The fate of women who deliver at home in rural Kwazulu

Assessment of the place of traditional birth attendants in the South African health services

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Summary

A community survey was carried out to establish the fate of rural Zulu women and their infants after home delivery. The results of a pilot project for training traditional birth attendants (TBAs) in the area are described. The authors conclude that potentially there is an important place for TBAs in the obstetric services of rural South Africa and recommend official recognition and preliminary extension of this programme.

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In many of the more inaccessible parts of Natal and Kwazulu rural women have considerable difficulty in getting to conventional care during labour. Little is known about the fate of these women and their infants, or about the traditional birth attendants (TBAs) who look after them. This study was undertaken to try to find some answers in this area.

Subjects and methods

The Umphambinyoni Valley in the Dududu district, 90 km from Durban, was selected for the study. The Dududu Clinic is one of two Kwazulu clinics in an area inhabited by approximately 200 000 people. Its staff consists of 3 midwives, 1 clinic domestic and 1 night-watchman. The surrounding area is extremely hilly, with many inaccessible valleys. The Umphambinyoni Valley is 3-4 hours' walk from the Clinic, and there is no bus service.

The Clinic is equipped with a waiting mothers' area which can accommodate 6 women. However, its drainage area covers the domains of 3 chiefs, and women are often reluctant to use this accommodation if they come from a domain outside of that on which the Clinic is built. It is therefore not surprising that although approximately 40 new antenatal women are seen at this clinic each month, only 5 deliver there each month, while approximately 15 are referred to the nearest hospital. The rest of the women deliver at home.

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The *induna* (chief's 'lieutenant') and his council in the valley were approached for permission to conduct a house-to-house survey of the women in a sample of 100 representative households scattered across the valley. The interviewer was a literate man living in the valley, who was appointed by the *induna's* council. At the same time permission was granted for the authors to investigate the methods of and develop a training programme for the 4 TBAs working in the valley.

Results

For various reasons the interviewer was only able to interview 85 parous women in the time available. During this time he obtained the histories of two maternal deaths in these households during the past 10 years. One woman had died of a massive antepartum haemorrhage, the other of a postpartum haemorrhage. These 87 women had had 364 deliveries between them, giving a maternal mortality rate of 550 per 100 000 deliveries.

Of the 85 women interviewed, 5,9% were under 20, 45,9% between 20 and 29 and 48,2% over 30 years old. A large proportion (69,4%) of the women were illiterate and exact estimations of their ages were therefore often not possible; only 9,4% had had 6-9 years of education while 21,2% had had 1-5 years. Of the group 18,8% were single, 61,2% married and 16,5% engaged. The status of 3,5% was unknown. Their mean number of pregnancies was 4,2.

The survival rate of the 361 children born to these 85 women was 79,5%. The perinatal mortality rate was 58/1 000 (8 stillbirths, 13 first-week deaths), the neonatal death rate (within 1 month of birth) 72/1 000 live births, and the infant mortality rate 147/1 000 live births. When mothers bottle-fed exclusively, the mortality rate was 9/16 live births; 52,9% of mothers breast-fed exclusively. The overall mortality rate among the infants varied with the mothers' educational status (Table I).

TABLE I. INFANT MORTALITY AND MOTHERS' EDUCATION IN YEARS

	Mothers' education in years		
	<4	4-6	7-12
No. of infant deaths	**62/267**	**11/62**	**4/23**
%	**23,2**	**17,7**	**17,4**

The understanding that mothers had regarding preventative health services was assessed by asking them about the use of enemas and of immunization. Of the women 71,8% gave their infants regular enemas, while 20% did not give a clear reply to the question; 23,6% of the babies were fully immunized, 42,3% partially immunized and 34,1% had received no immunization at all.

Assessment of accessibility of intrapartum care can be measured by the fact that 92% of these infants were delivered at home. Because such a high proportion of the women was delivering at home, and because the prospects of an early improvement in the availability of conventional intrapartum care seemed remote, an attempt was made to provide training for the TBAs and to assess the results of this training. The authors met with the TBAs for 4 hours once a fortnight for a year, then less regularly for a second year. The first 5 visits were used to administer a questionnaire based on one used in Ghana.[1] Suitable modifications were introduced as necessary, and with this information, the role of these women was defined as follows:

Role description of TBAs — Umphambinyoni pilot scheme

On completion of training it is proposed that the TBAs should carry out the following tasks in the community:

Visit pregnant women in their homes

Pregnant women in their immediate vicinity should be visited at home in order to provide health education. The importance of early and regular antenatal clinic attendance should be stressed. The family should be advised about diet in pregnancy and advised to avoid *isihlambezo*, a herbal infusion. The family should be advised about permissable activity in pregnancy — in particular, heavy manual work should be discouraged — and intercourse. The importance of breast-feeding and avoidance of the use of enemas in the neonate should be stressed.

