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## **TRADITIONAL BIRTH ATTENDANTS IN SAMOA: INTEGRATION WITH THE FORMAL HEALTH SYSTEM**

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## **TRADITIONAL BIRTH ATTENDANTS IN SAMOA: INTEGRATION WITH THE FORMAL HEALTH SYSTEM**

### **Abstract**

A Traditional Birth Attendant (TBA) as a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other TBAs. In many parts of the world, TBAs continue to provide a significant proportion of maternity care during pregnancy, birth and the postnatal period. In Samoa, TBAs are a recognised part of both the formal and informal health care system. The aim of this research was to examine the contribution that TBAs made in the provision of maternity care in Samoa. A descriptive study was undertaken and 100 TBAs who had attended more than 400 births a year were interviewed as part of a broader Safe Motherhood Needs Assessment.

The findings highlighted that although TBAs can work in collaboration with individual health providers or facilities or be integrated into the health system, TBAs were often practising autonomously within their communities, independent of collaborative links. This study showed that formal recognition and registration of TBAs would improve the recording of births and augment their partnership to the formal health care system. This formal registration process has since been implemented to improve monitoring and evaluation and assist future research with this important group.

## INTRODUCTION

Although the rate of births being attended by skilled health personnel has risen from 47% in 1990, worldwide, 34% of births have no skilled attendants (World Health Organization, 2011). Each year 45 million births worldwide occur without skilled personnel. Inequalities to maternity service provision exist across the globe, with skilled personnel attending in 66% of births in developing nations compared with 99% in developed nations. Millennium Development Goal 5 (MDG5) endeavours to reduce worldwide maternal mortality by 75% by 2015. A reduction in the considerable numbers of maternal and neonatal deaths and stillbirths will only occur with the use of skilled health personnel providing pregnancy and birth care especially midwives (UNFPA, 2011). In areas where women's access to maternity health personnel is limited or non-existent, traditional birth attendants (TBAs) are often the only caregivers during childbearing (Anderson, Anderson, Franklin, & Dzib-Xihum de Cen, 2004).

The World Health Organization defines a Traditional Birth Attendant (TBA) as a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other TBAs (World Health Organisation, 1992). In the 1970s, training for TBAs commenced in many places in the non-Western world (Kruske & Barclay, 2004; L. Sibley, Sipe, & Koblinsky, 2004). This training was usually supported by the World Health Organization and other funding bodies and undertaken by professional midwives (Kruske & Barclay, 2004).

In many parts of the world, TBAs continue to provide a significant proportion of maternity care during pregnancy, birth and the postnatal period (Kruske & Barclay, 2004). TBAs are often highly esteemed community members. However, their community status and recognition by governments varies worldwide where in some countries it is illegal to practice as a TBA (Syria, Turkey, Lebanon and China), in others there is no official recognition of TBAs despite their practice being permitted (Tanzania, Zambia, and Sri Lanka) (Flemming, 1994; Huang, 2003). For example, about 10 years ago the local provincial Health Bureaus in China abolished TBA licences and home birth was defined as illegal. This is despite evidence that distance and cost preclude many women from accessing hospital care for birth (Gao, Barclay, Kildea, Hao, & Beltone, 2010). In other countries, such as Bangladesh, TBAs are more accessible to women than professional providers, with 65% of births conducted by untrained TBAs. Postnatal care is also primarily provided by TBAs (Huque, 1997). In Pakistan, TBAs are also more assessable than professional providers and recognition is also coupled with employed work in the health system (Rozario, 1998).

### ***Traditional birth attendants in Samoa***

In Samoa, a small island nation in the South Pacific Ocean, TBAs occupy a strong and respected role and their legitimate role has been sustained over time. In one study of the role of the TBA in Samoa (Aiavao, 1993), many practicing TBAs have been influenced towards their vocation by their mother or a close relative who was herself a TBA. The casual apprenticeship that serves as training consists of accompanying and assisting the TBA in the community at births. After functioning as a TBA assistant, the apprentice becomes autonomous when she succeeds her 'teacher' upon her retirement or death (Barclay, Aiavao, Fenwick, & Tootoa Papua, 2005).

