The Female Client and the Health-Care Provider

Edited by Janet Hatcher Roberts and Carol Vlassoff

International Development Research Centre
THE FEMALE CLIENT
and the
HEALTH-CARE PROVIDER

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Summary

Lack of antenatal care and lack of attendance or attendance by non trained personnel during child birth are important risk factors of maternal and perinatal morbidity and mortality in Malawi related to obstetrical causes. Although many mothers attend antenatal clinics at various health units in Malawi, less than one quarter of them actually deliver at the health centre. A questionnaire was completed by 390 women who were followed up from an antenatal clinic at Nankumba health centre, Mangochi district, Malawi, to post delivery. About 85\% of the respondents had passed their sixteenth week of pregnancy by their first booking. Over 90\% of the women expressed a desire to deliver at the health centre. However, less than 25\% of these mothers did actually deliver at this health centre. The majority of those who delivered at home cited long travelling distances and unkind health centre staff as the main reasons for delivering at home. The labour outcome of the mothers who did deliver at the health centre was much better than that of the mothers who delivered at home ($X^2 = 16.89$, $P<0.001$). While it was very encouraging to note that the majority of the mothers desired to deliver at the health centre, the lack of actual deliveries occurring there was very much a cause for concern. Health education on the benefits of trained personnel assistance during labour is urgently required.

Introduction

Every year, an estimated half million women die of causes related to pregnancy and childbirth (World Health Organization 1991). Experience in other countries has shown that strategies most likely to produce a significant decline in maternal morbidity and mortality are those which include the assurance that women in labour can receive the skilled care they require (Safe Motherhood Newsletter 1994). In Malawi, the maternal mortality rate is estimated at 500 per

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100,000 births (Chipangwi 1989). A 1989 community study which analyzed maternal death data from 12 hospitals identified many direct causes of this very high maternal mortality, but the primary roots of the problem were found to be much deeper (Chipangwi 1989). One of these is the lack of trained assistance available during the majority of deliveries. It is estimated that at present in developing countries, 45% of births are either not attended or attended by non-trained personnel (Voorheove et al 1987). Awareness of the factors which may bring about this lack of attendance or attendance by non-trained personnel during childbirth is a precondition for improving women's use of health services.

Malawi's health service delivery is based on the National Health Plan 1986-1995 (UNICEF 1993). The main objectives of this health plan include extension of peripheral and community-based health services. This health service system has, however, been constrained by a lack of financial and human resources. Although gravely short of resources to offer optimal health services, the government of Malawi has done all that it can to provide antenatal services to pregnant mothers.

Among the steps taken to improve maternal health care services in Malawi is the training of traditional birth attendants (TBAs). Most TBAs, if not all, are elderly women who are already known to attend to mothers during labour in rural settings. These women are well known in their localities. They are identified, and given a two week training course consisting of theory and practice on simple and safe obstetrics. They are taught how to identify at-risk mothers, how to carry out hygienic deliveries, including care of the cord, and how to promote appropriate health education to the mothers. At the end of the course, in addition to the certificates of attendance, they are provided with delivery kits free of charge.

Antenatal clinic attendance in Malawi is good, and many mothers express the wish to deliver in a health unit (Mponda and Mwafulirwa 1993); in reality, the majority of them end up either not being attended or attended by non-trained people (the majority of whom are family members) during delivery. In Mangochi district, not more than 40% of pregnant women deliver in health units or with a traditional birth attendant (Mponda and Mwafulirwa 1993).

Why do so many women who wish to deliver their babies under the most ideal conditions available end up not doing so? In an attempt to answer this question, this study examined antenatal attendance, intended place of delivery, the
actual place of delivery, and the delivery outcome of a cohort of pregnant
mothers attending an antenatal clinic at Nankumba health centre in Mangochi
district of Malawi.

