

# PERINATAL MORTALITY AND ITS PREVENTION IN RURAL SWAZILAND

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## OPSOMMING

Niemand is in 'n beter posisie om die huidige hoë perinatale sterftesyfer te laat daal as die plattelandse vroedvrou nie. Verloskundig gesien, kan sy dadelik die versorgingspeil verhoog as sy steun en aanmoediging kry. Van groter belang is dit dat sy in haar posisie as 'n brug tussen 'n tradisionele plattelandse gemeenskap en 'n wetenskaplik gegronde gesondheidsdiens, direk die uitwerking van die voorheen genoemde 'primêre' oorsake van perinatale sterftes kan waarneem. Sy sal vind dat albei groepe dikwels ewe onkundig is oor sulke 'primêre' oorsake en om mekaar se probleme te hanteer.

## INTRODUCTION

**P**ERINATAL mortality is defined as the number of stillbirths and deaths in the first week of life per thousand births. While diagnoses such as 'prematurity' or 'intrapartum asphyxia' are of interest to midwives and doctors, they tell us very little about the basic reasons for these deaths. Of greater relevance to health workers in developing countries are what may be termed the 'primary' causes of mortality.

These factors overlap and affect (a) the mother and the community she lives in, and (b) the health services. They include the following:

### Economic

- lack of money or time to 'buy' maternity care
- resources spent on urban maternity units which are doctor-orientated yet most mothers live in rural areas and might prefer delivery at a local clinic by a midwife.

### Educational

- money and time available but there is unawareness of the benefits of modern maternity care
- distrust of workers with low educational standards (e.g. rural health visitors, 'barefoot doctors') who can, in fact, be more influential than over-trained nurses and doctors.

### Cultural

- family and community favour traditional practices and beliefs, seeing no advantage in modern obstetrical practice
- health professionals may have been educated in a different country or given training (and acquired prejudices) inappropriate to local needs.

### Intellectual

- as there is little concept of the future or anticipation of problems maternity services are used too little and too late

- health workers may seldom talk to their clients about mutual problems. Accommodation for waiting mothers, for example, is much appreciated by rural communities but highly trained doctors often have little idea of their patients' transport problems around the time of delivery.

### Geographical

- lack of roads, transport and telephones in rural areas
- nurses and doctors prefer to work in towns and cities.

### Political

- rural maternity services arouse little political fervour in male-dominated societies
- medical and nursing power (both in numbers and influence) is urban-based and orientated.

### Social

- migrant labourer husbands are unavailable to make decisions affecting the wife's pregnancy
- well-paid health workers in large organisations in materialistic societies tend not to sacrifice off-duty time for intangible rewards.

A study of all perinatal deaths occurring between November 1978 and June 1979 was therefore undertaken at this rural hospital —

- to clarify the role of some of the 'primary' causes of perinatal mortality described above;
- to help determine priorities for future maternity services in the area. If, for example, most deaths were due to poor or non-existent antenatal clinic (ANC) care, it would be wasteful to invest in a premature baby unit;
- as part of a larger study of mother and child health (MCH) services in this region of Swaziland.

While information about the perinatal period is important, it illuminates only a fraction of MCH problems. In Swaziland, over 70% of mothers deliver at home and 40% have no antenatal care in their pregnancy.<sup>1)</sup> Nor is there any point in a clinic or hospital having a low perinatal death rate if most of the babies salvaged later die in infancy due to preventable diseases or bad feeding practices — the national infant mortality is 156 per thousand,<sup>1)</sup> a remarkably high figure for such a small and relatively favoured country.

## Results

Of 52 deaths, 12 (23%) were judged unavoidable (congenital abnormalities, *abruptio placentae* without toxemia, stillbirths without an obstetric or medical cause) and were excluded from further study.