In Samoa, TBAs have recognition in that they are known as the *faatosaga* (midwife) or the *taulasea* (healer), placing her amongst those with special talents in the community (Barclay, et al., 2005). A study of Samoan art of healing depicts the Samoan TBA as having power and prominent social standing in her role in village life (Forsyth, 1983). The role of the TBA in Samoa is maintained separately from the formal health system. In Samoa, the Ministry of Health recognises the existence of the traditional health care system, which existed prior to the arrival of missionaries and their accompanying 'scientific' western medicine. The traditional health care system provided care to the physically and mentally ill. The TBA is seen by herself and the mother she cares for as a confident and independent practitioner. TBAs credibility and reputation comes from the espousal of traditional holistic care in Samoa and the anti-authoritarian and cultural sensitivity that they possess (Barclay, et al., 2005).

TBAs possess knowledge and expertise on childcare, counseling, and healing techniques. In addition, their practice is deeply rooted in Samoan culture and beliefs. Tradition and economical factors are often the grounds for women accessing TBAs. Anecdotally, it is believed that pregnant women in Samoa access TBAs for their accessibility, affordability and cultural acceptability, with pregnant women usually consulting TBAs before attending organised health facilities (Barclay, et al., 2005). Traditional healers and birth attendants are available to the community at all times and their services are paid in kindness and food, also accepting small gifts for appreciation of their work (Lees, 2004).

In Samoa, TBAs play an important role in maternity services provision. They are the traditional midwives, who provide maternity care particularly in the villages. TBAs are also members of Samoan women's committees. Many women choose to attend a TBA for all their maternity care and other women choose to have some care from a TBA with the remaining provided by the health service. Fifty-eight percent of pregnant women in Samoa have at least 1 antenatal care visit with a health

services and 93% have at least 4 visits (WHO, 2011). Eighty-one percent of births are attended by skilled health personnel (WHO, 2011) signifying that a proportion of the population are possibly having very little antenatal care and that TBAs may be performing a significant amount of pregnancy and birth care in Samoa. This will continue until health professionals become widely available across the country. Inadequate numbers of midwives service the Samoan population (total of 173 in 2009), with 9.4 nurses and midwives per 10,000 people (World Health organization, 2011) and 50 doctors in the country, with 2.4 per 10,000 people.

### ***The Samoan population and health indices***

The independent State of Samoa consists of two large islands, Upolu (1,110km<sup>2</sup>) and Savaii (1,700km<sup>2</sup>) which account for 96% of the total land area, two smaller islands, Apolima and Manono, which are both inhabited, and six smaller uninhabited islands. All the islands are volcanic containing volcanic mountains with people inhabiting the peripheries and roads encircling the inhabited islands providing transport access. Samoa's capital, the city Apia, is located on the island of Upolu. The population is 179,000 with 23,000 living in urban areas. Gross national income per capita is \$4,270 and per capita total expenditure on health was US\$179 in 2008. Compulsory birth notification has only been a recent occurrence in Samoa. Therefore, exact population calculations such as size and growth has been difficult (Barclay, et al., 2005).

Although it is possible that the Samoan health indices presented do not reflect accurate figures due to imperfect data collection practices, in 1990, life expectancy for both sexes at birth was 63 years (62 years for males, 64 years for females) and most recently reported WHO (2011) data reports it as 70 in 2009 (68 years for males, 72 years for females). Communicable diseases remain a significant cause of mortality, particularly in rural areas. There is concern about the rising rate of non-communicable diseases, cancer, cardiovascular disease, diabetes and hypertension. Additionally, Samoa also has a double problem of communicable diseases, with diarrhoeal diseases and pneumonia being significant causes of morbidity and mortality. A number of infections, such as HIV/AIDS and dengue, continue as significant health problems in the Samoan population (World Health Organization Western Pacific Region, 2005).

There are about 4,600 births annually in Samoa. There were three reported maternal deaths in 1997 and two reported in 1998, yielding a maternal mortality rate of 64 per 100,000 live births. It is possible that this data does not reflect accurate figures due to the under reporting of some maternal deaths (Health Information System, 1999). Latest figures from the World Health Organization reports the 2009 stillbirth rate as 10 per 1,000 total births and the neonatal mortality rate as 12 per

1,000 live births, a reduction from 20 deaths per 1,000 live births in 1990. The caesarean section rate is 12.8% in the decade 2000-2010 (World Health Organization, 2011). This percentage is most probably a reflection of the paucity of obstetric availability in Samoa (Barclay, et al., 2005).

