

Helping midwives in Ghana to reduce maternal mortality

By Liz Floyd

Abstract

This article describes work undertaken in Ghana with Kybele, a multidisciplinary humanitarian organisation. Kybele is dedicated to improving childbirth safety worldwide, by improving processes that will reduce maternal mortality. The role of the author, as the midwife team member, was to work alongside doctors and midwives in a busy maternity referral hospital in Accra, Ghana. Review of the history of maternal deaths, and observing and working alongside the midwives revealed a heavy workload, cramped and disorganised space, poor decision making and inadequate referral systems. This project provided opportunities for small group work, supported managers and targeted teaching to enable the Ghanaian midwives to share their beliefs about their role, understand the challenges and identify ways to improve standards of care for women. The midwives decided on four key areas for improvement: monitoring women using the partogram, improving professional accountability by introducing patient allocation, improving the labour ward environment and developing leadership skills. The partnership working style and ongoing support that are key features of the Kybele model will continue to assist the project and monitor progress.

Kybele is a US-based humanitarian organisation dedicated to improving childbirth safety worldwide through educational partnerships. It brings professional medical teams to host countries to work alongside doctors and nurses in their home hospitals to improve processes and practices and help raise maternal healthcare standards and reduce maternal mortality. In Ghana, Kybele has worked in partnership with the Ghana Health Service and with Ridge Hospital, Accra since 2006 (Engmann et al, 2010).

The key long term objective of the Ghana Health Service and Kybele is to raise maternal health care standards at Ridge Hospital and throughout Ghana to bring them in line with World Health Organization (WHO) global standards (WHO, 2007). A needs assessment identified multiple challenges including poor communication, poor teamwork, lack of emergency supplies, late referrals, minimal interdisciplinary coordination and poor knowledge. These

challenges are influenced by social, cultural and political as well as economic factors, and so advocacy at every level, as well as frequent monitoring visits, are essential for long-term sustainability. Patient care processes were analysed to identify system deficiencies and a process map of the key components for change was created (*Figure 1*).

Multidisciplinary teams of approximately 10 professionals visit three times each year for 2 weeks at a time. Their objectives are to work with staff to understand the culture of the organisation, build relationships by observing and discussing issues and encourage problem solving. Team meetings are held each evening to share observations, problems and ideas. In this way changes are only proposed to the host clinical staff after full agreement of the team. The key concept is that of partnership working rather than imposing change, which means that change occurs slowly with ample opportunity for re-evaluation and reinforcement at subsequent visits. Kybele interventions have already included the introduction of a labour ward triage system, neonatal resuscitation training (Bookman et al, 2010), multidisciplinary clinical meetings, the establishment of a 'high dependency unit' and the facilitation of a designated obstetric operating theatre.

This article describes a part of this process (shown in *Figure 1*) that involves the improvement of midwifery care practices using the International Confederation of Midwives (ICM) WHO Key Midwifery Competencies Framework (WHO, 2011b). The role of the midwife is central in the provision of maternity care; in Ghana midwifery is regulated by the Ghana Nursing and Midwifery Council (G-NMC), a signatory to the ICM.

Ridge Hospital is one of the main referral centres in Accra for high risk pregnancies. The maternity unit is overcrowded and run-down, housed in the oldest part of Ridge Hospital which was built in the 1920s. The labour ward is situated on the first floor with 13 beds plus mattresses on the floor. It is cramped, hot and untidy and has only three sinks and very little storage space. There is an adjacent 40-bed 'female' ward with a high dependence unit (HDU) and an antenatal clinic and a postnatal ward on the ground floor. Until recently, caesarean sections were performed in the operating theatres 10 minutes walk away.

There are usually three or four midwives on duty with two orderlies and a varying numbers of students. In Ridge hospital, the delivery rate has risen significantly in recent years; from 1905 in 2004 to 9357 in 2011 (Ridge Hospital Annual Labour Ward Report, 2011). In 2011, approximately one third of these births (3361) were caesarean sections. The