At the first visit the TBA will take the mother's history and refer her, with a case-sheet which she will issue, to the next antenatal clinic in the area.

Assist at the local maternal/child welfare point

The TBA could take histories, provide health education and possibly assist with the weighing of babies, etc. From this clinic she should be encouraged to do a certain amount of community follow-up (e.g. tracing women with positive serological test results who are not attending, etc.). Health education subjects to be covered by the TBAs at the visiting-point should include the following: regular antenatal attendance, breast-feeding, weaning foods, regular well-baby clinic attendance, the fully immunized child, signs of illness in babies, danger signs in pregnancy, transport and travelling when pregnant, the importance/methods of 3-year family spacing, signs of early labour, and the physiology of labour.

The visiting-point will be used by the clinic staff to: (*i*) provide a high standard of antenatal screening, thus ensuring that no high-risk mothers hazard a home delivery; (*ii*) introduce the TBAs to the community and provide them with continuing education, especially practice in palpating the pregnant uterus and its contents and the examination of newborn infants.

Deliver selected, healthy women who elect to deliver at home

In order for a woman to be accepted for home delivery by the TBA, she must: (*i*) have no risk factors on history-taking, and/or have been screened at the antenatal clinic and been designated fit for home delivery; (*ii*) have a cephalic presentation; (*iii*) have clear liquor; (*iv*) not labour longer than 18 hours; and (*v*) not push for more than 30 minutes.

The TBAs will be equipped with suitcases containing the following materials: 2 packets of sanitary towels, mouth suction apparatus, 5 sterile scalpel blades, 10 sterile cord clamps, chlorhexidine (Hibitane) in spirits (5 x 20 ml), 5 packets of sterile cottonwool balls, a small hanging scale, and 2 bars of toilet soap. These kits will be replenished at the clinic visiting-point.

Deliveries are to be conducted according to normal cultural practices, but without the aid of internal examinations or *imbelekisane* (a herbal infusion with oxytocic properties).

Postpartum

The TBA is to visit the baby and mother on the 2nd and 5th postpartum days. During these visits, she will examine the baby for: jaundice, hypothermia, cord and skin sepsis, and failure to suck. She will examine the mother for: fever, excessive bleeding, tender breasts, cracked nipples. Any such problems found will be referred for attention to the Dududu Clinic staff.

Health education given during these visits will cover: the importance of breast-feeding, the avoidance of enemas, the importance of well-baby clinics and immunization, and the importance of 3-year spacing of pregnancies. The baby and mother are to be referred after 1-2 weeks to the visiting-point or to the Dududu clinic for assessment. The mother should attend armed with the case-sheet issued by the TBA.

Follow-up

The TBA should follow-up her client once every month until the baby is successfully established on an adequate weaning food. During these visits, she should: (*i*) check to see the mother has attended the well-baby clinic; (*ii*) provide further contraceptive education and ensure that contraceptive measures are started by the third postpartum month; (*iii*) encourage the building of a pit privy; (*iv*) encourage the protection of the water supply; and (*v*) encourage the establishment of a vegetable garden.

A teaching programme with this overall training objective was then devised. Because all 4 women were illiterate, all teaching was done by word of mouth and by practical demonstration and experience. Recall of information was tested at each visit by reviewing the previous teaching sessions. Continuous assessment of practical skills, such as establishing the lie and presentation of the fetus or leading a health education session, was carried out on a one-to-one basis.

The work of the TBAs in the field was evaluated by having them keep records of all deliveries. A maternity case record for use by illiterate TBAs was constructed for this purpose, utilizing appropriate pictures. At each fortnightly visit the outcome of each delivery was discussed, records were checked, and an attempt was made to follow-up any referrals.

Results of TBA care

During the 2 years of the study, these 4 TBAs participated in the care of 22 pregnant women from their valley.

They referred 3 women in labour. One was referred because labour was prolonged; she delivered normally soon after arrival at hospital. Another was referred because of slow descent of the presenting part, with a big baby, in spite of strong contractions. This woman was transferred from the peripheral hospital to King Edward VIII Hospital, Durban, where she was safely delivered of a healthy baby by symphysiotomy. The third was also referred for prolonged labour, but had a normal vaginal delivery in hospital. Delivery was followed by a postpartum haemorrhage necessitating blood transfusion.

