TOWARDS A COMPREHENSIVE APPROACH TO ENHANCING THE PERFORMANCE OF HEALTH WORKERS

in maternal, neonatal and reproductive health at community level: Learning from experiences in the Asia and Pacific regions

Discussion paper 2

Angela Dawson
ACKNOWLEDGEMENTS

We would like to acknowledge the maternal, neonatal and reproductive health technical input of Drs Natalie Gray and Elissa Kennedy from the Burnet Institute on behalf of Compass, the Women’s and Children’s Health Knowledge Hub. We would also like to thank Dr John Dewdney from the Human Resources for Health Knowledge Hub for his comments on the manuscript.

The Human Resources for Health Knowledge Hub

This technical report series has been produced by the Human Resources for Health Knowledge Hub of the School of Public Health and Community Medicine at the University of New South Wales.

Hub publications report on a number of significant issues in human resources for health (HRH), currently under the following themes:

- leadership and management issues, especially at district level
- maternal, neonatal and reproductive health workforce at the community level
- intranational and international mobility of health workers
- HRH issues in public health emergencies.

The HRH Hub welcomes your feedback and any questions you may have for its research staff. For further information on these topics as well as a list of the latest reports, summaries and contact details of our researchers, please visit www.hrhhub.unsw.edu.au or email hrhhub@unsw.edu.au

© Human Resources for Health Knowledge Hub 2010

Suggested citation:
Dawson, A 2010, Towards a comprehensive approach to enhancing the performance of health workers in maternal, neonatal and reproductive health at community level: Learning from experiences in the Asia and Pacific regions, Human Resources for Health Knowledge Hub, University of New South Wales, Sydney.

National Library of Australia Cataloguing-in-Publication entry
Dawson, Angela.
Towards a comprehensive approach to enhancing the performance of health workers in maternal, neonatal and reproductive health at community level: learning from experiences in the Asia and Pacific regions / Angela Dawson.

9780733429446 (pbk.)
Community health services--Asia--Personnel management.
Public health personnel -- Training of -- Asia.
Public health personnel -- Training of -- Pacific Area.
Maternal health services -- Asia -- Personnel management.
Maternal health services -- Pacific Area -- Personnel management.

362.1982

Published by the Human Resources for Health Knowledge Hub of the School of Public Health and Community Medicine at the University of New South Wales.
Level 2, Samuels Building, School of Public Health and Community Medicine, Faculty of Medicine, The University of New South Wales, Sydney, NSW, 2052, Australia
Telephone: +61 2 9385 8464
Facsimile: +61 2 9385 1104
hrhhub@unsw.edu.au
www.hrhhub.unsw.edu.au

Please contact us for additional copies of this publication, or send us your email address and be the first to receive copies of our latest publications in Adobe Acrobat PDF.