Subjects and Methods

The study population included all mothers who had attended antenatal
clinics at the Nankumba health centre during the months of September and
October 1993, and who came from one of the following villages: Binali, Chamba,
Chilonga, Kala, Makokola, Nankumba, Saidi, or Sosola. These villages were
selected through a multi-stage method (Baker 1982). First, each village in the
Nankumba health centre catchment area was put into a cluster based on distances
of 10, 20, and more than 20 kilometres from the health centre. The maximum
distance was 30 kilometres. Three villages were then randomly selected from
each cluster.

Information collected on each woman included name, age, marital status,
educational background, gestation age, and expected date of delivery. In
addition, the women’s addresses were recorded to facilitate after-delivery follow-
up.

In April-May 1994, a follow-up was undertaken, and additional
information was obtained from the women. This information was collected by
means of a questionnaire which had been developed after a pilot study in the same
geographical area. Due to the high illiteracy rate among these women, the
questionnaire was administered to individual mothers in their homes by the
researchers. All the participants were clearly informed that the purpose of the
survey was to examine their antenatal histories, places of delivery, and delivery
outcomes. In addition, the women were asked to state the reasons for their
choice of intended delivery place, and the factors which determined the actual
place of delivery. Also included in the questionnaire was an inquiry into the
labour outcome, which relates to the mother’s and baby’s physical condition 24
hours after delivery, as reported by the mother. When delivery took place at the
health centre, the mother’s reported labour outcome was cross-checked with the
health centre’s records.

All data were coded and analyzed using the Statistical Package for Social
Scientists-x (SPSS-x) and BioMedical Programme (BMDP) software. Following
calculation of Mantel Haenszel chi-square statistics, a multivariate analysis was
conducted on those variables which had a high statistical significance of association with place of delivery. A logistic-regression model was used to determine the independent contribution of these variables to the place of delivery.

**Results**

Using the addresses provided by the participants, 396 of the 432 women who had been recruited were traced to their homes between September and December 1993. As six had not yet delivered, the questionnaire was completed by 90.3% of those who had been recruited into the study.

The respondents had a mean age of 17.4 years (SD 7.9). Eighty percent of the respondents were married or living with a regular partner. Nearly 90% of these women had never been to school, and therefore were illiterate. Eighty-five percent of the women reported attending antenatal clinics during previous pregnancies. The remainder were primigravidae. The respondents' mean gestational age at first booking was 22 weeks (SD 3.8), with almost 65% at 24 weeks or more. Only 3% of the women were at less than 16 weeks of gestation at first booking.

The reasons given by the respondents for attending antenatal during the present and/or previous pregnancies are shown in Table 1. For both present and previous pregnancies, about 90% of the respondents reported that they had attended the antenatal clinic to either get an obstetric check, for a tetanus toxoid shot, or to ensure that they would not be sent away when in labour. More than 50% of the primigravida women and 40% of non-primigravidae women reported that their husbands had instructed them to attend the clinic. Fewer than one third of the women in each group attended the antenatal clinic to receive medication, and only 1% of all respondents indicated that they had just followed friends to the clinic.

Almost half of the respondents (47%) had already given birth to five or more children; 5% had delivered 10 or more. The highest parity was twelve. Eighty-three per cent of the women who had delivered two or more children had not seen any of their children die. Despite the respondents' late booking for the antenatal clinic, more than one third not fulfil all the appointments given to them.

The majority (86%) of the mothers walked to the health centre, while the remaining 14% were carried by their husbands to the health centre on bicycles. The mode of transport appeared unrelated to the distance one had to travel to the health centre, to gestational age, or to the mother's parity. The respondents spent
a mean time of 7.7 hours (SD 4.3) travelling from home to the health centre and back. The time spent was directly related to the distance from the health centre, with those who had to travel over 20 kilometres spending well over 10 hours.

