Identifying practices and ideas to improve the implementation of maternal mortality reduction programmes: findings from five South Asian countries

J Hussein, a D Newlands, a L D’Ambruoso, a I Thaver, b R Talukder, c G Besana a

a Immpact/Ipact, University of Aberdeen, Aberdeen, UK b Mustashaar, Social Development Advisors, Ahmed Centre, Islamabad, Pakistan c Golpark, Kolkata, India

Correspondence: J Hussein, Immpact/Ipact, University of Aberdeen, Health Sciences Building, Forresterhill, Aberdeen, AB25 2ZD, UK. Email j.hussein@abdn.ac.uk

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Objective The successful implementation of programmes to reduce maternal mortality is constrained by a ‘know–do’ gap: the disparity between what is known and the application of that knowledge in policy and practice. This study identified innovations, practices and ideas aimed to improve project and programme implementation.

Design Cross-sectional.

Setting Five South Asian countries: Afghanistan, Bangladesh, India, Nepal and Pakistan.

Sample Sixteen projects and programmes, and 100 key informants.

Methods In-depth review of documents, key informant interviews and focus-group discussions.

Main outcome measures Innovations and ideas to improve programme implementation, and their perceived effects.

Results Delegation of duties to intermediate-level health workers, incentivisation of health workers, providing the means to overcome financial barriers for accessing care, quality improvements and knowledge transfer were examples of ideas put into practice to improve programme implementation. There was a perception that these improved service use and availability, but objective evidence was lacking.

Conclusions Some innovations, practices and ideas are supported by evidence of effect, and could be replicated, whereas others have not been formally evaluated. Testing of these innovations is required before more widespread adoption can be recommended, although experiences should be shared to narrow the ‘know–do’ gap, even though the evidence on beneficial effects remains unclear.

Keywords Good practices, maternal mortality, programme implementation.

Introduction

Since the launch of the global safe motherhood initiative in 1987, much experience in implementing maternal mortality reduction programmes has accumulated, although there is still substantial ground to be covered before the stated objectives are reached.1 Investment, political commitment and further research are needed, alongside efforts to bridge the ‘know–do’ gap – the disparity between what is known and the application of that knowledge in policy and in practice.2–4 The aim of this paper is to share practices and ideas identified as part of an assessment of maternal mortality reduction programmes in five countries in South Asia: Afghanistan, Bangladesh, India, Nepal and Pakistan, thereby contributing to closing the ‘know–do’ gap.

A quarter of the world’s population resides in the five countries included in this study. The population is predominantly poor and rural, with both geographical and financial problems limiting access to maternity care. An estimated 188 000 maternal deaths take place in these countries every year, making up 35% of global maternal deaths.5 There are major gender disparities: female literacy is below 50%, with two- or three-fold differences between men and women.6 This affects women’s capacity to work
out outside the home, and to access and pay for care. Less than 50% of births in these countries are attended by doctors, midwives or nurses. Most deliveries occur at home, with fewer than 41% occurring in healthcare facilities.

Health policies in the five countries all contain components designed to improve the supply of services, and to increase both women’s demand for and access to them. Life-saving emergency care and deliveries with skilled birth attendants is promoted. There is recognition that the costs of medical care can take up significant proportions of household income, so the reduction of financial barriers is highlighted. These policies form the foundations for the planning and design of maternal mortality reduction initiatives, but it is the practical, on-the-ground translation of policy into action that will make the difference in improving the well-being of women. Good intentions are all very well, but it is implementation that makes the difference. The practices and ideas described in this paper were put into place to overcome such implementation bottlenecks, but to what extent are they ‘good’ practices (Box 1) that can be confidently recommended for replication? Perceived benefits of the identified practices are explored.

Methods

Discussions with key informants in the countries being investigated led to the inclusion of sixteen projects and programmes in the study, based on the following criteria.

- Mix of large- and small-scale initiatives.
- Implemented within the last 10 years.
- Originating from all five countries.
- Representing different strategies, including home, community-based and health facility-based interventions.
- Projects and programmes with innovative ideas.