The Samoan Health Care system is a combination of public and non public service providers. The Government of Samoa remains the major health service provider. Other providers include NGOs, private health practitioners, a private hospital, traditional healers, traditional birth attendants, private providers, and alternative health practitioners both profit and not for profit. There are 33 government hospitals; health centres and sub-centres in Samoa. Their distribution by health region (Upolu, Upolu Rural, and Savaii Island) are Tupua Tamasese Meaole (TTM) Hospital in Upolu urban (Apia); 2 district hospitals, 7 health centres and 10 sub-centres in Upolu Rural; 2 district hospitals (Malietoa Tanumafili [MTII] and Sataua), and 4 health centres and 8 sub-centres. The 2 main hospitals are TTM and MTII.

District hospitals and health centres in Samoa are the basic units in the health care services in the rural areas. Registered and enrolled nurses staff these units and are the operational base for community nurses. A doctor periodically visits these services. Only one of the three district hospitals on the two larger islands (Upolu and Savaii) has a permanent doctor. This doctor visits the health centres at least weekly. All district hospitals have maternity beds (four postnatal, one labour bed and one delivery room). Midwives conduct the majority of deliveries, only calling a doctor if the delivery is compromised. Health centres also have two postnatal beds, one labour bed and one delivery room. Again, midwives mostly conduct the deliveries although if a midwife is not available a registered nurse will do so. Antenatal care is provided at district hospitals, health centres and the peripheral health facilities, the sub-centres. The Clinical Nurse Consultant in Midwifery travels to these to provide this service. Sub-centres provide simple preventative and curative services to the community, but they do not cater for deliveries and there are no maternity beds. Women are referred by the visiting doctor or nurse manager from the rural areas to TTM Hospital for specialist care.

There is one private (21 bed) hospital in Samoa located in a village on the outskirts of Apia. It provides various consultant services including obstetric care. There are 12 private medical practitioners and 7 private medical clinics (all located on Upolu). There is only one rural private medical clinic.

The health services recognise that many women have a TBA for maternity care and have been involved in the provision of training to TBAs. This training has been provided in Samoa for more than

two decades. A survey conducted by the then Samoan Department of Health in 1974-75 reported that TBAs conducted 67% of births in the country. Following this survey (1977), the Samoan Department of Health with the assistance of WHO implemented training for 357 actively practicing TBAs. A further survey undertaken in 1985 revealed a decline of births undertaken by TBAs to 24% of all births. Despite this significant decline, the Samoan Department of Health recommended a further review into the training and utilisation of TBAs, due to the critical health personnel staff shortage in rural areas. In 1987, 354 TBAs received a three day training course. Annual refresher courses were conducted in the years 1990-92. The number of births attended by TBAs were recorded as 988 (21%) in 1997 and 924 (20%) in 1998. In 1999 there were 188 currently active and practising TBAs in rural areas. Participation in the annual training workshops conferred active status onto the TBAs (Department of Health, 1997, 1998). Recent data from Samoa suggests that there are still more than 180 practising TBAs although this number also includes traditional healers (Ministry of Health, 2010).

While it is known that TBAs are an important part of Samoan society and culture, these Department of Health data are only estimates as no reliable data collection is undertaken to substantiate these figures. This lack of data with regards to the number of practising TBAs, the number of births attended by TBAs and their specific practices and referral patterns was the grounds for undertaking further research. The aim of this research was to examine the contribution that TBAs made in the provision of maternity care in Samoa.

## **METHOD**

A descriptive study using the WHO's Safe Motherhood Needs Assessment was undertaken initially in 2001. The study was approved by the Human Research Ethics Committee from the first author's university and the Department of Health in Samoa. The Department of Health was very supportive of the study as was the National University of Samoa. Both these organizations provided the surveyors for the data collection. A follow up survey of TBAs was conducted in 2008 as part of a health sector wide analysis of human resources for health.

### **The WHO Safe Motherhood Needs Assessment**

WHO developed the Safe Motherhood Needs Assessment (SMNA) in 1998 to provide health personnel and policy makers with assessment tools to undertake a rapid description survey for data relating to the availability, use and quality of maternity care provision and for the identification of any gaps in this provision of maternal and neonatal health provision (World Health Organization, 1998). The SMNA was designed to collect information to implement changes in the country's maternity care provision. The SMNA is a package of structured survey tools for data collection which

allow for local adaptation due to specific local needs. WHO (1998) recommends that the survey forms should be adapted for local use while keeping the basic structure intact.

