

People and Health

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Quick responses save mothers' lives

The maternal mortality rate in the city of Faisalabad, Pakistan, has been reduced to a level significantly below the national average. How this has been achieved is explained below.

Globally, about half a million maternal deaths occur every year, 99% of them in developing countries, including Pakistan. In developed countries there are only between two and nine maternal deaths per 100 000 live births, whereas in developing countries the range is 300–1000 or more per 100 000 live births. Illegal abortion causes 25–50% of maternal mortality; if family planning services were more widely accessible this factor would undoubtedly be much less significant.

Obstetric flying squad

In Faisalabad, Pakistan, where the maternal mortality rate was 10.1 per 1000 live births

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in 1977, an obstetric flying squad service was introduced in 1988. It comprises an emergency ambulance with medicines, equipment and trained staff, which can be called to a patient's home in case of complications during pregnancy, labour or the puerperium. Even with the best antenatal care, unexpected complications can arise at home, including antepartum and postpartum haemorrhage, toxæmic convulsions, premature or precipitate labour, abortion, and emergencies associated with ectopic pregnancy.

The obstetric flying squad deals with emergencies at home and then takes the patients to hospital for further management.

The idea of an obstetric flying squad was first put into practice at Bellshill in Scotland in 1935 and was subsequently taken up in Newcastle upon Tyne in England. In the developing countries, Faisalabad is probably the first city to establish an obstetric flying squad service.

The first requirement for an obstetric flying squad is the capacity to provide skilled help rapidly when emergencies occur. A 24-hour duty rota for consultants and house staff resident in hospital makes this possible. On being contacted the doctor on duty notes

Delay in securing expert attention when complications of pregnancy and childbirth arise at home is a major cause of maternal deaths.

down the indications and the condition of the patient and gives instructions to the person calling on measures to be carried out at home pending the arrival of the ambulance.

The service received its first call in January 1989 after the authorities had organized an explanatory meeting with a local community. A lady health visitor reported that a woman who had been pregnant for 38 weeks started to bleed suddenly when she went to the toilet. A team consisting of an obstetrics registrar, a senior house officer, an anaesthetist and a nurse arrived within half an hour. After resuscitative measures the patient was transferred to a labour ward and delivered by Caesarean section. Her recovery was uneventful and she was discharged nine days after the operation.

Education and information

An intensive campaign of education and information in the community followed. It involved the use of radio, newspapers, cinemas, hand bills, display charts, and advertisement boards. Information about the

service was given to lady health visitors, vaccinators, councillors, imams, gynaecologists, general practitioners, the heads of the social welfare organization, social welfare officers, principals of colleges, headmistresses of schools, political leaders, factory workers, the local government health officer, and the deputy director of the health department.

Growing demand

During the following year there were 73 calls, mostly from family members, lady health visitors, traditional birth attendants, and doctors, and a few from journalists and nurses.

A patient with acute renal cortical necrosis received peritoneal dialysis; this was a case of accidental haemorrhage in which the patient was so collapsed that venesection was done at home for initial resuscitation. There were 19 calls for obstructed labour, 17 for postpartum haemorrhage, 10 for antepartum haemorrhage, seven for inevitable abortion, six for labour pains, three for premature labour, and three for retained placenta. Other indications were cardiac failure in labour, breech presentation with cord prolapse, puerperal sepsis, false labour pains, hepatic encephalopathy with pregnancy, pregnancy-induced hypertension, eclampsia, and threatened abortion.

Talks on mother and child care

Three rounds of meetings were held at 35 mother and child health centres during 1989. In the first round, lectures were given on mother and child health care and on the obstetric flying squad to lady health visitors and traditional birth attendants. In the second, expectant mothers attended talks on the same subjects, received antenatal

check-ups, and were provided with iron pills. This was done on the advice of traditional birth attendants, who reported that expectant mothers often refused to attend hospital. In the third round, talks on these subjects were again offered to all women in the area, including traditional birth attendants and expectant mothers, both of which groups requested this and reported resistance to hospitalization among older women.

Mortality down

A survey of mortality associated with home delivery was conducted by a team of doctors and lady health visitors between January and December 1989. The homes of deceased mothers were visited and information was also obtained from the municipal corporation, vaccinators, and private hospitals. Evidence of 48 maternal deaths was discovered, although the records of the corporation showed only 34 such deaths. There were 55 560 recorded live births in the same year, giving a maternal mortality rate of 0.86 per 1000, substantially below current estimates for Pakistan as a whole.

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Delay in securing expert attention when complications of pregnancy and childbirth

arise at home is a major cause of maternal deaths. Community education, adequate transport and good personal relationships can help to diminish the problem. Eclampsia and postpartum haemorrhage can be reduced by good antenatal care and the hospitalization of women at risk. Obstetric flying squad services can save many lives by resuscitating patients at home and transferring them to hospital under supervision. Resources should be made available centrally so that such services can be expanded throughout the country.

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Mother and child health care centres should be established in remote rural areas as a further contribution to combating maternal mortality. An independent evaluation of the successful mother and child health programme in Faisalabad by an international agency would undoubtedly be of interest in many parts of the world.