This selection procedure could have introduced biases. Initiatives perceived as being successful may have been preferentially included. National programmes supported by, or implemented by, country governments, in collaboration with large, visible organizations such as the UN, bilateral agencies or international non-governmental organizations, were more likely to be selected compared with small projects, audits and endeavours run by local professional bodies, or national training or academic institutes without international funding. The standpoint of stakeholders such as the local programme managers, many of which are closely involved in the implementation of emergency obstetric care programmes, may also have affected the selection. Although informants were asked to consider these factors to minimise selection bias, the sample may still not be truly representative of maternal health initiatives in the region.

A structured protocol was used to review project and programme documents, including national maternal health policies, programme strategies, progress reports, evaluation studies and published literature. Key informant interviews and group discussions of between six and 20 participants were conducted during visits to the five countries using a semi-structured interview guide. The review protocol and interview guide contained topics related to the duration of the initiative, goals, funding, design, specific activities, beneficiaries, modalities of implementation and budgets. Information on effectiveness, lessons learnt, factors contributing to success and sustainability, unexpected consequences, constraints and ways of overcoming problems were elicited. Telephone interviews, email exchanges and regional discussions were subsequently used to verify the accuracy of findings. The 100 key informants included officers from UN headquarters, country and regional programmes, country government ministries, and non-government and donor organizations. Data collection took place between August 2007 and February 2008.

A description of each project or programme was constructed based on the data collected from documents and key informants. Specific practices and their perceived benefits were identified by reading interview notes and seeking information that met at least some of the criteria identified in Box 1.

Results

Of the sixteen projects and programmes, three each were implemented in Afghanistan, Bangladesh, India (Rajasthan

**Box 1. Definitions of good practice**

‘A good practice is one that meets at least two of the following criteria: leads to an actual change, has an impact on the policy environment, demonstrates an innovative or replicable approach, or demonstrates sustainability.’

**Criteria of good practice:**

- Evidence of need
- Participatory stakeholder involvement
- Sustainable
- Meets the identified need of a specified target population

‘Good practices are examples of processes and initiatives, such as services or political campaigns, which have yielded positive results, demonstrating, through evidence, effectiveness and usefulness in a specific context. A best practice can be an innovative experience that could be applied to other contexts, or can be considered a solution for improving certain situations.’
and Tamil Nadu) and Nepal, and four were implemented in Pakistan (Table 1). Projects and programmes included those supported by government, mostly in collaboration with the UN, and non-government organizations. Their coverage ranged from subdistrict to national level, with budgets between $70 000 and $300 million. All aimed to reduce maternal mortality. Some were country specific. Others were part of a larger multicountry initiative designed around a common principle, such as the Women’s Right to Life and Health (WRLH) projects, which focused on improving emergency obstetric care provision.

The practices identified in the study were categorised into those improving service availability and access, those enabling learning and knowledge transfer, and those addressing quality (Table 2). Some overlap occurred between categories: for example, practices to improve learning may also improve quality.

Delegation of duties to intermediate cadres of health workers
The lack of certain types of trained health personnel to perform the six functions for basic emergency obstetric care (antibiotics, antiepileptics, oxytocics, removal of products of conception, manual removal of placenta and assisted vaginal delivery) was identified by key informants as making effective project implementation difficult. In the Nepal WRLH project, this constraint was overcome by providing training and support to nurses and nurse midwives based in health centres, so that they could carry out functions previously provided by doctors. Such ‘task-shifting’ allowed crucial services to be delivered even when doctors were not available.

Other forms of task-shifting were documented. In Bangladesh, general medical officers were trained to administer anaesthesia for obstetric surgery wherever there was a shortage of such skills. In Pakistan, women do not like to use reproductive health services provided by male doctors. Few female doctors work in rural areas because of their fears for their personal safety, and because of their family responsibilities. The postgraduate rotation scheme increased the availability of female doctors in rural areas by placing recently qualified female medical graduates on 1-month, supernumerary rotations in district and subdistrict hospitals. They work alongside regular hospital staff to offer reproductive health and general medical services, taking on responsibilities beyond those normally given to fresh graduates, such as performing caesarean sections. Their work is supervised through their teaching hospital, and is recognised as part of their specialist training. In return for this ‘acting-up’ function, the postgraduate students collect a stipend additional to their normal salary, are provided with furnished accommodation, and are given transportation to their training centre.