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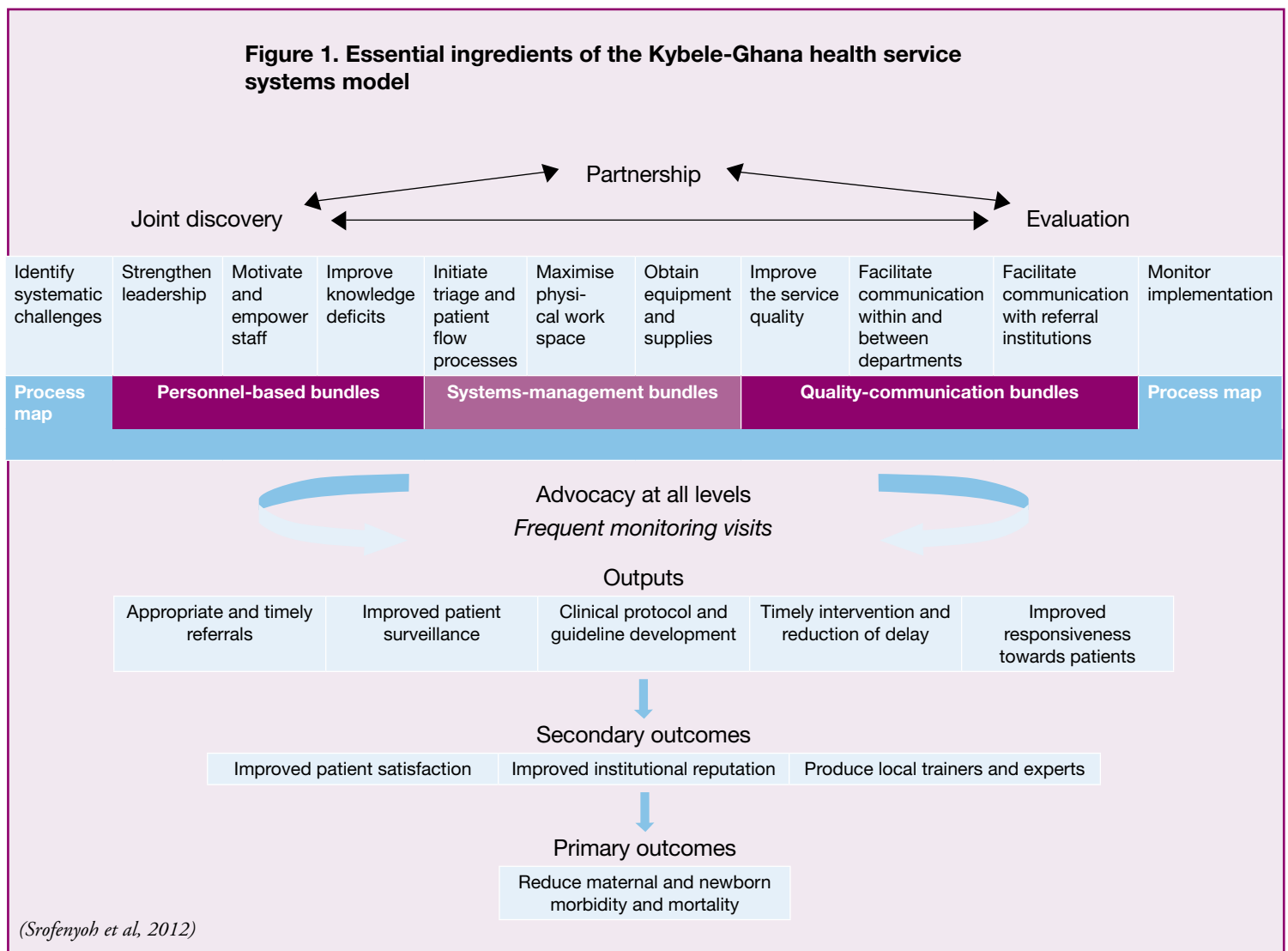
increase in births has placed an overwhelming pressure on the unit which has had no capacity to increase staff numbers or increase space. During the ‘heavy’ season (April to July) there may be up to 1200 deliveries per month and sometimes more than 50 deliveries in 24 hours. Nationally the birth rate is increasing. However, the introduction of free maternity care and the increasing use of mobile phones has improved the referral system, resulted in increased hospital delivery numbers (Ansong-Tornui et al, 2007).

