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Decline in teenage smoking with rise in mobile phone ownership: hypothesis

EDITOR—The good news is that the seemingly inexorable rise in teenage smoking in Britain has reversed. A sharp decline in the late 1990s has been as fast as the rise in the early 1990s. The table shows changes since the peak in 1996.¹

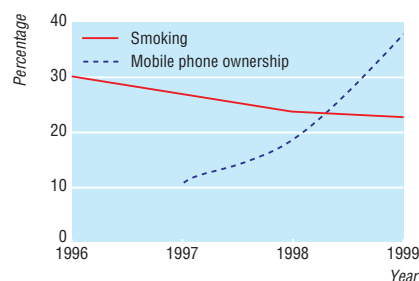
Percentages of teenagers who smoked weekly in 1996 and 1999¹

Age group (years)	1996	1999
All aged 11-15	13	9
Girls aged 15	33	25
Boys aged 15	28	21
All aged 15	30	23

We hypothesise that the fall in youth smoking and the rise in ownership of mobile phones among adolescents are related. The functions that smoking offers to teenagers have been extensively studied,² and we argue that the mobile phone is an effective competitor to cigarettes in the market for products that offer teenagers adult style, individuality, sociability, rebellion, peer group bonding, and adult aspiration. The marketing of mobile phones is rooted in promoting self image and identity, which resembles cigarette advertising. As ownership increases, mobile phones will become essential for membership of peer groups that organise their social life on the move and by means of mobile phones.

Over the period in which smoking rates have fallen among 15 year olds the ownership of mobile phones has sharply increased, having risen from low rates in the early 1990s (figure).

The trend in ownership of mobile phones has continued sharply upwards, with



Smoking among boys and girls¹ and ownership of mobile phones among those aged 15-24 (MORI's technology tracker, 2000) by year. MORI=Market and Opinion Research Institute

ownership reaching 73% among 15-24 year olds and 70% among 15-17 year olds by August 2000.

To explain the link with declining teenage smoking, mobile phones are particularly important as they consume teenagers' available cash, especially the pay as you go cards. If some teenagers cannot afford to smoke and pay for a mobile phone or they find that owning a mobile phone satisfies the same needs as smoking, they may decide not to smoke. Smoking may become seen as old technology, with the bright new world of text messaging, email, WAP, and 3G phones becoming the new aspirational gateway to adult life.

Given the continued rise in ownership of mobile phones, will the trend continue? Data on teenage smoking are not yet available for 2000, but if our hypothesis is correct the need to own a mobile phone will be providing vigorous competition for the spare cash once spent on cigarettes, while meeting many of same the needs.

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¹ Office for National Statistics. *Drug use, smoking and drinking among teenagers in 1999*. London: ONS, 2000.

² Royal College of Physicians. *Smoking and the young*. London: RCP, 1992.

Health hazards of mobile phones

Prevalence of headache is increased among users in Singapore

EDITOR—Hand held cellular telephones, using pulse modulated signals of frequency 870-995 MHz, are being used increasingly. Most reports of health symptoms related to use of these phones are anecdotal. We undertook a cross sectional study of a community in Singapore to study the prevalence of specific central nervous system symptoms among users of hand held cellular phones compared with non-users and to determine any association of risk factors and central nervous system symptoms among users of the phones.¹

From a sampling frame of all flats in a large town we conducted a one stage

Usage of hand phone and hand-free equipment and prevalence of headache

Usage of hand phone	Percentage with headache (sample size)	P value for trend
Duration per day (minutes)		
<2*	53.9 (253)	
2-60	60.6 (163)	
>60	65.1 (28)	0.038
No of times per day		
Nil*	54.0 (230)	
<5	61.8 (105)	
5-10	62.0 (62)	
>10	55.3 (47)	0.30
Hands-free equipment		
Never	65.4 (142)	
Some of the time	54.4 (62)	
All the time	41.7 (10)	0.006

*Includes those who do not use a hand phone.

random cluster sampling of 808 individuals, who were interviewed by trained medical students using a structured questionnaire. Central nervous system symptoms of those who did and did not use hand held cellular telephones were compared and any possible association studied. A two tiered approach was used to try to mask the true purpose of the questionnaire in which headaches and health symptoms were dealt with in the earlier sections before respondents were asked about their use of cellular phones. These steps should help to reduce recall bias among the respondents.

The prevalence of users of hand held cellular phones in Singapore was 44.8%.¹ Headache (according to the International Headache Society's criteria²) was the most prevalent symptom among users compared with non-users, with an adjusted prevalence rate ratio of 1.31 (95% confidence interval 1.00 to 1.70). There was a significant increase in the prevalence of headache with increasing duration of use (min/day) (P=0.038). The prevalence of headache was considerably reduced among those who used hands-free equipment compared with those who never used such equipment (42% v 65%).

Use of hand held cellular phones is not associated with a significant increase in central nervous system symptoms other than headache. We would suggest that more community studies should be conducted before one can make a statement such as "the only established risk is of using one while driving."³

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- 1 Chia SE, Chia HP, Tan JS. Prevalence of headache among hand phone users in Singapore: a community study. *J Environ Health Perspect* 2000;105:9-12.
- 2 Headache Classification Committee, International Headache Society. Classification and diagnostic criteria for headache disorder, cranial neuralgia, and facial pain. *Cephalalgia* 1988;8(suppl 7):1-96.
- 3 Maier M, Blakemore C, Koivisto M. The health hazards of mobile phones. *BMJ* 2000;320:1288-9. (13 May.)

Do laptop computers also pose a risk?

