, a least-squares regression model with a zero intercept was fitted between the number number of acute paediatric beds (excluding day case beds) and the number of acute (adult) beds for each hospital where there was a Paediatric Liaison Psychiatry service. This regression was used to estimate the number of acute paediatric beds in England from the number of acute (adult) beds. Second, another least-squares regression with a zero intercept was created between the number of Paediatric Liaison Psychiatry professionals and the number of acute paediatric beds in the hospitals with Paediatric Liaison Psychiatry. These two regression coefficients were combined to create an estimate of the number of Paediatric Liaison Psychiatry professionals required for England to have as many Paediatric Liaison Psychiatry consultants and nurses per paediatric bed as the mean (average) Paediatric Liaison Psychiatry service current in existence in England.

Results

Services for working age adults and older adults

Data were returned by, or about, all 179 EDs in England. Some of the acute trusts administer more than one ED.

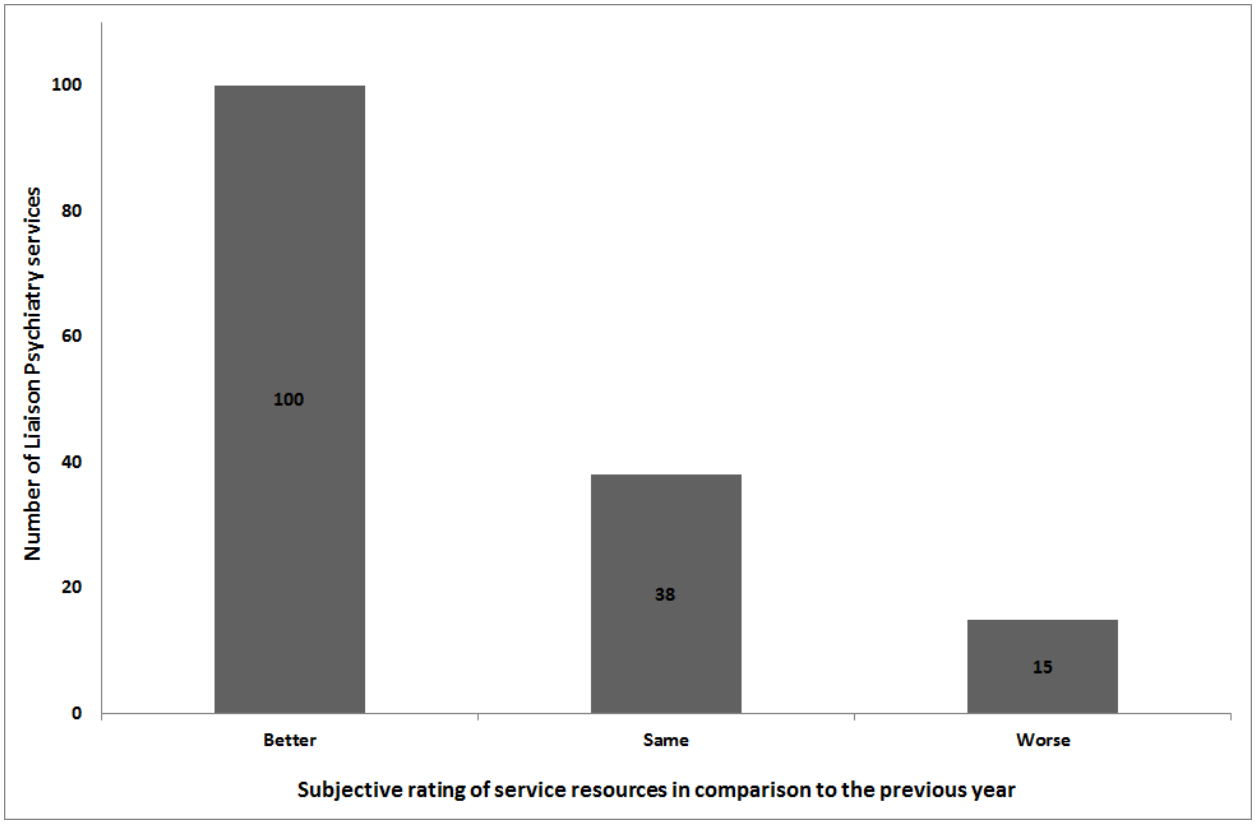
Figure 1: Acute hospitals with EDs in England by number of inpatient beds and by the number of EDs administered by each EDs acute trust.



Note: This graph is at the level of the acute hospital, not the trust. That is, all three of the EDs belonging to an acute trust with three EDs will appear on this graph.

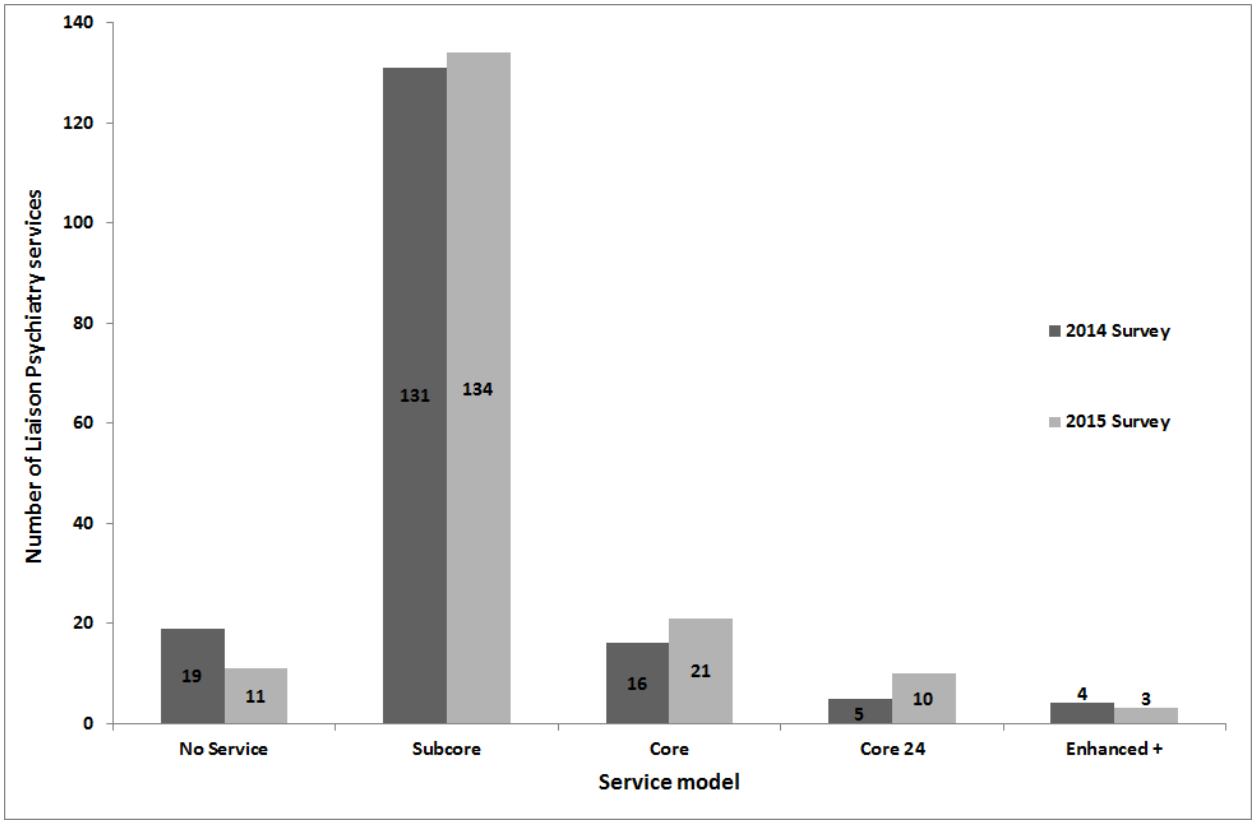
Most (101) of the EDs were the only ED administered by their acute trust. Sixty EDs were in acute trusts which administered two EDs, and 18 EDs were administered by acute trusts which had three EDs. In terms of bed numbers, the most frequent category was 251-500 beds (see Figure 1). Of particular note is the ED closures in the year between the previous survey and this one, only EDs administered by acute trusts with more than one ED were closed (not shown).

Figure 2: Number of Liaison Psychiatry services which report a better, same or worse resourced service than the service recalled from a year previously.



