

Reducing the burden of maternal mortality in Afghanistan

MERLIN'S COMMUNITY MIDWIFERY EDUCATION PROGRAMME IN TAKHAR PROVINCE



The purpose of this paper is to provide an overview of the Afghanistan Community Midwifery Programme in Takhar Province; to capture key lessons learnt from the first round of training, and to draw conclusions for both Merlin staff and other interested parties who may wish to support such initiatives in the future.

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Abbreviations

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| ANC | Antenatal Care |
| BEOC | Basic Emergency Obstetric Care |
| BPHS | Basic Package of Health Services |
| CAF | Care of Afghan Families |
| CI | Confidence Interval |
| CME | Community Midwifery Education |
| EC | European Commission |
| IHS | Institute of Health Sciences |
| METSU | Midwifery Education and Technical Support Unit |
| MMR | Maternal Mortality Ratio |
| MSH | Management of Sciences and Health |
| NGO | Non Governmental Organisation |
| REACH | Rural Expansion of Afghanistan's Community-based Healthcare |
| USAID | United States Agency for International Development |
| WHO | World Health Organisation |

Executive Summary

The Community Midwifery Education (CME) Programme in Takhar is part of the national CME programme in Afghanistan designed to reduce the very high levels of maternal mortality in the country. The first training programme in Takhar ran between October 2004 and April 2006 with three main objectives: to build community support for the education of community midwives; to establish a community midwifery education system within the Province, and to link this system to related initiatives and sectoral actors.

A significant challenge for the programme was acceptance at the community level, in particular gaining the trust of religious leaders for the training of female community health workers. Through considerable investment in community dialogue and close adherence to cultural norms and practices, the programme was able to overcome initial reservations felt by the community.

The success of the programme is shown by the high quality training of 21 (out of an original 22) midwives and their placement in health facilities within the Province identified in conjunction with provincial staff. This training is built on a comprehensive curriculum covering 18 months of theoretical and closely supervised practical training, and adherence to high quality standards set for the CME programme. A second training programme is now underway which will continue to strengthen the provision of maternal health services in the area.

Maternal mortality in Afghanistan

Afghanistan ranks second only to Sierra Leone as the country with the highest Maternal Mortality Ratio (UN Statistics, 2005). The most recent available data for Afghanistan puts the national average Maternal Mortality Ratio (MMR) at 1,600 per 100,000 live births (95% CI 1100–2000), though there is considerable variation from province to province¹. This average equates to approximately 17,000 Afghan women dying of pregnancy-related complications every year (MoPH, 2006).

The high MMR in Afghanistan could have many causes. There is limited availability and accessibility of health services; high fertility; poor health including chronic under-nutrition; poverty and low rates of literacy. In addition, the continuing low number of women in education and employment means limited availability of female health workers, further restricting women's access to services (due to restrictions on women being seen by male health workers). These problems are often exacerbated in rural areas (Bartlett et al, 2005).

In June 2004, 40 per cent of health facilities in Afghanistan had no female provider (thus limiting female access to services) and only 21 per cent of facilities had a midwife. Unsurprisingly in this situation, only 10 per cent of deliveries were attended by skilled personnel (Strong, et al., 2005).

Women's access to health services may be seen as a reflection of the larger picture of women's position in society in Afghanistan. Although the fall of the Taliban in 2001 was seen as a great opportunity to promote women's issues in the country and improve their position in society, the gains seen on paper, such as a new constitution granting women equality with men and a quota for women in parliament, have not necessarily been translated on the ground. Five years on the position of women was still characterised by high levels of violence against them, including "honour killings" and rape; high rates of female-child marriage; cultural barriers which prevent women seeking care from male workers and/or without their husband's authority, and denial of inheritance rights. Restrictive practices mean that women are often unable to access cultural activities such as libraries, and few public spaces exist for women outside the home and market (Womankind Worldwide, 2006).

Reducing maternal deaths – what works?

Programmes to reduce maternal deaths are based on the principle that every woman is at risk of a potentially life-threatening complication as a result of pregnancy and childbirth. Despite the importance of antenatal care, it is recognised that most support during pregnancy has little effect on reducing this risk. Countries that have successfully reduced maternal mortality to date have been those with a high level of access to a skilled attendant at birth combined with effective referral to emergency obstetric care when indicated (DFID, 2004).

