hospital clinicians working side by side with social scientists on simulated patient teaching,¹⁰ and a feasibility study where students worked in a scenario based environment requiring them to communicate with a patient while conducting a procedure. Students perceived this to be a realistic and powerful learning experience.¹¹

Evidence from randomised controlled trials that interactive continuing medical education is effective in changing clinical performance positively¹² has stimulated the development of other models of integrated learning. These include the patient pathway tutorial, in which students have to perform a series of tasks that represent the temporal sequence of clinical and communication skills needed for management. For example, the tutorial for chronic obstructive pulmonary disease consists of stations in history taking, examination, discussion of differential diagnosis, writing the prescription, explaining treatment, reviewing the chest radiograph, sharing bad news, written clinical communication, and a discussion with colleagues and carers if appropriate. At the end of each task the learner is encouraged to reflect and then provided with feedback.

Organising a cohesive faculty of teachers of communication skills as well as hospital clinicians in medical schools helps in developing a single integrated course for communication and clinical skills. Even in teaching something as skills based as resuscitation, encouragement to learn about effective communication with other team members may also help save lives. The scenario also gives students an opportunity to practise talking to patients and relatives, who report lasting impact from doctors' communication skills at a time of crisis. Learning side by side also implies that

trainee professionals of different disciplines learn some team skills together so that interpersonal communication and role linkages become embedded.

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Low level alcohol consumption and the fetus

Abstinence from alcohol is the only safe message in pregnancy

Recently the media in the United Kingdom highlighted the messages presented by one of us (RASM) and researchers from other industrialised countries, that the only safe communication about alcohol consumption in pregnancy is that of abstinence. Unfortunately the scientific basis for this recommendation was not clarified in the media. We provide here examples of the evidence that has led the United States, Canada, Australia, and other countries to adopt the abstinence message.

Fetal alcohol syndrome was first reported in the international literature by Smith and Jones in 1973.¹ Before that, Lemoine published a series of 127 cases in France, highlighting the phenotypic presentation of people exposed to alcohol while pregnant.² The full syndrome is characterised by a combination of short stature, neurocognitive deficits, and a specific triad of facial dysmorphism (short palpebral fissures, flat philtrum, and thin upper lip vermillion).

Fetal alcohol spectrum disorder is an overarching term encompassing the behavioural diagnoses occurring when the prenatal brain has been exposed to the teratogenic effects of alcohol, but the full phenotype of fetal alcohol syndrome has not developed. Fetal

alcohol spectrum disorder is difficult to diagnose, but it is possible, with a positive history of alcohol consumption in the mother and neurocognitive deficits with or without the facial features.³

The neurocognitive deficits in fetal alcohol syndrome and fetal alcohol spectrum disorder are pervasive. They include hyperactivity, impulsivity, difficulties with planning and mental organisation, concrete thinking, visuospatial problems, lack of awareness of social cues, and difficulties understanding the consequences of their own behaviour.⁴ They can cause immense distress and persistent difficulties for the affected individual. Furthermore, evidence shows overlap and comorbid presentation with conditions such as attention deficit hyperactivity disorder, autism, and personality disorder, requiring skilled clinical differentiation.⁵

Over the last 30 years the opinions of professionals working in this area have changed. Previously fetal alcohol syndrome was considered to be a possible consequence of chronic alcohol consumption occurring in specific high risk populations such as the native American tribal groups.^{1,6} Views later changed to encompass moderate consumption in all populations.⁶

Evidence from animals and humans now provides confirmation that behavioural changes may be seen even at low doses of alcohol consumption.

Ikonomidou et al report that exposure of the rat brain to ethanol for a period of hours during a specific developmental stage induces an apoptotic neurodegenerative reaction that deletes large neurones from several developing sites.⁷ Charness et al report that cell adhesion molecules are inhibited even at exposure to low concentrations of ethanol. These have subsequent effects on neuronal migration, fasciculation, and synaptogenesis, all vital to the developing brain.⁸

Sood et al report a prospective study of 501 mother-child dyads in which the child's behaviour was adversely affected even at low levels of alcohol consumption—as low as one drink per week. They further report that a dose-response relation existed between the level of alcohol consumed and behaviours seen. Children exposed to any level of alcohol, compared with those not exposed, showed 3.2 times greater odds of delinquent behaviour. These relations continued even after other factors were controlled for.⁹ Knupfer et al argue that because of methodological problems, such as differing classifications of drinking practice and the imprecise definition of what low level consumption meant in early studies, more research is needed before conclusive evidence is available about the dose-response relation.¹⁰

Evidence is currently emerging, but is as yet inconclusive, about the exact dose of alcohol that is safe in pregnancy. The likelihood is that individual differences in alcohol metabolism may protect most women when drinking small quantities. Currently we cannot predict who is and is not at risk.

A small unpublished study carried out by one of the authors (MAS) at St George's Hospital in London showed that just under 50% of those attending the teenage antenatal clinic drank more than four units on a single occasion and 27% occasionally got drunk. A further 25% drank at least once a week. Kaskutas and Graves studied alcohol consumption in 321 pregnant women. They found that when self selecting drinks, the size of the drinks was up to 307% greater than standard measures. The authors concluded that risk based on

current assumptions might actually be much higher than previously expected.¹¹

Unlike the position of the department of health—that one to two units a week in pregnancy are safe—the position adopted increasingly in other countries is that no level of alcohol consumption is known to be safe in pregnancy. A health promotion message about a safe amount of alcohol, although designed to protect the pregnant mother and the developing child, can be dangerous as it can be so easily misinterpreted. The uncertain level of individual risk to the developing fetus together with the possibility of misinterpreting a health promotion message mean that the only safe message in pregnancy is abstinence from alcohol.

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Neglected diseases

"Priority medicines for Europe and the world" is a wake up call from WHO

Few readers of the *BMJ* were probably aware or even cared that the presidency of the EU Council was held by the Dutch government during the second six months of 2004. Nevertheless, history is likely to remember the Dutch presidency with gratitude. For in the run up to it, the Dutch government commissioned the World Health Organization to develop a research agenda for the European Union that was based on public health needs for priority medicines.

The commendable report was published last November.¹ Masterminded by Warren Kaplan and Richard Laing, and using a new approach, it is a work of scholarship. It covers a wide range of critical issues and makes many far reaching research proposals for

the European Union. But underlying these extensive data and careful analyses are some chilling implications. Here are a few.

Firstly, contemporary notions of neglected diseases are far too circumscribed. They include both rare (orphan) diseases as well as common disorders (mainly communicable) of developing countries. But the neglected diseases also include a range of other conditions that are major burdens in all countries and for which we have few or no effective remedies. Epidemic influenza, appearing annually, probably causes a million deaths a year worldwide. But pandemic influenza, appearing every few decades, has much more devastating consequences. The pandemic of

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