The death of a woman from a pregnancy-related complication is a tragedy and also represents a serious risk to her existing children (Senah, 2003). In Ghana, maternal mortality data is collected by each individual institution, rather than compiled nationally (Ministry of Health/ Ghana Health Service, 2011). Institutions are judged by their individual performance. Referral hospitals represent a particular problem in terms of collection of mortality data. In 2009, Ghana’s national maternal mortality rate was 450/100 000 (Ghana Global Health Initiative Strategy, 2012). However, without proper birth and death registration systems these figures are unreliable. Between 2004 and 2011 the maternal mortality rate at Ridge Hospital fell from 10/1905 (524/100 000) to 36/9357 (380/100 000),

respectively (Ridge Hospital Annual Labour Ward Report, 2011). However, there is concern over the accuracy of recorded deaths and a concern that the death rate is not continuing to fall. This is due to a variety of reasons including changes in the way data is collected, the introduction of free maternity care overwhelming the service and inadequate standards of care. The main causes of maternal deaths at Ridge Hospital in 2011 were hypertensive disorders (15 deaths; 42%) and haemorrhage (8 deaths; 22%). Nationally the direct obstetric case fatality rate (DOCFR) is 1–2% (840 deaths per annum); however, this figure is very unreliable. Nationally the most common direct causes of maternal death were eclampsia (23%), post-partum haemorrhage (13%) and abortion complications (8%) (Ghana Ministry of Health/ Ghana Health Service, 2011).

Midwives provide an essential role in ensuring safe maternity care and their presence at a birth is regarded as key to this. However, their skills and abilities are more important than their presence (Graham, 2012). Where skilled assistance is available in Ghana, most maternity care is provided by registered midwives. Midwifery and nursing education is based on the British model where most midwifery education is now provided at degree level.

Figure 1. Essential ingredients of the Kybele-Ghana health service systems model



Women receive antenatal, perinatal and postnatal care from providers and midwives in the community and polyclinics. A small number of these have operating theatres with a doctor able to perform straightforward caesarean sections. However, when problems are identified women are usually transferred to a referral or district hospital. Like many developing countries, Ghana does not have a sufficient number of health professionals. Overall, only 58% of births in Ghana are attended by skilled birth attendants (Ghana Ministry of Health/Ghana Health Service, 2011). In the capital Accra, where this figure is much higher; there are 16.3 midwives per 1000 institutional deliveries (Ghana Ministry of Health/Ghana Health Service, 2011) and midwives provide virtually all the care for pregnant women. It is the quality of this midwifery care that will influence the outcomes for pregnant women (WHO, 2003). Poor utilisation of staff including midwives represents a waste of resources in any health system, particularly in developing countries. Strengthening midwifery practice (WHO, 2011a) does not necessarily require money but does require commitment and determination. This can only be achieved by the will and desire of Ghana and its midwives. Good leadership is fundamental to improving health care organisations (Barr and Dowding, 2012). It was hoped that basic maternity care and midwifery practice could be improved using the partnership working approach that is the key feature of the Kybele model.

Approach

Kybele team members are encouraged to take time to observe hospital processes and practices and to share their observations during evening team debrief meetings. Members are also encouraged to write a short report at the end of the visit. These observations are used as the basis for focused work with the maternity staff at Ridge Hospital.

During these observations of clinical practice it was clear that midwifery staffing levels were too low and that the working environment was crowded, poorly resourced and often dirty (Floyd, 2011). There appeared to be a lack of organisational structure and leadership and a persistent lack of monitoring of women including the very sick patients. It was observed that midwives rarely or only partially used the partogram and that midwives never wrote in the patient's notes. There was little evidence of decision making, and referrals to an obstetrician were haphazard.

The partogram is a visual tool that records basic physiological parameters during labour. It was developed to identify cases of obstructed labour and to facilitate timely referral. Its use is recommended by WHO (2011b) and in the Ghana Health Service Protocol (2008). Used correctly, it provides information to allow the midwife to decide whether labour is progressing normally or whether there are deviations that require referral to an obstetrician and intervention (WHO, 2003; Lavender et al, 2012). Although there is evidence that it is not always well used, midwives believe it is a vital tool in identifying abnormal labour (Lavender et al, 2011).

Further observations of clinical practice revealed that midwives were not allocated to specific women or work areas

but instead appeared to manage the workload collectively or by a 'task' system. For example, when arriving on shift one midwife would make a round to listen to all the fetal heart rates, which would often not be repeated again at the same shift. Senior obstetricians tended not to visit the labour ward, leaving very junior doctors to provide most of the obstetric care. The result was that no one person knew about any particular woman, her problems or risks and no one was responsible for monitoring her wellbeing. As the workload on the unit had increased, this had created a culture where no one took responsibility or was individually accountable. Midwives tended not to make decisions, deferring responsibility to junior doctors, and they appeared to have become de-skilled and demotivated. Furthermore, the obstetricians were frustrated to be called on to undertake routine tasks. This poor utilisation of staff represented a waste of resources. Scrutinising the case notes of women who had died also revealed that lack of observation and monitoring of sick women had significantly contributed to mortality. It appeared, therefore, that improving 'basic midwifery care' may help to prevent further maternal deaths.