Worldwide, it is known that up to 80 per cent of maternal deaths result from five well-understood and relatively common obstetric complications (bleeding, infection, complications of abortion, high blood pressure associated with pregnancy and prolonged or obstructed labour). These direct causes of mortality can be treated with existing inexpensive medical or surgical techniques. The remaining 20 per cent of deaths tend to be the result of underlying causes such as malaria, AIDS and anaemia, which are then exacerbated by pregnancy (ibid).

In most countries where the MMR has been reduced below 100 deaths per 100,000 live births, there has been a high level of skilled attendance at delivery. Analysis of most recent data on MMR and attendance by skilled attendants shows that all 20 countries with the lowest levels of MMR had over 98% attendance, while the 20 countries with the highest levels of MMR had less than 60% attendance (WHO, 2006).

Addressing maternal mortality in Afghanistan

Since 2001, the delivery of health services in post-conflict Afghanistan has centred on the implementation of a Basic Package of Health Services (BPHS) by the Ministry of Public Health and non-state providers, supported by three major donors: EC, USAID and the World Bank. This basic package is expected to address the major burden of disease and mortality through a set of cost-effective interventions at a level that can be sustained in the longer term (Strong et al, 2005).

¹ MMR in other provinces : Kabul 400 (CI 200–600), Laghman 800 (CI 400–1100), Kandahar 2200 (CI 1150–3000), Badakshan 6500 (CI 5000–8000)

Recognising that maternal mortality was responsible for a high proportion of preventable deaths in the country, the Ministry of Public Health made reducing maternal mortality a high priority and this is reflected in the significance placed on improving maternal health in a number of key health and development policies and strategies from this period. In addition to the inclusion of maternal health in the BPHS, reducing maternal mortality also features in the Health and Nutrition component of the National Development Framework (2002), as well as the National Health Strategy. In terms of strategies to support these aims, the National Reproductive Health Strategy for Afghanistan (2003–2005 and 2006–2009) highlights the availability of skilled attendants at birth as a major priority to reduce the high MMR in the country.

In July 2003 concerned actors from around the country (including the Ministry of Public Health, UNICEF, HealthNet International and JHPIEGO) met to review the community/auxiliary education programme (being implemented at the time) with the view to learning lessons from the approach and assessing how best to expand the training of community midwives in Afghanistan (CME training draft, internal document).

The recommendations from this review formed the basis for the implementation of the Community² Midwifery Education programme in the country. The programme was designed to develop competent, practising community midwives through the establishment of community midwife training centres across the country. A “Guidance Note” prepared at the time provided an operational framework for the successful expansion of the programme in a consistent manner, on a national scale. It was designated that technical assistance for the programme be provided by the Midwifery Education Technical Support Unit³ made up of members including the Ministry of Public Health (MoPH), the Intermediate Medical Education Institute (IMEI), HealthNet International, Rural Expansion of Afghanistan’s Community-based Healthcare (REACH)/JHPIEGO and UNICEF (Draft Guidance Document).

As part of this national programme, Merlin as an active player in the health sector (including one of the NGOs contracted to implement the BPHS in the country) was engaged to implement a training programme in Taloqan, Takhar province. The first round of the CME training programme in Takhar was implemented from October 2004 until April 2006, with funding from USAID. An assessment of the first training programme forms the basis of this paper.

1: Some definitions



Skilled Attendant refers to a person with midwifery skills who has been trained to a level of proficiency in the skills necessary to manage normal deliveries and to diagnose, manage or refer obstetric complications. As a minimum they must be competent to manage normal childbirth and be able to provide emergency obstetric care. Not all skilled attendants can provide comprehensive emergency obstetric care, although they should have the skills to diagnose when such interventions are needed and the capacity to refer women to a higher level of care.

Traditional birth attendants (TBA), either trained or not, are excluded from the category of skilled attendants at delivery.

