years, which is worrying. There is a similar gap between the ages of 6 and 10 years. While a child's weight and therefore doses of drugs may vary considerably with age, the size of an endotracheal tube varies far less. The authors' chart should at least show a full range of endotracheal tube sizes.

Before the meeting of the European Resuscitation Council in November last year the recommended endotracheal dose of adrenaline, atropine, and lignocaine was twice the intravenous or intraosseous dose. Since the meeting the American Heart Association has suggested that the initial endotracheal dose of adrenaline should in fact be 10 times the intravenous dose—that is, 100 μg/kg. It is likely that this will soon be accepted by the European Resuscitation Council as the standard. Thus Burke and Bowden's chart has at best a twofold and at worst a tenfold dosage error.

I understand that Oakley is currently revising his chart in accordance with the European Resuscitation Council's guidelines and is taking account of all these points. I look forward to seeing his new chart.

In conclusion, Burke and Bowden's chart has serious flaws and may even be dangerous. It should not replace the existing or updated Oakley chart.

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1 Burke DP, Bowden DF. Modified paediatric resuscitation chart. *BMJ* 1993;**306**:1096-8. (24 April.)
2 Oakley PA. Inaccuracy and delay in decision making in paediatric resuscitation and a proposed reference chart to reduce error. *BMJ* 1988;**297**:817-9.

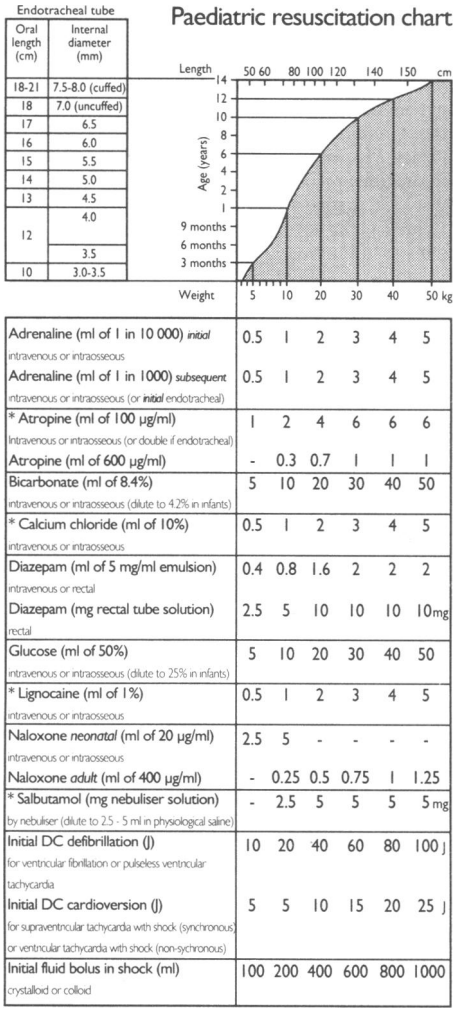
Updated standard reference chart

EDITOR,—In preparing the revised version of the standard reference chart for paediatric resuscitation[1] we have recognised the value of reading volumes rather than doses directly off the chart. The study by Derek P Burke and David F Bowden has confirmed this.[2] Nevertheless, caution must be exercised in forming overall conclusions about chart design on the basis of this study as no examples of the questions asked in the survey are provided and it is hardly surprising that a chart designed so that volumes can be read off is quicker to use than others. Furthermore, great care must be taken in basing a chart on volumes as many drugs are available in a variety of concentrations.

In Burke and Bowden's chart, constraining the doses to discrete columns may lead to considerable inaccuracy. For example, there is a 50% step up in many of the drug doses between the adjacent columns 5 and 6 in their chart. Given the potential error in initial estimation of age, this could lead to a 50% error in drug dosage. Similarly, there are large steps in the sizes of endotracheal tube, and the 4·5 mm diameter tube is omitted completely. As is evident from the original chart, this is the first choice for children between the ages of 1 and 2 years. As a result, no toddler will receive the best estimate of tube size the first time. When the importance of airway and ventilation in paediatric resuscitation is considered this is a considerable oversight.