Design by Gigglemedia, Sydney, Australia.
Towards a comprehensive approach

Discussion paper 2

Angela Dawson

Contents

2 Acronyms

3 Executive summary

4 Introduction

4 The need for a focus on HRH in MNRH at community level

5 Cadres at community level and their contribution to MNRH outcomes

7 The structure of MNRH services at community level

8 What is effective HRH performance in MNRH at community level?

13 Monitoring and evaluating HRH performance in MNRH at community level

18 HRH approaches in countries that have made progress towards MDG 5

20 Scaling up experiences and the contribution of HRH interventions

23 HRH and community engagement: some experiences from the Pacific

24 Selecting, implementing and evaluating HRH strategies: ways forward

25 References

List of Figures

6 Figure 1. MNRH personnel at community level: cadres, remuneration, function, employer and place of work

9 Figure 2. Characteristics of quality HRH and MNRH service delivery

11 Figure 3. Linking aspects of HRH and MNRH service delivery with indicators at a number of levels

17 Figure 4. Linking HRH performance fields with health system strengthening criteria and MDG 5

21 Figure 5. Examples of structural and economic changes in Indonesia which impacted on improved HRH performance

22 Figure 6. Essential elements and monitoring points for scaling up skilled birth attendance

List of Tables

7 Table 1. Levels of community health practice, possible care and services and staff involved

12 Table 2. Examples of HRH performance indicators alongside others in the health system related to reproductive health

14 Table 3. Linking HRH performance fields with health system strengthening criteria and MDG 5
# ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AusAID</td>
<td>Australian Agency for International Development</td>
</tr>
<tr>
<td>CHW</td>
<td>community health worker</td>
</tr>
<tr>
<td>EmOC</td>
<td>cost of emergency obstetric care</td>
</tr>
<tr>
<td>ESCAP</td>
<td>Economic and Social Commission for Asia and the Pacific</td>
</tr>
<tr>
<td>FIGO</td>
<td>International Federation of Gynecology and Obstetrics</td>
</tr>
<tr>
<td>FK-UGM</td>
<td>Faculty of Medicine, University of Gadjah Mada</td>
</tr>
<tr>
<td>GAVI</td>
<td>The GAVI Alliance (The Global Alliance for Vaccines and Immunisation)</td>
</tr>
<tr>
<td>HIS</td>
<td>health information system</td>
</tr>
<tr>
<td>HIV</td>
<td>human immunodeficiency virus</td>
</tr>
<tr>
<td>HR</td>
<td>human resources</td>
</tr>
<tr>
<td>HRH</td>
<td>human resources for health</td>
</tr>
<tr>
<td>ICM</td>
<td>International Confederation of Midwives</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>Lao People’s Democratic Republic</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MMR</td>
<td>maternal mortality ratio</td>
</tr>
<tr>
<td>MNRH</td>
<td>maternal, neonatal and reproductive health</td>
</tr>
<tr>
<td>MPS</td>
<td>Making Pregnancy Safer (Strategy)</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NGO</td>
<td>non-government organisation</td>
</tr>
<tr>
<td>NMR</td>
<td>neonatal mortality ratio</td>
</tr>
<tr>
<td>NSS</td>
<td>non-state sector</td>
</tr>
<tr>
<td>PHC</td>
<td>primary health care</td>
</tr>
<tr>
<td>PHM</td>
<td>public health midwives</td>
</tr>
<tr>
<td>PMNCH</td>
<td>The Partnership for Maternal, Newborn and Child Health</td>
</tr>
<tr>
<td>PNC</td>
<td>postnatal care</td>
</tr>
<tr>
<td>SBA</td>
<td>skilled birth attendant</td>
</tr>
<tr>
<td>TBA</td>
<td>traditional birth attendant</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNCPD</td>
<td>United Nations Commission on Population Development</td>
</tr>
<tr>
<td>UNDESA</td>
<td>United Nations Department of Economic and Social Affairs</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>UPCD</td>
<td>University Partnerships in Development and Cooperation</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>UTS</td>
<td>University of Technology Sydney</td>
</tr>
<tr>
<td>VHW</td>
<td>village health worker</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WISN</td>
<td>workload indicators of staffing need</td>
</tr>
<tr>
<td>WPRO</td>
<td>Western Pacific Regional Office of the World Health Organization</td>
</tr>
</tbody>
</table>

*A note about the use of acronyms in this publication*

Acronyms are used in both the singular and the plural, e.g. CHW (singular) and CHWs (plural). They are also used throughout the references and citations to shorten some organisations with long names.
This discussion paper presents a comprehensive approach to the assessment of individual health worker, team and HRH management performance in the context of health system strengthening and the achievement of Millennium Development Goal 5 (MDG 5). The paper focuses on health workers who deliver maternal, newborn and reproductive health care to households or provide outreach services from specific points in a community. Human resources in this context include nursing and midwifery professionals, community health workers, and traditional or cultural practitioners. These cadres do not only provide care at critical locations that vulnerable populations need to access, but they can also facilitate community empowerment which is central to primary health care.

The achievement of improved reproductive and maternal health outcomes is reliant on effective human resources for health (HRH) performance and quality maternal, neonatal and reproductive health (MNRH) service delivery. There are a number of characteristics that define quality HRH performance. These characteristics include effective health worker management, training, motivation and community engagement which may be used to develop indicators for performance assessment. Indicators areas must be considered in relation to all HRH policies and practices (horizontal integration) and linked to the objectives of the service to deliver of quality care across the continuum (vertical integration).