EDITOR—In their editorial on the health hazards of mobile phones Maier et al mention that studies in Russia in Soviet times were “inadequately documented”; they were also not well designed. These studies of so called non-thermal effects of microwaves never prove that these effects are real, and they do not discriminate the physiological effects from the harmful effects. When the eye is reacting to the light it is not a reason to screen out all light; the same argument is true with mobile telephones.

Research of this “problem” is led by public interest and pressure. A similar object for research and further regulation is laptop computers. They produce heat and microwaves very close to the testes, which are highly sensitive to temperature and radiation damage. The effect of heating is well known to every laptop user. Yet laptops were not studied for the dangers of their waves to the testes (I checked Medline).

Use by children was not regulated only because laptops are used by a narrower circle of people, who are not overwhelmed by non-existent horrors. I hope that my example will not lead to research into this problem, or to university and industry research programmes into the effects of heating and microwaves on testes.

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Anticoagulation to prevent stroke in atrial fibrillation

It’s still not clear whether results in secondary care translate to primary care

EDITOR—Kalra et al’s paper looking at the efficacy of anticoagulation for stroke prevention in atrial fibrillation¹ essentially complements Copland et al’s work in showing that an elderly population can be given adequate anticoagulation.²

As Kalra et al performed a cohort study with no control population, the study does not allow any estimate of the effectiveness of the treatment as is suggested in the paper. Thus we do not know if there was any treatment benefit. The cohort obtained similar therapeutic control to the original trial populations, but this is not a dramatic finding given that it represents a similar population—that is, patients selected from medical outpatient clinics. This point seems

to have been lost on Connolly, who in his editorial states, “They screened 2547 patients in general practice clinics.”³

As we have consistently argued, the findings of the original treatment studies and now these newer studies must be interpreted in the context of trials conducted on selected, secondary care, populations. It is still not clear how these findings translate to the general, primary care, population. We are currently undertaking a randomised controlled trial (Birmingham atrial fibrillation treatment with anticoagulation) of warfarin versus aspirin for patients aged 75 and over with atrial fibrillation who have been identified from general practice. This is a five year study and should answer the question of effectiveness within this defined population.

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- 1 Kalra L, Yu G, Perez I, Lakhani A, Donaldson N. Prospective cohort study to determine if trial efficacy of anticoagulation for stroke prevention in atrial fibrillation translates into clinical effectiveness. *BMJ* 2000;320:1236-9. (6 May.)
- 2 Copland M, Tait RC, Walker ID. A retrospective follow-up study of oral anticoagulant control and haemorrhagic complications in an elderly population with atrial fibrillation. *Br J Haematol* 2000;08(S1):56.
- 3 Connolly SJ. Anticoagulation for patients with atrial fibrillation and risk factors for stroke. *BMJ* 2000;320:1219-20. (6 May.)

Cohort was younger than many patients with atrial fibrillation in primary care

EDITOR—Kalra et al’s paper extends our knowledge of how effectively research into stroke prevention in atrial fibrillation can translate into clinical practice.¹ However, the authors studied patients recruited in district general hospitals and whose anticoagulants were controlled in hospital outpatient clinics. As a result the patients differed greatly from the whole population of patients with atrial fibrillation. The cohort studied was considerably older than that in the pooled atrial fibrillation studies but was still younger than those patients who make up primary health care teams’ population of patients with atrial fibrillation (48% were aged over 75, compared with 58-72% in studies based in primary care^{2 3}).

The information given about the frequency with which the international normalised ratio was measured implies a mean of about 27 hospital tests per patient over two years. This will have excluded from analysis all those who were unwilling or unable to meet this commitment, including many of the frailest patients, about whom general practitioners are especially concerned when it comes to deciding whether to start anticoagulation. Pragmatic studies of effectiveness must be based on the whole population of patients with atrial fibrillation and on the fact that blood samples for measurement of international normalised ratios will often have to be obtained in surgeries or in patients’ homes and the results applied by primary health care teams.

A literature is beginning to develop which suggests that in unselected primary care populations about half of all patients with atrial fibrillation will be considered for anticoagulation and will accept that advice.^{2 4 5} This may be the level against which performance should be judged. If so, it sets a limit on our ambitions and may help us to be more realistic about the likely effectiveness of applying the evidence. It also means that, although there is undoubtedly scope for identifying more people who should be offered treatment, current levels of anticoagulation represent an existing penetration of evidence twice as great as the raw figures suggest.

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- 2 Oswald N, Bateman H. Applying research evidence to individuals in primary care: a study using non-rheumatic atrial fibrillation. *Fam Pract* 1999;16:414-9.
- 3 Lip GYH, Golding DJ, Nazir M, Beevers DG, Child DL, Fletcher RL. A survey of atrial fibrillation in general practice: the west Birmingham atrial fibrillation project. *Br J Gen Pract* 1997;47:285-9.
- 4 Howitt A, Armstrong D. Implementing evidence based medicine in general practice: audit and qualitative study of antithrombotic treatment for atrial fibrillation. *BMJ* 1999;318:1324-7.
- 5 Sudlow M, Thomson R, Thwaites B, Rodgers H, Kenny RA. Prevalence of atrial fibrillation and eligibility for anticoagulants in the community. *Lancet* 1998;352:1167-71.

General practitioners have to decide best ways of allocating their time

EDITOR—In their study of warfarin for patients with high risk atrial fibrillation Kalra et al showed that 296 patient years of warfarin treatment reduced ischaemic stroke by an amount comparable to that in clinical trials.¹ Connolly’s editorial says that meta-analysis of trials shows that the risk of ischaemic stroke is reduced by two thirds and asks why warfarin is underused.²

In Kalra et al’s study six ischaemic strokes occurred. Assuming a risk reduction of two thirds then around 12 were prevented. Five major bleeds and 16 “minor” bleeds occurred, the minor bleeds including epistaxes, rectal bleeding, haematuria, and haemarthrosis.