The lack of a definite estimate of weight in Burke and Bowden's chart makes calculations of doses of second line resuscitation drugs, such as aminophylline, inotrope infusions, and emergency anaesthetic drugs, more difficult. We believe that the age-weight graph should be on the chart as it facilitates such calculations as well as allowing interpolation of doses.

The standard reference chart has now been revised in accordance with the new advanced paediatric life support (United Kingdom) guidelines (figure); the advanced paediatric life support course has been approved by the Resuscitation Council. In the revised chart all drug doses have been converted to volumes, but with clear guid-



*** Caution!** Non-standard drug concentrations may be available:
Use **atropine** 100 μg/ml or prepare by diluting 1 mg to 10 ml or 600 μg to 6 ml in physiological saline.
Note that 1 ml of **calcium chloride** 10% is equivalent to 3 ml of **calcium gluconate** 10%.
Use **lignocaine** (without adrenaline) 1% or give twice the volume of 0.5%; give half the volume of 2% or dilute appropriately.
Salbutamol may also be given by slow intravenous injection (5 μg/kg), but beware the different concentrations available (eg, 50 and 500 μg/ml).

Modified paediatric resuscitation chart

ance on what to do when alternative drug concentrations are used. Adrenaline has been split into initial and subsequent doses in accordance with the new guidelines. Naloxone and nebulised salbutamol have been added. The initial fluid bolus has been doubled, and the dose of glucose has been halved.[3]

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1 Oakley PA. Inaccuracy and delay in decision making in paediatric resuscitation and a proposed reference chart to reduce error. *BMJ* 1988;**297**:817-9.
2 Burke DP, Bowden DF. Modified paediatric resuscitation chart. *BMJ* 1993;**306**:1096-8. (24 April.)
3 Shah A, Stanhope R, Matthew D. Hazards of pharmacological tests of growth hormone secretion in childhood. *BMJ* 1992; **304**:173-4.

Authors' reply

EDITOR,—We are grateful for the opportunity of replying and particularly thank Peter Oakley and colleagues and M R Waters, all of the Advanced Life Support Group, for their comments.

The aim of our study was to compare the design and layout of both charts, not to recommend revisions to drug dosages. To this end we used the same drugs and dosages in our chart as are used in the standard chart. We recognise that there have been changes in the recommended dosages since our paper was submitted (October last year). Both charts require modification.

We specifically studied senior house officers because they are least experienced at resuscitation but the most likely to be called on in the crucial early stages.

We believe that the use of several drug concentrations on a chart would lead to confusion. We are surprised that the obvious solution has not been recommended by any group—that is, a nationally agreed standard paediatric resuscitation box containing drugs in a single form and fixed concentration to comply with those on the chart. A simpler solution to the problem would be to have prefilled syringes calibrated for weight, age, and length: this would remove the need for a chart. We approached International Medical Systems in November 1991 with this proposal, but it thought that this would not be economical.

The design of both charts allows "overdoses," the maximum being 50%. The standard chart also allows underdosage—in the worst case, 60% of the appropriate dosage being recommended. We know of no studies suggesting that a 50% increase in drug dosage during resuscitation has any adverse effect.

We are surprised that Waters is worried by the gap between the columns for a 1 and a 3½ year old child as this represents a difference in weight of only 5 kg. Drugs are ideally administered on a weight basis.

The exclusion of a 4·5 mm endotracheal tube was an omission on our part; these sizes, however, are only guidelines, and larger or smaller tubes are often required and should always be immediately available.

All the drugs mentioned on the chart are available in the stated concentrations.

