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Antenatal care in Goroka: issues and perceptions

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SUMMARY

The high maternal mortality rate in Papua New Guinea indicates an urgent need for action. One area for examination is antenatal care. From April 2002 to August 2002 a qualitative study was undertaken in order to identify perceptions, beliefs, barriers and strengths relevant to the utilization of antenatal care by women in the urban, periurban and rural communities of Goroka, Papua New Guinea. Interview data about antenatal care utilization were collected from 20 pregnant or parous women and 4 antenatal health care workers and relevant statistics were reviewed. This information was analyzed in order to identify the constraints faced by the users of antenatal care and health care workers providing such services and to make recommendations aimed to improve the utilization and delivery of antenatal care in Goroka. Multiple encouragers and barriers to using antenatal care were identified within the three categories of physical barriers/ encouragers, cultural issues and health care system characteristics. The attitude of health care workers and their perceived ill-mannered treatment of women was one of the most significant concerns raised by the women. Nevertheless, all of the women expressed overall satisfaction with the care given. All of the health care workers stated that antenatal care is very important for the health of both the baby and the mother and expressed a desire to improve the level of care. The major constraints faced were staff shortages, limited supplies and broken equipment. There were four key areas of strength: the broad level of coverage, the high regularity of attendance, the women's commitment to antenatal care and the willingness of health care workers to overcome resource difficulties in the provision of care. Recommendations to improve the delivery of antenatal care services and their utilization by women addressed the situation of women and the interactions between women and health care providers, and proposed innovations in the health care system.

Introduction

A review of available literature revealed that multiple barriers to antenatal care and health care facility utilization have been identified in Papua New Guinea (PNG); however, few studies have focused on understanding the total antenatal care experience for women. Gillett (1) in her comprehensive 1990 review of the health of women in PNG estimated that during the average woman's lifetime she has a 1 in 26 chance that pregnancy or childbirth will cause her death. By contrast, the lifetime maternal death risk is 1 in 1500 for the developed world (2). The maternal mortality rate for PNG in 2000 remained at around 120 per 10,000 live births (3). This situation is dire and demonstrates an urgent need for improved maternal care in PNG. A review of literature relevant to PNG identified a number of barriers to health care utilization: health care system factors, psychosocial and cultural variables, financial situation, social support

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systems and the personal experiences of women with antenatal care (4-6).

The present study was designed to identify perceptions, beliefs, barriers and strengths relevant to the utilization of antenatal care by women in the urban, periurban and rural communities of Goroka in the Eastern Highlands Province (EHP) of PNG. Data were analyzed in order to identify the encouragers and constraints faced by both the health care workers and the users of the services. Recommendations were proposed to help improve the utilization and delivery of antenatal care in Goroka, in both the short and long term.

Methods

As this study aimed to increase understanding of antenatal care utilization through the analysis of beliefs and perceptions of women and health care workers, it used a combination of predominantly qualitative and some quantitative methods. It was designed as a cross-sectional descriptive study and was generally retrospective in nature in that it primarily investigated prior experiences, beliefs and perceptions of women. It was not a large-scale or nationally representative study but an exploration of beliefs within the chosen community. The informal and open style of the interviews aimed to reduce the possibility that the women would give information that was perceived to be correct or more acceptable to the researchers.

The research design employed a socio-ecological approach which permitted a qualitative focus where data collection involved semi-structured interviews with women and health care workers (7). This approach allowed the users' perspectives and total situation to be explored within a social, cultural, psychological and organizational framework.

Ethical approval was obtained from the PNG Medical Research Advisory Committee as well as the Curtin University of Technology Human Research Ethics Committee. Informed consent was obtained from all women, health care providers and health care facilities prior to data collection. No personal identifying data were recorded and great care was taken to ensure confidentiality of the study participants. Interviews were conducted in tok pisin (Melanesian Pidgin), recorded and translated into English.

Purposive sampling was used to identify three communities which were known to be receptive to research projects, and convenience sampling was employed to identify women within those communities who were willing to participate. The communities were chosen to enable comparison between urban, periurban and rural communities. Over the four-month period (mid-April to mid-August) in 2002, the field team conducted semi-structured interviews with 20 pregnant or parous women from the selected communities, facilitated 2 focus groups with pregnant women, observed interactions of health care workers and their antenatal care clients, interviewed 4 antenatal health care workers from three clinics, and gathered relevant statistics from health care services.