In Nepal, the availability of basic emergency obstetric care increased from an average of one health centre providing the six obstetric functions per 100 000 population to one per 70 000 population. Use of basic emergency obstetric care services in health centres increased from 0.1% of total births to 4% (a 40-fold increase). Nurses reportedly felt more motivated and empowered. In Pakistan, 24-hour emergency obstetric care was provided where previously services were erratic or not available. Institutional deliveries increased, caesarean section rates doubled from 6 to 13%, and unnecessary referrals to teaching hospitals were reduced. (Not all these changes were necessarily a result of ‘task-shifting’, because other interventions were being implemented at the same time).

Obstetric helpline
Delay in reaching health facilities during obstetric emergencies was a problem identified in the WRLH project in India. A helpline service was introduced to provide a 24-hour transport response to calls for assistance. Its aim was to link villages with health facilities by improving transportation and referral, taking advantage in particular of the growth in the use of cellular phones, and improvements in roads and transport secondary to recent economic development. The coverage area was mapped, taxi drivers were recruited, transport rates were negotiated and the police were encouraged to assist. The helpline telephone number and the danger signs in pregnancy and labour were publicised during antenatal care, together with mass media and health awareness campaigns. When a call is made, the helpline staff organise transport and arrange escorts to hospital, and arrange hospital admission. The only data available on the effects of this project showed that within 9 months of it being implemented, over a hundred women a month were being transported to an appropriate health facility.

Incentives to healthcare providers
Various examples of financial incentives to motivate health workers and encourage maternity service use were identified. In Afghanistan, a fee was given to community health workers every time they brought women into healthcare facilities for childbirth. In Pakistan, the postgraduate rotation scheme provided financial and training incentives to female doctors to work in rural areas. The Tamil Nadu maternity programme in India attracted and retained doctors in remote locations by making it mandatory to complete service postings in rural primary health centres before applying for postgraduate training. These incentives reportedly led to increases in the availability and use of obstetric services. Deliveries with trained health workers in attendance increased from 8 to 50% in one province in Afghanistan, and 24-hour obstetric care became available in participating facilities in Pakistan. Data on uptake and
<table>
<thead>
<tr>
<th>Project/programme name and brief description</th>
<th>Duration</th>
<th>Coverage</th>
<th>Donors</th>
<th>Budget in millions of $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Basic package of health services programme</td>
<td>2003, ongoing</td>
<td>National (population 32 million)</td>
<td>Various development banks, and bilateral and multilateral donors</td>
<td>124.0</td>
</tr>
<tr>
<td>Afghanistan Women's Right to Life and Health (WRLH) project</td>
<td>2003–2005</td>
<td>National (at provincial level only)</td>
<td>Bill and Melinda Gates Foundation</td>
<td>0.1</td>
</tr>
<tr>
<td>Afghanistan BRAC programme</td>
<td>2002–2004</td>
<td>25 of 398 districts (population 2.3 million)</td>
<td>World Bank</td>
<td>Not available</td>
</tr>
<tr>
<td>Bangladesh</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Maternal and Child Welfare Centre project</td>
<td>1993–2010</td>
<td>National (population 150 million)</td>
<td>Government of Bangladesh and UNFPA</td>
<td>7.0 (estimated)</td>
</tr>
<tr>
<td>Bangladesh WRLH project</td>
<td>1998–2005</td>
<td>National</td>
<td>Bill and Melinda Gates Foundation</td>
<td>4.8</td>
</tr>
<tr>
<td>Bangladesh Dinajpur safe motherhood initiative project</td>
<td>1999–2001</td>
<td>Part of one district (population 200 000)</td>
<td>CARE USA and UNICEF</td>
<td>0.5</td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WRLH project</td>
<td>1999–2003</td>
<td>3 of 604 districts (population 3.2 million)</td>
<td>Bill and Melinda Gates Foundation</td>
<td>1.6</td>
</tr>
<tr>
<td>Rajasthan project</td>
<td>2001–2003</td>
<td>7 of 604 districts (population 15 million)</td>
<td>Bill and Melinda Gates Foundation</td>
<td>1.5</td>
</tr>
<tr>
<td>Tamil Nadu maternity programme</td>
<td>Ongoing</td>
<td>Statewide (population 66 million)</td>
<td>Government of India</td>
<td>Not available</td>
</tr>
<tr>
<td>Nepal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WRLH project</td>
<td>2000–2005</td>
<td>6 of 75 districts (population 3.1 million)</td>
<td>Bill and Melinda Gates Foundation</td>
<td>1.6</td>
</tr>
<tr>
<td>Nepal safer motherhood project</td>
<td>1997–2004</td>
<td>9 of 75 districts (population 3.5 million)</td>
<td>Department for International Development</td>
<td>3.7</td>
</tr>
<tr>
<td>Nepal Safe motherhood innovation project</td>
<td>2004–2007</td>
<td>6 of 75 districts (population 1.5 million)</td>
<td>European Commission</td>
<td>2.6</td>
</tr>
</tbody>
</table>
availability of services associated with the introduction of the incentives were not available from Tamil Nadu. There were also no data available on behaviour change or motivation in any of the incentive schemes described.

