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atenolol, but in an observational study we cannot discount the possibility of confounding factors. Our model adjusted for the most obvious of these (age and smoking), but there may be other unidentified factors. The strength of experimental studies is that randomisation removes selection bias.

In the Medical Research Council's trial the relative risk of dying from cancer for men receiving atenolol was 1.9 compared with placebo (1.2 to 2.8) and 1.4 (0.9 to 2.2) compared with diuretic. In our study the 95% confidence intervals of the relative risks for all cancers and for lung cancer excluded a twofold excess risk from atenolol. We cannot exclude risks lower than this.

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Rates of caesarean section, epidural analgesia, and forceps and vacuum extractions in 17 maternity units in 1985 and 1989

Does awareness of rates of obstetric interventions change practice?

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Management awareness profiles may be used to present maternity units' statistics graphically.¹ They also provide a means of comparing units. It is generally thought that it is helpful for managers and clinicians to be aware of the variations between maternity units and knowing where their own unit stands. Whether management awareness profiles have any effect on decision making, however, is still unknown.¹ We evaluated their impact after five years of their use in Belgium.

Subjects, methods, and results

Since 1985 the Belgian French Speaking Association of Obstetricians and Gynaecologists has sent a questionnaire to maternity units annually. Perinatal deaths, birth weight, preterm deliveries, and selected obstetric interventions are recorded. Management awareness profiles are prepared and returned yearly to the heads of the obstetric departments. The profiles include each item's median value, range, and 10th and 90th centiles of the distribution and the position of the unit for which the profile has been prepared.

The number of participating maternity units increased from 34 in 1985 to 49 in 1989; they covered more than 80% of live births in Brussels and Wallonia. Our analysis is based on the 17 maternity units that sent data from 1985 until 1989 without interruption. The 17 units registered a total of 12 524 deliveries in 1989. Data on caesarean sections were available in all the units, on epidural analgesia in 16, and on forceps and vacuum extractions in 13. The rates of interventions are given as percentages—that is, per 100 deliveries. Variances of the distributions of intervention rates were computed and were compared by Hartley's $F_{\max}$ test.²

The caesarean section rates ranged from 3.8% (59/1536) to 18.5% (43/232) in 1985 and from 6.5% (58/898) to 22.1% (38/172) in 1989. The rates of epidural analgesia ranged from 1.3% (3/232) to 42.7% (487/1141) in 1985 and from 2.8% (16/580) to 65.1% (226/347) in 1989. Forceps and vacuum extractions

were performed in 8.1% (34/418) to 19.8% (226/1141) of the deliveries in 1985 and in 2.6% (15/580) to 24.7% (222/898) of the deliveries in 1989.

The variance of the distribution of the intervention rates did not change significantly during the study: the ratio of the largest variance to the smallest one ($F_{\max}$) was 1.7 for caesarean sections, 2.6 for epidural analgesia, and 3.3 for forceps and vacuum extractions. The figure shows that the rates of caesarean sections, epidural anaesthesia, and forceps and vacuum extractions went down in some maternity units but increased in most of them.

Comment

We found no change of practice in our study, but this does not seem to be due to a lack of use of management awareness profiles by the maternity units. In 1990 we sent a questionnaire to the heads of the 49 maternity units that participated in the voluntary registration system in 1989. This showed that management awareness profiles were circulated to the staff in 30 of the 34 units that answered the relevant question. The increasing number of units participating in the system also indicates an interest in the management awareness profiles.

Feedback of information has been shown to change operative procedures in some non-randomised studies but not all.³ The results of randomised controlled trials are less encouraging.^{4,5} Our results also suggest that awareness is not enough to change behaviour. Management awareness profiles are potentially useful, but mechanisms to make them effective in changing behaviour are still to be developed. Their long term effects will have to be evaluated.

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