Results

According to the Papua New Guinea Department of Health (3), in 1990 in the EHP the estimated number of live births was 10174, the antenatal coverage was 61.5%, slightly lower than the national coverage (64.2%), and the annual number of new antenatal attenders was 6255 women in a total attendance of 17098 (37%). In 2000 the antenatal coverage for EHP (61%) had not changed (8). According to attendance records at Goroka Base Antenatal Clinic, the total attendances at Goroka Base Antenatal Clinic have decreased over the last three years. In 2000 the total attendance was 2712 women, in 2001 it was 2425 and in 2002, from January to June, there had been 1158 women (which gives an estimate, based on previous years, of 2326 for the year). According to records at Goroka Hospital

there were 2855 live births at Goroka Hospital in 2001. Maternal deaths for EHP were 12 in 1990 (3), 24 in 1998, 16 in 1999 and 17 in 2000 (8).

The data revealed four key areas of interest: the women's reasons for attending antenatal care, the women's perceived barriers and encouragers to attending, their experiences of antenatal care and the health care workers' beliefs and perceptions about antenatal care services.

Reasons for attending antenatal care

The reasons that women gave for attending antenatal care fell into three categories: to seek out care for themselves, to seek out care for the unborn child and to receive education or expected health treatment. 11 of the 20 women expressed multiple reasons for attending antenatal care, whereas the others expressed only one reason.

In general, the women put a high value on attending antenatal care. The most common reason given for attending antenatal care was to receive information regarding the state of the unborn child (13/20). This was expressed in terms of finding out the lie of the baby and if there was anything wrong with the baby and ensuring that the baby would be born healthy. Another common reason (12/20) given for seeking out antenatal care was to receive medication and nutritional supplements. Equally common (12/20) was the reason that the women wanted to receive general antenatal care and to discover any sickness in themselves. It was acknowledged among the women that there was a possibility of complications during pregnancy and that going to antenatal care was a way of finding out whether or not they were healthy in their pregnancy.

Two reasons for attending antenatal care given by a smaller number of women were a desire to secure a place to give birth at the hospital, which they believed would be facilitated by attending for antenatal care, and to receive health education. Education was mostly stated in a general sense and not for the receipt of specific information.

The average time of first visit for women on their first pregnancy was the fifth month with 4 of the 20 women going for antenatal care as soon as they missed a period or within the first month. However, some error in recall of this information is likely as some women had had their first pregnancy more than ten years previously. In subsequent pregnancies, there was a pattern of postponing the first visit to the seventh or eighth month with only 3 mothers stating that they had gone earlier than the fifth month for their initial visit. Most women stated that in subsequent pregnancies they had gone for their first visit closer to the time of delivery.

All of the women attended regularly once they had an initial visit, following the recommended return date given to them by the health care worker. The only exception to this was when women encountered an obstacle that delayed their visit. No woman reported not continuing to attend antenatal care once she had started.

Barriers and encouragers to attending antenatal care

Barriers

The most common barriers to utilizing antenatal care fell into the three categories of physical barriers, cultural issues and health care system characteristics.

> "It is hard to come here. There are many things that make it hard like finding transportation, finding money to pay for the bus, making sure my children are looked after, and leaving more work for others at home."

Of the 20 women, 9 stated that they had no difficulties or felt no barriers to attending antenatal care, while some women described numerous barriers. All of the women who stated that they felt no barriers to attending

antenatal care lived within the urban and periurban areas. It is interesting to note that, despite the women perceiving that there were no obstacles for themselves, they were aware of and concerned for the women in other areas who they knew did encounter barriers.

> "When I was pregnant it was easy for me to go for antenatal care because I live close to the hospital. But for my sister who lives outside of Goroka it is hard for her to find transportation and to get the money from her husband to buy her way to antenatal care. She also does not have water like I do, that is easy to wash with, or the time to spend the whole day away from her family and garden. I am sorry for the women who live outside of Goroka."

