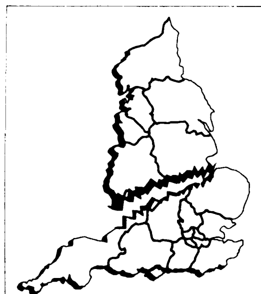

Health of pregnant women

Marion H Hall

Reproduction is highly important for human well-being. Decisions about whether, when, and how to have children are of the utmost importance to individuals and inextricably entwined with the closest human relationships. Society does, however, have a legitimate interest in the birth of an appropriate number of children and in those children being as healthy as possible, including those with impairments. The health of pregnant women is thus an obvious aspect for consideration as a key area in a health strategy. The case for and against its selection will be discussed in respect of maternal, fetal, and neonatal mortality and morbidity and in the light of the potential for and feasibility of prevention.

Case for targets

MATERNAL MORTALITY

The death of any pregnant woman or recently delivered mother is shocking to all concerned. Around 75 British women still die every year from pregnancy related causes, and the regional variation in the rate of pregnancy related death per 100 000 births varied from 5·8 to 10·6 among regions in the years 1976-87.[1] The regional variation may be partly due to maternal characteristics, but the report concludes that substandard care was provided in most cases, and at least some of these deaths may have been avoidable.

MATERNAL MORBIDITY

Little or no routine data are collected on morbidity, though it may be assumed to be greater after caesarean section or instrumental delivery, and intervention rates are enormously variable. The extent of distress associated with perinatal death and miscarriage is now acknowledged. Taking a broad definition of health it could also be argued that unwanted pregnancy, resulting in termination, is a manifestation of ill health, and this now occurs in about one in five or six conceptions.

FETAL AND NEONATAL MORTALITY

Estimates in prospective studies of the likelihood of fetal death from conception to term vary from 13% to 24%,[2] and perinatal death, at 5-10 babies per 1000 births, is much commoner than death in the rest of childhood and early adult life. There are again considerable regional variations, more than could be explained by chance,[3] but the question of what proportion of deaths is avoidable is open.

FETAL MORBIDITY

This is an appropriate aspect on which to focus services as it may result in a wide range of mental or physical impairments. The incidence of cerebral palsy, one of the most serious sequelae, has not fallen with perinatal death rates. The condition is thought to be due only rarely to birth asphyxia and possibly to early pregnancy influences, but it is strongly associated with birthweight.[4] The aetiology of some congenital malformations is more clearly understood. The possibility that intrauterine events influence health in later life[5] enhances the importance of pregnancy as a key target.

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Possible aims in the government's health strategy

The scope for safeguarding and improving the health of mothers (before, during, and after pregnancy) and of babies includes:

- Adoption of a healthy lifestyle—in particular good nutrition and avoidance of both smoking and more than minimal alcohol consumption during pregnancy
- Effective family planning services for those men and women who wish for this
- Protection against infectious diseases (for example, rubella)
- High quality maternity care services (tailored where appropriate to the needs of particularly vulnerable groups such as unsupported mothers and certain ethnic minorities)
- Improving management of obstetric emergencies by having available in every maternity unit a consultant obstetrician and anaesthetist whose main priorities are to oversee the labour ward
- Good infant nutrition
- Improving general socioeconomic and environmental circumstances, in particular quality of housing
- Health education and promotion (about all of the above)

Target: By 1993 all regional health authorities (and in turn district health authorities and family health services authorities) should have established targets for reducing stillbirths and infant deaths (possibly with separate targets for different causes)

PREVENTION

Reports of the confidential enquiries into maternal deaths are always accompanied by detailed recommendations for service organisation, which are generally believed to have contributed to the fall in death rates. However, adherence to the recommendations is not universal. The effectiveness of interventions to prevent morbidity in the mother, from urinary tract infection to perineal pain after parturition, has now been explored by meta-analysis of all published and unpublished randomised controlled trials,[6] and a great many effective interventions are now known to be available. Alleviation of parental distress after miscarriage[7] and perinatal death[8] has been studied in different ways and much is known about how to address the problem. Prevention of unwanted pregnancy is a valid objective of family planning services, and there is some evidence about which types of service are most useful.[9]

Prevention of perinatal mortality and morbidity are usually considered together. Randomised controlled trials have found few effective interventions, perhaps because death is so uncommon and measures of morbidity hard to find. Some successful interventions are tight control of diabetes, cervical cerclage, and corticosteroids before preterm delivery, and many more interventions are known to reduce the rate of intermediate outcomes such as preterm delivery or low birth weight. Prevention of congenital malformation usually takes the form of averting the birth of the affected fetus by terminating pregnancy, but avoidance

JOHN R SIMMONS

Adoptiong a healthy lifestyle is one way to improve health in pregnant women and their babies

of teratogens and genetic counselling when appropriate can also have a useful impact.

