safety and the need to provide information to the parents.

Firstly, the lack of adverse outcome reflects, we hope at least in part, the fact that our unit makes decisions at a time before clinically significant fetal compromise occurs. We make no apology for that.

Secondly, it reflects a type two error, as much greater numbers of cases would need to be looked at before any difference was clear. Rates of cerebral palsy attributable to labour are very low and a huge series would be needed to see a difference. The small risk of adverse fetal outcome needs to be considered alongside maternal safety. When either rare outcome occurs criticism of the professionals follows. The debate about this balance needs to take place.

Where does this leave us? Although we should consider ways of speeding up, as have been described, we are more concerned with avoiding prolonged delays and perhaps finding ways of classifying cases more accurately, as also has been suggested. But with increasing litigation and also clinical governance requiring adherence to standards the presence of a national standard is hard to ignore. The concept of individual units creating their own standards may be attractive but is unlikely to be acceptable if there is any major difference from a national standard. It may well be that the sentinel audit of caesarean section can give some national data about what is achieved and could even set targets for what may be reasonable improvements.

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1 Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, et al. Planned Caesarean section versus planned vaginal birth for breech presentation at term: a randomised multicentre trial. *Lancet* 2000;356:1375-83.

Some words on conflict of interest

EDITOR—Medical journals—and doctors generally—are in a transition phase in relation to conflicts of interest (or competing interests, as the *BMJ* calls them). We are moving from a phase where it has been normal not to declare them to one where it will be strange not to do so. In this transition phase we are confused about what to declare. My line is "If in doubt, declare," which is why I even declared the death of my pet rabbit in an editorial on animal research.[1] There are rarely problems when competing interests are declared but often anxieties when they seem to have been hidden.

Expert witnesses are paid—and so do have a financial interest when they are publishing on topics on which they give expert opinions. They should thus declare that they have been expert witnesses. The fact that this applies to many doctors makes it more, not less, important that such competing interests are declared.

Richard Smith *editor, BMJ*

1 Smith R. Animal research: the need for a middle ground. *BMJ* 2001;322:248-9.

Take home naloxone for opiate addicts

Drug misusers may benefit from training in cardiopulmonary resuscitation

EDITOR—Dettmer et al report encouraging initial results of a scheme to give take home naloxone to opiate addicts.[1] They also refer to training opiate misusers in resuscitation as part of the project. In 1997 we conducted a pilot study of cardiopulmonary resuscitation training in Glasgow, where the incidence of sudden death due to drug misuse is high.

Of the nine volunteers who agreed to participate in the study (all opiate misusers), eight had witnessed a drug overdose. Six described unconsciousness and seven described cyanosis in the victims. The methods used to stimulate the victims ranged from physical stimulation (for example, slapping) (n = 6) to injecting intravenous amphetamine (n = 1) or using a spoon to prevent tongue swallowing (n = 1). Emergency services had been called in five cases. Only one volunteer reported attempting cardiopulmonary resuscitation.

All volunteers were assessed with a validated scoring system before and after a standard basic life support teaching session.[2] The group's mean penalty score fell from 94 (range 25-120) to 11 (range 0-20) ($P < 0.001$, paired t test for sample means). The two instructors who did the testing and training confirmed that in the test after the instruction all volunteers performed to the standard expected for the Resuscitation Council (UK) advanced life support course.

Most drug misusers in our pilot study had witnessed an overdose, and take home naloxone or cardiopulmonary resuscitation may therefore be useful in Glasgow. We are concerned that not all the misusers called for immediate help, but other studies have suggested that this may be due to fear of the police becoming involved.[3]

Our pilot study showed that this vulnerable group can be trained in basic life support to an acceptable level. If enough drug misusers could be trained in cardiopulmonary resuscitation this might be a useful additional strategy to reduce mortality from opiate overdose.

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1 Dettmer K, Saunders B, Strang J. Take home naloxone and the prevention of deaths from opiate overdose: two pilot schemes. *BMJ* 2001;322:895-6. (14 April.)
2 Graham CA, Lewis NF. A scoring system for the assessment of basic life support ability. *Resuscitation* 2000;43:111-4.
3 Darke S, Ross J, Chen J, Hall W. Overdose among heroin users in Sydney, Australia. II. Response to overdose. *Addiction* 1996;91:913-7.

