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Study of teenage care in one general practice

Sir,
Teenage health issues feature in the *Health of the nation*,¹ and it has been suggested that adolescent medicine is sufficiently important to warrant its own medical speciality.² However, we have doubts regarding the feasibility of this suggestion.³

Work to date reveals health needs which teenagers feel are important, which are different from adult concerns for them.⁴ Another report shows that teenagers would like to discuss many issues with a concerned adult, who could be their general practitioner.⁵ Most recently an intervention study has confirmed that teenagers are happy to listen to advice regarding smoking.⁶ However, there are no descriptive studies of patterns of consultation.

We set out to review notes held by our general practice in a Cardiff suburb to determine how often we see our teenage patients in the course of normal surgeries. Data on teenagers are not easily obtained because national morbidity statistics are produced for the age bands 5–14 years and 15–24 years.⁷ We reviewed a systematic, non-random sample of 22% of the available notes of 11–19 year olds and recorded the medically defined reasons for all face-to-face consultations in 1991.

The consultation rates shown in Table 1 should be compared with the consultation rate for the practice as a whole in 1991, which was 4.01 consultations per person. Male and female 11–14 year olds consulted at a similar rate but infrequently compared with the rate for the whole practice. Further assessment of this age group showed consultations for similar reasons,

irrespective of sex, with upper respiratory tract infection and skin problems being most common. However, in the older age group males consulted rarely while females consulted at a rate above the practice average. This difference was not solely explained by gynaecological and contraception issues; female patients also consulted with more 'routine' morbidity such as respiratory infections and skin disorders. These results fit into patterns of morbidity previously found.^{7,8}

Of the 58 older teenage girls four had had a termination of pregnancy in 1991 (none had a pregnancy which continued to term)— this pregnancy rate of 7% is nearly four times higher than the English rate of 18.6 per 1000 for 14–19 year olds.⁹ Previous work in the practice revealed that this rate was not unique to 1991. This occurred despite use of oral contraception by 20% of 15 and 16 year olds and 60% of 17–19 year olds in the practice (according to patients notes), suggesting that peripheral suburban estates may need increased resources if the teenage conception rate is to be reduced.

Further research is needed into primary care provision of services for teenagers. Such work needs to be put in the context of adolescent health provision as a whole, as teenagers consulting are often uncomfortable in the surgery.¹⁰ We need a coherent theory for teenager care which can be understood by the primary care team if we are to plan appropriate services. As today's teenagers will be tomorrow's adults and parents this would be a worthwhile investment.

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Hospital anxiety depression scale

Sir,
The hospital anxiety depression (HAD) scale, containing seven items in each of its subscales, was designed to detect significant anxiety and depression in general medical patients.¹ The subscales measuring anxiety and depression (scores ranging from 0 to 21 on each) have been shown to provide independent measures of these mood disorders in medical, but not in psychiatric, populations.² A study was undertaken to examine the validity of the subscales in a general practice population.

A total of 110 unselected attenders, aged 18 to 64 years at a group practice surgery in Liverpool were the subjects for this study. After obtaining informed consent they were asked to complete the HAD scale while waiting to see their general practitioner; following their consultation a psychiatric interview³ was conducted, blind to the results of the HAD scale. As part of the interview, the Montgom-

Table 1. Consultation rates among teenagers in one practice in 1991.

	11-14 year olds		15-19 year olds	
	Male (n = 50)	Female (n = 50)	Male (n = 62)	Female (n = 58)
% of patients seen in 1991	78	84	69	97
Consultation rate	2.54	2.74	1.13	4.64

n = number of patients for whom records surveyed.

ery-Asberg rating scale for depression (MADRS)⁴ and the clinical anxiety scale (CAS),⁵ were completed for each patient. The scores of all three scales and the diagnosis according to the third edition of the *Diagnostic and statistical manual of mental disorders (DSM III)*⁶ were used in the analysis.