Case against

The decline in maternal mortality has already been disproportionately large, so that maternal deaths form a lower proportion of all deaths of women in the reproductive age group than they did 30 years ago.[1] Study of avoidable death in the European Community[10] shows the United Kingdom in a less unfavourable light in respect of perinatal and maternal mortality than in respect of mortality from several other conditions, which suggests that there may be less scope for further intervention in perinatal and maternal mortality. Similarly, as the British induced abortion rate is among the lowest in the developed world, and as all methods of contraception have a recognised failure rate, it may be difficult to achieve any large reduction in unwanted pregnancy.

Perhaps the most cogent argument against regarding the health of pregnant women as a key target for the health strategy is that poor health is largely caused by social conditions. Gradients in perinatal mortality rates with social class[3 11] and other measures of deprivation[12] suggest that resources should be directed towards alleviation of poverty, poor housing, and malnutrition and curtailment of advertising of harmful substances such as alcohol and tobacco rather than towards health services. This of course may apply to other causes of ill health but is especially important in reproduction, partly because its success may be determined largely by events long before the pregnancy itself and because poverty may be precipitated by pregnancy, especially among single unsupported women, who often lose earnings and have special housing needs.

Possible targets

Perfect health for pregnant women cannot be an aim as improvements in care increasingly allow women with serious chronic diseases to try to have children. Choosing numerical targets at a national level may result in them proving unattainable for some health authorities but not particularly challenging for others because of large differences in existing levels of health and of service provision. Nevertheless, locally based targets for the health of pregnant women can be identified.

Most pregnancies should be wanted, which often, but not always, means they should be planned. Given the health problems of contraception,[13] however, the appropriate level of contraceptive use is for women to decide, and a target could be to make sure that all older school children are fully informed. Because counselling in unplanned pregnancy should be non-directive, no specific termination rate can be a target, but consumer surveys could assess the quality of counselling.

Ectopic pregnancy should be diagnosed as early as possible—Modern techniques allow the identification of almost every case before catastrophic haemorrhage occurs, and this is a realistic aim.

Miscarriage is not usually preventable, but it is important for psychological health that appropriate investigation and counselling should be offered, together with rubella immunisation of those negative for the antibody and treatment with anti-D immunoglobulin when appropriate.

Prenatal diagnosis—Though the cost effectiveness of screening programmes is important, the aim of the programme should not be to minimise the number of births of handicapped children but to offer reproductive choice to parents, provided resources are available. Thus the aim would be to offer full information to all parents eligible for screening to ensure that they had genuine choice and adequate support during periods of stress such as waiting for results or during and after termination or birth. Targets could be set for technical aspects of screening, such as good quality control on assays and tests, low rates of false positive and false negative results, and minimisation of morbidity after procedures, by adequate training.

Appropriate use of technology—New technology should not be widely used before it has been fully evaluated, but there is considerable doubt whether this is the case in respect of current practice of ultrasonography[14] or caesarean section.[3] Devolution of responsibility to primary care may reduce inappropriate use of technology, but this requires further evaluation.

Strategy for targets

The strategy for addressing the above and other goals could be based on the proposals of Banta[15]—for example, contracts specifying that all programmes of care to be purchased should be of proved efficacy, safety, and value. It is unlikely that this could be implemented immediately as there is often no consensus about what constitutes proof, but purchasers certainly ought to be discussing those matters. Because of women's overwhelming need and desire to have care and deliver as locally as possible, it is not practicable except in large urban areas to "shop around" for care, and outreach or devolution of care must be encouraged.

Women's views of what are important health outcomes and services must be ascertained by surveys and discussion with consumer groups and incorporated in the strategy; they may well illustrate the "myth of infinite demand"[16] as many women prefer minimal intervention.

A prerequisite for meeting goals is investment in information systems. Some standardisation is needed for collection of data on critical matters such as classification of the cause of perinatal death, the lower gestation limit at which death is classified, indications for caesarean section, etc.