General practitioners are frequently asked to manage anticoagulation. Many areas have poor anticoagulant clinics, and patients in rural areas or in residential care may be unable or unwilling to travel. A blood test for these patients will need a home visit by the doctor. We can assume that seven blood tests are needed for initial stabilisation, and a further 23 per patient will be needed over two years at the 31 day intervals used by Kalra et al. Assuming 10 minutes each, this is five hours of a doctors’ time, not including travel, “while you’re here doctor” consultations, and dealing with complications (Kalra et al recruited 167 patients, of whom 18% dropped out), repeat prescriptions, and inquiries about coprescriptions, etc.

By doing the above for about 12 patients for two years we prevent one ischaemic stroke and generate 1.7 bleeding complications (in everyday practice the treatment may not be so well targeted, so results may be less impressive). As Moss points out in an editorial, the United Kingdom has fewer doctors and nurses than other developed nations, and general practitioners are not short of work.³ The problem is our under-resourced system of care, which forces general practitioners to make difficult choices about how to allocate their time.

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- 2 Connolly SJ. Anticoagulation for patients with atrial fibrillation and risk factors for stroke. *BMJ* 2000;320:1219-20. (6 May.)
- 3 Moss F. Junior doctors' pay: a wake-up call to the NHS. *BMJ* 2000;320:1224. (6 May.)

Rapid anticoagulant testing is not available in general practitioners' clinics in Japan

EDITOR—Kalra et al reported that anticoagulation in non-valvular atrial fibrillation yielded comparable rates of stroke and major complication in clinical practice to those obtained in trials.¹ Pooled data from randomised controlled studies in patients with atrial fibrillation showed that anticoagulation reduced ischaemic stroke by two thirds.² Despite such a dramatic benefit, warfarin is underused in patients with atrial fibrillation in clinical practice,³ particularly in elderly rural patients.⁴

I wished to see why warfarin was not prescribed to patients with atrial fibrillation with risk factors for stroke in a clinical setting. A questionnaire was sent to 40 general practitioners in 30 clinics in Kochi, Japan; 30 doctors in 20 clinics responded. In 10 clinics, most of which provide primary care with no beds for admission or fewer than 20 beds, rapid anticoagulant testing in their own facilities was not available. Almost half of the doctors (14) prescribed warfarin for only a tenth (or less) of patients with atrial fibrillation, and three of the doctors prescribed anticoagulation for half or more of their patients with atrial fibrillation.

Conversely, antiplatelet treatment was substantially used; just over half of the doctors (16) prescribed aspirin or ticlopidine for half or more of their patients with atrial fibrillation. The target therapeutic range for more than eight tenths of the doctors was an international normalised ratio of 1.5-2.5 if the prothrombin time was used and 10-30% if the thrombotest was used.

Many doctors were reluctant to prescribe warfarin to patients with atrial fibrillation who had risk factors for stroke, giving as reasons unstable anticoagulation due to bad compliance with warfarin (16), their fear of bleeding complications (12), and the unavailability of the rapid anticoagulant test (9). Patients' refusal to undergo anticoagulation

(4) and the efficacy of antiplatelet treatment for stroke prevention (4) were also cited.

Many of the doctors partly ascribed underuse of warfarin to not having their own anticoagulant laboratories. If they manage patients with atrial fibrillation they request results of anticoagulant tests from laboratory services and receive the results a few days later; the time lag would make strict control of anticoagulation difficult.

Because atrial fibrillation is common⁵ and many cases are asymptomatic, not only specialists in hospitals but also general practitioners in primary care have to take responsibility for managing patients, especially in rural areas. Anticoagulant laboratory services should develop to be able to provide rapid results for general practitioners.

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- 2 Atrial Fibrillation Investigators. Risk factors for stroke and efficacy of antithrombotic therapy in atrial fibrillation. Analysis of pooled data from five randomized controlled trials. *Arch Intern Med* 1994;154:1449-57.
- 3 Brass LM, Krumholz HM, Scinto JM, Radford M. Warfarin use among patients with atrial fibrillation. *Stroke* 1997;28:2382-9.
- 4 Flaker GC, McGowan DJ, Boechler M, Fortune G, Gage B. Underutilization of antithrombotic therapy in elderly rural patients with atrial fibrillation. *Am Heart J* 1999;137:307-12.
- 5 Feinberg WM, Blackshear JL, Laupacis A, Kronmal R, Hart RG. Prevalence, age distribution, and gender of patients with atrial fibrillation. Analysis and implications. *Arch Intern Med* 1995;155:469-73.

Comprehensive geriatric evaluation should be routine before treatment is started

EDITOR—Kalra et al show that in their study the rates of stroke and major haemorrhage after anticoagulation were comparable to pooled results of randomised controlled studies.¹ The study therefore confirms that warfarin is more effective than aspirin for stroke prevention in chronic atrial fibrillation. The authors also claim that this treatment is feasible, safe, and effective in clinical practice even in elderly people. Because barriers to starting anticoagulation are not conclusively addressed, responsibility for underuse of warfarin could be blamed on doctors' lack of awareness about the benefit of anticoagulation.