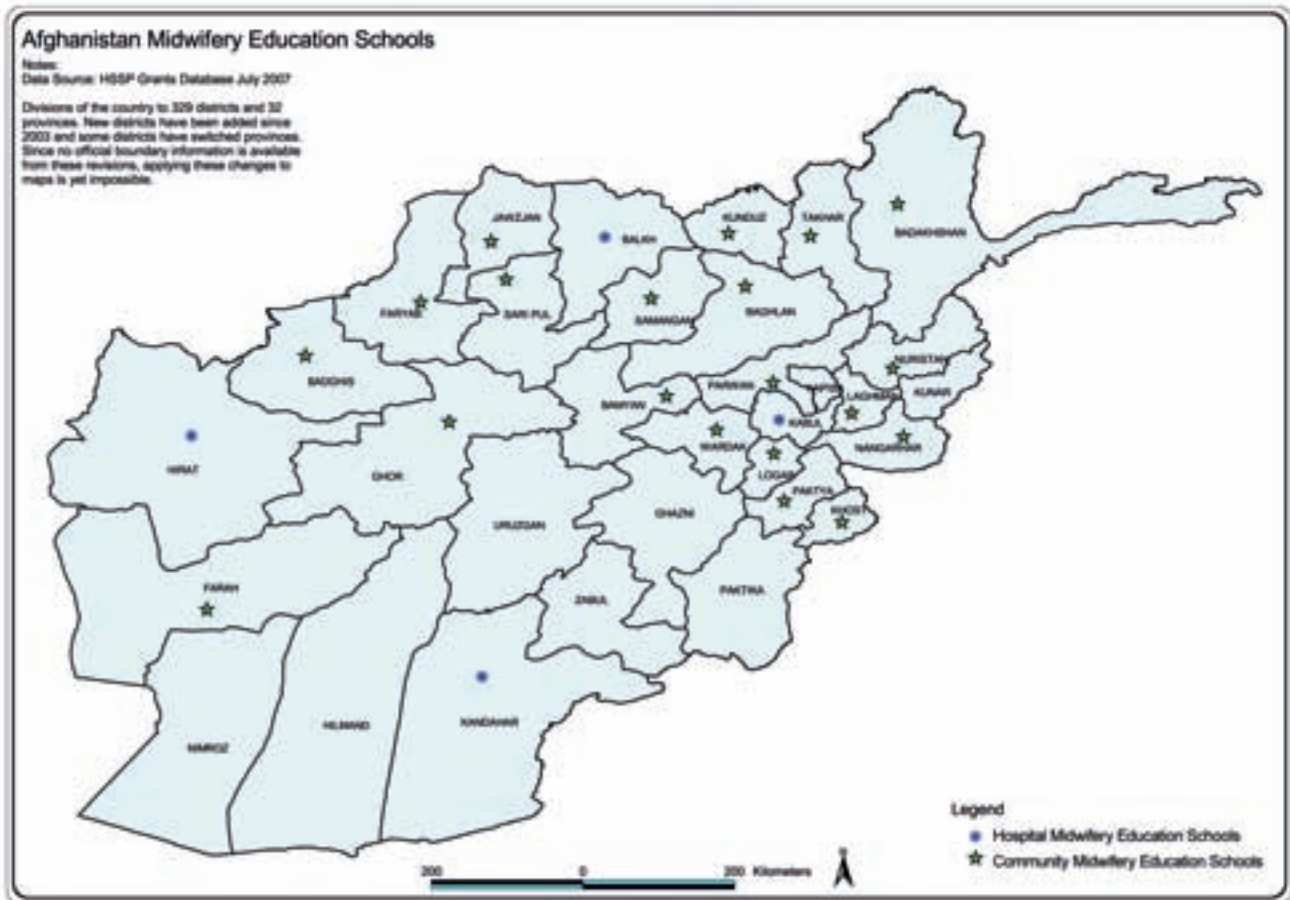
Basic Emergency Obstetric Care (BEOC) includes injectable antibiotics, anti-convulsants and oxytocics; assisted vaginal delivery, manual removal of placenta; removal of retained products of conception.

Comprehensive Emergency Obstetric Care (CEOC) includes all the elements of BEOC plus blood transfusion and Caesarean section.

Source: DFID, 2004.

² The term Community midwife refers to the location of deployment and distinguishes this cadre from the cadre of midwife posted to hospital settings (Hospital midwife)

³ The terms METSU and IMEI have now been revised



Programme overview

Although the Takhar programme was the first phase of Merlin's support to the CME programme, Merlin had been operational in Takhar for five years. Previous Merlin activities had included the delivery of other health services, including mother and child healthcare programmes.

