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National survey of use of hospital beds by adolescents aged 12 to 19 in the United Kingdom

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tions clinicians have adopted a more selective EEG requesting policy. Doctors may have a lower risk of making, and patients may have lower risk of receiving, a misdiagnosis of epilepsy. The reduction in the number of unnecessary procedures releases technical capacity which can be used in the conduct of other investigations. Systematic replication of this work, possibly on a regional basis, would yield savings which would permit development of accessible local neurophysiology services.

Julie Jones and Clare Jowett in the audit departments of Wrexham Maelor and Royal Shrewsbury Hospitals facilitated the meetings and distribution of guidelines. We specially thank the users of the service for listening and changing their practice

Contributors: DS had the original idea for the audit, helped with data collection and analysis, and is guarantor for the study. RB did most of the data collection. RP reported on all the EEGs. The paper was jointly written by DS, RB, RP, and BT.

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Competing interests: DS presented the data at an educational meeting sponsored by GlaxoWellcome, for which he received payment.

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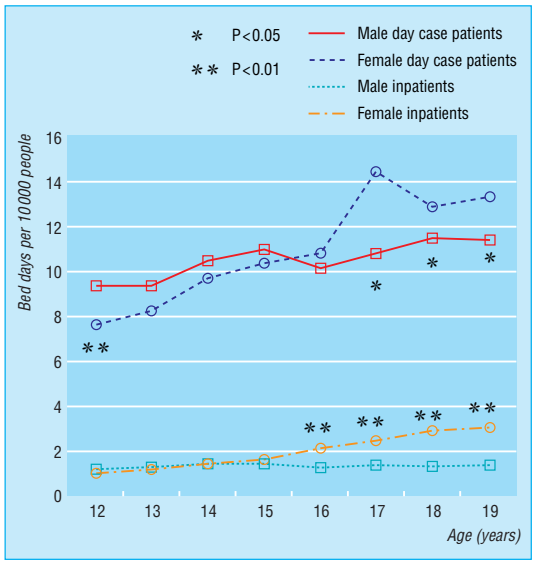
In contrast to North America and Australia, little attention has been paid to the use of health services by adolescents in the United Kingdom. The incidence of survival from chronic illness in young people is increasing. The care of adolescents is becoming a quality issue for the NHS.[1 2] Health data are rarely available in the United Kingdom on adolescents as a separate group, with standard data dividing young people into those aged under 14 years or those aged 15-44 years.[3] A study of the use of psychiatric beds by adolescents in England and Wales is presently being undertaken by the Royal College of Psychiatrists (A O'Herlihy, personal communication). Previous regional studies have been undertaken,[4 5] but reliable national data to guide the provision of other hospital services to adolescents are not available.

Participants, methods, and results

I requested information on the numbers of hospital bed days of inpatients and day case patients aged 12 to 19 years from April 1997 to March 1998 from all health authorities and boards in Wales and Scotland and 27 randomly selected ones from England. I excluded admissions for obstetrics, mental health, and learning disabilities. Information was provided by 37 health authorities and boards (response rate 79%), including three of the five in Wales, all 15 health boards in Scotland, and 19 English health authorities and boards, including at least one from each of the eight English regions. Information from three health authorities and boards was unusable. Average bed days was calculated by summing data from all 34 included health authorities and boards (population 15.8



Bed days of adolescent inpatients and day case patients per 10 000 population by age and sex

Editorial by Macfarlane and Blum

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million). I used two sample *t* tests to analyse differences in means. Data were normally distributed.

Total inpatient bed days per 10 000 people increased significantly from 17.0 (SD 7.4) at 12 years to 24.6 (SD 7.7) at 19 years ($t=-4.5$, $P<0.000$) (figure). Bed days for males were significantly higher than females at age 12 years; however, bed usage by females surpassed that of males from 17 years. Bed days for females but not males increased significantly during adolescence. Total bed days of day cases per 10 000 people increased significantly from 2.32 (SD 1.82) at 12 years to 4.31 (SD 1.38) at 19 years ($t=-6.8$, $P<0.000$). I found no increase in bed days of male day cases during adolescence, however in females bed days increased significantly between 12 and 19 years. Females used significantly more bed days as day cases than did males from 16 years onwards. Bed day usage (inpatient and day case) was not related to the population of the health authority.

Data from all Scottish health boards (population 5.2 million) allowed calculations of the use of inpatient beds per 10 000 people of a specific age. Bed day use increased significantly from 1604.2 (SD 100.5) per 10 000 12 year olds to 2099.4 (SD 82.1) per 10 000 19 year olds ($t=-3.4$, $P<0.005$). I found no significant differences between sexes. Total inpatient bed use was 3732.5 per 10 000 young people aged 12-19 years.

Comment

Adolescents aged 12 to 19 years occupy an average of 18 inpatient beds and 2.2 day case beds in a district general hospital nominally serving 250 000 people. The use of hospital beds increases rather than decreases through adolescence. This contradicts the assumption that adolescents use hospitals rarely and do not merit separate facilities. An average district general hospital has the activity to support a ward for adolescents of 12 to 15 beds. Overall, 12.8 inpatient beds are required for each 10 000 adolescents aged 12 to 19 years in the hospital catchment area (based on standard assumptions of an 80% bed occupancy). Although dedicated wards for adolescents may not be possible in many hospitals, the provision of other facilities should be considered.