However, if we are to consider HRH performance improvement in relation to health system strengthening and MDG 5, the perspective needs to be multidimensional. HRH and service delivery are also linked to information system, the supply of medical products, vaccines and technologies, financing, leadership and governance. Plotting indicators in a matrix format across these areas can provide an opportunity to see how indicators in each aspect of the health systems might relate. This will enable appropriate measures to be selected for assessing performance across the health system. Tracking this progress is essential for ongoing quality improvement and requires rigorous monitoring and evaluation systems.

The experience of countries that have made progress towards MDG 5 demonstrates that a coordinated health system approach is necessary. System strengthening, but also the impact of structural and economic changes on maternal and reproductive personnel and their ability to deliver care. However, there is a paucity of documented HRH achievements at community level in the Pacific. Examples of human resources in maternal and reproductive care are isolated and lack reference to other aspects of the health system, or impact on health outcomes. This illustrates the pressing need to identify a more coordinated approach to planning, implementing and evaluating HRH interventions.

Assessing health worker performance is critical to ensuring that maternal and reproductive health care and services at community level are relevant, accessible, efficient, acceptable, and effective. However, appropriate indicators for assessment must be selected that are clearly linked to other aspects of the health system framework so that a much needed comprehensive approach can be taken to address MDG 5.
INTRODUCTION

Addressing the barriers and constraints faced by health workers and managers is a key component of health system strengthening and improving the quality of health care in low and lower middle income countries in the Asia and Pacific regions. A number of reports have highlighted the lack of knowledge available to policy makers and practitioners concerning tools and approaches that have proved useful in addressing human resources for health (HRH) challenges in similar contexts (de Savigny and Adam 2009; WHO WPRO 2009). Such knowledge serves to support informed decision making and helps countries prioritise the limited resources available for systems strengthening. There is therefore a need to understand what tools work in specific settings and to identify lessons from successful (and unsuccessful) reform efforts that can be applied by countries with comparable objectives. However, assessing what constitutes a successful HRH intervention, and the extent to which it translates into enhanced management, team and individual health worker performance that impacts upon health outcomes at community level, depends on coordinated approaches and efficient monitoring and evaluation systems.

This discussion paper presents a comprehensive approach to the assessment of individual health worker, team and HRH management performance in the context of health system strengthening and the achievement of Millennium Development Goal 5 (MDG 5). It provides examples of lessons learned in the planning, implementation and evaluation of HRH interventions in maternal, neonatal and reproductive health (MNRH) at the community level in the Asia and Pacific regions and considerations for enhanced performance in this area. These conclusions are based on some key findings of a narrative synthesis of the peer-reviewed and grey literature selected using a defined search strategy and inclusion criteria. A copy of this document is available upon request.

THE NEED FOR A FOCUS ON HRH IN MNRH AT COMMUNITY LEVEL

MDG 5 commits the global community to reducing maternal mortality by three-quarters between 1990 and 2015, and ensuring universal access to reproductive health by 2015. The progress of many countries in South-East Asia and Oceania is insufficient to reach the target if prevailing trends persist. Maternal mortality remains unacceptably high in many developing countries, with 61% of women delivering alone or with an unskilled attendant, and moderate or low access to reproductive health services including family planning (UNDESA 2009b). Weak health systems and low investment in health care contribute to difficulties in equitable access to quality MNRH care and services.

A key component of a functional health system is a competent, motivated and well-managed workforce. HRH are essential to the delivery of evidence-based packages of care to improve reproductive and maternal health outcomes. At the community level, HRH provide care at critical locations that vulnerable populations need to access. Health workers can also facilitate community empowerment which is central to primary health care (PHC). The need to develop HRH capacity in MNRH, particularly in nursing and midwifery at the PHC level, is a feature of a number of regional (WHO WPRO 2005; WHO/SEARO 2006) and country HRH strategic plans (Lao PDR MoH 2009; MoH Cambodia 2006).
The term ‘community’ refers to people who share a common socio-cultural background, religion or habitat. This includes vulnerable high-burden populations who reside in a variety of settings such as geographically isolated villages, urban slums or on borders. Communities may also be marginalised due to religion, ethnicity, language and culture. Community-based care is care provided by primary health workers (who may or may not include traditional healers and birth attendants) and structures to community groups.