The primary physical barriers to the women were distances that needed to be travelled, which were difficult because of the lack of public transportation, lack of money to pay for transportation or physical weakness that made it difficult to walk the lengthy distance to the clinic. Women in the rural area in particular found that distance was a barrier to getting to antenatal clinics. The women of the periurban area saw distance or transportation as less of a barrier whilst none of the women from the urban area had any problem with distance or transportation. All of the 10 women interviewed in the rural areas described that they had to walk all the way to the clinic, or walk some of the way and then find public transportation to get into town, followed by more walking or getting other public transportation from the bus stop to the hospital. The women in the periurban and urban areas stated that they walked to the hospital because it was not far away and only used public transportation when it was raining or they were not feeling well. Money was a physical barrier in that the women did not always have the money needed to pay for transportation and were not able to obtain money easily.

The expected roles of women within the culture presented some obstacles since women found it more difficult to take their other children with them to antenatal care or to find others to look after their children. Additionally, at the time of a relative's death or fighting within their village, it was not culturally acceptable for the women to leave. Another cultural issue raised by one woman was that she missed one of her visits because her relatives were angry with her and had put a 'curse' on her. When her relatives were no longer angry with her she was again able to attend antenatal care.

The health care system barriers primarily took the form of long waiting times, negative attitudes of health care workers, occasional and unannounced closures of clinics, no antenatal health care worker present and lack of nutritional supplements or medications.

Encouragers

The most common encouragers fell into the same three categories of physical encouragers, cultural issues and health care system characteristics. All the women named at least one thing that they felt encouraged them or made it easier for them to attend antenatal care.

The main physical encourager to the women in the urban and periurban areas was that the clinic was close enough that they were able to walk to it and did not need to rely on having money or transportation. All of the women of the periurban and urban areas made similar statements about the way in which they got themselves to antenatal care.

The women who indicated that they walked to the clinic also talked about how the exercise strengthened them and helped them be healthy; and in one woman's case she believed that it helped her have an easier labour.

Another physical encourager as well as a cultural encourager described by several women in the rural areas was that they had family to look after their other children. The

close kinship system of PNG is a strength in that it assists women to receive support and assistance from their families. Most women did report that their husbands, relatives or extended family were able to and did assist them to receive antenatal care while they were pregnant. The provision of social support in much of PNG is a culturally felt obligation and is heavily depended upon. 15 of the women stated that their husband was supportive of them during their pregnancy and that he helped them with such things as household duties, money, food, clothing and childcare. 6 women said that their in-laws were supportive in similar ways and 6 women stated that their own families were supportive.

It was interesting to find that the women in the periurban settlements stated that they received less help from family and in-laws. This is probably because the families that are living in settlements have moved there from a village and away from their extended families. All of the women who stated that they did not have enough support or found it difficult to find childcare were living in the periurban areas.

As all of the women in the study received antenatal care during one or more of their pregnancies, each of them had access to a clinic which provided antenatal care. The provision of antenatal care in clinics was an encourager to women being able to receive the care. The women also perceived the health care providers' work as important and beneficial and sought out their care.

Perceptions about antenatal care

All of the women expressed overall satisfaction with the care given. Most often they expressed satisfaction in terms of having received the services that they felt were important as well as reassurance that their pregnancies were without complication. Some of the women expressed satisfaction in having the opportunity to receive antenatal care because of its importance in pregnancy outcomes.

> "I thought about if I would survive or if my baby would survive. If something went wrong, it would be easy for one of us to die. I think that the nurses do good work, and important work. They help by checking the baby, checking me, giving medicines. Even though they get cross sometimes it is good work that they do."

Despite the high level of satisfaction with services received, it is interesting to note that 14 women also brought up the issue of being dissatisfied with the attitudes of or treatment by the health care workers. This was the most common concern that the women raised regarding the care that they received.

> "If a nurse is angry at me she should talk to me quietly inside the room on my own. This practice of theirs to get angry at me when I am outside with all the other women is not a good one."

The health staff were described as shaming them and getting angry with them for not having washed before attending for their visit, for not wearing convenient clothing, for having too many children and/or for missing a visit. Shaming or condescending attitudes of health care workers were outlined as a concern in health education talks, advice giving and the collection of patient information.

Additionally, women reported being concerned with the long waiting time between the time that they arrived and the time of completing their visit as well as the inconvenient waiting area (when it was hot, rainy, cold, wet etc). Other issues that were raised by women were lack of easy communication with health care workers, high fees (20 kina) for delivery at the hospital, that nurses in training were performing antenatal care assessment activities without direct supervision of a nurse and that male nurses in training were performing antenatal care.