The WHO Safe Motherhood Needs Assessment conducted in Samoa was funded by the World Health Organization (World Health Organization, 1998) and conducted over two periods. Participants were purposively recruited and participation was voluntary. The SMNA was adapted to account for local purposes (different phrases and terminology) and translated into Samoan. Survey forms were distributed to the various survey teams. The nominated surveyors from the National University of Samoa and hospitals were released from their duties to collect the data.

All health districts in Samoa were included in the sample. Due to Samoa's small population, it was possible to purposively cover each health district with its hospital, health centre and/or sub-centre. All TBAs known to the Department of Health were contacted to take part. There were 102 of these. The survey data generated was verified by senior members of nursing staff and was revealed to include 50% traditional healers. The nurse managers then sought all the TBAs they could find across Samoa by accessing village nurses and midwives. This produced a list of 227 TBAs. Further confirmation and identification of this list was undertaken to ascertain the numbers of active TBAs. One hundred TBAs from the nurse manager's generated list were surveyed and found to be active.

Quantitative data were analysed separately using frequencies and means as appropriate. Data were entered into the EPI-Info database by two of the surveyors, using the files supplied by the WHO Needs Assessment Guide (1998). Notes taken through the interviews and surveyor field notes were transcribed and made up the qualitative data. This data was analysed by descriptive analysis of common themes and responses.

## **FINDINGS**

The 100 TBAs initially interviewed reported attending a total of 445 births over the previous 12 months, although 29 TBAs had not attended any births in the past 12 months. Therefore, the 445 births had been attended by 71 of the TBAs. Most TBAs had attended between three and seven births and six reported attending 15 births in the previous year.

The TBAs were asked about their knowledge and understanding of danger and warning signs that may alert them to refer women to formal health facilities maternity care. Participants could respond more than once as to what danger signs may alert them to refer. Inadequate knowledge was revealed from the survey (Table 1). Absence of fetal movements, sepsis and signs and symptoms of pre-eclampsia were not considered by most TBAs as reasons for alarm and referral. When the TBAs were asked what they used to cut the cord post birth, almost all ( $n=94$ , 93%) used a sterile blade or



scissors. Almost half of TBAs did not use anything to treat the umbilical cord, although 36 (36%) used alcohol, and 22 (22%) used water or oil.

Almost half ( $n=48$ , 48%) of the TBAs reported using herbs in their practice. The rationale given for their use included to avoid abortion (46%), to relieve obstructed labour (14%), to stimulate contractions (13%), to help expel the placenta (5%), and to help with lactation (2%). It was common practice in Samoa for TBAs to apply herbs to the entire body of the laboring mother to facilitate birth when labour is prolonged. Their beliefs surrounding this practice are that by applying herbs, evil spirits that may cause difficult deliveries are scared away. Additionally, after birth, TBAs applied the leaves of the *fuefuesinai* plant to aid in lactation establishing.

More than half of the TBAs reported referring women to a health facility within the first week after a normal birth. A third of TBAs referred women only if the woman was unwell (Table 1).

When the TBAs were asked about the information and advice they provided women post birth, 67 reported that they advised child spacing, 71 advise them on early breastfeeding, 36 advised women on cord care, 42 advised the mothers to take their babies for immunisation, 53 advised women on personal hygiene, and 49 advised on nutrition.

The interviews demonstrated that the TBAs had limited understanding of the importance of keeping and recording information and data. This was because they were not accountable to any government, non-government or funding agencies. They reported that all their information and data were stored in their own 'memory banks' for the purpose of passing it on to the next appropriate successor. At the time there was no system to ensure that TBA births were registered and accounted for, nor counted in the total number of Samoan births per annum. This means that the outcomes of these women and babies are not accounted for.

## **DISCUSSION**

This study indicated due to the reported number of births per year that they attend, TBAs are an integral component of the health system in Samoa. Although TBAs can work in collaboration with individual health providers or facilities or be integrated into the health system (L. M. Sibley, Sipe, T.a., Brown, C.M., Dialo, M.M., McKnatt, K., & Habarta, N., 2009), Samoan TBAs are practicing autonomously within their communities, independent of collaborative links. Issues of lack of informative and supportive links between TBAs and the formal health system arose in this research. This study showed that formal recognition and registration of TBAs would improve the recording of births and augment their partnership to the formal health care system. Continued TBA training could

also contribute to enhanced links between TBAs, the community and the formal health care system (World Health Organisation, 1992).