We are not persuaded that this is true in all cases. Oral anticoagulation is a complex and labour intensive therapeutic modality; not only good dosing decisions but attention to detail and communication can make a difference between success and failure.² Doctors may have some concerns about starting this treatment as the risks linked to inadequate management are so large as to overwhelm the benefit of stroke prevention.³⁻⁵

Recent European studies showed that the prevalence of dementia among patients aged 65 or more is around 6.0%, doubling over each decade. On the basis of these data, we could expect that nearly three tenths of subjects aged 80 or more may

have cognitive impairment affecting performance in activities of daily living. In this case, strong support by care givers and prompt availability of laboratory services are needed for regular measurement of patients' international normalised ratio. If this is not possible, doctors may legitimately opt for a less effective but more manageable thromboprophylaxis.

Kalra et al found that treatment with warfarin was stopped in 18% of patients, the reasons being death, major bleed, intracranial haemorrhage, disabling stroke, patients' choice, poor compliance, and interactions with other drugs. The authors did not assess the cognitive and functional status of their patients, but we speculate that withdrawal of warfarin was related in some cases to inadequate management of long term anticoagulation. We suggest that a comprehensive geriatric evaluation should become a routine procedure before a doctor starts this treatment.

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- 2 Ansell JE. The quality of anticoagulation management. *Arch Intern Med* 2000;160:895-6.
- 3 Bellelli G, Barbisoni P, Gusmeri A, Sabatini T, Rozzini R, Trabucchi M. Underuse of anticoagulation in older patients with chronic atrial fibrillation: malpractice or accuracy? *J Am Geriatr Soc* 1999;47:1034-5.
- 4 Rozzini R, Sabatini T, Trabucchi M. Risk assessment and anticoagulation in atrial fibrillation in the elderly: malpractice or accuracy? *Stroke* 1999;30:2239-40.
- 5 Rozzini R, Sabatini T, Bellelli G, Trabucchi M. Anticoagulation in elderly patients with chronic atrial fibrillation: the need for geriatric assessment. *Age Ageing* (in press).

National claims database belongs to NHS as a whole

EDITOR—Fenn et al provide a useful analysis of the growing costs of clinical negligence to the NHS.¹ They might, however, not have had to restrict their research to data from Oxfordshire's local database of clinical negligence if the NHS was making proper use of data from its national database of claims.

Since its establishment in 1995, the NHS litigation authority has been responsible for managing both the clinical negligence scheme for trusts, which deals with all claims against most NHS trusts from 1995 onwards, and the existing liabilities scheme, which deals with all claims against NHS trusts and health authorities that originate before that date.

As a result, the litigation authority has a computerised database of thousands of clinical negligence claims, with almost complete coverage of England from 1995 to the present day and with excellent, albeit not complete, data before 1995. Sadly, the litigation authority has chosen to make little or no use of this database of clinical claims. We have the data, but we just do not use them

at present to examine the causes of clinical negligence and help prevent their recurrence.

The NHS litigation authority's database could also be of direct use to NHS trusts. At present they have no way to check the past litigation record relating to individual clinicians. The database could be used for this purpose, but when it was set up the litigation authority effectively disabled the database by choosing not to collect on computer any data that would identify individual clinicians, even though it has that information in its paper records. With hindsight, this was a serious mistake and should now be put right. It would be straightforward for the litigation authority to start to collect data identifying the clinician for all new cases of clinical negligence immediately and simple to extract such information from its paper records for all past cases.

In the future, the NHS litigation authority's national database of clinical negligence claims could be an invaluable resource. It should be open to researchers and NHS organisations to use the database, within some carefully established rules of confidentiality and data access. This database belongs not to the NHS litigation authority but to the NHS as a whole.

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Standard definition of child overweight and obesity worldwide

Authors' standard compares well with WHO standard

EDITOR—Different standards have been proposed to define overweight and obesity in childhood, and as a result it is difficult to compare published results. An international standard is useful for making international comparisons and monitoring the global epidemic of obesity. The new standard proposed by Cole et al (the International

Obesity Task Force standard) meets this demand.¹ By contrast, the World Health Organization recommended using the sex-age specific body mass index 85th centiles derived from data from the United States' first national health and nutrition examination survey collected in 1971-4 to define adolescent overweight for international use.^{2,3}

Using data from large nationwide surveys from China (1991 China health and nutrition survey), Russia (1992 Russian longitudinal monitoring survey), and the United States (third national health and nutrition examination survey, 1988-94), we compared Cole et al's and the World Health Organization standards to assess overweight in children (aged 6-9) and adolescents (10-18). These three countries' total populations account for about a quarter of the global population.

We examined the prevalence of overweight in each country by using each standard. The table shows that the two standards produced consistent estimates of the prevalence of overweight, although that proposed by Cole et al (the IOTF standard) produced a slightly lower estimate in children than did the WHO standard but a slightly higher estimate in adolescents. In general, the agreement was better in all adolescents, girls aged 6-9, and male adolescents. We calculated the κ coefficient to examine the agreement at an individual level. $\kappa \geq 0.8$ suggests an excellent agreement.⁴ κ values also suggested an excellent agreement between these two standards, although the agreement varied by sample, age group, and sex.

Results from studies in older children and adolescents using these two standards would seem to be comparable, although the standard proposed by Cole et al is better for international use. We found, however, that the prevalence of overweight is much lower in adolescents than children in the samples from the surveys in China and Russia, but the prevalence was similar in American children and adolescents.

Further research is needed to understand whether our findings are mainly due to socioeconomic and behavioural factors; alternatively, both standards may have a higher sensitivity for indentifying individu-

als as overweight among children than adolescents in developing countries, where children and adolescents' growth, development, and maturation patterns are different from those of the reference populations.