Table 1 Reasons Given for Attending Antenatal Clinics

<table>
<thead>
<tr>
<th>Reason</th>
<th>Present Pregnancy (%) (n = 390)</th>
<th>Previous Pregnancy (%)</th>
<th>X²</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>For obstetric check</td>
<td>91</td>
<td>92</td>
<td>0.07</td>
<td>NS</td>
</tr>
<tr>
<td>For tetanus toxoid</td>
<td>87</td>
<td>88</td>
<td>0.14</td>
<td>NS</td>
</tr>
<tr>
<td>To avoid being sent away when in labour</td>
<td>90</td>
<td>94</td>
<td>3.85</td>
<td>0.05</td>
</tr>
<tr>
<td>Husband requested attendance</td>
<td>55</td>
<td>39</td>
<td>18.79</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For haematenics and antimalarials</td>
<td>31</td>
<td>24</td>
<td>3.95</td>
<td>0.05</td>
</tr>
<tr>
<td>Was not feeling well</td>
<td>24</td>
<td>29</td>
<td>3.32</td>
<td>NS</td>
</tr>
<tr>
<td>For health education</td>
<td>20</td>
<td>25</td>
<td>0.70</td>
<td>NS</td>
</tr>
<tr>
<td>To accompany friends</td>
<td>1</td>
<td>0</td>
<td>1.73</td>
<td>NS</td>
</tr>
</tbody>
</table>

* Some respondents mentioned more than one reason
NS = difference not statistically significant

Ninety-five percent of the respondents indicated that they wanted to deliver at the health centre; four percent preferred to deliver at a trained traditional birth attendant’s place. Only one per cent stated that they would like to deliver at home. Of those who indicated that they liked to deliver at the health centre, two-thirds said that it was because they could be quickly referred to the hospital in case of complications. Only four respondents indicated that they would deliver at the health centre because the nurse said to (Table 2). On the other hand, all the mothers who preferred to deliver at a trained traditional birth attendant’s place gave the long distance to the health centre as the reason for saying so.

Regarding the actual place of delivery, only 90 (23%) women delivered at a health institution. Eighty-four delivered at the health centre, and six delivered at Mangochi District Hospital where they were referred due to labour complications. Of the remaining 300 mothers (77%) who delivered outside a health institution, 68% were not attended to or were attended to by non-trained personnel during child birth; the other 32% were attended to by trained traditional birth attendants (TBAs). Taken as a whole group, 52% of all respondents were
not attended to or were attended to by non trained personnel during child birth. This included 11 primigravidae and five women who had delivered 10 or more children.

Table 2 Reasons for Wanting to Deliver at the Health Centre

<table>
<thead>
<tr>
<th>Reason</th>
<th>Respondents (#)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick referral to hospital</td>
<td>245</td>
<td>66</td>
</tr>
<tr>
<td>Safe delivery</td>
<td>97</td>
<td>26</td>
</tr>
<tr>
<td>Health centre near home</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>It is free</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Husband said to</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Nurse said to</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>371</td>
<td>100</td>
</tr>
</tbody>
</table>

The reasons given by the 300 women for delivering at home are shown in Table 3. The majority (53%) said that by the time they realized they were in labour, they could not make it to the health centre or to the nearest trained traditional birth attendants' place in time. A surprisingly large percentage (21%) indicated that they delivered their children at home because their own experience or that of others had shown that certain midwives were very unkind to mothers during labour. Another 10% mentioned that an old female relative had refused to let them go to the health institution or to a TBA's place when in labour.

Table 3 Reasons Given for Delivering at Home by Those Who Had Done So

<table>
<thead>
<tr>
<th>Reason</th>
<th>Respondents (#)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realised too late that she was in labour</td>
<td>108</td>
<td>53</td>
</tr>
<tr>
<td>Unkind health centre staff</td>
<td>43</td>
<td>21</td>
</tr>
<tr>
<td>Older female relative refused to allow delivery in health centre</td>
<td>27</td>
<td>13</td>
</tr>
<tr>
<td>Too long distance to travel to health centre</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Sent back (date not due)</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>204</td>
<td>100</td>
</tr>
</tbody>
</table>
The number of mothers who delivered at the health centre was indirectly related to their distance from the health centre. For example, 90% of those who lived within one kilometre of the health centre delivered there, while only 10% of those who lived more than 20 or more kilometres away did the same. Similarly, the number of mothers who presented at the health centre during the second or third stage of labour increased proportionately with the increase in their distance from the health centre.