Also expressed as ‘community orientated primary health care’, this notion integrates the concept of PHC aimed at individuals with population-based services by including clinical services, epidemiology and health promotion as elements of community-based ‘care’ (Van Weel and De Maeseneer 2008). Community-based care and services can be provided to individual households, sometimes described as ‘home based’, or it may be in the form of outreach services to villages delivered at specific points such as a health post or from a mobile clinic.

Human resources at community level can be broadly categorised into three main groups: nursing and midwifery professionals, community health workers (CHWs), and traditional or cultural practitioners. Workers in other sectors, such as school teachers and community development workers, may also be involved in the provision of MNRH care and services. The term ‘skilled birth attendant’ (SBA) is generally applied to workers in the nursing and midwifery cadre (WHO 2004). However, in some circumstances CHWs receive specialised training in midwifery, qualifying them as SBAs.

The term ‘community health workers’ is used to describe practitioners who are usually ‘selected, trained and work within the communities from which they come’ (Lehmann et al. 2004). It is not possible to define CHWs or create a standard set of functions for them as CHW tasks are assigned according to the local conditions (WHO 1989, p. 21). CHWs perform a broad range of tasks in MNRH which include curative, preventive and promotive functions. These include health education and promotion, advocacy, community mobilisation, dispensing reproductive health commodities and drugs, basic clinical interventions and referral.

In addition, CHWs perform a mix of health service functions and community development functions, the latter involving mobilising the community to improve their social and economic as well as health status.

Community health workers (CHWs) perform a broad range of tasks in MNRH which include curative, preventive and promotive functions.

Examples of cadres within the CHW category in the Asia and Pacific regions are family welfare assistants (Mridha et al. 2009), peer health educators (Walker 1998), mobile obstetric maternal health workers (Teela et al. 2009) and female community health volunteers (Shrestha 2003).

Traditional birth attendants (TBAs) are cultural workers engaged in MNRH whose practice is based on the socio-cultural and religious context of the communities in which they work. TBAs in some countries are independent of the health system and considered alternative or complementary to Western medicine. TBAs are not formally trained, although they may attend short training courses offered by UN agencies (Lan and Dunbar 2003; UNFPA 1996), local NGOs (Parco and Jacobs 2000) or Ministries of Health (Ronsmans 2001). They are often not formally employed but receive direct payment from their clients in the community. However, in some contexts, such as in Samoa, they are licensed to assist in deliveries and are supervised by midwives (WHO 2008a).

TBAs may also be involved in referring women to services and providing socio-cultural support. A number of names are given to TBAs depending on the context. For example, they are referred to as hilots in the Philippines (Mangay-Angara 1981), dunkun bayi in Indonesia (Chen 1976) and yalewa vuku in Fiji (Morse 1981).

This diversity between and among nursing and midwifery professionals, CHWs, and traditional or cultural practitioners at community level is summarised at Figure 1. In addition, MNRH providers can be salaried or unsalaried, they undertake different service functions, and are self-employed and/or engaged by the public service and/or non-state sector. These providers may also perform their duties in the community in which they reside or as part of an outreach service.
HRH make a major contribution to MNRH in communities. The density of SBAs has been found to impact upon maternal health outcomes (Anand and Bärnighausen 2004). In almost all countries where SBAs attend more than 80% of births, the maternal mortality ratio (MMR) is less than 200 per 100 000 live births (World Bank 1999). The importance of this correlation has led to the adoption of the proportion of births attended by an SBA as an MDG 5 indicator with the target of 90% coverage by 2015 (UNCPD 1999).

There is also evidence that other cadres at community level can make important contributions to MNRH. CHWs have been shown to have an impact on preventing neonatal deaths (Baqui et al. 2008a; Baqui et al. 2008b; Bari et al. 2006) and recovery rates of mothers who had postnatal depression (Rahman et al. 2008). This has been achieved through CHW identification of key clinical signs and symptoms, referral and health education.