In addition to the information on antenatal

care provision, the women expressed opinions regarding the provision of labour and delivery care and some heartfelt issues regarding the care that they received. From the discussion on labour and delivery practices and the women's beliefs and perceptions, it was clear that there is a need for further research and understanding of what women experience in labour and delivery.

Health care workers' beliefs and perceptions

The four health care workers reported providing similar services in antenatal care and holding similar beliefs about antenatal care and concerns regarding the inadequacies of antenatal care. All the health care workers said that antenatal care was very important for the health of both the baby and the mother. The barriers to providing care were outlined by all four health care workers as staff shortages, limited supplies (of medicines, water and educational materials) and broken equipment. All the four health care workers believed that women should be seen regardless of when they come or how they come so as to provide care when it is most convenient to women. This is in conflict with some of the women's comments of being turned away because of coming too early in pregnancy, not coming on their scheduled visit, or because they had failed to wash themselves before coming.

Another barrier nominated by the health care workers was the effect of inadequate facilities for providing good quality care. These inadequacies included the lack of toilet facilities, limited or no privacy and inadequate waiting areas for the women. Additionally, the health care workers indicated that they felt that there are too few clinics providing antenatal care and therefore the patient load on them was too high. Having a shortage of health educational materials was also described as a barrier as was the limited amount of time available to provide health education. A shortage of midwives to provide antenatal care and to supervise nurses and community health workers, as well as a severe shortage of female doctors, were also identified as important problems. The four health care workers desired more inservice training in order to further their own education and ultimately benefit their patients.

Despite the challenges to providing antenatal care, all the health care workers expressed a desire to improve the level of care and a personal belief in the importance of quality antenatal care.

Discussion

Though Papua New Guinea is very diverse in languages, cultures and the lived experiences of women, there are common themes in the interaction of people with the health services. Therefore, despite the small sample size drawn from a geographic area contained within 15 kilometres of Goroka, we believe that the results and conclusions of the study do have wider implications. Nevertheless, they need to be generalized with caution.

All the women interviewed in the study had used antenatal clinic services. The rate of utilization of antenatal services in the Goroka District is high, which makes it an appropriate place to conduct such a study and we believe it has identified important information. However, the attitudes of non-users and the added difficulties of more remote and marginalized women have not been investigated. Though the factors identified here are likely to be widely applicable, their relative weight may be quite different in less favoured areas.

Strengths of antenatal care

Numerous strengths of antenatal care were identified by the four health care workers and the users of antenatal care. The first of four strengths was that all of the women interviewed had received some antenatal care during pregnancy and all of them stated a positive level of satisfaction with or placed high value on antenatal care.

However, this was a small sample of self-selecting volunteers and their responses may have been biased because the researchers were perceived as connected with the health care system. Nevertheless, women putting value on receiving antenatal care and making an effort to receive it demonstrated that the antenatal programs were effective in drawing women to them. In addition, the lack of fees for antenatal care ensures that there is not an additional financial burden in attending the antenatal clinic.

Secondly, it was commendable that once the women started attending for antenatal care they continued to attend on a regular basis. The women did not have a pattern of going only once or occasionally. The overall opinion of the women was that it was important to attend according to the schedule given to them and they attempted to return on the given date and to overcome any barriers to attending.

Similarly, the third strength is that of the ingenuity employed by women in overcoming barriers in order to seek effective care and to assist others. The commitment of women to obtaining antenatal care was shown by one woman who sold a pig in order to have money for antenatal care and delivery. Another example is illustrated by the following story.

> "When I was nine months pregnant my village was fighting with the next village. They had blocked the roads and no buses were coming. I had to go to the clinic for my antenatal visit, and as you know it is a long walk from here. But with no buses I had to walk. It was not easy to leave the village with fighting; I was scared because I thought that with all the walking I might have my baby alone in a ditch. I did get to the clinic and everything was okay but it would have been easier for me to go to a clinic that was nearer if there was one."

The fourth strength was that health care workers, in spite of providing antenatal care to large numbers of women, were able to maintain the level of care given the limited resources and shortage of staff. Despite the time constraints, staff shortages and limited supplies it was observed that the activities provided during antenatal care were consistent with the standard of minimum care adopted by the World Health Organization (WHO) Technical Working Group on Antenatal Care (9). These observations were further supported through the interviews with the women and health care providers.