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Drug misuse in Lothian

EDITOR,—We recently reported a decrease in the self reported history of injecting and frequency of recent injecting among attenders at our clinic, having compared 50 referrals in 1988 with 50 referrals in 1990.[1] Mervyn London and colleagues raise four principal reservations on which we wish to comment.[2]

Firstly, they suggest that the findings might be explained by a change in referral pattern, with our newly established service attracting more severe cases in 1988 and the people referred in 1990 being "less involved in injecting" and "in less difficulty." We considered this possibility and sought to exclude it by looking at the recent injecting frequency of a subsample of frequent past injectors in both years. Among this notionally severe group, recent injecting frequency was much lower in 1990 ($\chi^2=19{\cdot}9$, df=2, $p<0{\cdot}0001$). This finding was reported in our paper.

Secondly, London and colleagues suggest that injectors in 1990 may have been less prepared to report recent injecting, being more likely to consider injecting undesirable behaviour. We are aware of the limitations of self reported data. We accept this as a cautionary element in interpreting data. Had we reported increased injecting, how-

ever, we might well have faced the objection that our patients in 1990 reported injecting more in order to obtain a substitute prescription. It is interesting that we found no difference in recent sharing of syringes between the two years among recent injectors. If injecting is undesirable we would have thought that sharing would be even more so.

Thirdly, London and colleagues say that the suggestion (in our discussion) that wider availability of oral opioids may be contributing to a decrease in injecting seems simplistic. This would indeed be so had we not considered other possible factors in our discussion, such as the influence of education targeted at the public and at drug users and changes in attitude owing to drug users' personal experience of friends and relatives becoming ill and dying of conditions related to HIV.

Finally, it is suggested that wider availability of opiates may result in increased drug misuse in the population. This may well be so but was outside the scope of our study, which looked mainly at injecting drug use. We wish neither to overlook the "disadvantages of some treatments" nor to promote substitute prescribing as having no disadvantages. Indeed, we believe that decisions about treatments for drug misuse should be informed by cool debate and honest acknowledgment of both the advantages and the disadvantages of any treatment strategy, whether applied to individual patients or to the wider issue of public health.

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1 Griffin S, Peters A, Reid M. Drug misusers in Lothian—changes in injecting habits 1988-90. *BMJ* 1993;**306**:693. (13 March.)
2 London M, Dzialdowski A, Haarhoff G. Drug misusers in Lothian. *BMJ* 1993;**306**:1128. (24 April.)

Short notice for meetings

EDITOR,—Consultants are being encouraged to give dates of admission to patients when they are seen in outpatient clinics. This system has been used here for two years. It was successful when the waiting time was less than three months but has become difficult to organise since this has lengthened to six months. One reason for the long waiting time in outpatients is the short notice often given for urological meetings. In this hospital the urology department comprises two consultants, one senior house officer, and two preregistration house officers. Thus cancelling clinics or theatre lists at short notice causes terrible problems.

During February a record was kept of the advertisements of all the conferences and meetings that a consultant urologist could justifiably attend. This included not only urology meetings but also medical meetings with a general content, such as those concerned with pain relief, and management development meetings. The type of meeting was recorded, as was the time until the event (table). The following journals were received: *BMJ, British Journal of Urology, New England Journal of Medicine, BMA News Review, Journal of Urology,* and various free newspapers and abstract journals supplied by drug companies. Unsolicited advertisements received in the post were also recorded. Some meetings were counted more than once as the announcements for them appeared in more than one journal or several issues of the same journal. Meetings whose date had been arranged at the previous meeting were excluded; this included most local management meetings.

Thirty eight notices appeared in journals and 28 in abstract journals, 17 notices came unsolicited in the post, and four meetings were arranged by phone. The table shows that notice of meetings is often too short. Particularly poor in this respect are management type courses in Britain. Many who advertise give less than four weeks' notice, and I wonder which clinicians can accept at less than four weeks' notice. Overseas organisers all give longer notice. Maybe they understand that organised clinicians require this time to make ordered arrangements, perhaps reflecting a more consultant based service.

In the future, if the NHS becomes, as promised, more consultant based all meetings (other than local ones taking place during lunchtimes or the evenings) will have to be advertised at least six months in advance to ensure that a wide range of clinicians can attend.