**TABLE 1 AVOIDABLE PERINATAL DEATHS  
(40 cases)**

| FACTOR   | NUMBER | % OF TOTAL |
|--|--------|------------|
| 1. Admitted with                               |        |            |
| — Stillbirth                                   | 15     | 37.5       |
| — Foetal distress                              | 3      | 7.5        |
| — Obstructed labour                            | 4      | 10         |
| 2. Transport difficulties                      | 8      | 20         |
| 3. Born before admission                       | 8      | 20         |
| 4. Mismanaged 2nd stage                        | 12     | 30         |
| 5. 'At Risk' factor not managed adequately     | 12     | 30         |
| 6. No antenatal care                           | 7      | 17.5       |
| 7. Prematurity (spleen score 36 weeks or less) | 14     | 35         |
| 8. Hypertension and pre-eclampsia              | 2      | 5          |
| 9. Multiple pregnancy                          | 6      | 15         |

## Discussion

Perinatal deaths can be prevented at 3 levels: (a) in the hospital (b) at mobile and permanent rural clinics and (c) in the community, which includes the mothers themselves, their families and neighbours.

The results in Table 1 suggest that:-

- a) the hospital has a limited role in directly preventing mortality as well over half the deaths had occurred prior to admission or were due to factors beyond the hospital's control (Factors 1,2,3,6).
- b) attendance at ANCs and delivery by midwives or doctors is no guarantee of survival, as a third of deaths were due to 2nd stage mismanagement (usually due to inaccurate assessment of cervical dilatation) while a further 30% were associated with antenatal 'At Risk' factors either being missed or inadequately dealt with. In a series of 500 deliveries at this hospital,<sup>2)</sup> 57% were found to have one or more 'At Risk' factors present likely to cause maternal and/or foetal complications. When assessed by two independent medical observers, appropriate action was judged to have been taken in less than half of cases. Such deficiencies can be improved by regular self-audits, in particular the unit perinatal mortality and morbidity meeting.

- c) there is community resistance to institutional care and/or ignorance of its benefits (Factors 1,2,3,6). This must be a major concern to all MCH workers because, while the region served by this hospital has a low incidence of pelvic contraction, toxemia, anaemia and malnutrition and obstetrically-relevant diseases like malaria, sickle-cell disease and abortions either do not exist or are uncommon, the national perinatal, infant and maternal mortality rates are estimated to be much higher than expected for a small, compact nation whose communications, employment, nutrition and health services compare favourably with many other African countries.

Prematurity was a factor in 35% of deaths, almost all being due to combinations of birth asphyxia, respiratory distress syndrome, hypothermia and hypoglycaemia. Tan<sup>3)</sup> has shown that good neonatal care is not dependent on expensive equipment and can be practised in rural hospitals.

Analysis of the stillbirths showed that almost half could have been prevented at antenatal clinic level (e.g. undetected syphilis, undiagnosed pelvic contraction, bad obstetric histories taken too lightly) while a further third were due to 2nd stage errors in management.

## Conclusion

Perinatal mortality is caused by many non-obstetric 'primary' factors such as a community's economic and educational standing, cultural beliefs, geographical position and political power. Nevertheless, the present study suggests that a considerable proportion of deaths in this rural area are preventable now, particularly at antenatal clinic level and around delivery. This is not meant as a criticism of midwives, who work in a system which expects them to fill many other roles besides their obstetric one.

Hospitals have a limited role in directly preventing mortality, not least because so few Swazi women deliver in institutions. Maternity facilities must not simply exist: they must be socially acceptable to their community. In this respect, the examples of Cuba<sup>4)</sup> and China<sup>5)</sup> must interest any MCH worker, particularly the latter's blend of traditional and Western medicine.

No person is better placed to reduce the present high perinatal mortality than the rural midwife. Obstetrically, she can immediately improve standards of care if she is encouraged and supported. Of greater importance, her position as a bridge between a traditional rural community and a science-based health service means that she can observe directly the effect of the previously mentioned 'primary' causes of perinatal mortality. She will find that both groups are often equally ignorant of such 'primary' causes and of each other's problems in trying to cope with them.

## REFERENCES

1. Report WHO Statistician, Ministry of Health, Mbabane (1978).
2. MCH Services, Lubombo District — Part 1. Good Shepherd Hospital, Swaziland, 1979.
3. Tan, K.L. *Tropical Doctor*, 1978, 8, 36-39.
4. Ochoa, R. Ministry of Health Publications, Havana, Cuba, 1976.
5. Biddulph, J. *Papua New Guinea Med. J.* 16 (2) (1973).