Barriers analyzed

One of the key findings was that the women, particularly in the rural area, encountered multiple barriers in their endeavour to receive antenatal care. One of the main sociodemographic barriers affecting the rural women in this study was their low income and very limited financial resources. This was complicated by the high number of visits that the women were expected to make. The recommended schedule was for monthly visits until 28 weeks' gestation, then every two weeks from 30 to 36 weeks and weekly thereafter. As most women in this study did not start attending antenatal care until after the sixteenth week, they very soon had to undergo return visits on a fortnightly basis followed closely by the weekly visits. This presented a financial barrier for some of the women and took a lot of their time.

Another sociodemographic barrier was having a low level of education. To move closer to town and health care facilities would mean having some kind of formal income, which was more likely if a woman or her husband had more formal education. This view is supported by the findings of Klufio and Kariwiga (4) in that the women in their study who came from a lower socioeconomic class and whose husbands were less educated received less antenatal care. They also found that the women with higher parity tended to receive less antenatal care.

A situational factor that affected many of the women in the rural area was that of access to antenatal care. The limited

availability of transport and the longer distances to travel to health care facilities were barriers to attendance for rural women. This was particularly true of the high-risk women who were unable to get the care that they required at closer clinics and had to travel into Goroka on a regular basis. Compounding this barrier were psychosocial barriers such as physical tiredness during pregnancy that makes walking long distances more challenging and the high workload of the women in gardening, childcare and activities of daily living. Embedded in the women's workload were their expected roles to support extended family and their communities in all customary obligations and activities.

The National Sex and Reproduction Research Team and Carol Jenkins (10) found that traditional beliefs about pregnancy, delivery complications and illness contradicted western medical beliefs. The findings of the present study did not reveal many instances where the traditional beliefs were contradicting western-style antenatal care. However, there were beliefs regarding fertility and delivery which were contrary to western medical beliefs. Despite contradicting beliefs, the women still sought and received antenatal care and health care. Social events with strong cultural elements such as a death in the community, clan warfare and social unrest also created barriers for the women. The main reasons that women gave for attending were the same as those found in the national study (10). Women in both studies attended most commonly in order to find out about the status of their baby. This demonstrated that the women recognize the benefits of finding out what the western medical model has to say about the health status of their baby, which in turn acknowledges the role that the health care system has played in informing people about the benefits of antenatal care.

Attitudes and actions of health care workers

The attitude of health care workers and their perceived ill-mannered and unsympathetic treatment of women was one of the most significant concerns raised by the women. Garner et al. (5) similarly found in their study on infant mortality and antenatal attendance in a rural area of PNG that the attitudes of health care professionals as perceived by clients were a barrier to utilization. In developing and developed nations, the quality of health care services is affected by the unprofessional and unsympathetic attitudes of health care workers (11), which in turn can negatively affect the desire of people to use health services.

Analysis of observations and interviews in this study revealed why women perceived the attitudes of health care workers negatively. Health care workers were seldom observed smiling, asking open-ended questions, making eye contact or delivering health education in a friendly conversational manner. Most observations of the relationships between the health care workers and the women revealed that the women did not ask questions, but did listen to what was said to them, and that health care workers had little time for relationship development. Even though the observations and reports of women made it apparent that this is clearly an area requiring change, health care professionals consistently reported their desire to provide good care for women, and women repeatedly reported satisfaction with the overall care in spite of the perceived negative attitudes of health care workers.

We speculate that these perceived negative attitudes are 'something to be lived and dealt with' or 'expected' and their acceptance has its roots deep in the mentality of accepting the directions and advice from a 'superior' or a 'more educated person', particularly in relation to public or government services. This is complicated by the cultural requirement to respect others who are viewed as more knowledgeable, which in this case is expressed through listening, and a desire to avoid being shamed; therefore, the

women remain silent.