Overcoming financial barriers for access to health care

Schemes to give poor women and their families enough money to access maternity services were identified. The Dinajpur project in Bangladesh set up a community loan fund (as one of several activities that aimed to upgrade health facilities and mobilise communities) so that people could borrow money to pay for transport and other costs. The project reported that, in locations where physical upgrading, community mobilisation and the community loan fund were implemented, the proportion of women with complications able to use health facilities increased from 16 to 40%. In control sites where no such interventions were implemented, the use of health facilities remained at the level of approximately 12%. In comparison sites, where facilities were upgraded without the fund, usage increased from 12 to 26%.

In Nepal, village development committees also raised funds for accessing obstetric care, with associated improvements in utilisation rates. In Tamil Nadu, a voucher scheme reimbursed people for transportation costs when travelling to health facilities for childbirth. No data on the success of this scheme was available.

Appreciative inquiry

Appreciative inquiry is a participatory process that brings groups of people together to identify problems and develop solutions, using self-reflective analysis and learning within a supportive environment. It was originally developed as a technique in the 1980s to improve organizational management practices. Implemented in four WRLH projects, it aimed to foster a collective role in service enhancement, and to improve long-term planning. Sessions were held to include health facility personnel with diverse roles such as hospital cleaners, ambulance drivers, nurses, doctors and administrators. Critical events were used in discussions that were non-threatening and non-punitive. Successes and problem solving were the focus of discussions.

Informants who had participated in the process praised the approach. Reported effects included assignment of specific days to clean and organise surroundings, campaigns to involve the community in project activities, and even developing a garden in the grounds of the hospital. Internal resources were found to fund additional activities, conflicts amongst staff were resolved, and improvements were made to recording and reporting systems. Clinical protocols were introduced. Non-medical staff improved their awareness of the importance of clinical interventions such as blood-

Table 1.

<table>
<thead>
<tr>
<th>Project/programme name and brief description</th>
<th>Duration</th>
<th>Coverage</th>
<th>Donors</th>
<th>Budget in millions of $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>2000–2004</td>
<td>3 of 134 districts (population 6.5 million)</td>
<td>Bill and Melinda Gates Foundation</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>2001–2006</td>
<td>Not available</td>
<td>Asian Development Bank and Government of Pakistan</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>2004–2006</td>
<td>3 of 134 districts (population 5.1 million)</td>
<td>District government, UNICEF and UNFPA</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>2007, ongoing</td>
<td>National population 165 million</td>
<td>Government of Pakistan, Department for International Development</td>
<td>300.0</td>
</tr>
</tbody>
</table>

Hussein et al.
pressure measurement or blood donation. Health personnel perceived an increased sense of ownership, team spirit and motivation, and reported improved attitudes and behaviour in their day-to-day work.