Peer health educators can contribute to increased reproductive health knowledge and to some extent improved attitudes linked to delaying timing of the first sexual experience and safer sexual behaviour (Maticka-Tyndale 2006). Although there is little evidence that the practice of trained TBAs can have an impact on maternal mortality, they may reduce perinatal and neonatal deaths and stillbirths (Sibley et al. 2007).
Community-based MNRH care can involve home-based and/or outreach services. Home-based refers to care and services that are delivered in the patient’s or consumer’s home. This may include births that take place in a woman’s home or visits made to the family home to distribute family planning commodities. Outreach includes visits that are made by health workers who reside in one village or community to another community, or the visits that midwives or auxiliary nurses make to communities. These outreach services can be delivered in a purpose-built structure sometimes known as an aid post or at a central point in the community such as a community meeting place, a youth centre or a market. The range of MNRH care and services at community level and the staff involved are summarised in Table 1.

### Table 1. Levels of Community Health Practice, Possible Care and Services and Staff Involved

<table>
<thead>
<tr>
<th>Level</th>
<th>Possible Care and Service in the Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home-based</td>
<td>Normal delivery by SBA including basic obstetric and newborn care and referral, if needed</td>
</tr>
<tr>
<td></td>
<td>Family planning</td>
</tr>
<tr>
<td></td>
<td>Commodity distribution (e.g. condoms, other contraceptives, insecticide-treated bed nets)</td>
</tr>
<tr>
<td></td>
<td>Health education during pregnancy (including sexual and reproductive health education) and birth preparation</td>
</tr>
<tr>
<td></td>
<td>Postpartum/postnatal care for mother and baby</td>
</tr>
<tr>
<td></td>
<td>Identifying/referring newborn illness</td>
</tr>
<tr>
<td></td>
<td><strong>Resident in community</strong> CHWs, volunteers, TBAs</td>
</tr>
<tr>
<td>Outreach (aid post/dispensary)</td>
<td>Normal delivery by SBA including basic obstetric and newborn care and referral, if needed</td>
</tr>
<tr>
<td></td>
<td>Antenatal care, vaccination</td>
</tr>
<tr>
<td></td>
<td>Family planning</td>
</tr>
<tr>
<td></td>
<td>Diagnosis and treatment of sexually transmitted infections</td>
</tr>
<tr>
<td></td>
<td>Commodity distribution (e.g. condoms, other contraceptives, insecticide-treated bed nets)</td>
</tr>
<tr>
<td></td>
<td>Health education during pregnancy (including sexual and reproductive health education) and birth preparation</td>
</tr>
<tr>
<td></td>
<td>Postpartum/postnatal care for mother and baby</td>
</tr>
<tr>
<td></td>
<td>Identifying/referring newborn illness</td>
</tr>
<tr>
<td></td>
<td><strong>Visiting</strong> Public, private and NGO Midwives, nurses, nurse/midwife assistants, CHWs, allied health workers</td>
</tr>
</tbody>
</table>

### Key to acronyms in Table 1

- CHW: Community health worker
- NGO: Non-government organisation
- SBA: Skilled birth attendant
- TBA: Traditional birth attendant
Towards a comprehensive approach

Discussion paper 2  Angela Dawson

The achievement of improved reproductive and maternal health outcomes is reliant on effective HRH performance and quality MNRH service delivery. Yet, despite the importance of the relationship between HRH and MNRH care and services, there is little discussion concerning the complex interaction of the components of effective HRH and quality MNRH practice at the various levels. This includes an examination of contributing factors such as socio-cultural norms, health system structures, and ideologies that impact on the accessibility, acceptability and quality of health services. An improved understanding of these factors may enhance efforts to undertake a comprehensive approach to planning, implementing and evaluating health care.

Characteristics of quality HRH and MNRH service delivery

There are a number of characteristics or aspects of HRH and MNRH practice that contribute to effective performance. These are outlined in Figure 2.