Labour outcome was best for those mothers who delivered at the health centre, compared to those who delivered with trained traditional birth attendants, and to those who delivered at home (P < 0.001). Of the 36 mothers who reported to have had a poor labour outcome, one delivered with a midwife at the health centre, six with trained traditional birth attendants, and 29 at home. Regarding the babies' reported physical condition 24 hours after delivery, there were two stillbirths (one delivered at home and the other at the health centre), and one baby was reported as having been in poor condition. This latter child was delivered at the health centre.

A logistic regression model was established using 8 variables which showed a significant association with a mother being assisted by a trained personnel during delivery. Table 4 shows that five of the variables emerged as being independently associated with a mother being assisted by a trained personnel during delivery. The strongest association was a positive attitude to the health centre staff. Patients who approved of the behaviour of the health centre staff were 2.8 times more likely to have delivered at the health centre or at a TBA's place than those who did not.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>X²</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive attitude toward health centre staff</td>
<td>2.8</td>
<td>1.6-4.7</td>
<td>17.5</td>
<td>0.001</td>
</tr>
<tr>
<td>Lack of objection from elder</td>
<td>2.4</td>
<td>1.0-5.8</td>
<td>4.6</td>
<td>0.030</td>
</tr>
<tr>
<td>Education</td>
<td>1.7</td>
<td>1.2-2.5</td>
<td>20.4</td>
<td>0.001</td>
</tr>
<tr>
<td>Distance</td>
<td>1.6</td>
<td>1.1-2.4</td>
<td>5.0</td>
<td>0.020</td>
</tr>
<tr>
<td>Received health education about it</td>
<td>1.5</td>
<td>1.1-2.1</td>
<td>6.0</td>
<td>0.010</td>
</tr>
</tbody>
</table>

CI = confidence interval
Discussion

Although the sample size in the study was relatively small, and limited to a catchment area around one rural health centre in Malawi, it was sufficient to fulfil the objectives and to provide reliable information. The findings of this study bring out some important points which can be of value in the future planning and management of maternity services, particularly as regards the factors which facilitate or inhibit women's use of the health services during labour in Malawi as a whole, and in the Mangochi district in particular.

The loss to follow-up was due to several factors. Some mothers had emigrated from the villages, while others were farm workers and were therefore not known by the indigenous members of the villages.

The great majority of the respondents appeared well aware of the reasons why one should attend an antenatal clinic. However, while about 90% indicated that they attended the clinic for an obstetric check, only one percent was influenced by her peers. The other reasons given for attending the clinic, such as securing a place so that they could be attended to when in labour, were also reflected in their gestation age at the time of first booking. Almost two-thirds of the respondents' gestation age at first booking was 24 weeks or more, and despite their late booking for the antenatal clinic, more than one third of them did not fulfil all the appointments given to them. The general lack of knowledge about the benefits of the proper attendance of antenatal clinic needs to be addressed very quickly.

This study demonstrated that antenatal attendance in and around Nankumba Health Centre is good, and many of the mothers expressed a wish to deliver in a health unit. In terms of provision of antenatal care as a means of preventing maternal mortality and morbidity, this relatively high antenatal attendance and the expressed wish to deliver at a health facility gives some ground for optimism, and it is indeed a sign of the success of the antenatal services provided by the Malawi government.

Paradoxically, however, when they were asked to give the reasons for wanting to deliver at the health centre, 90% of the respondents indicated that they could be referred to Mangochi hospital much more quickly. This may be a reflection of lack of confidence by these mothers in the services offered by the health centre during labour.
The finding that almost 95% of the women expressed the wish to deliver at the health centre but only 23% ended up actually doing so is less than the figure for the whole district, which is about 40% (Mponda and Mwafulirwa 1993). The respondents in this study could have had less clearer views on the value of being attended by trained people during delivery, and this may also have been a reflection of the low levels of literacy among the mothers in this study. A majority of those mothers (68%) who delivered outside the health centre ended up either not being attended or attended by non-trained people during delivery. This lack of assistance by trained personnel during delivery continues to provide countless opportunities for an increase in maternal morbidity and mortality, as well as perinatal morbidity and mortality. In this respect, the findings of this study compare very well with the UNICEF report on the situation of children and women in Malawi, in which it was reported that antenatal attendance in Malawi is good, and many of the mothers express the wish to deliver in a health unit (UNICEF 1987). Similarly, in a study of service-related factors contributing to maternal mortality in hospitals in Malawi, it was found that many mothers continue to deliver at home and only come to a health facility when problems have developed (Phoya et al. 1992).