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- 1 Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 2000;320:1240-3. (6 May.)
- 2 World Health Organization Expert Committee. Physical status, the use and interpretation of anthropometry. *WHO Tech Rep Ser* 1995;No 854.
- 3 Must A, Dallal GE, WH Dietz. Reference data for obesity: 85th and 95th percentiles of body mass index (wt/ht²) and triceps skinfold thickness. *Am J Clin Nutr* 1991;53:839-46.
- 4 Stokes ME, Davis CS, Koch CG. *Categorical data analysis using the SAS system*. Cary NC: SAS Institute, 1995.

Young Chinese people in Hong Kong are not representative of those in China

EDITOR—People struggling to make sense of datasets of adolescent body mass indices from different countries will welcome the paper by Cole et al.¹ The authors note the obvious limitation of using datasets from developed countries alone to draw up a standard definition of overweight and obesity. There is a particular limitation in using data from Hong Kong. Cole et al state that the Hong Kong sample used "may be fairly representative of the Chinese." This is surprising, since the Hong Kong Chinese are not generally regarded as representative of the Chinese, especially with respect to nutritional status.

We determined whether the Hong Kong data could be regarded as representative of Chinese data as a whole. To do this we applied Cole et al's cut-off points for overweight and obesity to a dataset of anthropometric measurements that we collected in 1999 on a random sample of 13-16 year old school attenders (n=1577) in an urban and a rural area of Zhejiang Province (Hangzhou city and Chunan county). Zhejiang is one of the wealthier eastern Chinese provinces. Each age band was analysed separately, and the table summarises results across all age groups.

Estimates of prevalence of overweight (percentages) using IOTF and WHO standards*

	China				Russia				USA			
	IOTF	WHO	Difference†	Agreement	IOTF	WHO	Difference†	Agreement	IOTF	WHO	Difference†	Agreement
All in study	6.4	6.5	-0.1	0.93	15.7	15	0.7	0.90	28	27.6	0.4	0.92
Children (6-9 years):												
All	10.5	11.9	-1.4	0.92	26.6	29.4	-2.8	0.90	23.4	27	-3.6	0.89
Male	10	11.7	-1.7	0.92	25.9	31.7	-5.8	0.86	21.3	24.6	-3.3	0.91
Female	11	12.1	-1.1	0.92	27.4	27.1	0.3	0.95	25.6	29.4	-3.8	0.88
Adolescents (10-18 years):												
All	4.5	4	0.5	0.94	11.7	9.6	2.1	0.88	30.6	27.9	2.7	0.93
Male	4.5	4.3	0.2	0.98	11.5	10.5	1.0	0.92	28.4	26.3	2.1	0.94
Female	4.5	3.7	0.8	0.90	11.7	8.9	2.8	0.84	32.6	29.4	3.2	0.93

IOTF=International Obesity Task Force. WHO=World Health Organization. BMI=Body mass index.

*IOTF standard defines overweight as BMI \geq those age-sex specific BMI cut offs corresponding to BMI=25 kg/m² at age 18; WHO standard defines overweight as BMI \geq age-sex specific BMI 85th centile derived from United States' first international health and nutrition examination survey.

†Difference=IOTF estimate minus WHO estimate.

Numbers (percentages) of overweight and obese adolescents, Zhejiang Province

	Boys			Girls		
	All (n=771)	In urban area (n=370)	In rural area (n=401)	All (n=806)	In urban area (n=415)	In rural area (n=391)
Overweight	36 (4.7)	31 (8.4)	5 (1.2)	20 (2.5)	19 (4.6)	1 (0.2)
Obese	7 (1.0)	5 (1.4)	2 (0.5)	4 (0.5)	4 (0.9)	0

The Hong Kong data used by Cole et al give rates for overweight of 11.7% and 9.8% and rates for obesity of 3.1% and 1.8% in boys and girls respectively. There are thus large differences between Hong Kong and Zhejiang, especially in the rural area, where rates of overweight and obesity are low—indeed, underweight is a far greater problem. Since over 70% of mainland Chinese people live in rural areas these figures are probably more representative of China as a whole than those for the urban area, and certainly those for Hong Kong.

To establish standard definitions for overweight and obesity a population in mainland China would be preferable to one in Hong Kong. This could be done fairly easily, since anthropometry is carried out routinely in many schools in China.

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Body mass index is harder to interpret in children than adults

EDITOR—There is widespread agreement that for adults a body mass index of 25 kg/m² constitutes overweight and 30 kg/m² obesity, but there are no agreed definitions for children. Cole et al propose using body mass index centile curves and the LMS method to derive childhood standards.¹ First they calculated the z scores at age 18 corresponding to 25 kg/m² and 30 kg/m². Next, they found the body mass index corresponding to these z scores for children aged 2-18. They thus assume that the prevalence of overweight and obesity remains constant throughout childhood.

The prevalence of overweight increases with age and, using the 1990 British reference data² and a definition of 25 kg/m², is about 10-12% at age 18 but increases to 20-25% at age 23. The critical period for excessive weight gain, however, is considered to be late adolescence and early adulthood.³ Therefore, although 10% of 18 year olds may well be overweight, it is unlikely that a similar percentage of 5 year olds will be.

There are difficulties associated with the interpretation of body mass index in childhood, which depends not only on height but also on sex and pubertal status.⁴ Moreover, a recent report comparing body mass index cut-off values with percentage body fat in prepubertal children found that

although high cut-off points had high specificity, the sensitivity was poor and depended on sex.⁵

Charts of body mass index, standardised at an agreed level, are undoubtedly useful for monitoring population trends. It is unlikely, however, that the index in itself can provide a standard definition for overweight and obesity in children that would be useful in clinical practice.