For change to occur, stakeholders must recognise the need for change, be involved in identifying the challenges as well as solutions to problems and have 'ownership' of any changes to practice (Barr and Dowding, 2012). The Kybele team, were well known to the medical and midwifery staff and shared good working relationships based on shared professional roles and mutual respect. Many of the issues encountered by the midwives at Ridge Hospital appeared to relate to midwives' autonomy and scope of practice and the effect of this on interdisciplinary team working.

Method

The observations were shared with the Ridge Hospital maternity staff in a series of meetings. The labour ward midwifery manager had previously shared her frustrations over the quality of midwifery practice and the lack of 'kindness' to women, so she welcomed this initiative as it provided her with a forum to voice her 'vision' for a better unit. The senior obstetrician and clinical director had been a key figure in the foundation of the partnership between Ridge Hospital and Kybele and supported the need to improve working practices on the labour ward and provide vital leadership and support to the medical staff. Midwifery meetings were led by the labour ward manager and facilitated by the author. These included general staff briefings, meeting with the senior 'in-charge' midwives, meeting with a group of junior midwives and meetings with senior managers. The author also shared her observations of practice as well as the findings from mortality case studies and was able to help staff identify the vital role of the midwife in improving pregnancy outcomes instead of appearing to criticise poor standards.

Using the ICM (WHO) *Midwifery Model and Key Midwifery Competencies* (WHO, 2011b) the midwives were asked to share their ideas and beliefs about their role. This reminded them about the unique role of the midwife and identified areas where practices and standards of care could be improved for women. These discussions

also allowed opportunities for realistic discussion of the problems and challenges experienced in working in such a busy environment. After much discussion the midwives decided on several key changes:

- Monitoring women in labour using the partogram
- Improving accountability and allocation
- Improving the labour ward environment
- Leadership.

Monitoring women in labour using the partogram

The midwives group agreed jointly that 'the midwife is the champion for mothers and babies and should give individualised, woman and family centred care'. Through further discussion, midwives agreed that the midwife's fundamental role is to review, assess, plan, implement and evaluate care for all women in their care. They recognised that using the partogram was key to reclaiming their role, and that this would improve accountability, decision making and appropriate referral, and should therefore result in better care for women. Although it was the responsibility of each midwife to complete and to use the partogram correctly, the senior midwives and the labour ward manager recognised that it was their responsibility to ensure this happened.

Improving accountability and allocation

The midwife is personally accountable for her actions (and omissions) and must always be able to justify her decisions. The midwives recognised that they could not be accountable for their practice without being given a clear allocation of their responsibilities. The workload is often very heavy and the organisation of work can be difficult. However, allocating one midwife to an area of beds (and therefore to specific group of women) is the only way to ensure any degree of accountability. It was agreed that to aid communication and therefore increase patient care, this allocation should be recorded on the existing white board at each shift hand over, along with contact details for the obstetrician on call for the labour ward. It was clear from discussions that ensuring this happened was dependent on the senior or 'in-charge' midwife and that changing from 'task allocation' to 'patient allocation' would be unpopular with some. Therefore, the labour ward manager and other senior managers would need to actively promote and support this change.

Using the partogram properly is important for individual accountability. The midwives agreed they needed to be more active and timely in calling doctors when they identify problems and that using the partogram would facilitate this. Previously only the doctors wrote in the patient's folder. It was agreed that if the midwife identified any abnormalities, she should write her findings and her plan of action (including the reason for referral) in the patient's folder as well as calling the doctor. Midwives frequently complained that when a woman was transferred in an emergency, there was inadequate accompanying documentation and often no communication at all, so they recognised the importance of recording the key findings. For midwives to start writing in the patient's folder would be a significant change in practice,

one that would need training and support.