The CME programme was designed to train community midwives over an 18-month period. To achieve this aim, three interrelated and complementary objectives were conceived. Firstly, building community support for the education of community midwives; secondly, establishing the midwife education system (utilising agreed curriculum and standards), and thirdly, linking the system to related initiatives and sectoral actors. To implement the programme, Merlin partnered with a national NGO, Care of Afghan Families (CAF), with particular expertise in community development.

2: Care of Afghan Families

Care of Afghan Families (CAF) is a non-governmental, non-political, not-for-profit organisation established in January 2003 by national staff working at the time for a range of international agencies. CAF was formed to better utilise local potential and to promote a longer term basis for efforts to promote self-reliance within communities and families.

CAF's mission is to enable families to fight disease and its causes and it does this through its work in health, education and community development.

CAF has been working in partnership with Merlin for a number of years in several provinces including Takhar province. CAF's experience in community development is a key to the success of the CME project. The use of the Community Social Organisers is seen as particularly important in the communities' acceptance of the project.

Objective 1: Building community support for the education of community midwives

The primary objective of building community support for the programme within the province was of crucial importance for later success. The activities under this objective included the development of a uniform and culturally appropriate message in Dari (the local language) to promote the link between the availability of trained midwives and the safe delivery for mothers and babies. This message was disseminated through posters which were drawn by a local artist and used by the Community Social Organisers in their health education sessions. To help in this process, the Community Social Organisers were trained in motivating communities to improve care-seeking behaviour related to maternal and child health. In addition the message was transmitted through various programmes on Radio Takhar and through a number of round-table conferences on the CME programme organised by TV Takhar.

The programme also worked with the village committees and community health committees to ensure that increased awareness generated by the health education sessions was translated into increased numbers of female consultations and increased referrals of woman to health facilities with the support from the male community. More information on the work of the Community Social Organisers is provided in Box 3.

3: Work with Community Social Organisers

The role of the Community Social Organisers on the programme was crucial in helping to strengthen and widen the community support for the CME students as future Community Midwives. This was achieved through organising and conducting regular meetings in all districts from which the CME students were drawn (and to which they would later return after training). Meetings facilitated contacts with religious leaders and other community stakeholders. Merlin worked with CAF to strengthen the information base on which the messages to the communities were based by collecting data on what community members thought about institutional deliveries versus home deliveries, as well as their opinions about the CME programme and the training of students.

4: Selection criteria for students



The selection of students for the CME training followed agreed criteria designed to improve the outcome of the training as well as the long term success of the programme. Students had to:

- be female
- be 18 years of age or older
- have demonstrated support from their communities in the form of a letter from the Shura (council) or similar body
- have a minimum of nine years of education (minimum of six years education acceptable until 2007)
- have obtained a pass mark on the basic entrance examination
- be able to provide a letter of support from families/husbands stating they are able to participate fully in the programme, including working in the hospital on all shifts
- preferably be married due to the likelihood of remaining in their communities and gaining the respect of their community

Students who met these criteria were selected based on the overall plan for human resources for health in the province and admitted up to the capacity of the programme.

Objective 2: Establishing a Community Midwifery Education (CME) system

This objective focused on the establishment of the learning centre and systems to support the CME training. A major activity within this objective was the provision of the pre-service training using standard learning resources and coordination with the Midwifery Education Technical Support Unit on technical issues. In addition, a coordinating Council for the programme was established, which acted as a focal point for programme decision-making.

The programme adhered to a range of requirements including criteria for recruitment of female students. In addition, numerous programme areas such as the choice of equipment used and the ratio of teachers to students also conformed to agreed standards. The programme also met the criteria for the Institute for Health and Sciences (IHS) including the provision of regular documents and updates on student progress which was built on regular student evaluations.

Qualified local teachers were hired to ensure that the required student/teacher ratio was reached and that the long term sustainability of the programme was supported. Staffing had to be approved by the community leaders. Teachers were recruited against clear teacher requirements and all teaching adhered to

the competency-based methodology. Students were accompanied to all clinical sites and their performance monitored for skills improvement.

The training programme followed the agreed curriculum prepared for the Ministry of Public Health for all organisations implementing a CME programme. The 18-month training was divided into three phases. Phase 1 covered the management of normal pregnancy, labour and postnatal care. Phase 2 was designed to build the students' skills in the management of life-threatening complications of pregnancy and childbirth. Phase 3 addressed other reproductive health and basic health topics such as family planning.