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Competing interests: None declared.

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Anaemia in Chinese, South Asian, and European populations in Newcastle upon Tyne: cross sectional study

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Britt drew attention to anaemia in Punjabi women in Southall nearly 20 years ago.[1] Representative population data on anaemia in adults from ethnic minorities in the United Kingdom have not been published since then. We used data from the Newcastle heart project[2 3] to assess the prevalence of anaemia in South Asian (Indian, Pakistani, and Bangladeshi) and Chinese ethnic groups.

Methods and results

The Newcastle heart project was a stratified random sample of 1889 Newcastle residents of European (n=825), Indian (259), Pakistani (305), Bangladeshi (120), and Chinese (380) ethnic origin, studied during 1991-7. Chinese respondents were aged 25-64 years; the others were aged 25-74 years. Full details have been published elsewhere.[2 3] Haemoglobin and red cell indices were determined with a Coulter STKS analyser. We defined anaemia as a haemoglobin <130 g/l in men and <120 g/l in women. We compared respondents who ate beef, pork, lamb, chicken, or fish with those who rarely or never did. Women were asked about their menstrual history, though this information was not available for Chinese respondents. Odds ratios were estimated from logistic regression using Stata 6.0 (Stata Corporation, College Station, TX).

Haemoglobin was lowest in men of European origin and highest in those of Chinese origin, whereas haemoglobin was lower in South Asian and Chinese women than in European women (table). The prevalence of anaemia was similar among men of all ethnic groups. However, anaemia was 3.0 (95% confidence interval 2.0 to 4.4) times more prevalent in South Asian women than in European women and 2.1 (1.3 to 3.3) times more prevalent in Chinese women than in European women. The findings were similar when the analysis was confined to non-smokers. One per cent (0.3% to 2.6%) of European women and 4.0% (2.2% to 6.6%) of South Asian women had haemoglobin <100 g/l. Anaemia was less prevalent after the menopause in European women but remained common after the menopause among Indian and Bangladeshi women.

Of Indian respondents, 32% rarely or never ate meat compared with less than 2% of other ethnic groups. Among Indian respondents, 23% of those who did not eat meat and 13% of those who did were anaemic. The numbers who did not eat meat were too small for analysis by any other ethnic group. The odds

What is already known on this topic

Psychological stress has been implicated as a determinant of disease activity in multiple sclerosis

Evidence on the relation between stressful events and exacerbations of multiple sclerosis is lacking

A recent report of the American Academy of Neurology emphasised the need to obtain tightly defined prospective data

What this study adds

Patients with multiple sclerosis who experience a stressful event are subsequently at increased risk of an exacerbation of their disease

Stress and infection are independently associated with the risk of an exacerbation

Stress and infection and the risk of an exacerbation

Certain types of psychological stress can suppress immune reactions, leading to an increased susceptibility to infections.[23] This would confound the positive association we found between stress and exacerbations. However, we found no evidence of an increase in infections after stressful events in this study. Stress and infection were independently associated with the risk of exacerbation. It will not be easy to tackle these factors in individual patients, because infections and stressful events cannot simply be eradicated from patients' lives. The knowledge that stressful events are associated with disease activity adds important information to the limited insight that patients and their caregivers have on this unpredictable disease.

We thank the late Monica van der Hoven, who performed secretarial and organisational tasks for this study, and to D Dippel for critical reading of the manuscript.

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Competing interests: None declared.

Ethical approval: The medical ethical committee of Erasmus MC approved the study.

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Corrections and clarifications

Sexual function problems and help seeking behaviour in Britain: national probability sample study

We inadvertently omitted from the main text (but not from the table) one of the main findings of this study by Catherine Mercer and colleagues (23 August, pp 426-7). We should have mentioned that the most common problem among women, as among men, was a lack of interest in sex. Also, in the final sentence of the penultimate paragraph, a misplaced word ("often") changed the sense: the sentence should have said that people who seek help for their sexual function problems often consult their general practitioner.

Wrong heading on BMJ cover

We misrepresented on the cover of the issue of 2 August the paper by Michael J Radcliffe and colleagues (Enzyme potentiated desensitisation in treatment of seasonal allergic rhinitis: double blind randomised controlled study. *BMJ* 2003;327:251-4). Our heading suggested that desensitisation (of any type) for allergies does not work, whereas the paper by Radcliffe and colleagues referred specifically to enzyme potentiated desensitisation. Traditional desensitisation does in fact work for certain indications (for example, bee and wasp venom anaphylaxis; severe simple, grass pollen hay fever; and severe cat allergy). Unfortunately, we repeated our error in the first sentence of the summary in "This Week in the BMJ."

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An error in the figure in this paper by R M Viner has recently been brought to our attention—a couple of years after publication (*BMJ* 2001; 322:957-8). The legend within the graph should indicate that the top two curves relate to male inpatients (blue) and female inpatients (red) and that the bottom two relate to male and female day case patients (green and orange respectively).

"Terminal sedation" different from euthanasia, Dutch ministers agree

In this news article by Tony Sheldon, we attributed the wrong sex to the Dutch health minister (30 August, p 465). Clémence Ross is in fact a woman.