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- Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 2000;320:1240-3. (6 May.)
- Cole TJ, Freeman JV, Preece MA. Body mass index reference curves for the UK, 1990. *Arch Dis Child* 1995;73:25-9.
- Power C, Lake JK, Cole TJ. Measurement and long-term health risks of child and adolescent fatness. *Int J Obesity* 1997;21:507-26.
- Bini V, Celi F, Berio MG, Bacosi ML, Stella P, Giglio P, et al. Body mass index in children and adolescents according to age and pubertal stage. *Eur J Clin Nutr* 2000;54:214-8.
- Reilly JJ, Savage SA, Ruxton CH, Kirk TR. Assessment of obesity in a community sample of prepubertal children. *Int J Obes* 1999;23:217-9.

Reanalysis suggests questionable validity of new definition during puberty

EDITOR—Cole et al suggest a new definition of obesity in children, which they argue is less arbitrary and potentially more international than other definitions.¹ It is unclear how pooling data from six non-representative countries and linking the cut off to a certain adult cut-off value, which was itself arbitrarily defined, serves either of the two purposes. If anything, it confuses the issue: one of the advantages of using cut-off values based on one population, however inappropriate, is that it allows the user to predict the direction of the bias, which becomes harder with a mixed population.

The authors argue that "the sensitivity of the curve to the timing of puberty may affect performance of the cut off points where puberty is appreciably delayed, although differences of less than two years are unlikely to make much difference." To test this claim, I have compared the standard definition used in the United Kingdom (body mass index above the 98th centile of the United

Kingdom reference)² with the new definition, using a local dataset of 20 802 children, aged 5.5-14 years, from Plymouth, England.³

Overall, 5% (n = 1035) of children were considered obese by the old definition as against 3.0% (n = 614) by the new definition; of these, 611 children were classified as obese by both definitions (κ statistic = 0.73; $P < 0.001$). Most of this difference in classification, however, was manifest in the pubertal age group (table).

Significant differences in the timing of the onset of puberty between populations are well known.⁴ A key determinant of variation in pubertal timing between populations is socioeconomic status, and five of the six countries (Brazil excluded) have gross domestic products way above those of most of the African and Asian countries. Most childhood obesity is manifest in puberty, and it is at this stage that the new definition is likely to misclassify.

Definitions such as these, produced by respected authorities, often get accepted quickly without sufficient debate. Over time, the word "international" sticks and gives people the impression of universality long after the original baseline population gets forgotten. The authors make the mistake of regarding children as little adults and trying to extend the relatively greater homogeneity of adult populations to children.

Inconvenient as it may be, we will just have to learn to live with the quirks of childhood growth instead of trying to find one all-encompassing international definition.

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- Cole TJ, Bellizzi MC, Flegal K, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 2000;320:1240-3. (6 May.)
- Cole TJ, Freeman JV, Preece MA. Body mass index reference curves for the UK, 1990. *Arch Dis Child* 1995;73:25-9.
- Kinra S, Nelder R, Lewendon G. Deprivation and childhood obesity: a cross-sectional study of 20,973 children in Plymouth, UK. *J Epidemiol Community Health* 2000;54:456-60.
- Proos LA. Anthropometry in adolescence—secular trends, adoption, ethnic and environmental differences. *Hormone Res* 1993;39(suppl 3):18-24.

Reasons for inadequate health care vary

EDITOR—The pharmaceutical industry has not "abandoned the battlefield" in the fight against tropical disease, as discussed by Schull.¹ Pharmaceutical companies are still researching and developing new drugs for

Numbers (percentages) of children considered obese by old² and new¹ definitions*

Age quartile (years)	Boys		Girls		Both sexes	
	Old definition	New definition	Old definition	New definition	Old definition	New definition
5.3-7.1	104 (3.8)	60 (2.2)	80 (3.2)	78 (3.1)	184 (3.5)	138 (2.7)
>7.1-8.9	131 (5.0)	74 (2.8)	97 (3.8)	84 (3.3)	228 (4.4)	158 (3.0)
>8.9-11.7	154 (5.7)	74 (2.7)	125 (5.0)	83 (3.2)	279 (5.4)	157 (3.0)
>11.7-14.1	161 (6.2)	53 (2.1)	183 (7.0)	108 (4.1)	344 (6.6)	161 (3.1)
All ages	550 (5.2)	261 (2.5)	485 (4.8)	353 (3.5)	1035 (5.0)	614 (3.0)

*All differences significant at 5% level (χ^2 test, $P < 0.001$).

several diseases and have actively participated in partnership projects in recent years. These projects aim at implementing treatment access programmes in HIV/AIDS and other diseases prevalent in tropical countries, such as lymphatic filariasis, leprosy, trachoma, tuberculosis, and malaria. The recently established medicines for malaria venture is a particularly good example.

The reasons for inadequate availability of health care vary from country to country and include political, financial, and physical barriers, especially the lack of an adequate infrastructure to deliver the benefits of drugs. The barriers are such that they can be addressed only through concerted action by national governments, bilateral donors, and multilateral agencies, together with the private sector and non-governmental organisations.

In some countries affordability of good healthcare treatments could be improved by giving a higher priority to health in political agendas and budget decisions. In many others affordability is not possible without considerable support from aid organisations and donor countries. The pharmaceutical industry has shown that it is more than willing to take ability to pay into account in partnership programmes with the governments of developing countries and other organisations that seek to improve health care.