Quality MNRH care and services are based upon the Continuum of Care model that involves health practitioners working with the community, family and individuals. This comprises four characteristics: reproductive care, antenatal care, intrapartum care and postnatal care (PNC). These characteristics include effective education about reproductive rights and dissemination of contraception; quality antenatal care (including nutritional advice and supplements, malaria prevention services, tetanus vaccination and prevention of parent to child transmission of HIV); skilled attendance at birth; and PNC for mother and baby, including advice and support for breastfeeding and routine immunisations.

Under the Continuum of Care model (PMNCH 2009) these services need to be closely integrated with functional linkages between different service providers (Kerber et al. 2007). This contributes to the provision of comprehensive coverage of care that must be acceptable and accessible to vulnerable and marginalised groups.

In addition, these packages of care must be based on the latest evidence which ensures their technical currency and be relevant to the needs of the community. The latter can be achieved through consultation processes within the community in which the care is to be delivered. However, the quality of this care is largely dependent on health worker performance as well as the willingness of women to access it and families or the State to pay for it.

Quality HRH practice involves effective leadership, performance management, incentives, appropriate remuneration, workforce planning, selection and recruitment. Supportive working environments are required that foster teamwork and partnerships and provide adequate infrastructure, logistics, equipment, transport and communication systems. This also includes policies that concern the health, safety and welfare of staff as well as family-friendly working environments. Appropriate numbers of staff are required with a skill mix that is aligned with the MNRH service delivery requirements. Quality education and training are necessary to build the required knowledge, skills and attributes to meet the competencies to perform a specific function within a profession. National HRH policy and legally binding conditions are necessary to regulate health worker training and practice to ensure quality and public safety. Community participation is essential. Community members should not only be considered to be users of services delivered by health workers, but also as contributing to the delivery of home-based interventions through volunteer activity or as household members.

All of these characteristics need to be considered in relation to all HRH policies and practices (horizontal integration) and the objectives of the organisation (vertical integration) (Baird and Meshoulam 1988). Effective implementation of these approaches requires that human resource (HR) systems are acceptable to managers and health workers which is critical in ensuring enhanced performance outcomes (Guest 1997).

The relevance, accessibility, efficiency, acceptability, effectiveness and impact of HRH performance can be assessed at the individual health worker, team and management levels. Indicators or measurable variables of performance can be based on these criteria and be drawn from the characteristics of HRH practice outlined above. Hornby and Forte (2002) present a systems approach to understanding HRH performance according to inputs, processes and outputs. Key inputs in the HRH system include the skill mix of the staff, the available numbers of HRH in relation to the case load and population served, and the associated staff costs in relation to the total health expenditure. Process-level HRH indicators are concerned with efficiency. This includes the organisational environment in which people work and how it affects how people deliver care and services as well as how efficiently HRH are utilised in the service. At the individual health worker level this
FIGURE 2. CHARACTERISTICS OF QUALITY HRH AND MNRH SERVICE DELIVERY

Key to acronyms in Figure 2
HRH  human resources for health
MDG  Millennium Development Goal
MNRH  maternal, neonatal and reproductive health
denotes the efficiency of care and services such as case management and patient satisfaction. This process area includes task performance measurements which focus on technical aspects, as well as contextual performance of tasks outside core job practices such as involvement in village health committees (Michie and West 2003) which contribute to acceptability measures.

The effectiveness and impact of HRH performance is reflected in changes in health outcomes. An output indicator might be the proportion of women who deliver their babies with an SBA, which has strong links with health outcomes such as MMR, or the contraception prevalence rate. Health outcomes can be linked to workforce indicators in order to gauge the impact of HRH performance. For example, an HRH outcome indicator might be the contraception prevalence rate in relation to family welfare workers employed, or the adolescent fertility rate in relation to the number of peer health educators. This combines population-based data with service-based data.