The overall teaching included both theoretical content as well as clinical skills development. The clinical skills development was designed so that graduated midwives would be capable of providing comprehensive maternal, newborn and infant care. Each module was self-contained and included a learning outline and a multiple-choice knowledge assessment questionnaire which was administered on completion of the module. In addition, learning guides, skills checklists, role plays, case studies and clinical simulations were included where applicable.

New graduates were evaluated by the Council members to identify appropriate locations for their entry into the Ministry of Public Health system. The placement decision was made at the start of the programme so that students were able to familiarise themselves with their proposed clinic throughout their training period and the facilities could be supported in the interim with any necessary inputs (equipment etc) required to allow the student to take up their position successfully on completion of the course.

5: Classroom teacher requirements

Clear criteria guided the selection of teachers for the training programme. These criteria included:

- At least 50 per cent of midwifery faculty are midwives
- There is evidence of training (degree, diploma, or license) for all faculty members
- All faculty members have at least two years of clinical practice experience within the past five years or 20 per cent of time is spent in practice
- All newly graduated faculty must work a minimum of 20 per cent in clinical area
- All faculty members have received at least one knowledge update in the past two years
- All faculty members have completed a course on teaching methodology (Effective Teaching Skills course)

Source: Midwifery Education. Classroom and Practical Instructions.

Objective 3: Linking the CME system to related initiatives and sectoral actors

The third and final objective of the programme was to link the CME system to other related initiatives and health sector actors, particularly the Learning for Life (LFL) programme⁴ and the BPHS. The latter link was vital in ensuring that the graduates would enter the communities and selected health facilities in line with MoPH objectives for staffing and prioritisation.

The project provided regular reports to the donor and all feedback from the donor was shared with the faculty team.

6: Accreditation of training



To be accredited, a training school must achieve a score of at least 80% against the standards set. Standards cover five areas: Classroom and practical instruction; clinical instruction and practice; school infrastructure and training materials; school management; and clinical areas where students will gain clinical experience. The high accreditation score awarded to the Takhar programme (overall score of 93%) provides a measure of the success of the programme. The accreditation process includes self-assessments as well as external assessments by members of the National Midwifery Education Accreditation Board. The standards are clear and explicit, and schools are able to identify gaps and improve performance. The diplomas from accredited schools are recognised in-country as well as internationally (USAID, 2006).

What did the programme achieve?

The programme achievements can be seen on a number of levels.

In the first instance the programme was able to create the learning space required in order to implement the training programme. The training programme received recognition for its quality teaching, gaining accreditation in April 2006 from the National Midwifery Education Accreditation Board (with an overall accreditation score of 93%). Further information on accreditation is provided in Box 6.

In addition target communities were sensitised and educated about the programme. These outputs led ultimately to the successful achievement of the overall programme objective: the graduation of 21 out of the original 22 students enrolled on the course, and their placement in health facilities identified in conjunction with the provincial health staff as part of the prescribed staffing numbers for the health system.

The programme placed considerable emphasis on the competency of the graduating midwives. The competency-based approach used by the programme focused on the skills needed to provide a range of care including antenatal care, labour, postpartum and newborn care, with a particular focus on the skills to deliver essential obstetric care, that is, to be able to provide adequate delivery assistance as well as to deal with obstetric emergencies. The services that trained midwives are expected to provide are outlined in more detail in Box 7.

The skills developed are expected to have a direct positive impact on the quality of care provided in the communities to which the midwives have been posted.

Supervision for the midwives rests with the Ministry of Public Health. A supervision tool is currently being translated and will be implemented by CAF as the BPHS implementing organisation. The Reproductive Health Officer at the Ministry of Public Health based at the hospital is also responsible for joint supervision visits.

The posting of the trained midwives was undertaken in collaboration with the Ministry of Public Health with the aim of posting graduates within their own communities.

⁴ The LFL programme is an accelerated health-based adult literacy programme which offers classes to Afghan women aged 18–49 in rural areas. The programme is supported by USAID.