**Advocacy at policy level**

In addition to the objectives of strengthening service provision and increasing access to emergency obstetric care, the Nepal safer motherhood project was unique amongst the sixteen initiatives reviewed, in that it explicitly articulated a separate objective to develop and advocate for policy development at a national level.\(^\text{20}\) In this project, staff worked closely with the Ministry of Health and other stakeholders, conducting regular meetings with government officials to discuss lessons learnt from project implementation, and to consult on planned activities and ways forward. It was reported that the process increased participation in decision making and strengthened government confidence when interacting with donor partners.

The perceived effects of the policy activities were numerous. The government began taking the lead in acting on maternal health interventions, instead of relying on donor organizations. Project experiences were used to inform the development of national reproductive health standards, protocols and interventions. District safe motherhood plans were developed with discrete budget allocations. Development partners revised their policies to come into line with government protocols, and an improved joint approach by donors and the government towards longer term and integrated support for maternal mortality reduction interventions was reported.

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**Table 2. Summary of practices and ideas identified in South Asian projects and programmes**

<table>
<thead>
<tr>
<th>Identified practice</th>
<th>Country</th>
<th>Perceived benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improving service availability and access</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delegation of duties to intermediate cadres of health workers</td>
<td>Bangladesh, Nepal, Pakistan</td>
<td>Increased availability and use of obstetric services</td>
</tr>
<tr>
<td>Obstetric helpline</td>
<td>India</td>
<td>Sense of empowerment (nurses in Nepal)</td>
</tr>
<tr>
<td>Incentives to providers to increase deliveries in health facilities</td>
<td>Afghanistan</td>
<td>Referrals to tertiary-level facilities reduced</td>
</tr>
<tr>
<td>Incentives to healthcare providers to work in peripheral locations</td>
<td>India, Pakistan</td>
<td>Increased use of obstetric services</td>
</tr>
<tr>
<td>Overcoming financial barriers for access to healthcare</td>
<td>Bangladesh, India, Nepal</td>
<td>Helpline was used by women</td>
</tr>
<tr>
<td>Electronic educational birth-preparedness pack</td>
<td>Afghanistan</td>
<td>Effective deployment of doctors to rural areas</td>
</tr>
<tr>
<td>Training for female health workers linked to literacy development</td>
<td>Afghanistan</td>
<td>Increased availability and use of obstetric services</td>
</tr>
<tr>
<td>Identification of blood group of community members</td>
<td>Bangladesh</td>
<td>Increased use of obstetric services</td>
</tr>
<tr>
<td><strong>Enabling learning and knowledge transfer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appreciative inquiry</td>
<td>Bangladesh, India, Nepal, Pakistan</td>
<td>Community involvement</td>
</tr>
<tr>
<td>Advocacy at policy level</td>
<td>Nepal, India</td>
<td>General improvements in environment, care processes and motivation</td>
</tr>
<tr>
<td>Funds set aside for innovation within projects</td>
<td>India, Nepal, Pakistan</td>
<td>Government leadership</td>
</tr>
<tr>
<td>Starting small and scaling-up later</td>
<td>Bangladesh</td>
<td>Development of national standards, planning</td>
</tr>
<tr>
<td>Implementation of project interventions with control and comparison sites</td>
<td>Bangladesh</td>
<td>Reduction in maternal mortality</td>
</tr>
<tr>
<td><strong>Improving quality of services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouraging birth companionship during childbirth</td>
<td>India</td>
<td>No information available</td>
</tr>
<tr>
<td>Subcontracting of private, for-profit groups within government initiatives</td>
<td>India</td>
<td>No information available</td>
</tr>
<tr>
<td>Improving systems for maternal death reviews, clinical audits and other assessments of quality of care</td>
<td>Bangladesh, India, Nepal, Pakistan</td>
<td>Reduction in maternal mortality (India)</td>
</tr>
</tbody>
</table>

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309
Although not articulated as an objective in itself, another example of policy advocacy was seen in Tamil Nadu. The Indian state has a well-developed maternal death review system, with routine healthcare facility- and community-based audits. The system is used to inform changes in policy by ensuring that all maternal deaths and circumstantial evidence related to the event are reported directly to the highest state level officers within 24 hours. Key informants perceived this system as one of the reasons why reductions in maternal mortality had occurred.