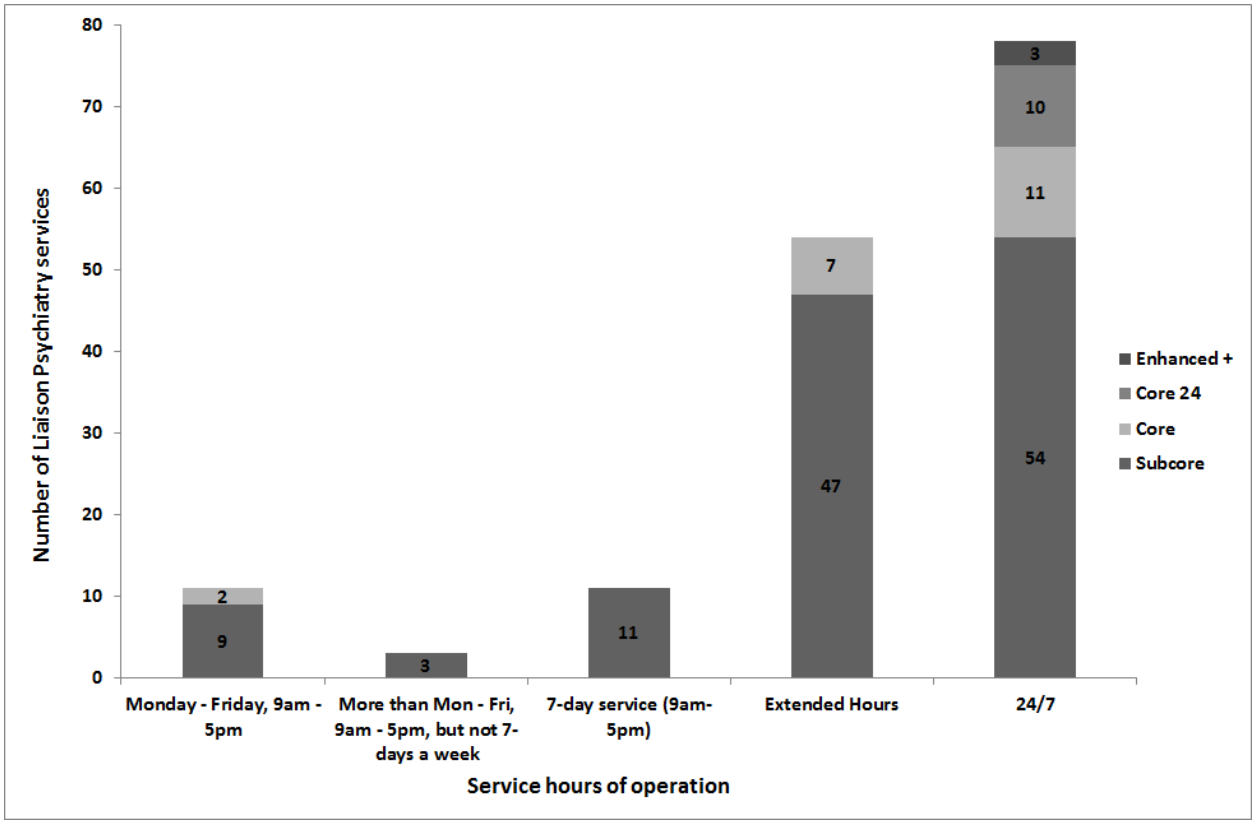
Most (100/153 of services who answered), said their service was better resourced than a year previously, while 15 reported their service was worse resourced and the remaining 38 reported no change (see Figure 2).

Figure 3: Services in each service model for this survey with, for comparison, the results from a similar survey from the year previously.



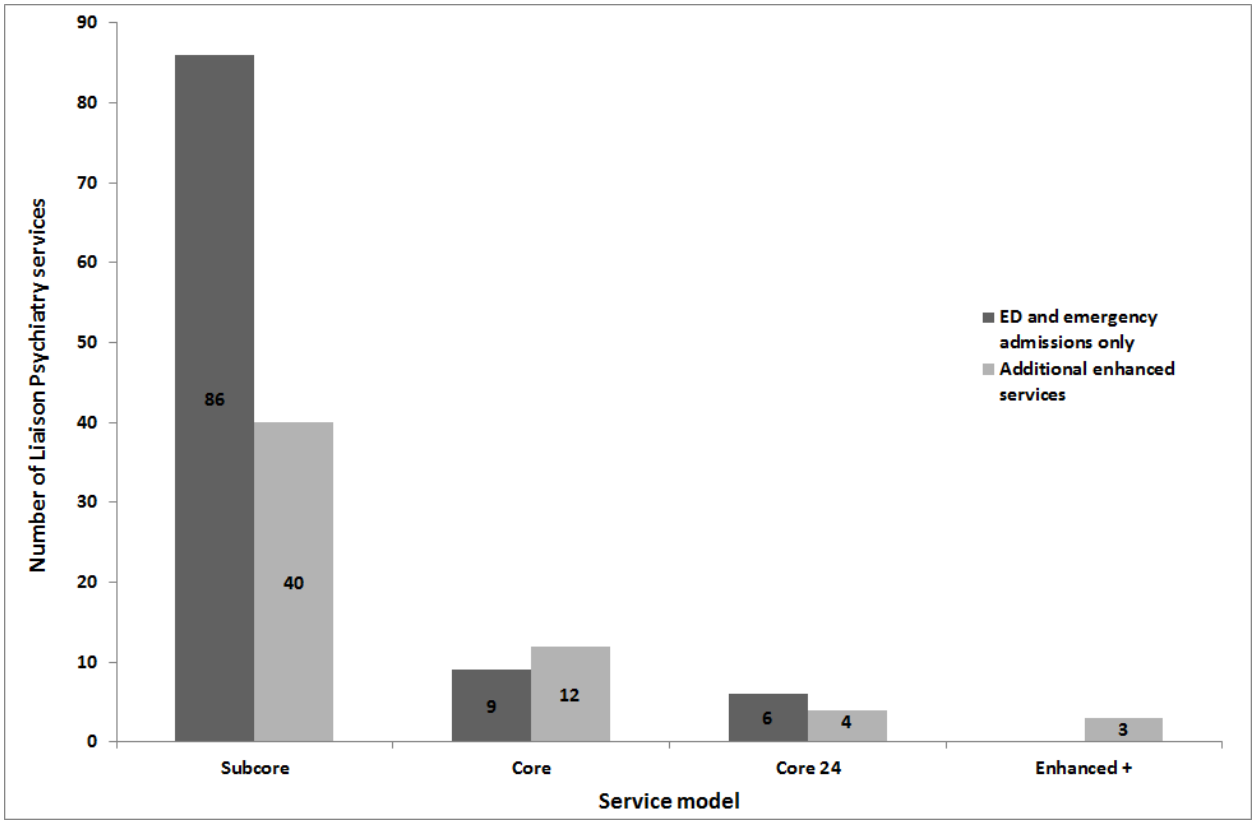
Overall, there were 11 acute hospitals with EDs in England which were reported to have no service. There were 134 services which existed but did not meet the criteria to be considered Core. There were 21 Core services, 10 Core 24 services and three which were Enhanced 24 or Comprehensive. These last two categories were conflated because there were so few comprehensive services, they differ from each other, and many of the criteria for a Comprehensive service are not greater than those for Enhanced 24 (see Figure 3).

Figure 4: Services divided by their hours of operation and service model.



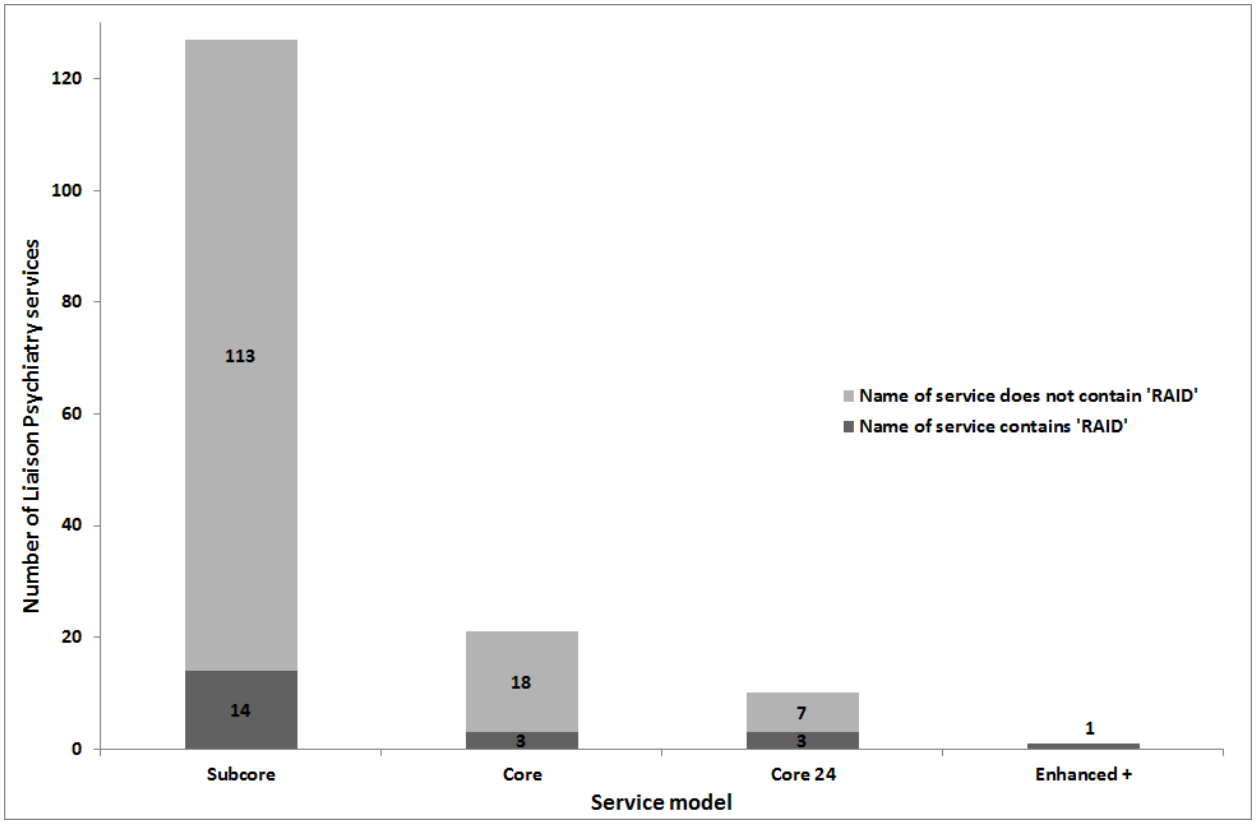
In terms of hours of service, 78 services reported being open 24 hours a day, seven days per week. This is more than the seven-day extended hour services (54) and more than all the services operating for fewer hours than that (25). Of note is that most (54) of even the 24 hour, seven day services were still graded ‘SubCore’, largely because of a lack of consultants in post. The situation is similar for 47 of the 54 services operating seven-day extended hour services and for nine of the 11 services operating Monday-Friday 9-5 services (see Figure 4).