Problems in achieving targets

It will be difficult to make any valid assessment of whether targets are being achieved (because of poor routine data collection and doubt about whether rates

of mortality and morbidity are population based) and not being distorted by selective referral and case mix differences. Targets may conflict—for example, the wish to reduce birth asphyxia might be thought to be incompatible with lowering the caesarean section rate, and fear of litigation may motivate the obstetrician. The proper aspirations of one set of health professionals may conflict with those of another—for example, midwives and general practitioners are both expert in the care of women with normal pregnancies. Financial considerations may interfere with appropriate tertiary referral. Planning and cooperation are more likely to promote better health than the competition which is proposed.

It may be difficult to quantify "soft" outcomes such as women's perceptions of counselling and grieving after bereavement without intrusive inquiries. Long term outcomes such as the birth or survival of children with handicaps may have implications for other public and private sectors and for families but may be invisible to those purchasing health care. Full health and economic assessment of strategies for intervention is essential.

Conclusion

Promotion of good health and nutrition in childhood will improve maternal health, but pregnancy is not too late for useful intervention, and failure to provide will mean paying a heavy price in terms of the health of future generations.

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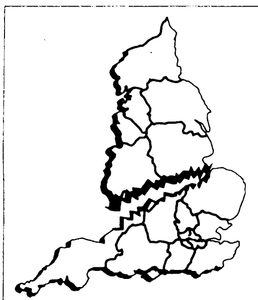


Accident prevention

I B Pless

The consultative document offers what is described as a new approach to improving the health of the population.[1] To an outsider it seems long overdue. There is an urgent need for such an initiative in general, but especially for accidents, which remain at epidemic levels. As Mr Waldegrave points out in his foreward, the need arises because the government's recent preoccupation with the management of the National Health Service is but one indirect way to meet the nation's health needs. To do so properly other more sweeping reforms are needed, especially those that decidedly shift the emphasis from medical care alone to at least equal investment in public health.

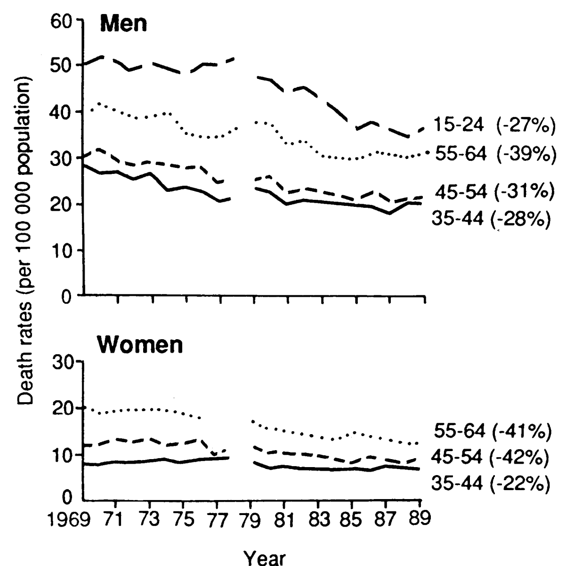
Should accidents be a key area?

The inclusion of accident reduction among the key areas is fully justified because it meets each of the specified criteria: injuries are a major cause of concern, there is wide scope for reducing them, and targets may easily be set.

Accidents are the leading cause of death among those under 30 and account for a greater proportion of years of potential life lost than cancer and heart disease combined.[2] They should also be a dominant concern because of the enormous costs to the NHS for treatment and rehabilitation.

The scope for improvement is especially compelling. A large number of proved measures await widespread implementation.[3] If there were similarly convincing evidence that equally effective means of preventing or treating cancer were available but not being implemented there would be a public outcry.

Finally, setting targets for accident reduction is easy—perhaps too easy when they reflect only aggregate figures. Although any of several global rates can be chosen, because of what is known about the epidemiological patterns of injury such figures are much less meaningful than age and cause specific targets.



Trends in accidental deaths in England, 1969-89 by age and with percentage change over the time in parentheses. Discontinuity between 1978 and 1979 due to change in coding; source of data, Office of Population Censuses and Surveys

With a combination of these three criteria a convincing case could even be made for placing injury reduction at the very top of the list of key areas.

The case against

The very use of the term accidents may imply that accidents are random events, beyond human control. This notion, however, is entirely discredited. A large

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