Big conclusions are drawn from little evidence

EDITOR—Dettmer et al's paper on two pilot studies to provide take home naloxone to opiate addicts has really answered nothing.[1] The numbers in the studies were tiny (29 episodes in Berlin, five in Jersey). The response rate was less than 35%, with presumably serious selection bias. The results are anecdotal as far as can be told from the extremely limited methodology presented. The patients were presumed to have done well if a (possibly drug affected) layperson said that they had recovered. What was the length of observation? Was there any follow up? Were there late complications?

The second case presented as anecdotal evidence of benefit raises serious concerns. An agitated layperson runs into a clinic that presumably has trained medical staff on site, gets a naloxone injection made up, runs off, and then returns with the "saved victim." What were the medical staff doing in the meantime? Presumably they were so surprised by this scenario that they thought that leaving a patient to die with airway compromise around the corner was acceptable. This suggests that we are leaving heroin users to deal with "their own" and altering what the response should be—give first aid, provide airway management, call an ambulance, and maybe give naloxone.

With response rates of 35%, 60 other uses of naloxone may not have been reported. Poor outcomes are less likely to be reported by a group that is naturally suspicious of authority, reluctant even to call ambulances, and extremely wary of police involvement.

I am deeply concerned that this article was published without any editorial comment. It is seriously flawed research that does not illuminate this difficult area but just increases the shadows. For those who believe that naloxone is a benign drug I would refer them to an article reporting that the use of intravenous naloxone was associated with a 1.3% (95% confidence interval 0.6% to 4.0%) rate of adverse events (asystole, fits, pulmonary oedema, and violence).[2]

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1 Dettmer K, Saunders B, Strang J. Take home naloxone and the prevention of deaths from opiate overdose: two pilot schemes. *BMJ* 2001;322:895-6. (14 April.)
2 Osterwalder JJ. Naloxone—for intoxications with intravenous heroin and heroin mixtures: harmless or hazardous? A prospective clinical study. *J Toxicol Clin Toxicol* 1996;34:409-16.

Figures in Jersey give no support to scheme's effectiveness

EDITOR—The study of take home naloxone in Jersey reported by Dettmer et al ran from October 1998 for 16 months,[1] although the distribution of naloxone to users continued afterwards. The coroner's figures for deaths in Jersey from dependent drug use are dominated by the use of opiates and benzo-

diazepines. There were no such deaths in 1996, four in 1997, two in 1998, four in 1999, and three in the first six months of 2000. Such figures give no support to the effectiveness of take home naloxone.

Jersey's results may not be applicable to other settings. It is a small island. Most drug users live fairly near the hospital, and the ambulance staff carry naloxone. It would have been safer if the companions of the person in the anecdotal case had phoned for an ambulance.

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Apparent advantages may be balanced by hidden harms

EDITOR—Providing treatment by proxy for opiate overdose is attractive because it may improve the outcome in overdose victims while developing self esteem in drug using "rescuers." Unfortunately, in the pilot schemes reported by Dettmer et al, where ampoules of naloxone were given to injecting drug users, most of the naloxone seems to have been unaccounted for at the end of the study.[1] Possibly some of the missing naloxone was used to support "flatlining," in which one drug user stands guard with naloxone while another uses opiates in a dose that far exceeds tolerance; we have come across this practice as a consequence of naloxone being used in emergency ambulances locally.

A further problem with opiate blockers is that they may be used as weapons against other drug users (one of us (AJA) came across this practice after naltrexone was introduced in prison practice). Providing a powerful drug to those who remain involved in the illicit drug market should be done with caution.

Naloxone is not without pharmacological dangers: life threatening side effects may occur in up to 3% of naloxone treatments for heroin intoxication.[2] Subjects are unlikely to have reported their involvement in deaths occurring in association with their intervention. Presumably the Jersey data could be examined further: in an island population it may be possible to gather data from other sources such as accident and emergency departments and police to find out what happened to the "missing" naloxone.

Before rushing headlong into the provision of a treatment with unknown risks it is important to discover the extent of harm caused by this intervention so that this can be considered when assessing what are apparent benefits.