Figure 5: Services divided by their service model and whether they offer non-acute additional activities.



Looking at the activities offered by individual Liaison Psychiatry services, the service models suggest Core and Core 24 would only concern themselves with acute presentations and care of emergency admissions ("inreach"), leaving outpatients, co-clinics and other enhanced activities to the Enhanced+ services. The reality is rather different: Although all the Enhanced+ services do all offer additional activities, a large fraction of all the other grades of service undertake these activities as well. In particular, about a third of SubCore services offer non-acute interventions, suggesting the service models do not entirely model what many smaller services deliver (see Figure 5).

Figure 6: Services divided by their service model and whether the name of the service contained the acronym 'RAID'.



With regard to the names of services, a total of 21 had names which contained the acronym 'RAID', named in reference to the well-known service of that name at City Hospital Birmingham. As can be seen, there is much variety over the true resourcing of these 'RAID' services, with 14/21 not even reaching the designation of being Core services (see Figure 6).

Figure 7: Consultant and nurse numbers in Liaison Psychiatry services in England's acute hospitals with EDs: Current provision and that required for nationwide implementation for the different service models.

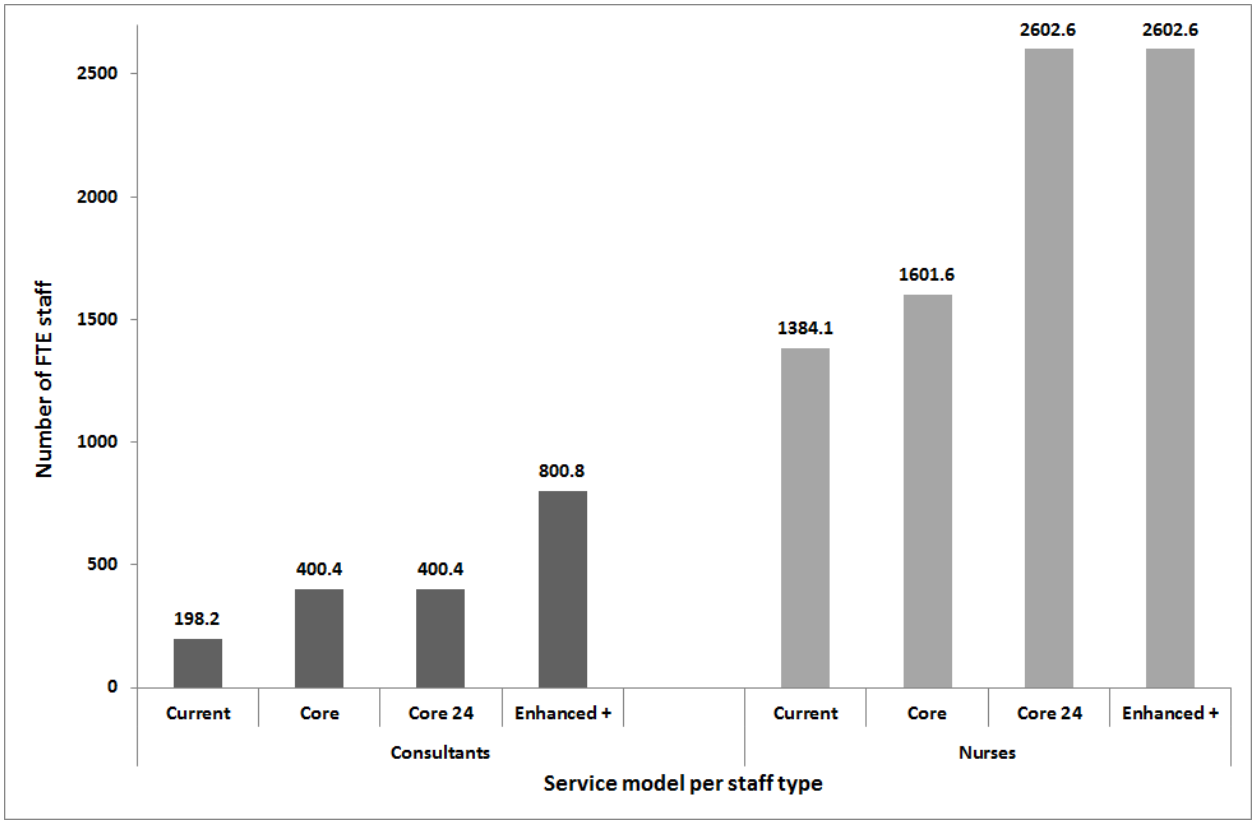


Figure 7 shows the current measured provision in acute hospitals with EDs in England for consultants and for nurses, along with the provision required to bring all of England's EDs to Core, Core 24 and to Enhanced specifications, respectively. Of the 198.2 FTE consultant liaison psychiatrists currently working in acute hospitals with EDs in England, 11.9 FTEs are locums. Of the 1384.1 FTE nurses currently working, 50.9 FTEs are bank staff. The proposed mix of services in the DoH Impact Assessment[50], of 12.5% Enhanced, 25% Core 24 and 62.5% Core, with the largest hospitals having the best resourced services, places the requirement for consultants at 497.9 FTEs and for nurses at 2155 FTEs, figures intermediate between Core 24 and Enhanced for consultants and between Core and Core 24 for nurses. In terms of current provision for other doctors, there are 141.1 FTE junior doctors and 34.7 FTE trust grade doctors and specialty doctors combined. In terms of other team members, there are 64 FTE psychologists including trainee psychologists and assistant psychologists, 0.7 FTE psychotherapists, 5.1 FTE CBT therapists and Psychological Wellbeing Practitioners combined, 1 FTE trainee counsellor, 12.2 FTE drug and alcohol nurses, 21.4 occupational therapists, 0.6 FTE physiotherapists, 6.8 FTE healthcare assistants, 9.4 FTE other approved mental health

[50] "Impact Assessment - Gov.UK." 2014. 28 Jul. 2015 <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/362051/Impact_Assessment.pdf>

practitioners, 2.2 FTE pharmacists, 3.7 physicians associates, 47.8 FTE team managers and service operations managers combined, 1 FTE mental health coordinator, 3.6 FTE research assistants, 2 FTE graduate mental health workers, 19.3 FTE social workers, 1 FTE peer support workers, 1 FTE carers assessment officers, 28.8 FTE support, time and recovery workers, and 239.1 FTE administrators.

Figure 8: Consultant numbers in Liaison Psychiatry services in England's acute hospitals with EDs: Spread of consultants across age specialties.