However, this view is also complicated by the importance of relationships and the dependency of people on one another in PNG. Repeatedly it was observed that people go to great lengths not to offend each other. Nevertheless, given this high value system, it is surprising that health care workers did not give more attention to the development of relationships with their clients. Even though there is often no time in a busy clinic for relationships to be developed, a smile, friendly body language and reassuring remarks could improve the situation dramatically. However, the teaching given to health care workers about a positive attitude and other improved ways of relating to clients and patients is rarely reinforced in clinical practice. As there are no 'market forces' operating in PNG there is very little choice about where to attend for antenatal care. If the attitude of a health care worker is not liked, in most cases there is no choice about going elsewhere. We suspect that this subtly alters the attitudes of both health care workers and clients. Another explanation as to why health care workers shame or demean women is that it is part of an endeavour to increase compliance on the assumption that women will then be more keen to comply with requests so as to avoid public shaming. This could be a result of the perceived power status of health care workers and the exercise of this power over female clients.

Health care system

The utilization rates of the three health care facilities studied were higher than the national average reported by Gillett (1) in her 1990 review. This is in part because an area with relatively high antenatal care coverage was chosen for the study and perhaps also because of changes in health care over the last ten years. Access to antenatal care in and around Goroka was not as difficult to achieve as it would be in more rural areas of PNG.

We believe that the high utilization rates at the clinics in this study add to the frustrations of the overworked staff as well as further deplete very limited resources. Failures in the health care system in the areas of staff shortage and the limited availability of resources have been variously attributed to the process of decentralization and recentralization (12), to the restructuring of provincial and hospital administration as well as to detrimental policy (6,13-15) and to the poor training of health care workers (5).

In spite of the barriers to improving the quality of health care, we believe that the antenatal care delivery system has survived as well as it has because of the commitment of health care workers and PNG's previous history of good health care services. The level of antenatal care in this study was within the acceptable range as laid out by the WHO Technical Working Group on Antenatal Care (9). The areas and issues identified for improvement in the delivery of antenatal care were the lack of options for safe home births, the minimal levels of health promotion, the lack of maternal counselling on the danger signs and symptoms of pregnancy complications, the limited counselling on smoking, alcohol and betelnut cessation and the failure to carry out urinalysis.

Previously, there have been attempts at implementing the use of village-trained birth attendants and village health workers. However, these have met with varied success and have encountered multiple barriers such as the lack of receptiveness by communities, cultural beliefs and taboos, issues of payment and supervision, and lack of monitoring and evaluation (16-18). There have also been positive aspects and favourable outcomes in some of these programs which may assist in increasing the success rate of village birth attendant and health worker programs if they were to be tried out again.

The difficulties that health care workers face in providing sufficient health promotion activities of good quality due to the limited availability of time, staff shortages,

inadequate training and lack of resources are clearly understood. Health promotion education can also prove challenging in that the messages are difficult to express cross-culturally, they contradict traditional beliefs or they are hard to simplify for general understanding. Additionally, health promotion messages are met with resistance from women when they are delivered in a negative and demeaning way.

Clearly there are costs of both providing and receiving health care, but given the reviving strengths of the health care system, the beliefs and perceptions of women and the desire to provide good care, there is room for much hope. We believe that the following proposed recommendations are feasible and, if implemented, will have a positive effect on the delivery and utilization of antenatal care.

Recommendations

Our recommendations for improving the utilization and delivery of antenatal care services in Goroka District fall into three categories:

- recommendations applicable to women
- recommendations at the relationship level between women and health care providers
- recommendations at the health care system level.

Improving women's situation

One of the critical components of improving the reception of health care by women in developing countries is to empower women to advocate for themselves. The situation for women in PNG is similar to that in many developing countries in that they are less educated than men, have a disadvantaged social position, lack the financial resources for autonomy and have a general sense of powerlessness (1,11). One basic and fundamental way of empowering women is to increase the availability of education and ease their access to it. In a paper regarding education and women in PNG presented at the Waigani Seminar in 1997 (19), Lady Carol Kidu stressed that education is a major means of freeing women from poverty and oppression while raising their socioeconomic standards. Likewise, Gillett (1) points to education as being one of the most important factors affecting the health of women and their children in PNG. The education and empowerment of women can then bring about more community involvement and ownership of better health and well-being at the local level, resulting in a stronger demand for health care facilities to improve.

Interaction with health care providers

We suggest that implementing village health worker programs will bring health care closer to the villages, provide culturally acceptable care and give communities a sense of ownership. These programs, however, need to be supported by strong commitment from the community and by health care workers and government health officers to ensure that the programs are sustainable. A well-trained village health worker, if properly supported, can provide basic health coverage for the entire community (not just women) as well as be a valuable asset to health promotion.