Affordability is an issue for Samoan women. The cost of hospital fees, medications, transport and accommodation all contribute to the inaccessibility of the health system, leading women in many countries to use the traditional system in its place. In a country where these inequalities to maternity care exist, from a public health perspective, TBAs can play a vital role in maternity health care provision in Samoa. International support of TBAs has been growing since the 1990s, both from the government health sector and non-government organizations commencing with a joint statement of support from UNFPA with WHO and UNICEF to contribute to the effort endeavouring to improve global reproductive health (WHO, 1992). Offering TBAs continued support and training and evaluation of TBA practices could be one strategy in Samoa to improve reproductive health, maternal and neonatal health outcomes and minimize maternal and neonatal mortality rates (United Nations population Fund, 1996).

Due to the shortage of health services professionals in Samoa and the transferring of TBA knowledge through apprenticeships, TBAs will most certainly continue to play an important role in the provision of services for pregnant and birthing women in Samoa in the coming years. Despite TBA training provided by the Department of Health (now Ministry of Health) for almost 20 years, problems still exist. Besides the concerns noted above, this survey indicated there was a lack of understanding about the recognition and detection and referral of women with complications or risks. Referral to the health care system in the antenatal period by TBAs and the use of the formal health care system for antenatal care by women, together with the provision of emergency obstetric care, are important factors in getting women that are most in need of a hospital delivery to birth in a hospital. In communities where TBAs are actively participating and hold a respected position in their community, trained TBAs can possess a significant role in influencing women's use of and compliance to antenatal care (L. Sibley, et al., 2004). The training of TBAs is an ongoing process with refresher courses held twice a year by a Nurse-Midwife Consultant. All TBAs are registered and given certificates for their achievements.

This study resulted in the development of a 'Birth Book' for TBAs to use to record the number of births they attend and to provide information to the health services via community nurses also using the book. Development of the book was guided by a Samoan Nurse Consultant and they are reviewed monthly by nurse managers, both for enhanced record keeping for the Ministry of Health, but also with the aim of strengthening the linkage between the health care system and the community through the TBAs.

More recently, Samoa has developed a structured TBA registration and annual training review carried out by midwives (Buchan, Connell, & Rumsey, 2011). TBAs are now required to be registered through the Ministry of Health which means future research and analysis of TBA outcomes will be more feasible and accurate. Very few countries have registered TBAs in such a way.

This was a descriptive study of all the known TBAs in Samoa. Due to the non-registration of TBAs in Samoa, validation of the number of TBAs actively practising cannot be undertaken. The study is a 'snapshot' view in Samoa and it is likely that not all TBAs are accounted for. The lack of effective information systems made some calculations very difficult. This research, nonetheless, provides information regarding the significant role of TBAs in Samoa, and problems with referral to health services of at risk women. Approaches for promotion of referral for at risk women through the improvement of identification and the acknowledgement by TBAs of the need to refer is needed in Samoa.

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**Table 1: Practices of Traditional Birth Attendants**

	<b>NUMBER OF TBAS</b>	<b>PERCENT (%)</b>
<b>Last time TBAs attended a birth</b>		
• In the past week	19	19
• In the past month	33	33
• In the past six months	19	19
• In the past year	19	19
• In the past five years	3	3
• Five years or longer	6	6
<b>Danger and warning signs that may alert TBAs to refer women to a health facility#</b>		
• Abdominal scars/ previous stillbirth	22	22
• Headache/ hypertension/ swelling	23	22
• Anaemia/ pallor	41	41
• No fetal movement	14	14
• Abnormal fetal lie	44	44
• Sepsis/ offensive smelling vaginal discharge	19	19
• Light bleeding	29	29
• Heavy bleeding	46	46
• Multiple pregnancy	22	21
• Obstructed labour	42	42
<b>Time the TBAs take to refer a woman after a normal birth</b>		
• Never	19	18
• Immediately	22	22
• During first week	21	21
• During first six weeks	7	7
• If woman is ill	30	30
• Other	4	3

\*TBAs could report more than one danger and warning sign