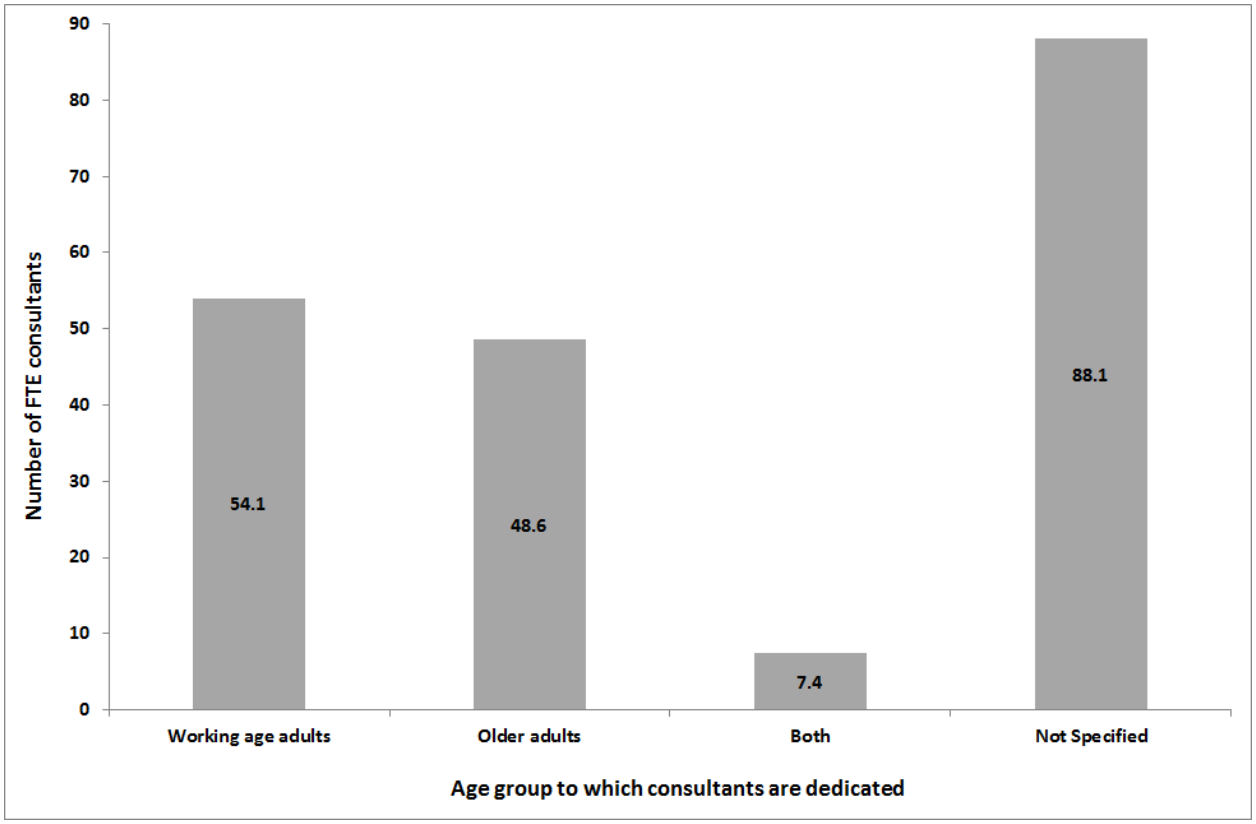


Figure 8 breaks down the total figure for consultants into the different age groups that consultants work within. Of the total 198.2 FTE consultant liaison psychiatrists working within acute hospitals with an ED in England, 54.1 FTE of these are working age adult dedicated, 48.6 FTE of the total are old age consultant psychiatrists, and 7.4 FTE consultant liaison psychiatrists work across both working age adult and older adult age groups. The responses for the remaining 88.1 FTE consultant liaison psychiatrists in the country did not specify which age groups these consultants worked with (this was not asked specifically). Of the 168 liaison psychiatry services in acute hospitals with an ED in England, 150 services reported working with older adults, with 5 services not seeing older adult patients, and the remaining services not explicitly mentioning which ages groups are worked with. Of the 150 services who see older adults, only 39 have a separate older adult team within the service, and only 28 of these separate older adult teams have an old age liaison psychiatrist working within the team.

Figure 9: Number of Liaison Psychiatry services with a response time standard.

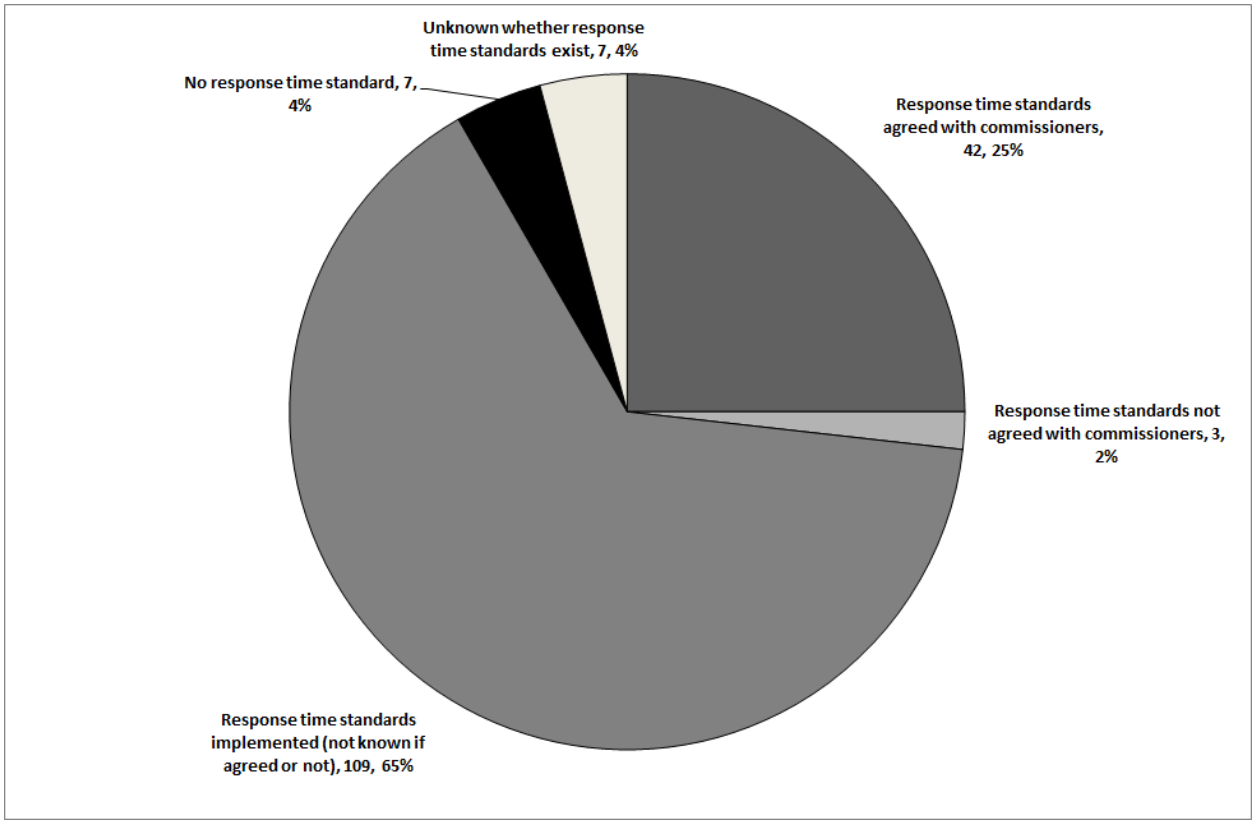


Figure 9 describes the nature of services' response time standards. Most (92%) of the services had a response time standard, but only a minority (25%) said these were agreed with commissioners.

Figure 10: Liaison Psychiatry services' response time standards in detail.