Other promising approaches and innovations
To improve service availability and access, an electronic ‘educational birth preparedness pack’ for use by community health workers was introduced in Afghanistan, designed to be more transportable than paper, and to motivate community health workers to place more emphasis on educating people regarding the danger signs in pregnancy. Also in Afghanistan, difficulty in finding literate women to become health workers led to the idea of linking health worker training to literacy programmes. In Bangladesh, a register of the blood groups of community members at village level is kept so that potential blood donors can accompany women to hospital during obstetric emergencies.

Learning and knowledge transfer ideas included setting aside unmarked funds within projects for unanticipated innovations to be tried out – these had allowed the obstetric helpline and appreciative inquiries to be piloted. In Bangladesh, a large programme had developed capacity by starting in a small number of sites and scaling up only after experience of implementation was built up. The Dinajpur project assessed the effect of introducing community loan funds using control and comparison sites, providing an example of how ideas can be tested more rigorously as part of routine project implementation.

In India, quality improvement efforts involved subcontracting the private, for-profit sector to provide security, catering and sanitation services for the government. Maternal death reviews and clinical audits were used in various settings, sometimes involving lay panel members. Electronic patient record-keeping systems were tried in Bangladesh, and criterion-based audits or clinical guidelines were adopted. The Tamil Nadu programme promoted companionship during childbirth by ensuring that health facilities welcomed birth partners. Most of these practices and ideas have not been evaluated formally.

Discussion
High-quality scientific evidence must form the backbone of any knowledge base; however, bridging the ‘know-do’ gap in implementing and problem solving for maternal mortality reduction interventions also needs to take notice of field experience, innovation and common sense. The practices and ideas identified in this study were generated through experience and understanding of local needs. Many practices were innovative, in the sense that they had not previously been implemented widely or used routinely to reduce maternal mortality.

Apart from being innovative and responsive to need, ‘good’ practices should also be effective. Unequivocal evidence of effectiveness was lacking in many of the practices identified because the benefits recorded were not from objective assessments, but relied mainly upon observations, routine monitoring and opinion. However, some of the practices identified have been described in other settings where there has been evidence gathered on their value and utility.

The shortage of human resources in health is a major obstacle to reaching international health goals. Resolving this problem will require long-term changes, but ‘task shifting’ (delegating clinical functions to less specialised health workers) has been recommended as an interim measure in a number of places. Examples include: paramedics conducting caesarean sections; the shifting of anti-retroviral treatment, education and dispensing services from physicians to mid-level clinicians, and from nurses to community health workers; and the provision of midwife-led maternity services. Such practices have been shown to be feasible and acceptable, and are associated with favourable outcomes.

Protocols and unified record systems during referrals; use of bicycles, motorcycles and boats in villages; communication aids such as radios and mobile phones; pre-negotiated arrangements and community loan funds to reimburse taxi drivers and private car owner’s fuel costs have been recommended to address transport and referral problems. The obstetric helpline described in India has built on these experiences by bringing together many of these separate components into one package. High-quality evidence is lacking on the value of these ideas, but an argument may be made that transportation, referral and communication are essential components of any health service, so further evidence of effectiveness is not required. However, formal evaluation studies would provide a greater understanding of the efficiency and cost effectiveness of the many variants described.

The maldistribution of health workers is linked to the unwillingness of highly trained personnel to reside in rural and remote areas. Two schemes identified in our study addressed this problem through incentives: financial rewards, career development, continuing education and recognition. These and other motivational interventions have been implemented elsewhere. A systematic review found that a range of initiatives to improve motivation are effective in addressing distributional factors, but that
isolated financial incentives are insufficient.31 The practices described in our study are therefore consistent with existing evidence.