The pharmaceutical industry also participates in helping developing countries overcome the physical barriers to access by addressing the problems of pharmaceutical management (facilitating and improving effective distribution systems to get medicines from warehouses to health outposts), manufacture, quality control, storage, education, and the overall provision of health care, from diagnosis to treatment.

There is clearly a need for enhanced efforts by all parties to create sustainable solutions, and the pharmaceutical industry is ready to play its part.

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1 Schull M. Lack of new drugs for tropical disease should not be accepted. *BMJ* 2000; 321:179. (15 July.)

Informed consent is being neglected

EDITOR—It has been depressing to see the decline of medical ethics in recent issues of the *BMJ*. One issue reports on President Clinton's attempt to impose heavy fines for breaches of research ethics¹ yet publishes a trial in which participants were not told they were randomised.² In another issue an editorial derides the idea that clinical trials should have objectives that are relevant to patients.³ Yes, trials should be "simple, timely, and well designed to answer well posed questions." But there is no need for them to "second guess what patients prefer"—asking

patients would be better and more likely to produce more meaningful research questions. The idea that quality of life evaluations should be built into clinical trials is not new,⁴ and if this is done it will be easier for doctors and patients to make treatment decisions that make sense to individual patients. Fortunately, some doctors associated with the *BMJ* still believe that patient confidentiality and informed consent are paramount, and one general practitioner who writes for the journal acknowledges that "routine practice now fails to fulfil the basic principles of data protection."⁵ Patients should be grateful for small mercies.

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- 1 Charaton F. Clinton seeks heavy fines for breaching research ethics. *BMJ* 2000;320:1491. (3 June.)
- 2 Atkin WS, Hart A, Edwards R, Cook CF, Wardle J, McIntyre P, et al. Single blind, randomised trial of efficacy and acceptability of oral Picolax versus self administered phosphate enema in bowel preparation for flexible sigmoidoscopy screening. *BMJ* 2000;320:1504-9. (3 June.)
- 3 Ashcroft R. Giving medicine a fair trial. *BMJ* 2000;320:1686. (24 June.)
- 4 Fallowfield L. *The quality of life: the missing measurement in health care*. London: Souvenir Press, 1990.
- 5 Browne A. Lives ruined as NHS leaks patients' notes. *Observer* 2000 June 25;3. (Quoting Iona Heath.)

RCGP should press for increase in resources

EDITOR—I share Toft's evident disappointment in his royal college's efforts in trying to maintain a decent standard of clinical practice.¹ I am a general practitioner, and as part of its contribution to revalidation and clinical governance the Royal College of General Practitioners (Scotland) published a detailed practice accreditation document in July 1999. This is generally a well thought out and comprehensive list of criteria that practices should aspire to in order to achieve basic and more advanced levels of accreditation. It seems to me, however, to have one profoundly disappointing flaw: little importance is given to spending adequate time with patients.

Although a 10 minute consultation is recognised as necessary for the highest level of accreditation, a practice can still be accredited as an acceptable practice if a patient is seen every two or three minutes. Common sense and experience show that it is quite impossible to deal adequately with many of our patients' complex problems in this sort of time, let alone elicit hidden symptoms or problems, engage in health promotion, or treat our patients with compassion and humanity. Howie et al's research into consultations shows conclusively the greater effectiveness and value to patients of a 10 minute consultation.²

Resources seem stretched to their limit. In general practice one obvious answer would be for the Royal College of General

Practitioners to press much more strongly for an increase in resources, which would allow us to have smaller list sizes. We do, after all, compare badly with many other western European countries in the number of general practitioners per head of population. To suggest that a practice that sees 12 or 20 patients in an hour deserves some sort of accreditation undermines the hard work of general practitioners who spend longer with their patients, and it is insulting to patients to suggest that they should be satisfied with this.

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- 1 Toft A. Has humanity disappeared from the NHS? *BMJ* 2000;320:1483. (27 May.)
- 2 Howie JGR, Porter AMD, Heaney DJ, Hopton JL. Long to short consultation ratio: a proxy measure of quality of care for general practice. *Br J Gen Pract* 1991;41:48-54.

Parents do not always understand things doctors might say to them

EDITOR—Misunderstandings between patients and their doctors have featured in several recent papers in the *BMJ*.¹⁻⁴ At Gloucestershire Royal Hospital we completed an outpatient study of 100 parents or carers (after a pilot study in 20) to see what their understanding of the words "positive" and "negative" in relation to test results might be (because these words have opposite meanings in general usage and in medical terms). We also assessed their understanding of two phrases that a doctor might use in passing, which do not denote any disease ("the haemoglobin was a bit low" and "she's small but normal"). We used a semistructured questionnaire, and the same interviewer (DH) spoke to all the subjects. Verbal and non-verbal clues as to the "correct" answer were minimised, and no feedback was given as to whether the answer given was correct.

The sample was representative (in terms of age, sex, and reason for attendance) of the parents and carers we would expect to see in outpatients. Of the 100 questioned, 15 said that they had had previous experience of not being sure what a test result meant; eight of these specifically mentioned not understanding what the doctor had said. Eighty three of the sample understood "positive" and "negative" in relation to a test result in the same way as a doctor, nine got them the wrong way round, and eight were unable to decide which was right.

The word "haemoglobin" was not understood by 38 of the sample, and none of those questioned realised that the phrase "the haemoglobin was a bit low" meant that there was nothing wrong. Suggestions of what it meant ranged from "anaemia," "something to do with the blood," and "lack of iron" to "diabetes," leukaemia," and "haemophilia." On direct questioning 63 of the sample said that they would be worried by this statement.

The response to the phrase “she’s small but normal” was more difficult to interpret as many of those questioned said that it had been said of their child. Only 13 would be worried by this statement.

