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- All letters must be typed with double spacing and signed by all authors.
- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
- We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.
- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

Registering births

SIR,—We were moved by Dr Marek R Gabrielczyk's description of the handling of events surrounding the birth and subsequent care of his daughters (18 July, p 209).

Without wishing to add to his family's distress, we believe that it is important to clarify the position regarding registration of births in England and Wales. According to section 41 of the Births and Deaths Registration Act 1953: "Live birth means a child born alive." There is no reference to gestational age. The definition of signs of life recommended by the World Health Organisation includes beating of the heart, pulsating of the umbilical cord, or definite movement of voluntary muscles after complete expulsion of the conceptus by the mother. Any child that has been monitored and nursed in intensive care must have shown signs of life and should be registered as a live birth, regardless of whether it is considered to be pre-viable. If the child subsequently dies the event must be registered as a neonatal death.

There are three reasons why health workers are reluctant to acknowledge that the births of such children should be registered. Firstly, they think that the parents may be upset by the official paperwork and funeral arrangements related to a neonatal death. Secondly, although hospitals can arrange a funeral funded by the National Health Service, staff worry that parents may feel obliged to fund a non-institutional funeral from limited resources with the aid of the derisory £9 government neonatal death grant. Finally, such deaths inevitably adversely affect the crude perinatal mortality rate of an institution or health district, and while this rate continues to be used as an index of quality of care staff are naturally reluctant to acknowledge as live births infants that they consider to be pre-viable.

Dr Gabrielczyk's letter highlights the increas-

ingly accepted need for parents and staff to acknowledge the loss of a child, however premature, and the comfort received from official recognition of the event. This suggests that in the long term most patients would probably benefit from the registration of very preterm births. From the institutional point of view, as perinatal deaths due to other causes decline deaths in extremely preterm infants will form a larger proportion of perinatal deaths. For example, from 1983 to mid-1987 in maternity units in the North West Thames region of 8.92 deaths/1000 births, one in 12 was of an infant of less than 26 weeks' gestation. This emphasises that perinatal audit should be based on birthweight specific perinatal mortality rates if these rates are to be compared among units.

There is a paradox, particularly striking in the case of twins, that even before the 28th week of

pregnancy all babies born with signs of life should be registered as live births, whereas a child born dead cannot be registered as a stillbirth until the 28th week of gestation. Perhaps there is a case, as in Norway, for registering the outcome of all pregnancies that last beyond 16 weeks' gestation. This would be a formal acknowledgement of the pregnancy and would also provide valuable information about the causes of fetal loss.

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** We have received several letters making similar points to this one.—ED, *BMJ*.

Seconds may count

SIR,—We agree with the claim voiced in Dr Tessa Richards's conference report (18 July, p 198) that thrombolytic treatment after defibrillation is the second major advance in the management of patients with acute coronary thrombosis. As with defibrillation, however, the greatest need for thrombolytic treatment is outside the hospital. The resistance to the institution of thrombolytic treatment outside the hospital voiced in the conference is similar to that encountered in the past.

Evidence shows that mortality in patients with acute myocardial infarction treated with streptokinase increases with increasing delay between the onset of symptoms and the start of treatment with streptokinase.¹ Similarly, infarct size increases with increasing duration of occlusion before reperfusion.² Accordingly, the amount of myo-

cardium salvaged is greater the shorter the duration of occlusion before reperfusion. Hugenholtz² has estimated that infarct size might be limited by a further 15% if thrombolytic treatment was given 30 minutes earlier.

We have administered thrombolytic treatment out of hospital to 71 patients with acute myocardial infarction using recombinant tissue plasminogen activator. The mean time from the onset of symptoms to the start of treatment was 118 minutes. Preliminary results for patients receiving tissue plasminogen activator outside hospital show reperfusion of the blocked coronary artery (TIMI grades 2 and 3) in 70% of patients, whereas this occurred in only 63% of patients receiving tissue plasminogen activator in the casualty department, other wards, or the coronary care unit. A pilot