Another type of incentive to health workers was found in Afghanistan where a cash payment was given to community health workers who brought women to facilities for childbirth. A similar large-scale intervention to increase delivery rates in health facilities has also been introduced in India,32 but there are as yet few studies on the effects of such payments. The concern is that such incentives can lead to altered behaviours and self-interest amongst health workers, leading to perverse effects at the expense of health service users, or mistrust between care providers and those seeking care.33,34 For example, women may suspect that they are being taken to a clinic or hospital to increase the health worker’s income, rather than because of real clinical need.

Financial costs incurred by poor women in seeking care are substantial.35 Uptake of skilled care at delivery shows the widest poor–rich gap compared with services such as immunisation and provision of contraceptives.36 Funding the provision of maternity care adequately is therefore vital. Ideas proposed include fee exemptions and waivers, voucher and cash-transfer schemes, loans, and healthcare insurance.37 Most of these efforts are currently implemented on an experimental basis or are on a small scale, and evidence on the benefits and disadvantages of such interventions remains limited.38

Knowledge transfer is a process where learning is shared, replicated or used to scale-up interventions, create value and improve effectiveness, although the best way to do this is not clear.39 ‘Policy advocacy’ is one form of knowledge transfer, and this study identified an initiative with the explicit objective of transferring an appreciation of the importance of high-quality maternity care to groups at government and decision-making level. In another case, ‘appreciative enquiry’ (asking staff supportive questions about their problems to find solutions) appeared to improve motivation, quality of services and reflective practice. Despite the perceived benefits, concerns regarding these practices include their resource-intensive nature, the need for highly skilled facilitators, committed leadership and almost evangelical enthusiasm.

Sustainability is another criterion of good practice. It refers to the likelihood of activities or benefits continuing after initial inputs have been withdrawn.40 The lack of skilled human resources was an important constraint to sustainability in the region. Conversely, indications of sustainability included uptake of learning from projects into larger-scale programmes, and the implementation of projects and programmes in collaboration with governments. These examples suggest that the projects supplemented rather than detracted from ongoing government health initiatives. Finding out whether health personnel themselves experienced benefits from the interventions, or adopted them as part of their routine practice, was not assessed, although this would be a useful thing to do in the future.

The practices and ideas identified in the study give rise to some key points to consider for the future. Firstly, the evidence base for many of the practices described is weak. Formal scientific evaluations or operations research to test the effect of such efforts, as exemplified by the Dinajpur project, need to be conducted more widely. Secondly, the slow progress in reducing maternal mortality in this region has led to a sense of urgency amongst those implementing maternal health programmes, despite the lack of evaluation as to whether what they are doing is actually beneficial. Undue haste to ‘scale-up’ initiatives needs to be tempered by experience of how to implement actions that we know work (such as provision of emergency obstetric care), by starting small, and learning from experience. Considering the sustainability of interventions is also important. Thirdly, new ideas or innovations need to be seen in context: the same solution will not fit all situations. Finally, even if some practices and ideas have not been proven to be ‘good’, there is value in sharing the experiences of how others have overcome constraints – and it is through this mechanism of knowledge transfer that common sense approaches can evolve to become evidence-based strategies.

In conclusion, some of the practices identified such as task-shifting and incentivisation are supported by evidence of their usefulness, so they can come close to being recognised as ‘good’ practices. The effectiveness of other ideas has not yet been established, and so cannot be widely advocated. We recommend further testing of these ideas, but in the interests of knowledge transfer, we encourage others to share experiences of innovative practices, even when beneficial effects are unclear.

Disclosure of interests
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Contribution to authorship
JH wrote the paper, conceived the methodology and analysed the data. DN and LD contributed to sections of the manuscript, assisted in methodology development and analysis, and collected data in Afghanistan, India and
Nepal. IT led data collection in Pakistan, and contributed to the manuscript and analysis. RT contributed to data collection in India and contributed to the analysis. GB wrote sections of the manuscript, conducted literature searches, and reviewed, organised and provided references. All authors have read and approved draft versions of this manuscript.

Details of ethics approval
Not required.

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