7: Services provided by trained midwives



Trained midwives, working at both hospital and health centre level, are able to provide comprehensive maternal and newborn care including:

- antenatal and postnatal care
- care and support during delivery, including newborn care
- diagnosis and management of common maternal and newborn emergencies (e.g. Post-Partum Haemorrhage, retained placenta, newborn asphyxia), especially those that frequently result in maternal or perinatal death
- stabilisation and referral of cases that require advanced care e.g. eclamptic fits, septic shock
- provision of family planning and early newborn care

Source: CME Guidance Document

Provincial work-planning estimates suggest that by the completion of a proposed third round of training (which might take place between 2008 and 2010), all 51 health facilities in Takhar province would be staffed by trained CME graduates.

Data collection from all facilities in the province provides an opportunity to follow the work of the trained midwives over time to assess the changes in practice and the impact on maternal health.

At present it is too early to judge the effect that the midwives are having but the preliminary indications are positive and suggest an increase in the number of women delivering in the presence of a trained midwife. In some facilities there is also a noticeable rise in the total number of antenatal care cases, due to increased follow-up following initial presentation for an ANC consultation.

The programme has also been highly successful in terms of increasing the acceptance for the CME programme in Takhar province. This has been demonstrated by the response of community/religious leaders to the programme and their requests for their own female relatives to participate in future courses. This is a major achievement and one which will underpin the role of the community midwives in the future as well as future training programmes. The second CME training programme in Takhar is already underway and benefiting from the acceptance generated by the first programme.

For the students themselves, the training has brought benefits beyond the training in terms of the positive impact on personal confidence and empowerment through the new roles they hold within their communities.

Finally, the collective achievement of the various midwife training programmes in the country, linked with the decentralisation process, has been to contribute to the creation of a health service which is better able to meet the needs of women. To date, 400 midwives have been trained through the national CME programmes and 800 through the IHS programmes, contributing to a total of 2,200 midwives currently working in the country. While this is a great improvement it is estimated that between 6,000 and 8,000 trained midwives will be required in the country to ensure adequate access to skilled care at delivery. A continued and coordinated response to the issue is therefore required.

8: Case study – CME graduate



Fauzia is one of the 21 students to have completed the CME training. She now works at the hospital in her home town of Farkhar.

As a mother-of-three, Fauzia knows first-hand about the problems that pregnant women face in the Province. When students were being recruited for the first phase of the CME training, Fauzia was keen to enroll. With the full support of her family, Fauzia underwent the 18-month course in Taloqan.

In the first six months after graduation, Fauzia assisted more than 65 deliveries. Fauzia believes women are increasingly choosing to give birth in a health facility rather than at home because they know they will have a midwife to attend them.

What challenges did the programme face?

The general climate in Afghanistan has been less than favourable towards the work of NGOs in recent years. Not only have international aid workers been targets for acts of violence but their presence in the country and their operations have often been the subject of criticism from government officials. This provides a challenging environment in which to work, especially for a programme attempting to train female workers and to provide services targeted at women.

In addition, the CME programme in Takhar province faced a number of significant challenges both at start-up as well as during implementation.

One significant challenge for the programme was the impression initially held by many community members that the programme would undermine religious customs and rules. The programme therefore invested considerable effort in providing information about all activities on the programme. Working closely with the local partner organisation, CAF, these initial misconceptions were gradually overcome. The programme was able to gain the trust of communities to send their female relatives to a training programme run by an international organisation and at some distance from their home villages.

The programme also faced a number of hurdles in terms of delays in implementation and issues relating to the involvement of an international agency in the management of the programme, but these were overcome by appropriate programme management responses.

What factors contributed to the success of the programme?

The first round of the CME training in Takhar has undoubtedly been a success and this is due in large part (in addition to the enormous efforts of the programme staff) to the support the programme received from a number of influential and critically placed persons. These included persons in the Public Health (PH) department, namely the Provincial Public Health Director (PPHD) and the Head of Public Health. The Provincial MSH-REACH representative was also very helpful, while Merlin's collaborating agency, CAF, played a vital role.

The support from key players has been within the context of a high degree of coordination and collaboration between a range of actors, both national and international, around a national plan for the training of community midwives and towards a common vision of lower maternal mortality within the country.

Though the project did not have any significant opponents, some religious leaders were initially doubtful of the programme's aims and working practices during the early programme implementation phase. However these views changed over the period of implementation as the programme was able to show how the activities conformed to all religious and cultural requirements.