Linking HRH and MNRH service delivery planning, implementation and evaluation for improved performance

It is only at the impact and outcome levels that HRH indicators make a link with MNRH care and services and health outcomes. However, impact indicators – for example, the number of home visits made by peer health educators in relation to the percentage of women aged between 15 and 49 years currently using contraception – fail to reveal the complex interactions that have contributed to performance at the process and input level. This highlights the need to link planning, implementation and evaluation across both HRH and service delivery areas at the input, process and impact levels using common criteria. The diagram in Figure 3 depicts a broad-ranging approach to HRH and MNRH service delivery planning, implementation and evaluation. This involves equal consideration of HRH and MNRH service characteristics and associated input, process and output indicators throughout the entire planning and implementation cycles. Impact indicators are therefore considered alongside input and process indicators in order to address MNRH needs and affect outcomes. In addition, indicators need to be developed according to six criteria (relevance, accessibility, efficiency, acceptability, effectiveness and impact) to ensure comparability and alignment across all aspects and levels of HRH.

For example, at the input level an HRH indicator such as the percentage of trainees from the local community provided with knowledge and skills on reproductive health in a given year can be considered alongside a service delivery indicator such as the percentage of clients given counselling on family planning.

Linking HRH performance with other aspects of the health system framework

So far, we have only considered HRH in relation to service delivery, which constitutes only two of the six building blocks of the WHO health systems framework for action (WHO 2007). If we are to consider HRH performance improvement in relation to health system strengthening and MDG 5, the perspective needs to be multidimensional. HRH and service delivery are also linked to information systems, the supply of medical products, vaccines and technologies, financing, leadership and governance. Table 2 provides some examples of indicators at input, process and output levels in reproductive health across the six building blocks of the WHO health systems framework. Plotting indicators in a matrix format can provide an opportunity to see how indicators in each of the areas might relate so that appropriate measures can be selected for assessing performance across all areas. Indicators can be developed and selected according to the six criteria discussed above (relevance, accessibility, efficiency, acceptability, effectiveness and impact) discussed above which ensures a coordinated approach to planning, implementation and evaluation.

At the process level, the HRH indicators are concerned with efficiency and when they are linked in with the other building blocks of the health system contribute to strengthening efforts in a horizontal manner. Output level indicators focus on the effectiveness of HRH. This involves a more vertical approach to achieving the objectives of the organisations which include improving reproductive health outcomes as shown in Table 2. These approaches are central to strategic human resource management and the ‘fit’ of HRH activities (Wright and McMahan 1992) with the goals of health system strengthening and achievement of MDG 5.
FIGURE 3. LINKING ASPECTS OF HRH AND MNRH SERVICE DELIVERY WITH INDICATORS AT A NUMBER OF LEVELS

(Adapted from Hornby and Forte 2002)

**Key to acronyms in Figure 3**
- HRH: human resources for health
- MNRH: maternal, neonatal and reproductive health
### TABLE 2. EXAMPLES OF HRH PERFORMANCE INDICATORS ALONGSIDE OTHERS IN THE HEALTH SYSTEM RELATED TO REPRODUCTIVE HEALTH

*(Selected Indicators adapted from ESCAP 2003)*

<table>
<thead>
<tr>
<th>HRH Service delivery</th>
<th>Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input level</strong></td>
<td></td>
</tr>
<tr>
<td>Percentage of female trainees provided with knowledge and skills on reproductive health in a given year</td>
<td>Number of service delivery points offering family planning services</td>
</tr>
<tr>
<td><strong>Process level</strong></td>
<td></td>
</tr>
<tr>
<td>Proportion of CHWs trained in family planning and reproductive health</td>
<td>Percentage of clients given counselling on family planning during a year</td>
</tr>
<tr>
<td><strong>Output level</strong></td>
<td></td>
</tr>
<tr>
<td>Percentage of CHWs trained in relation to the number of clients who received counselling</td>
<td>Percentage of clients expressing satisfaction with the counselling services received</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leadership and governance</th>
<th>Information systems</th>
<th>Supply of medical products, vaccines and technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existence of national population and reproductive health policy and plans</td>
<td>Percentage of women 15–49 years currently using modern methods of contraception included in routine data collection</td>
<td>Percentage of service delivery points stocked with family planning commodities according to needs</td>
</tr>
<tr>
<td><strong>Process level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of national policy targets in monitoring and evaluation of plans at community level</td>
<td>Collection of data according to national protocols at community level</td>
<td>Percentage of contraceptive supplies that are wasted</td>
</tr>
<tr>
<td><strong>Output level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of targets met/protocols followed as per policy</td>
<td>Number of routine data collections as per protocol in household surveys</td>
<td>Available number of contraceptives in relation to need</td>
</tr>
</tbody>
</table>