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2 Osterwalder JJ. Naloxone—for intoxications with intravenous heroin and heroin mixtures: harmless or hazardous? A prospective clinical study. *J Toxicol Clin Toxicol* 1996;34:409-16.

Author's reply

EDITOR—Our report was intended to stimulate serious consideration of the legitimacy and health benefits of providing home-based supplies of naloxone as part of the comprehensive care of opiate addicts. That consideration is now under way. Our report was a case report (not a research report). Nevertheless, a single life saved is still a life saved. Carefully designed research on this new approach to preventing deaths from overdose is now required to accompany the recommendation of wider availability of naloxone to prevent avoidable deaths from opiate overdose.[1,2]

Graham's successful experience of providing training in resuscitation methods in Glasgow is extremely encouraging. Information about naloxone administration should be embedded in broader training about resuscitation and the importance of summoning an ambulance at the earliest opportunity.

We have now encountered further instances of opiate overdose in people who have been saved by peer administration of take home supplies of naloxone provided by the growing number of clinical services that support this additional preventive intervention. This includes selected parts of our own addiction treatment services in south London in which take home naloxone was made available earlier this year (our methadone maintenance clinic and our inpatient detoxification ward were initial sites since these treatments paradoxically increase immediate risk of fatal outcome from overdose).

We strongly support Mountain's proposed sequence of providing airway management, checking breathing, and summoning an ambulance, and only then considering naloxone. Naloxone administration must be an adjunct to, not a replacement for, calling an ambulance. The objective is to cover a critical high risk time and has a similar logic to moving naloxone out of accident and emergency departments into mobile ambulances. We know of cases in which a living victim was dead by the time medical or ambulance staff arrived but who would almost certainly have survived if emergency naloxone had been given during this interim time. These deaths include deaths in institutions (such as prison or drug rehabilitation units). Relevant non-medical staff in these facilities should surely be trained and authorised to administer naloxone while awaiting the arrival of a doctor, as applies to ambulance staff in many countries.

Finally, one further point should be acknowledged. If I were the parent of a heroin addict, I would undoubtedly hold emergency naloxone at home to resuscitate my child more effectively while awaiting an ambulance. I find myself wondering what justification I would offer for withholding this effective interim treatment from my neighbour and his or her child.

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A longer version of this letter is published on bmj.com

1 Advisory Council on the Misuse of Drugs (ACMD). *Reducing drug-related deaths*. London: Home Office, 2000.
2 Strang J, Powis B, Best D, Vingoe L, Griffiths P, Taylor C, et al. Preventing opiate overdose fatalities with take-home naloxone: pre-launch study of possible impact and acceptability. *Addiction* 1999;94:199-204.

Bell's phenomenon should not be regarded as pathognomonic sign

EDITOR—Although Minerva provides welcome light hearted news at the end of the weekly trawl through the *BMJ*, I must comment on the picture in the issue of 14 July of the male patient with Bell's phenomenon.[1]

Bell's phenomenon is a normal defence reflex present in about 75% of the population, resulting in elevation of the globes when blinking or when threatened (try touching your cornea with your finger, for example). It becomes noticeable only when the orbicularis muscle becomes weak as in, for example, bilateral facial palsy associated with the Guillain-Barré syndrome. It is, however, present behind forcibly closed lids in most healthy people and should not be regarded as a pathognomonic sign.

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1 Smith J, Henderson B. (Minerva.) *BMJ* 2001;323:118. (14 July.)

Doctors should be trained in advanced life support before students are

EDITOR—Phillips and Nolan report on the training of medical students in basic and advanced life support.[1] Of course medical students need training, but what about the rest of us? The authors state that many juniors cannot effectively perform cardiopulmonary resuscitation, and Fielden and Bradbury showed that 83% of surgeons and anaesthetists (from consultant to senior house officer) failed to give defibrillation according to advanced life support protocols.[2] Shouldn't it be compulsory for at least one member of the cardiac arrest team to have successfully completed an advanced life support course before we worry about medical students?

Advanced life support courses are oversubscribed, and medically qualified instructors for the courses are in short supply. As resources are scarce surely we should concentrate time and money on training doctors before students. Cardiac arrest teams are usually led by senior house officers in medicine, anaesthesia, or intensive care.