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Number of weeks' notice given in advertisements for various meetings

Type of meeting	No of announcements received	Time before meeting (weeks)		
		Minimum	Maximum	Median
Local business meeting	6	1	6	3·5
Local management course	7	4	23	12
Medical meetings in Britain	39	1	69	4
Management type meeting in Britain	11	1	8	3
Foreign meeting	24	4	67	17

Children need their independence

EDITOR,—In his soundings article Tony Smith draws attention to recent research at this institute which compared the findings of surveys of schoolchildren and their parents in a sample of schools in England in 1971 and 1990.[1] A dramatic decline was recorded not only in the "licences" that parents granted their children at particular ages, such as the licence to cross roads and go to school on their own, but also in the extent of children's leisure activities outside the home.

During the 19 years between the two surveys the volume of traffic on the roads almost doubled, though the number of children killed was halved. In interpreting this apparent paradox the government has claimed that the figures show that our roads are now much safer. Clearly, however, much of the reduction in accidents is explained by children being increasingly denied the basic right to get about on their own. This is due to parents' understandable concern about the risk to life posed by the rising volume of traffic and to the effectiveness of a road safety campaign encouraging parents to "act responsibly" by withdrawing their children from that risk. One obvious outcome, reflected in the results of the institute's survey, is a sharp increase in the prevalence of parents escorting their children.

This defensive approach to children's road safety overlooks an important aspect of public policy. A minister for children, if there was one, would no doubt be concerned about the effects on children's physical and social development of these growing restrictions. A key element of children's maturation is an environment that allows them, on one hand, to get regular exercise—for instance, on the daily walk or cycle to and from school—and, on the other, to have the opportunity to take initiatives and learn from their experiences without constant adult supervision; these themes were the subject of a conference held at the Policy Studies Institute recently.[2]

Smith's conclusion that the steady erosion of children's independence means that they are "being deprived of a pleasure" is a considerable understatement.

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1 Smith T. Walking to school. *BMJ* 1993;**306**:1135. (24 April.)
2 Hillman M, ed. *Children, transport and the quality of life.* London: PSI (in press).

Australian healthcare

EDITOR,—As rightly indicated by Margaret Whitehead and others, the health problems of Australian Aboriginals remain an indictment of health policy in Australia.[1] I take issue, however, with some of the statements implying that all states in Australia are equal.

The statement that private patients compete with public patients in all states is incorrect. Queensland has had a free public hospital system for over 50 years. Medicare was introduced in Australia only in February 1984. Only 8% of the patients treated in Queensland's public hospitals are private patients. Unfortunately, waiting lists for both outpatients and for elective operations in this state are very long. Furthermore, budget cutbacks have closed down many outpatient services, and elective admissions have ceased in many of the hospitals. Indeed, in the first 16 weeks of 1993 some of our hospitals were closed for elective admissions for up to six weeks.

In Queensland there is no competition between privately insured patients and public patients for public hospital beds—there is simply a lack of money for public hospitals. Unfortunately, because the resources which can be allocated to medicine will never equal the requirements of those who need help, rationing must be introduced and some need to do without.

No country in the world is able to provide First World health care free at the point of delivery without some form of rationing. Obviously, some countries are able to do this better than others. We are not performing well at present in terms of equality of access to health care.

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1 Whitehead M, Judge K, Hunter DJ, Maxwell R, Sheuer MA. Tackling health inequalities: the Australian experience. *BMJ* 1993;**306**:783-7. (20 March.)

Cervical screening in women over 50

EDITOR,—W J Van Wijngaarden and I D Duncan concluded that cervical intraepithelial neoplasia typically occurs in younger women and that all women over 50 with an adequate history of negative results on smear testing might be safely discharged from further screening if these findings are confirmed in other populations.[1] If this change was to take place the definition of adequate history would be crucial, and we would agree that a three year interval should be regarded as the maximum time allowable between smears for a screening history to be deemed satisfactory.

Recently we published a study examining survival from cancer of cervix in the west of Scotland.[2] We found that survival after treatment