Two women were referred during the antenatal period, one because she requested a tubal ligation, and the other because on examination at the clinic visiting-point she was found to have a

small pelvis. All 5 of the referred women received adequate postnatal health education from the TBAs. The only early infant death in this series was that of the baby of one of the referred women, who returned from hospital bottle-feeding her baby. The baby died at 5 weeks of gastro-enteritis.

The TBAs successfully delivered 17 women at home, 14 of whom had no high-risk factors and received adequate care. One woman with a previous neonatal death and 2 grand multiparas called the TBAs when they were already in advanced labour. They were correctly and safely delivered at home. There were no maternal, perinatal or early infant deaths in this group.

One of the impressive characteristics of the TBAs was their readiness to accept new ideas and change long-established customs when adequate explanations of the need for change were offered.

Discussion

This survey showed that the people of the Umphambinyoni Valley still rely on traditional structures for intrapartum care in 90% of deliveries. Care is given either by an older woman in the family, or by women whom the community have come to accept as TBAs because of their 'compassion and courage in staying with women in labour'. Such women are often widows or the wives of men who are unable to work. They receive a gift in kind for services rendered. A similar structure exists in Malawi.[2]

The view of TBAs held by most medical staff is that they are an ignorant and meddlesome lot out for quick gain. Our experience with this group suggests quite the contrary. They proved to be compassionate, conscientious women, hungry for new knowledge and better methods. They were prepared to walk for 3-4 hours each way every fortnight for 2 years to receive instruction and share their insights. Their only reward was a substantial meal and the knowledge that they were being equipped to render a better service to their community. There is no doubt that they accepted new ideas freely and were prepared to act on them. There is also no doubt that their attitudes and insights largely control the practices that surround pregnancy, delivery and infant care in rural areas. If health education is given to young women only in such areas, it is therefore usually being given to the wrong target group. It is really no surprise that health workers often find that so little change in health-related behaviour results from their teaching in such areas.

Health services in the Republic of South Africa have so far ignored the traditional midwife, with the exception of the licensing and control of the Indian TBAs in Durban in the 1950s. This situation is quite different from that in many nations in the developing world, in which the TBAs have been registered and integrated into the health care delivery system. Ten countries in Asia, 10 in Africa, 4 in the Middle East and 12 in the western hemisphere register TBAs. Twenty-three of these countries provide some form of training, the length of which varies from 7 days to 1 year.[3] The role of the TBAs varies from country to country, but may include the provision of antenatal, intrapartum, postnatal and family planning services. Remuneration of these women may take the form of: (*i*) a monthly retainer from the Government, regardless of services performed; (*ii*) a monthly stipend from the community; (*iii*) payment based on performance (e.g. the number of family planning clients referred); or (*iv*) payment by clients for services or family planning supplies which traditional midwives receive free of charge.

Programmes for the training of TBAs have been initiated by government health services, voluntary organizations and medical schools. Often when governments have been committed to replacing TBAs with better-trained personnel, suspicion between the TBAs and the health authority has been such that training has been more effective when offered by a voluntary agency.

The place of TBAs in the South African health services

The question therefore arises as to whether there is a place for the registration and training of TBAs in the rural obstetric services of South Africa. This survey shows that the numbers of deaths in pregnancy in the remote areas of Kwazulu, which are not reached and will not be reached in the foreseeable future by conventional health services, are unacceptably high. The pilot project has demonstrated that even illiterate TBAs can be trained to provide a high standard of health education and motivate the mothers to use poorly accessible antenatal clinic services. They can also provide rudimentary but effective monitoring of labour, as judged by the timing and quality of the transfers received from them after training.

In their valley they have become the community arm of an over-extended health service. Their training has undoubtedly contributed to safer delivery and better mothering. However, the further extension of this programme has foundered on two problems. One is that of financial reward. The community has not organized regular remuneration at a level which the TBAs regard as adequate for their devotion to the training programme. It is probable that this issue should have been brought up at the start of the programme by one of us in our discussions with the community, rather than allowing it to come later from them. The health authority concerned has allocated no funds for such projects. The other issue on which any further extension of this pilot project has foundered is that of the legitimacy of trained nursing personnel co-operating with TBAs in the manner mentioned. At the time of writing no clear ruling on this issue has been received by the authors.

Conclusion

Our experience with training this group of Zulu TBAs suggests that, when carefully selected, such personnel can be a valuable asset to rural obstetric services in the areas of:

1. Health education in respect of the elimination of undesirable practices both antenatally and postnatally.
2. The provision of rudimentary intrapartum care which is safer than that generally available to these women at present.
3. Obstetric case-finding. We recommend that the project be extended to other areas, with the necessary official recognition and financial backing to make it possible to evaluate it over a longer period and at greater depth.

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