Of the 110 subjects, 14 fulfilled the *DSM III* criteria for a depressive disorder (major depressive disorder or dysthymic disorder) and 28 subjects fulfilled the criteria for an anxiety disorder (general anxiety disorder or panic disorder); 10 subjects fulfilled the criteria for both an anxiety disorder and a depressive disorder. The sensitivity and specificity of the HAD subscales in distinguishing cases from non-cases were analysed (Table 2). The best compromise between sensitivity and specificity for both the depression and anxiety subscales is achieved by the threshold score of nine (that is, above eight), as shown by the lowest misclassification rate at these cut-off points. For the anxiety subscale, a threshold score of 10 (that is, above nine) provides a low overall misclassification rate but leads to an unacceptably low sensitivity of 61%.

The Spearman correlation coefficient between the anxiety score on the HAD scale and the CAS score was 0.75 and that between the depression subscore on the HAD scale and the MADRS score was 0.80; both these figures are highly significant ($P < 0.001$), suggesting that the subscores on the HAD scale are reliable measures of the severity of these mood states.

Further analysis was undertaken to determine whether the anxiety and depression subscales provided independent measures of different mood disorders or whether, given the similarity of their items, both the subscales were measuring the same entity. Because the scores on the HAD subscales of anxiety and depression were positively correlated with those of the observer on MADRS and CAS, respectively, in assessing the correlation

between HAD subscores on depression, HAD(D), and the MADRS score, it was necessary to 'partial out' the effect of the correlation between the HAD subscore on anxiety, HAD(A), and the MADRS score. A similar 'partialling out' was used in calculating the correlation between HAD(A) subscores and the CAS score. The partial correlation coefficients between the self rating scores on HAD subscales of anxiety and depression and the observer ratings were 0.69 and 0.75, respectively, and these are also highly significant ($P < 0.001$). This supports the assertion that the items on anxiety and depression subscales provide independent measures of different mood disorders.

The HAD scale has already been shown to be an effective screening instrument in general practice,⁷ but for such use other scales are available. The merit of the HAD scale lies in its scaled structure and deliberate exclusion of items common to emotional disorders and physical illnesses. The present study shows that despite criticisms⁸ the subscales appear to provide a valid and independent measure of the severity of different mood disorders in the population attending primary care. The final proof of the usefulness of the HAD scale, however, awaits the demonstration of an association between high scores on the HAD depression subscale and a favourable response to antidepressant drug treatment. In operation the scale is efficient, needing only a few minutes for the patient to complete, which makes it an acceptable instrument for use in primary care research.

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Table 2. Sensitivity and specificity of the hospital anxiety depression scale using different threshold scores.^a

	HAD scale score greater than				
	6	7	8	9	10
<i>Depressive disorders (n = 14/96)</i>					
Sensitivity	93	86	71	43	29
Specificity	83	85	93	96	97
Misclassification rate	15	15	10	11	12
<i>Anxiety disorders (n = 28/82)</i>					
Sensitivity	93	86	82	61	50
Specificity	56	72	79	87	89
Misclassification rate	35	25	20	20	21

n = number of patients in group with/without disorder according to *DSM III* criteria. ^aSensitivity = true positives on HAD/total positives on *DSM III*; specificity = true negatives on HAD/total negatives on *DSM III*.

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Role of neuromuscular excitability in metabolic problems

Sir,

Organic metabolism oscillates between catabolism and anabolism. Catabolism involves potassium and protein consumption, activation of the sympathetic nervous system, secretion of adrenalin and cortisone, hyperglycaemia, acidosis, and cellular retention of sodium and water.¹ Anabolism involves restoration of protein and potassium stocks, activation of the parasympathetic nervous system, insulin secretion, hypoglycaemia, alkalosis, and excretion of sodium and water.

However, a given metabolism may show stronger or weaker reactions within this complex system of regulation and compensation. Hyperglycaemia can be observed without acidosis and vice versa. A complete series of biological tests (blood, tissue, urine and faeces examination) would be necessary to evaluate general metabolic imbalance. Another method of testing general metabolic deviation is the measurement of neuromuscular excitability: the sum of catabolic effects produces hypo-excitability, the sum of anabolic effects hyper-excitability. These concepts, discovered at the turn of the century, were refined by Laborit in the 1950s² but the method was discredited because it was unreliable.

Recent progress in electronics has made it possible to manufacture accurate, portable 'rheotomes' (Medical Ingenierie, France) that are convenient to use at the patient's bedside or in the doctor's surgery