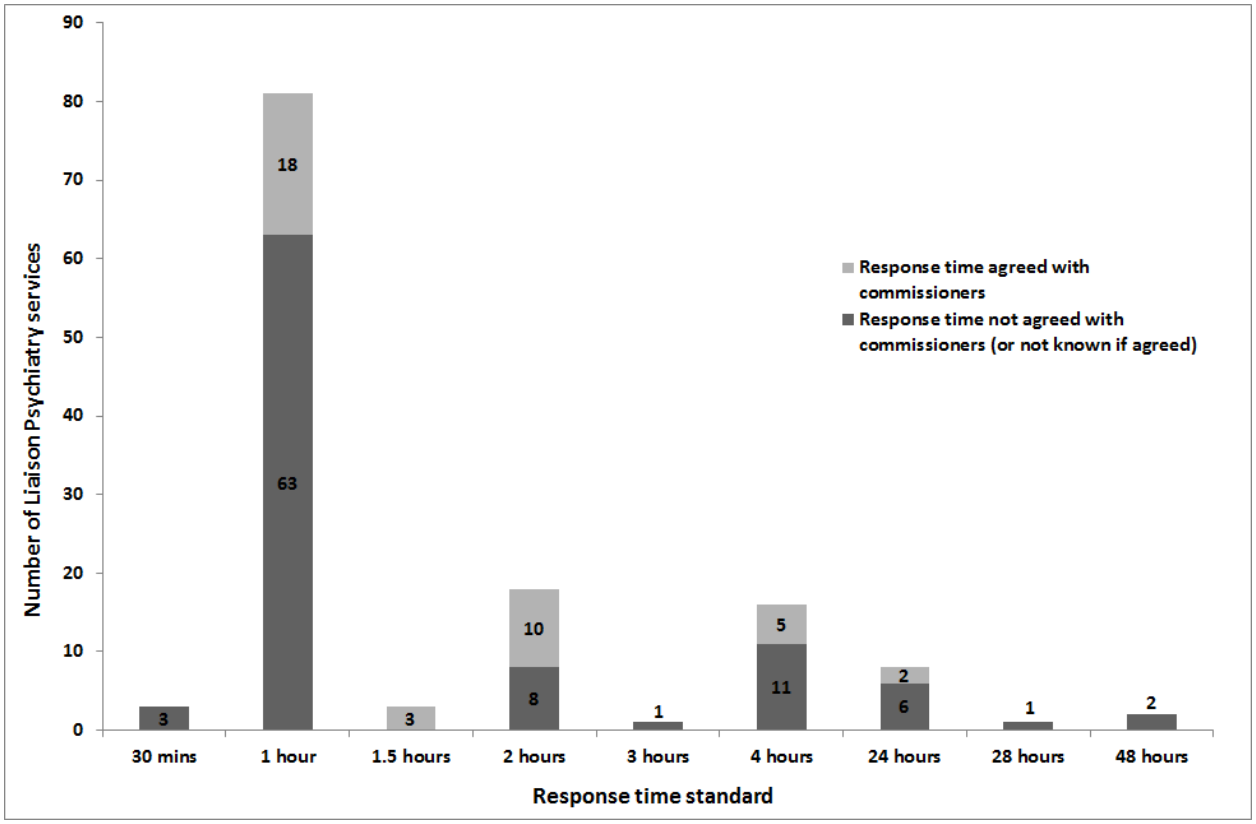


Figure 10 describes the details of the response time standards. Many services reported several response time standards. Some were divided by place: Referrals from ED had one standard and referrals from the wards had another. Some were divided by urgency into one or more categories, each with their own standard. Figure 10 collates the shortest response time standard as reported by services, be that from a particular place within the hospital or for referrals of a particular quality, such as 'urgent'. These response times varied from 30 minutes to 48 hours, broadly reflecting the staffing level within the service, though there were examples of Subcore services with 30 minute standards. Most response times were not agreed with commissioners, and none of the response times greater than 24 hours were agreed.

There were some questions the answers to which are not reported here. Apart from the administrative questions, these were about budgets, the acceptance and transfer of referrals and the rules by which patients are allocated to particular services for young people, those for working age adults or services for older people. Almost no service was able to answer any budget questions and no two responses contained comparable figures. The questions about taking referrals but transferring patients immediately, and that about the rules for allocation to services were answered in a wide variety of ways such that the answers were not groupable. The raw data for these questions (and all others) are available to researchers from the authors.

Services for children and young people

The denominator for this survey was the 179 EDs in England, plus the three English children's hospitals which are their own NHS trusts and have their own EDs. These trusts are Birmingham Children's Hospital NHS Foundation Trust, Sheffield Children's NHS Foundation Trust and Alder Hey Children's NHS Foundation Trust.

The Child and Adolescent Faculty of the Royal College of Psychiatrists had reports of 19 acute hospitals with an Emergency Department which had Paediatric Liaison Psychiatry services and of 15 hospitals which had no service. We successfully contacted 16 of these known services, finding that 13 of these did have a Paediatric Liaison Psychiatry service and the remaining three did not. The services informed us that one of the initial 15 hospitals that was thought to be without a service actually did have a Paediatric Liaison Psychiatry service. We were also given 13 extra 'leads' by these services. By the end, we had attempted to contact 32 hospitals, successfully making contact with 24 of them. Of those we contacted, 19 had a Paediatric Liaison Psychiatry service, and 5 hospitals did not. The 24 hospitals we spoke to told us of six more hospitals that did have Paediatric Liaison Psychiatry services, and 15 others which did not have services. In summary, combining information obtained from services that we had spoken to and also information provided by The Child and Adolescent Faculty of the the Royal College of Psychiatrists, we had reports of there being no Paediatric Liaison Psychiatry service at 37 hospitals, and there being a Paediatric Liaison Psychiatry service at 29 hospitals. Last, we had no data (apart from the observation that none of the clinicians in the field at the 24 hospitals we contacted, including national figures, knew of any services at those places) from 116 hospitals.

Figure 11: Consultant and nurse numbers in Paediatric Liaison Psychiatry services in England's acute hospitals with EDs: Current provision and that required to take England to the level of provision of the mean existing service.

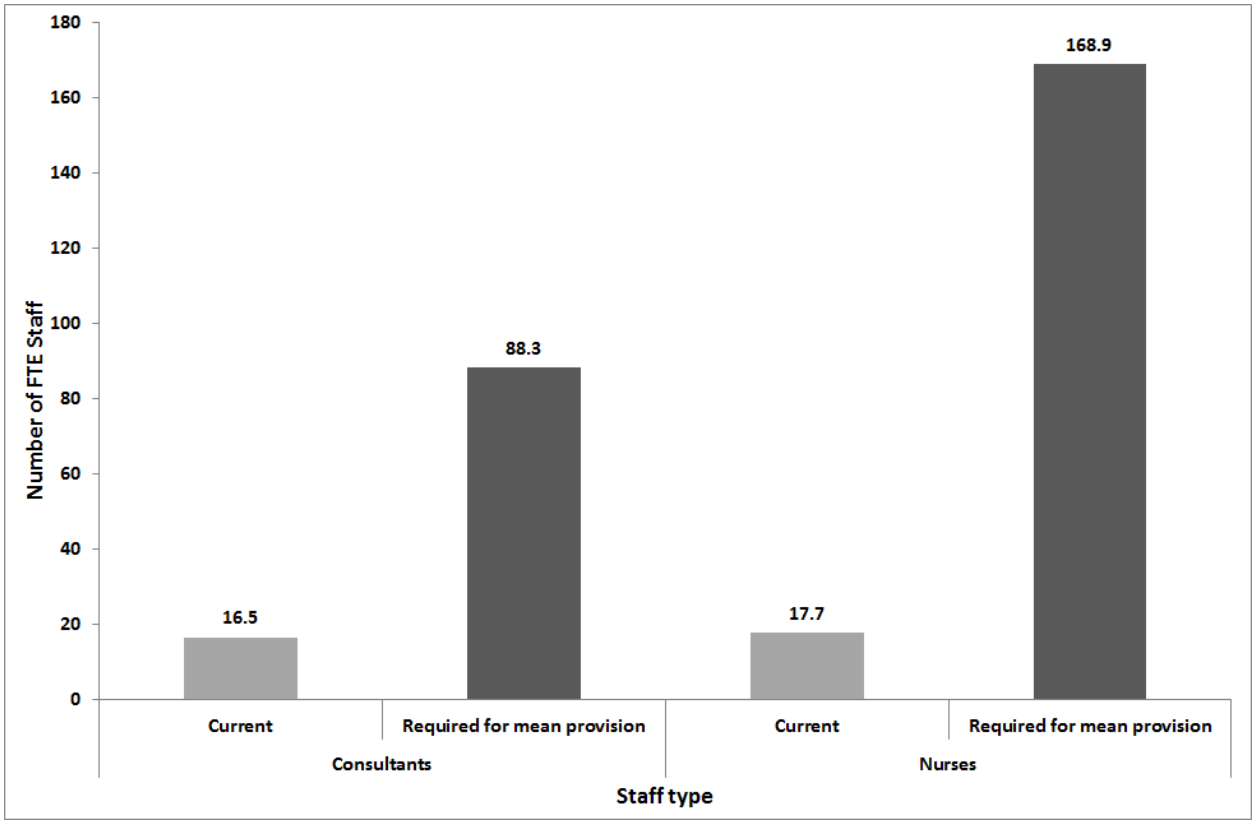
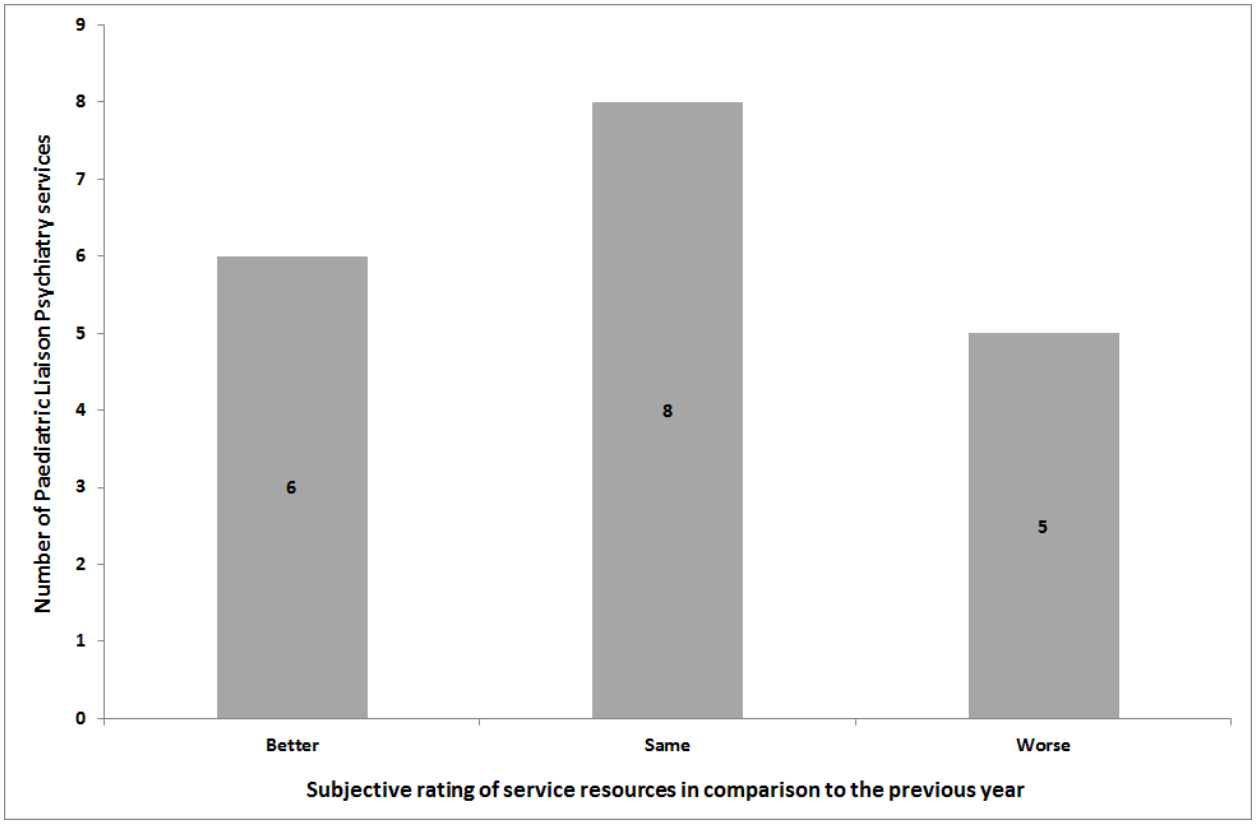


