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The need for evidence-based obstetrics

Other things being equal, all elements of health care should be based on evidence of effectiveness and cost-effectiveness. Some convincing reasons, however, do exist to suggest that we as obstetricians have a special responsibility and that obstetrics may be "more equal" than other health disciplines in its need to be based on solid evidence.

Our clientele

First among these reasons is the special nature of our clientele. In most fields of medical care, persons come to the doctor because they are ill and seek a cure or relief. In obstetrics, pregnant women come to us healthy but with an iatrogenic belief that obstetrical care will further improve the excellent outcomes that nature has already provided to them. The professionally engendered nature of our care increases our responsibility. The presence of the baby, who has no choice in the matter, doubles it.

Our practices

Much of antenatal and intrapartum care constitutes a gigantic screening exercise in which various interventions are used in a massive effort to unearth unsuspected pathology in apparently healthy women. The concept of prevention rather than cure has been taken to unwarranted extremes. "A stitch in time saves 9," but if we take a single stitch 1000 times to save 9, little has been gained despite enormous cost. One can only speculate about the benefits that could be attained if those resources were more efficiently used.

To be useful, screening tests should be used to identify important health problems for which effective forms of management are available that will prevent or beneficially modify adverse health outcomes. Few of the screening activities that characterise obstetrical care fill these criteria.

Another major element of obstetrical care that I became increasingly uncomfortable with during my years of practice consists of advice for the pregnant woman: preconceptional advice and advice on diet, sexual activity, rest, work, exercise, relaxation, smoking, and drinking (milk, coffee, and alcohol). This is powerful advice with huge effects on the physical, social, emotional, and financial function of women and their families. Unlike ordinary advice, it cannot be easily rejected because it appeals to the pregnant woman's concern for the welfare of her unborn baby and because it is given by those whom she believes to be authorities on reproductive health. The validity of much of this advice has not been adequately assessed.

By professing the ability to improve the health outcomes for already healthy women and their babies, obstetricians have a special responsibility to ensure that their practices are based on solid evidence that they do more good than harm.

Our challenge

Obstetrics has been targeted by none other than Archie Cochrane himself. After chiding the medical profession as a whole ("It is surely a great criticism of our profession that we have not organised a critical summary, by specialty or subspecialty, adapted periodically, of all relevant randomised controlled trials"), he reserved his special scorn for our specialty.

"Of all medical specialties it is in obstetrics and gynaecology in which clinical practice is least likely to be supported by scientific evidence. They have a distinguished past. . . . but the specialty seems to have slipped up recently. The specialty missed its first opportunity in the 60s when it failed to randomize the confinement of low risk pregnant women at home and in hospital. Then having filled the emptying beds by getting nearly all pregnant women into hospital, obstetricians started to introduce a whole series of expensive innovations into the routine of pre and postnatal care and delivery, without any rigorous evaluation. The list is long, but most important were induction, ultrasound, fetal monitoring, and placental function tests. The specialty reached its apogee in 1976 when they produced 20% fewer babies at 20% more cost. After due thought and meditation, but without prayer, I awarded them the wooden spoon" (1).

It is nice to be noticed, but surely we would prefer a different form of notoriety. Cochrane subsequently removed the slur of the wooden spoon from obstetrics, but we may still be left with a niggling doubt about the justification for the reprieve.

Availability of the evidence

Much of the required evidence for evidence-based obstetrical practice is now available and accessible. Controlled trials in perinatal medicine have been carried out since 1922, when Johnston and Sidall (2) compared the infection rate for women who had a perineal shave in labour with women left unshorn and found no evidence of benefit from the barbaric practice. More than 20 years has passed since Iain Chalmers began work on his register of randomised trials of perinatal care and to assemble his international cast of coworkers and reviewers. More than 7000 reports of controlled trials have been entered into the register, with their results synthesized into some 600 regularly updated systematic reviews. Successive disk issues of the *Oxford Database of Perinatal Trials* (3) and its successor, the *Cochrane Pregnancy and Childbirth Database* (4), have made this strong evidence electronically available to those who need it: those who practise, use, or provide the necessary resources for perinatal care. Now the systematic reviews provided by the Cochrane Pregnancy and Childbirth

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Collaborative Review Group are available in the *Cochrane Library* (5).

For those more comfortable with print than with electronic media, these systematic reviews have been published in peer-reviewed medical journals and in the enormous, 2-volume (too long, too heavy, and too expensive) *Effective Care in Pregnancy and Childbirth* (6) and its companion volume *Effective Care of the Newborn Infant* (7). The conclusions of the former volume are now available in the reasonably priced paperback *A Guide to Effective Care in Pregnancy and Childbirth*, a second edition of which was published in 1995 (8). These works collectively still represent the only published compendium of systematic reviews of care for an entire medical specialty.

The gap between the evidence and our practice

As a group, we have been slow to incorporate evidence from controlled trials into clinical practice. Despite Johnston and Sidall's debunking of perineal shaving more than 70 years ago, the procedure was routinely used when I began practice and still persists in many communities. Although administering corticosteroids to women who are likely to give birth preterm was shown to safely reduce the risk for perinatal death and respiratory distress syndrome by 1972 (9), 20 years later it was still offered and administered to less than a quarter of the women whose babies would benefit from it (10).

Our colleagues and our patients have a right to expect that valid evidence on the effectiveness of both old and new procedures will be absorbed quickly and appropriately into clinical practice as soon as it is published and disseminated.

The systematic reviews of the effects of obstetric care that have been published both in print and electronically are now available worldwide. Despite this, policies of perinatal care vary widely from country to country, from community to community, from institution to institution, and among individual practitioners. This variation appears both in the use of high-tech, high-cost diagnostic and therapeutic interventions and in low-cost manoeuvres whose variation cannot be explained by differences in available resources. The extent of the variation, despite a common body of valid research-based information, suggests that obstetrics is not as scientific as it purports to be.

The exponential increase in evidence about the effects of obstetrical care is gratifying, but a pressing need exists to translate this evidence into practice. Passive dissemination of research findings is not enough to change either clinical policy or clinical practice. National and internationally promulgated practice guidelines as currently introduced have only a small effect (11), and local validation by respected peers is required to bring practice into line with evidence (12).

As obstetricians, we have collectively demanded the responsibility for pregnancy care and have accepted the challenges thrown at us. We now have an abundance of high-quality evidence available to us. The responsibility to use it rests squarely on our shoulders.

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