An important area of education is the continued education of nurses, health extension officers and doctors about effective interpersonal communication, positive patient relations and skills to deliver effective health promotion messages. There are many resources available to assist health care workers in learning to help communities, communicating effectively with others and developing creative ways of delivering effective health promotion. One such text is 'Helping Health Workers Learn' by David Werner and Bill Bower (20). Another is 'Training for Transformation: A Handbook for

Community Workers' by Anne Hope and Sally Timmel (21). Continuing education of health care workers will help them to learn that building relationships is a process. In a country where the majority of the population live in rural areas, it is critical that health care workers are able to lead and train others to lead communities and women through the process of looking at their resources, identifying their problems and learning to ask questions. Creative use of health promotion resources beyond those requiring literacy (posters, billboards, brochures) such as drama, role-playing, songs, dance and story-telling are invaluable. Additionally, it is critical for more research to be done into the educational programs of nurses, health extension officers and doctors to ensure that they are being taught a curriculum that is relevant to the situation of the people that they will be serving.

Health care system level

It is generally acknowledged that an increase in the number of health care workers, particularly for the aid posts that serve as the primary entry point to the health care system, is necessary. This could be addressed through effective lobbying in Port Moresby by community representatives, increasing funding to the mobile units, training of village health workers, implementing community health teams, and the active involvement of schools.

There is also a need for an increase in the allocation of funds from provincial government, national government and aid projects to the public health sector to ensure supplies and support for programs. This may be difficult in the current financial climate, but the importance of health to development is becoming more widely recognized, even among traditional aid donors. Specific funding to kick-start, or restart, community-based health programs should be sought, either by the government or by non-government organizations, including community-based organizations. Successful community-based programs should be given more acknowledgement and support and widely promoted as good models to be followed.

These two recommendations are very important but may take time to implement in the face of current resource constraints. However, since the high maternal mortality rate indicates an urgent need for action, what can be done now in the short term, with present resources, to improve antenatal care services for women?

The first such recommendation, which could be implemented immediately, is to reduce the standard number of antenatal care visits to four (for normal pregnancies) while encouraging starting antenatal care early in pregnancy according to the recommendations of the WHO Technical Working Group (9) for the minimal level of care for a normal pregnancy. However, it is critical that with the reduction in the number of visits a reduction in services does not follow. Efforts must be made to ensure that the essential services are provided and it is equally important that the psychosocial and medical needs of the women are addressed. This would allow health care workers to provide any necessary interventions earlier, have more time for health education, reduce the number of barriers to women, decrease the daily patient load on staff and give health care workers the opportunity to make the best use of the longer periods of time spent with each client or patient. Increasing health education during antenatal care and within the general community will promote general knowledge about pregnancy and health issues.

In addition to reducing the number of antenatal care visits it is important to individualize care. Individualized care and counselling have been shown to empower mothers and their families to make informed decisions regarding their health care (22). Individualized care plans are often used in western countries to enable health care workers to communicate effectively with each other and to enable the clients to be involved

in the care that they receive. Areas of need are mutually identified by the health care worker and client and agreed upon solutions are proposed. This provides for continuity in care and the setting of goals. Care plans and individualized care also aid health care workers to look at the total situation of the clients and not just at their physical health status. This type of case management in antenatal care can have a positive influence on how mothers view antenatal care as well as a positive effect on changing lifestyle behaviours (23).

The final recommendation is the need to address the conditions and attitudes of health care workers. Through local action and leadership it may be possible to improve the conditions, morale and attitudes of health care workers by the creation of a local health ombudsman who would handle complaints and reward praiseworthy performance. In addition, the ombudsman could provide individual incentive for health workers demonstrating responsibility to the public. The ombudsman would be available for clients to share their negative experiences with as well as praise the performance of health workers. The concept of an ombudsman is well established in Papua New Guinea and the National Ombudsman is a highly respected and politically independent figure, whose actions are widely and sympathetically reported in the media. It should be stressed that it is important that the local health ombudsman be created through local action and leadership and not as a government tool, though the support in principle of the health authorities at provincial and national levels will have to be won and will be essential to its success.

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