Figure 11 shows provision in acute hospitals with EDs in England for consultant child and adolescent psychiatrists and paediatric liaison nurses and the number of consultants and nurses required to take England up to the mean provision of the current existing services. There are 16.5 FTE consultants (of whom 0.6 FTEs are locums) and 17.7 FTE nurses (of whom 2.8 FTE are bank staff). As mentioned in Methods, we estimated the number of paediatric beds in England (9,490) and we found for every 100 acute paediatric beds there were on average 0.9 FTE consultants and 1.8 FTE nurses in hospitals where there were Paediatric Liaison Psychiatry services. These figures were combined to make FTE requirements for the whole of England to have Paediatric Liaison Psychiatry provision equal to the mean of the current provision in hospitals where there is a service. For consultants that figure is 88.3 FTEs and for nurses it is 168.9 FTEs.

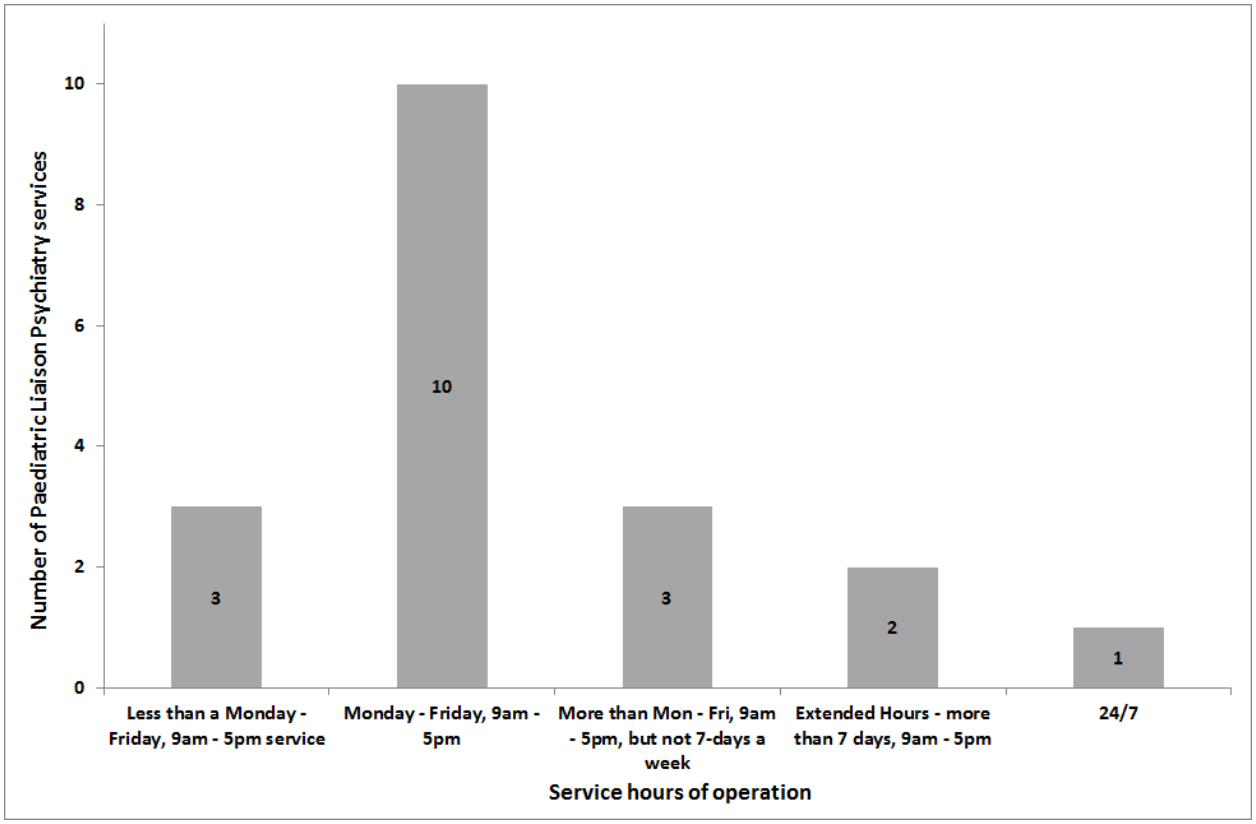
Additional current provision data are as follows: There are 9.3 FTE junior doctors, 5.1 FTE of whom are specialist registrars and there are 1.4 FTE specialty doctors. There are 26.5 FTE psychologists including trainee psychologists and assistant psychologists (likely a serious underestimate - see Discussion), 2.5 FTE psychotherapists including trainee psychotherapists, 3 FTE family therapists, 1.8 FTE social workers, 0.1 FTE counsellors, 0.8 FTE occupational therapists, and 10.7 FTE administrators.

Figure 12: Number of Paediatric Liaison Psychiatry services which report a better, same or worse resourced service than the service recalled from a year previously.



Responses to how well resourced the service was in comparison to the previous year are fairly evenly spread: Eight out of 19 services said their service was resourced the same as the previous year, six said their service was better resourced and five said their service was less well resourced (see Figure 12).

Figure 13: Services divided by their hours of operation.



The modal operating hours are Monday-Friday 9-5 (10 services). Three services have operating hours which are less than Monday-Friday 9-5, one of which only operates one morning per week, another of which operates 1.5 days per week, and the other service operates four days per week. Three services have operating hours which are greater than Monday-Friday 9-5, but these are not seven-day services as all three of these services work longer hours over a five-day period. Two services provide extended hours over seven days, and one service reported being open 24 hours a day, seven days per week (see Figure 13).

Outside of the hours of operation 13 services describe using the duty psychiatrist, one uses a combination of duty psychiatrist and on-call community child and adolescent mental health services (CAMHS), four use on-call CAMHS and one is a 24 hours service.

Figure 14: Response time standards of Paediatric Liaison Psychiatry services.