9: The role of the Provincial Public Health Director (PPHD)

The role of the PPHD in Takhar was instrumental in the success of the programme. A primary role of the PPHD was to select the areas which would be supported by the programme, i.e. the health facilities which would receive a student after training. In addition, the PPHD ensured that all students were able to carry out their clinical placements in Taloqan Provincial Hospital and selected health centres (both basic and comprehensive) with the support of the incumbent staff.

The PPHD also ensured the acceptance of the programme more broadly through attendance at the monthly Midwifery Coordination Council meetings and sharing of information on programme progress with other stakeholders in Takhar province.

How expensive is a midwife training programme?

Information on the costs and cost-effectiveness of midwife training programmes is sparse (Walker et al, 2002) and often limited to individual interventions. One review of the cost-effectiveness analysis of strategies for addressing maternal and neonatal health in developing countries concluded that skilled attendance allowed for appropriate early recognition and treatment of complications and appropriate referral. Although more costly in terms of resources (compared to antenatal or community based packages), skilled attendance was effective in reducing maternal and neonatal morbidity and mortality, and as such was highly cost-effective (Adam et al, 2005).

Although Walker et al (2002) provide a methodology for undertaking an economic analysis of midwifery training programmes, which could be used by others, they also conclude that they were unable to assess whether the training programmes were more or less cost-effective than other safe motherhood interventions because the use of different outcome measures (i.e. maternal mortality versus neonatal mortality) hindered comparison.

However their breakdown of costs between start-up and operational and their comment that follow-on (replication) programmes would result in lower costs per trainee are applicable here.

Of the total CME project costs of US\$611,839, indirect costs were estimated at just over 9 per cent of the total. The balance of US\$551,859 was direct project costs and covered the management costs of the programme including salaries for administrative, teaching, clinical and support staff. It also included travel and other costs such as supplies, equipment and food for students.

The total cost of training was therefore just over US\$24,000 per student for this first round of training.

The budget for the second round of training is US\$291,038 (direct costs) and the total number of students enrolled is 22. This works out to just over US\$13,000 per student - considerably cheaper than the first round.

Lessons learnt

The CME programme in Takhar province has resulted in a number of valuable lessons which have already been applied to the second training programme, but which may also be useful for others implementing, or anticipating implementing, such a programme in Afghanistan or similar contexts.

These lessons include the need to ensure that the selection of students will allow for the training of competent midwives who will also have the backing of their communities and health systems and will provide a long-term resource to their communities. There is a need to ensure that candidates represent the rural areas as well as more urban locations to ensure good coverage especially in classically underserved areas.

Making sure that the awareness programme is informed by local views and ideas on the issue of midwife training and the role they will play is also vital for the longer term acceptance and support of the programme. In particular religious leaders need to be kept informed about the programme and the various steps involved.

Finally it is vital to select trainers who are committed to the programme and who have a suitable background with training experience and to ensure that any gaps in skills/knowledge are filled through the appropriate training courses in advance of the programme. It is particularly useful if the trainers chosen have previous experience of planning or implementing similar training programmes.

Conclusions

The Takhar CME programme has undoubtedly been a success and this is evident in the enthusiasm for the second and third rounds of training and the increasing number of women applying to join the programme. Ultimately the success of the programme will be reflected in better statistics for maternal health. While it is too early to judge this, it is encouraging to note that the preliminary statistics show an increasing number of women giving birth in the presence of a trained midwife.

The Afghanistan CME programme provides an excellent example of the cooperation and collaboration of a number of actors and a collective contribution to tackling the enormous issue of maternal mortality within the country. The fact that various donors and implementers, both local and international, are able to support a national process which is endorsed by the Ministry of Public Health, and to provide their respective contributions, is an example of the positive benefits of a partnership approach.

Merlin's continuing involvement in the programme in Takhar through the second and third rounds of training, which build on the initial programme outlined here, provide an opportunity to follow-up on the graduates from the first programme. In addition Merlin's role in the implementation of the BPHS initiative provides the opportunity to view this programme in the larger context of efforts to improve the availability of health services and systems more generally which are vital if the issue of maternal mortality is to be adequately addressed in the longer term.

It is hoped that other Merlin programmes as well as other agencies will find this review of the Takhar programme useful and an encouragement to develop similar initiatives in countries where maternal mortality is a concern.

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