These words and phrases were used in an artificial way, in a fairly small sample, but the results serve to remind us that we need to be vigilant about the words we use and try not to create unnecessary worry. Reassuringly, many parents spontaneously commented that they would ask the doctor if they didn’t understand.

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- Charles C, Gafni A, Whelan T. How to improve communication between doctors and patients. *BMJ* 2000;320:1920-1. (6 May.)
- Britten N, Stevenson FA, Barry CA, Barber N, Bradley CP. Misunderstandings in general practice prescribing decisions: qualitative study. *BMJ* 2000;320:484-8. (19 February.)
- Barry C, Bradley C, Britten N, Stevenson F, Barber N. Patients’ unvoiced agendas in general practice consultations: qualitative study. *BMJ* 2000;320:1246-50. (6 May.)
- Donovan JL, Blake DR. Qualitative study of interpretation of reassurance among patients attending rheumatology clinics: “just a touch of arthritis, doctor?” *BMJ* 2000;320:541-4. (26 February.)

Substance use seems to be increasing among 11 year olds

EDITOR—Plant and Miller report that illicit drug use has declined since they carried out a survey in 1995.¹ Their overall findings are broadly in agreement with similar work undertaken by Goddard and Higgins² and

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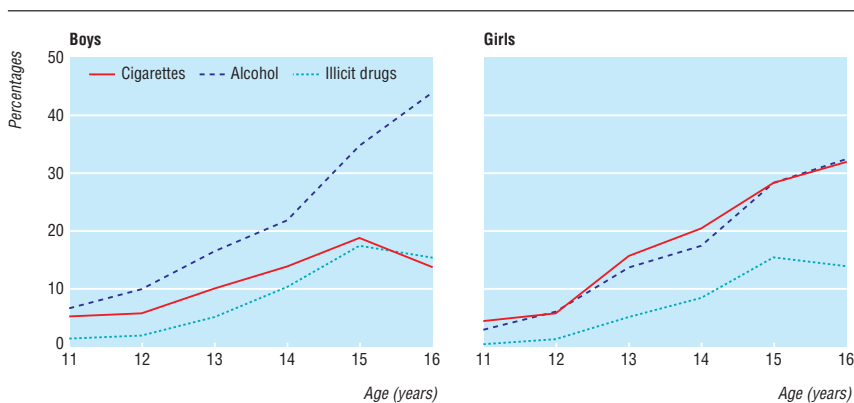
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Percentage of adolescents using cigarettes (daily), alcohol (weekly), and illicit drugs (monthly)

by us. Goddard and Higgins reported that 7% of 11-15 year olds said that they had used illicit drugs within the past month and that prevalence increased sharply with age, from no recent use at age 11 to 18% at age 15.

Our data were collected among 11-16 year olds by self report questionnaire during the latter part of 1999 and the first three months of 2000 from a stratified sample of 28 schools in England (n = 9742). We found that regular, monthly, illicit drug use rose from 1.0% at age 11 to 14.5% at age 16, with an overall mean of 5.5%. Highest illicit drug use was by 15 year old boys (16.8%) (figure).

We also found that daily cigarette smoking rose from 4.8% at age 11 to 24.1% at age 16; mean use was 11.7%. More girls than boys smoked (13.7% v 9.5%), with peak use being by 16 year old girls (31.2%). In contrast, Goddard and Higgins found that only 1% of 11 year olds claimed to be regular smokers.

Our data showed that regular, weekly, alcohol drinking rose from 5.1% at age 11 to 36.0% at 16; mean use was 14.5%. Alcohol was drunk more by boys than by girls (16.4% v 12.8%). Highest use was by 16 year old boys, 42.6% of whom said they drank at least weekly. Goddard and Higgins reported that only 3% of 11 year olds in their sample drank on a weekly basis.

Overall substance use by adolescents, both licit and illicit, seems to be declining. These data may, however, indicate a general increase in substance use by 11 and 12 year old children against a background of an overall decrease by 13-16 year olds.

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- Plant M, Miller P. Drug use has declined among teenagers in United Kingdom. *BMJ* 2000;320:1536. (3 March.)
- Goddard E, Higgins V. *Smoking, drinking and drug use among young teenagers in 1998*. Vol 1: England. London: Stationery Office, 1999.

Earlobes are less convenient than fingerpricks for blood glucose testing

EDITOR—Probably billions of fingerpricks have been performed by people with diabetes since self monitoring of blood glucose concentrations was introduced in 1979. The site usually recommended is the side of the fingers rather than the thumb or earlobe.

Carley et al showed a small reduction in pain in the earlobe compared with the thumb.¹ Their conclusion that “tests should be obtained by lancet puncture of the skin on the earlobe rather than ... the thumb” is not, however, warranted, as it does not take into account other factors that are important to patients.

The earlobe cannot be seen by the patient without a mirror. This makes both pricking and subsequent pressure for haemostasis more difficult. My patients’ experience is that this results in blood dripping on to their clothes. Earlobes may be slightly less painful, but using them is less convenient than using one’s fingers.

Techniques for finger pricking that reduce pain include using variable depth finger pricking devices and ultrafine lancets and pricking the back of the nail bed with a 29 or 30 gauge insulin needle (as described by Raab).²

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- Carley SD, Libetta C, Flavin B, Butler J, Tong N, Sammy I. An open prospective randomised trial to reduce the pain of blood glucose testing: ear versus thumb. *BMJ* 2000;321:20. (1 July.)
- Bernstein R. *Dr Bernstein’s diabetes solution*. New York: Little, Brown, 1997:71.

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