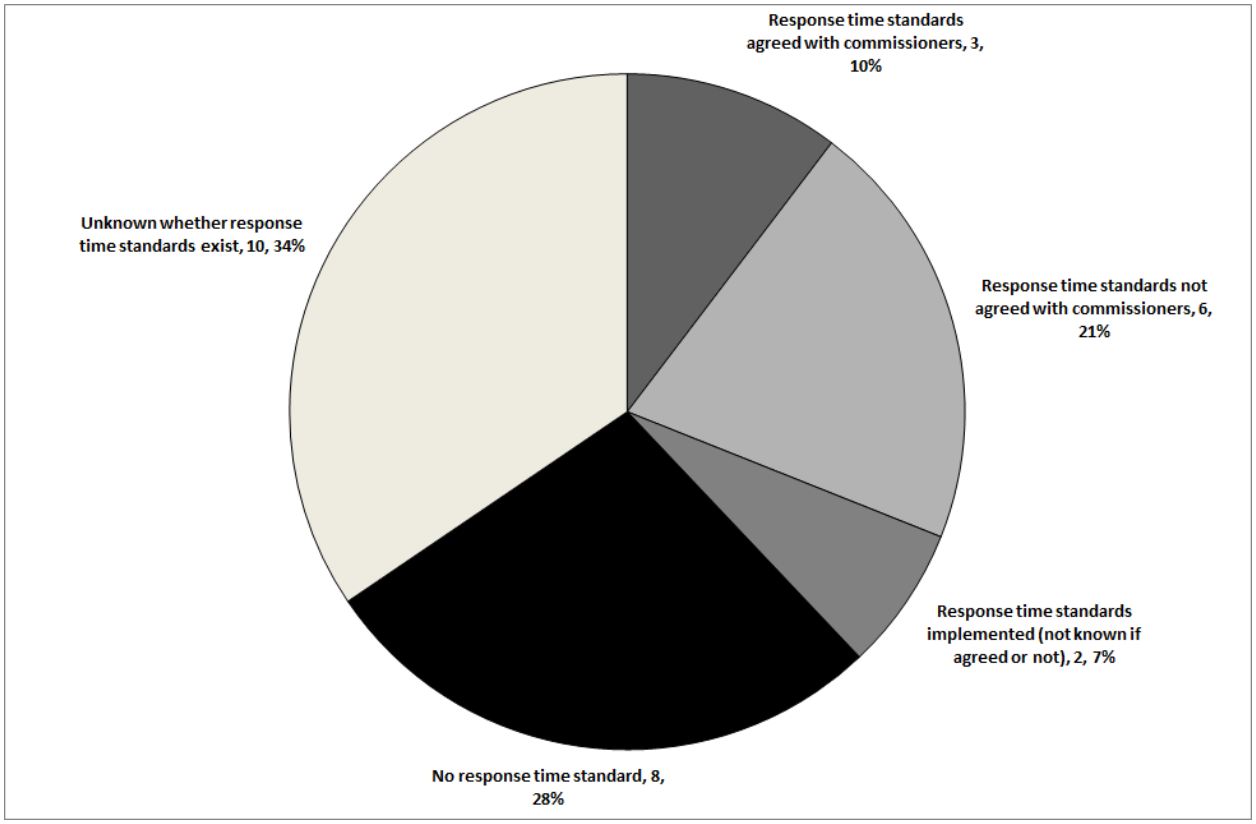


Figure 14 describes the nature of services' response time standards. Eight (28%) of services reported no response time standard, but this was not known in a further 10 (34%). Of those eleven which reported having a response time standard, only three were reported as being agreed with commissioners.

Figure 15: Paediatric Liaison Psychiatry services' response time standards in detail.

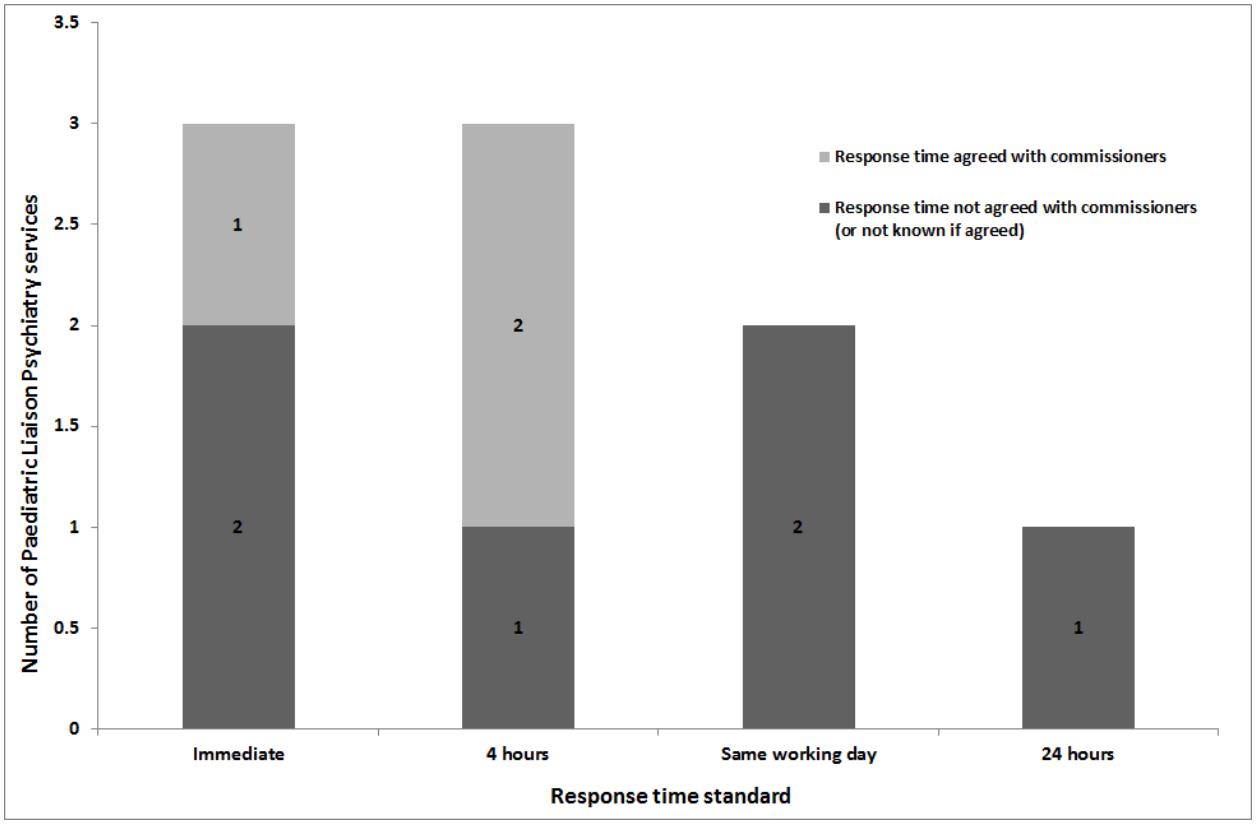


Figure 15 describes details of the response time standards. Many services reported several different response time standards. Some services reported their time standards in terms of the source of the referral: ED, wards, or outpatients/community. Other services reported their time standards by urgency: emergency, urgent, or routine. Figure 15 charts the shortest response time standard reported by each service. These response times varied from immediate response to 24 hours, mostly reflecting how well staffed the services are. Most response times were not agreed with commissioners, and no response time greater than four hours was agreed with commissioners.

There were some questions which were asked of the services which are not reported above. Apart from the administrative questions, these were about service names, age criteria, referral processing, service activities, onward referral policies, budgets and service research. With regard to service names, none were called RAID. For age criteria, 17/182 answered the question. One service denied having age criteria, one sees patients aged 0-16 years, one sees patients aged 0-17 years, 14 see patients aged 0-18 and one sees patients up to age 25. There was no pattern to the answers to the question about referral processing. About service activities, most (17/182) services describe attending multidisciplinary meetings and 15/182 describe having a training role for acute hospital staff. With regard to onward referral policies and service activities, the responses had no pattern. The budget questions were not answered fully by any respondent. The raw data are available to researchers via the authors.

Discussion

Summary of results

This survey, the second annual survey of Liaison Psychiatry in England, has found a mixed picture.

Among adults' services, there are many services which are too poorly resourced to be likely to be delivering the all the benefits to patients and the acute healthcare economy as envisaged by interpretations of the RAID study. However, this situation is better than it was a year ago, when the Liaison Faculty of the Royal College of Psychiatrists asked us to undertake a similar survey. Now, fewer EDs have no service at all, and more services are graded Core and Core 24. Furthermore, most services report being better resourced than they recall being a year previously. More services operate 24 hours per day than any other set of hours, and many - even relatively poorly resourced - services undertake non-acute activities in addition to emergency work. To take the whole of England to Core level would require the ~200 consultants currently working to be doubled to ~400, and to take England to a reasonable mixture of services would mean ~500 consultants posts would need to be created and filled. Most services had a response time standard, only a minority of which were agreed with commissioners. The most frequent response time standard was one hour.

Among young people's services, the picture is more varied:Only a few services exist, so the bulk of acute psychiatric presentations are likely to be managed by off-site Child and Adolescent Mental Health Services (CAMHS), often after delay. There is no well established body of evidence supporting the commissioning of services, and no guide for what should be commissioned even once a decision has been made to do so. There was no comprehensive prior survey of paediatric liaison psychiatry in England, but on recall of resourcing a year ago there is a mixed picture with similar numbers reporting better, worse and similar levels. To take England to the current mean provision of places where there is a service, the number of consultants would have to increase from 16.5 FTE to 88.3 FTE and for nurses from 17.7 FTE to 168.9 FTE. The modal hours of operation is 9-5 Monday-Friday and few of the services had agreed response time standards - though three services had the response time of 'immediate', suggesting there are several services which are thriving and delivering an excellent service.