Improving the labour ward environment

The labour ward is cramped, untidy and sometimes dirty. It was necessary to remind staff that everyone shares responsibility for maintaining a clean, safe environment for patients and that basic hygiene is fundamental to protecting mothers and babies. The first clean-up was undertaken by all staff (senior obstetric staff, team members, midwives, orderlies and students) and set an example and an expectation that everyone usually tries to maintain.

There is an on-going challenge to organise a ward so that essential equipment is readily available. It appeared to make no sense that important drugs were hidden in the back of locked cupboards or that blood pressure charts were individually drawn out on a blank sheet of paper each time. Resistance to change is in part cultural but also a coping mechanism, therefore it is necessary to ensure all staff have time to understand the changes that are being asked of them. Being able to return several months later to monitor, support and reinforce change was important to the success of the project. The main aim is for the midwives themselves to advocate for improvements, on behalf of the women in their care.

Leadership

None of these changes can be achieved without the commitment of those in charge. Those in authority are responsible within the organisation for ensuring their employees fulfil their responsibilities, at the same time midwifery managers desire their organisation to be successful with good quality midwives who will provide high standards of care to pregnant women. The midwifery managers understood the rationale for the changes and agreed to be more visible on the labour ward and to assist and support the older 'in-charge' midwives. The labour ward manager was also asked to identify a small group of enthusiastic junior midwives who were encouraged to support improvements in grass roots practice. They were asked to identify their own areas of particular interest and were then given opportunities to develop them. Under the supervision of the labour ward manager one agreed to look at redesigning the paper charts (for magnesium sulphate), another to plan a series of teaching sessions and another to promote writing in the patients notes. Encouraging these junior midwives and identifying them as 'bright young things' also gave them a clear role to promote practice improvements as grass roots as well as supporting the labour ward manager.

Discussion

Throughout the developing world, the collation of maternal death data remains unreliable, yet the death of a mother should always be recognised and counted. Without sophisticated IT systems, Ridge Hospital staff spend considerable time collecting baseline data which inevitably takes them away from 'hands on care'. However, it is essential to have sufficiently accurate information to be able to understand the workload of the unit and to identify where problems occur. Although the workload is

Key Points

- Improving midwifery practices in Ghana will help to improve maternal mortality
- Midwives autonomy, standards and scope of practice and interdisciplinary team working are vital to providing safe care
- Improving 'basic midwifery care' is vital for improving pregnancy outcomes
- Scrutinising the case notes women who died showed that the lack of observation and monitoring of sick women contributed to maternal mortality

increasing as the birth rate continues to rise, it is important to record trends. Data collection is also vital in order to identify the effect of changes and interventions so that it can be seen whether they have any effect on outcomes. In the future it is hoped that as well as quantitative data there will also be some investigation of how the quality of care affects morbidity as well as the experience for patients and their families.

The collection of the data itself has been used as a method for improving practice. The labour ward manager was given a quality improvement data tool to help her identify how well the partogram was being completed by individual midwives, which enabled her to coach staff who were not using it properly. Using this also gave her the key role for promoting partogram use and improving practice. During this process the midwives were also able to identify their own particular learning needs. These quality improvement data sheets will be analysed to provide information on how well the partograms were being used and to monitor how much correction and coaching the labour ward manager was giving to her staff. Prior to commencing this work, baseline information was recorded from the patients' notes and the partograms in order to establish just how complete the documentation was. It is intended that these findings as well as any changes as a consequence of the interventions will be presented at a later date.

It is too early to know whether these changes in practice will be sustained or will have any material impact. It is also possible that as the data collection methods improve, recorded outcomes may worsen for a period. It is important that all partners (Ridge Hospital staff and midwives, the Ghana Health Service and Kybele) recognise the importance of ongoing future commitment to raising standards. The intention is to maintain the model of regular team visits with targeted focused activities for several years to come in order to ensure that improvements and changes are firmly embedded into maternity service delivery.

Conclusions

This scheme helped to identify and strengthen some of the key components of good midwifery practice at Ridge Hospital in Ghana. It used a model of partnership working between the Ghana Health Service, midwives at Ridge Hospital and Kybele. The key components that were

identified for change were; monitoring women in labour using the partogram, improving accountability and decision making, improving the labour ward environment as well as developing and supporting good leadership. Although the presence of midwives is known to be important for the provision of safe maternity care, it is not simply their presence that matters but what they actually do in their practice. It is necessary to identify which components of midwifery care of the care of sick and vulnerable women will ultimately reduce mortality rates.

AJM

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