Many of those who delivered at home were either primigravidae or grand multiparas. Although the reasons given for not being attended or being attended by non-trained people during delivery appeared genuine, for example that of the long distances from the health centre, the risks taken particularly by the grand multiparas remain disturbingly high. These mothers who take the trouble to attend the antenatal clinics are among those in the district who should be assumed to have been motivated to use the health facilities. While it appears from the list health education topics given in the antenatal clinics that most of these mothers should have had sufficient knowledge about the signs of the onset of labour, and many of them were multiparas, apparently many of them did not put that knowledge into practice. Indeed, 53% of those who delivered at home said that they did so because by the time they realised they were in labour they were no longer able to walk to the health centre. The health education given at the health centre seems to be failing.

From this study it is clear that the role played by family members and relatives must not be underestimated. Thirteen percent of the women who delivered at home said that they did so because they had either been forbidden to go to the health centre, or advised to stay at home by an older female relation. This suggests that health education about the advantages of delivering a baby
under the care of a trained person should not be limited to only the pregnant women, but through the village health committees to the whole communities. On the other hand, although only two percent of the women who attended the antenatal clinic did so on the instruction on their husbands, it does appear that at least some men have started to realise the importance of the maternity services offered.

Our findings that there was a big difference in terms of the labour outcome depending on the place of delivery is not surprising, considering the maternity knowledge levels of those who assist in the deliveries at home, and the generally unclean environment under which some of these deliveries take place. The trained birth attendants may have fared well with regard to the labour outcome because these trained traditional birth attendant could have been more selective in the choice of their patients and insisted on sending all problem cases to the health facilities.

Distance from the mothers' home to the health centre affected antenatal attendance and the place of delivery. As a result, of the mothers who lived 8 kilometres or more away from the health centre, only those who had complications during a home "trial of labour" resorted to going to the health centre. This could also explain why the labour outcome was bad for some mothers who delivered at the health centre.

Given the relatively small proportion of mothers who deliver at a health facility, and the possibility that those who go there go after the home "trial of labour" has failed, leading to a poor labour outcome, health education on the signs of the onset of labour and the benefits of delivering in a health facility must be re-emphasized. Given that many mothers delivered at a trained traditional birth attendants' and the labour outcome was relatively good, many more trained traditional birth attendants should be made available at the village level.

To its credit, the Malawi Government has already taken steps towards the training of traditional birth attendants. However, much more needs to be done at this stage of high maternal mortality and perinatal mortality in Malawi if more mothers are to be attended by trained personnel during childbirth.

We were encouraged by the finding that the women who had a positive attitude to the health centre staff were almost three times more likely to deliver their children under the assistance of a trained person. We were similarly encouraged that those who received health education about the advantages of being assisted by a trained person during labour were one and one-half times more likely to be assisted during labour by a trained person. This also suggests
that the maternal health public education campaigns have somewhat succeeded in influencing attitudes. On the other hand, one should not forget that 20% of the women who delivered at home did so because they had either from past experience or from being told learned of bad attitudes among the health centre staff towards them.

Our analysis showed that the woman’s education was a very important factor in her decision to deliver her baby under good care. This compares very well with other findings and recommendations that to reduce maternal mortality and morbidity one needs to improve female literacy (USAID 1991).

It is therefore clear from this study that to improve women’s use of the available maternity services during labour, the government of Malawi and private organisations are confronted with serious challenges. It is evident that women’s education in general and about the use of health facilities in particular requires considerable emphasis and strengthening in order to reach a broad segment of the female population. Increasing the demand for maternity services through education should go hand in hand with extending access to these services.

References