Strengths and weaknesses

This survey, with its companion from a year before, represents the best survey of Liaison Psychiatry activity in England of which we know. We used evidence-based techniques to achieve a 'perfect' response rate of 100%, with information being returned about all 179 EDs in England. We asked an appropriate number of questions of appropriate depth and were therefore able to deliver an unparallelled snapshot of - and trends in - clinical activity which has already been of use to numerous government and other agencies. Reduced forms of the dataset of the first survey have been shared (with strict data sharing agreements) with a total of

nine agencies, including CQC, Monitor, the Workforce Planning Committee of the Royal College of Psychiatrists, and Health Education England.

The survey of Paediatric Liaison Psychiatry did not have such a tremendous response rate, but it too is the best survey of the speciality of which we know. As mentioned above, it is our view and that of the Paediatric Liaison Psychiatry lead for the Royal College of Psychiatrists that none or very few services were missed by the 'snowball' approach we undertook.

However, all scientific work has weaknesses and these surveys are certainly no exception. First, there is the problem of definitions of Liaison Psychiatry. In any specialty where services have grown in response to local perceptions of need, without until recently any guidance for commissioners, there is no reason to suppose services will be structured in any way similarly. This means attempts to categorise services into groups are likely to generate categories of poor validity and to have numerous services in 'grey areas' between categories. The issue of what is, and what is not, Liaison Psychiatry is constantly tested by the realities of individual services' circumstances. Because people with mental health needs are managed in general hospitals without Liaison services, it is not the patient group seen which defines Liaison: It is some quality of there being a dedicated team based on site. Both of these criteria were challenged by the data: There were dedicated teams based in adjacent buildings, across the road or a few minutes walk away. There were also some teams which were based on site and were staffed on a rota from a larger team so there was no continuity of staffing, and conversely there were off-site teams which called themselves Liaison services but provided a service no different to there being no Liaison, of one-off generic assessments by unknown staff. As well as these was a strong Liaison service which had been moved to 40 minutes away for a year to allow building work to go ahead, and a Paediatric Liaison Psychiatry service which has been moved 20 minutes away this year and will be moved further away next year. Altogether, just deciding what is Liaison and what was not straightforward. However, we were meticulous in our documentation and were consistent throughout.

The service model specifications (Core, Core 24, etc.) were created in an effort to simplify the tremendous complexity of thinking about Liaison Psychiatry in the context of the RAID study which supports the existence of Liaison Psychiatry services aimed at ED and emergency care, when every existing was created and grew in its own unique contexts. In that regard the models were a success, but this survey revealed the ordinal nature of the models, which only acknowledges non-acute clinical activity once ED and emergency admissions are fully addressed with a Core 24 service. In actuality we found many relatively poorly resourced Subcore services were already undertaking non-acute work. There was also a structural problem with the service models: Because they were based on real services' provision, the nursing provision requirement actually fell when ascending the scale from Core 24 to Enhanced. In addition, once the model specifications were scaled per acute bed, the Comprehensive specification had lower provision requirements for many disciplines than Enhanced 24. To manage this problem, we fused Enhanced and Comprehensive categories into a single category into which the few well resources services were placed.

Inevitably in any service mapping exercise, the data may go out of date. The health service is in constant change and Liaison Psychiatry is the subject of major policy commitments, so change is to be expected. Indeed, during the survey of adults, one service was threatened with closure, given one month to close down and then reprieved. Short term commissioning and Winter Pressures-type approaches contribute to rapid growth and shrinkage of services.

This survey was about Liaison Psychiatry services, but we found there is mental healthcare input into acute hospitals which is not part of Liaison Psychiatry. First, there are clinical psychologists, neuropsychologists and health psychologists employed directly by the acute trusts, often as part of particular specifications of particular care pathways, which may be specifically for young people. We discovered in our discussions with leaders at the British Psychological Society (BPS) that many acute hospitals with no Paediatric Liaison Psychiatry at all have a number of clinical psychologists employed as part of particular pathways. For example, one acute hospital's children's cancer pathway might employ 0.3 of a FTE clinical psychologist and the young people's diabetes pathway might employ another fraction. The BPS believes there to be about 400 psychologists working in acute hospitals in England, many more than were detected These clinicians' roles are primarily to assist patients within these pathways, and invariably the major psychiatric presentations are handled by off-site CAMHS. Thus, even where there is significant from psychologists, Paediatric Liaison Psychiatry is still necessary.

We have carried out several surveys of this kind and a recurring theme is difficulties in establishing where services are absent. Because people with mental health problems do get seen wherever they present and clinicians in one place may not have experience of a Liaison service - and clinicians are naturally loyal to their own establishments, establishing the absence can be very problematic. For the paediatric survey we took the extreme measure of assuming absence unless we had some evidence of presence of a service. This approach may have failed to capture some services but if so, these services have managed to exist in a small speciality without coming to the attention of any of the clinicians and leaders in the field we spoke to. These individuals were able to tell us of services which are planned and will not come into existence for one or more years as well, suggesting we are capturing much of current activity by this approach.

A particular weakness was our calculation of requirements for Paediatric Liaison Psychiatry consultants and nurses. This necessarily approximate approach was taken in the absence of any other data to use. We used the responses we had to calculate how many consultants and nurses were provided per 100 acute paediatric beds on average where there was Paediatric Liaison Psychiatry (about one consultant and almost two nurses). We also used the same data to calculate the relationship between how many acute paediatric beds there are per 100 acute adult beds (about nine). This second relationship was used to estimate how many paediatric beds there are in England (there are no official figures for this), and this figure was used with the first estimate to estimate how many Paediatric Liaison Psychiatry consultants England needs.

The great and grave assumptions made in this calculation are only justified because there are no better data to use. An indication of how fragile this calculation is that any sensitivity analysis, such as removing a single poorly resourced service from the dataset, the requirement estimate nearly doubled.

Interpretation and future research

The RAID study predicts Liaison Psychiatry services concentrating on ED and emergency admissions will pay for themselves, but there are no such studies for non-acute Liaison Psychiatry nor for Paediatric Liaison Psychiatry.

However, every clinician working in the field will report the likely positive effects of non-acute Liaison Psychiatry and the authors predict that once research similar to the RAID study is complete, savings similar to or greater than those RAID type services offer to the acute care pathway will become apparent. For Paediatric Liaison Psychiatry the situation is the same, with no formal study supporting the commissioning of services, while there is clinical consensus of the likely savings and improvements in health available. In support of this is a description we had from an academic paediatric liaison psychiatrist of an unpublished audit of paediatric bed occupancy in one English county. This found the young people who were admitted to paediatric beds for reasons primarily related to their mental health were much older and stayed much longer, suggesting prompt Paediatric Liaison Psychiatry input could pay for itself by shortening these admissions. The urgent needs for research are health economic analyses for non-acute Liaison Psychiatry and for the whole of Paediatric Liaison Psychiatry.

The Government is committed to there being adequate liaison psychiatry in every acute hospital in England by 2020. For working age and older adult consultant figures, a doubling of numbers in four years is not fantasy: It takes a Liaison Psychiatrist to create one - A junior doctor who is nearing the end of their programme spends a year in a training post with a Liaison Psychiatrist and is qualified to work in Liaison Psychiatry when they become a consultant. For children and young people, the picture is less clear. First, there is no formal ‘endorsement’ qualifying child psychiatrists to work in Liaison, so the workforce issue is about training, recruiting and retaining enough consultants, though the numbers required (as estimated by us) are much more than a doubling. For nurses, the situation is similar: A significant increase of the workforce required for working age adult and older adult services and a huge ninefold increase is estimated as necessary for children and young people.

We had anecdotal reports that the major paediatric centres are now convinced of the value of Liaison Psychiatry and are planning investment in posts and services, and we know there has been significant improvement in the last year for services for adults of working age and older adults. Accordingly, the most pressing future research need is for regular repeat surveys of workforce and activity in Liaison Psychiatry for all age groups.

Concluding Remarks

Liaison Psychiatry is beneficial for patients. Because of this survey it is now known how much there is, and there has been some progress about how much there needs to be for adults of working age and for older adults. There are about 200 consultants and this will need to at least double. There are fewer than 1500 nurses and this figure will need to be increased to about 2500. This gap is large, but is closeable. Taking into account government commitments to adequate Liaison Psychiatry by 2020, there are reasons to be optimistic about the many patients in the acute hospital setting with mental health needs getting the care they need.

Liaison Psychiatry services for children and young people have further to go. This survey found sparse Liaison provision with a severe shortfall of consultants and nurses as well as other disciplines. Our (assumption-heavy) calculations suggests a fivefold increase in the number of consultants and a tenfold increase in the number of nurses will be required. This is a very large gap, but the absolute numbers of additional professionals is less than that required for the adult services, so again there is reason to be hopeful that by 2020 children in hospital who have mental health needs will have those needs met.

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