**Key to acronyms in Table 2**
- **CHW**: community health worker
- **HRH**: human resources for health
MONITORING AND EVALUATING HRH PERFORMANCE IN MNRH AT COMMUNITY LEVEL

Measuring the effectiveness of HRH interventions and the extent to which they translate into enhanced management, as well as team and individual health worker performance that impacts on health outcomes at community level, depends on adequate monitoring and evaluation. However, it is necessary, given the discussion above, that this is linked to and coordinated with other monitoring and evaluation activities. For example, the results of health worker performance management at the micro level should feed into a larger HRH quality improvement system that itself forms part of overall health system improvement and, if appropriate, scaled-up solutions.

Linking HRH performance fields with health system strengthening criteria and MDG 5

A whole-of-system approach to performance demands that HRH evaluation is integrated into a quality assurance approach which is linked to health system strengthening and the achievement of the MDGs. Table 3 sets out the areas by which HRH performance can be evaluated alongside criteria for assessing health system strengthening and associated targets for MDG 5. The HRH performance fields on the left are categorised according to their relationship to policy, management systems, and education and training. Indicators can be drawn from the three fields at input, process and output levels. The focus on certain fields and use of key indicators will be determined by the context.

At community level in MNRH, for example, community participation in HRH is critical across these fields. Indicators in this case will reflect community contribution to HRH performance through engagement in HRH processes such as selection and recruitment, supervision, and education and training. The list also reveals that indicators should be developed to address individual, team and management performance.

HRH performance is affected by the socio-cultural context and is dependent upon the availability of infrastructure, medications, supplies, functional lines of communication and funding. Better coordination across health systems areas will help to ameliorate some of these issues; however, issues at the superstructure level may pose the greatest difficulties. Significant investment is required in economic and structural change which must be linked with health system improvements. However, an evaluation of health system strengthening by the Global Alliance for Vaccines and Immunisation initiative found that almost all countries are using funding for ‘downstream’ activities (e.g. to support and deliver immunisation and maternal and child health services) rather than ‘upstream’ in sector-wide change or reform (Martinez et al. 2009).

HRH indicators can be used as evidence by which an assessment of overall performance can be made according to five criteria listed under health system strengthening: equity, efficiency, access, quality and sustainability (Islam 2007). Equity refers to fair access to and distribution, and allocation of resources among different individuals or groups. Efficiency concerns the allocation of resources in a way that ensures obtaining the maximum possible overall benefit, as well as technical efficiency, or the achievement of the maximum possible sustained output from a given set of inputs. Access relates to physical as well as financial access, while quality concerns the ability to meet implied or stated needs. Financial and institutional sustainability are about the capacity of the system to continue its normal activities into the future. These criteria can be used by health system building blocks individually and collectively to assess overall health system strengthening.

The MDG 5 targets serve as higher-level impact indicators but also need to be traceable through process and input indicators. These also frame the content areas of performance in maternal mortality and universal access to reproductive health. MDG 5 is also interrelated with other Millennium Development Goals (WHO 2008b). Maternal mortality, for example, is closely linked to the health outcomes of newborns born to these mothers and therefore progress on MDG 5 will also influence efforts to reduce child mortality (MDG 4). Progress in achieving MDG 3, promoting gender equality and women’s empowerment, will help in achieving MDG 5. Increasing primary education (MDG 2) for girls and eradicating extreme poverty and hunger (MDG 1) are means to empower women and will positively influence the achievement of MDG 5.
### TABLE 3. LINKING HRH PERFORMANCE FIELDS WITH HEALTH SYSTEMS STRENGTHENING CRITERIA AND MDG 5

(Adapted from Dal Poz et al. 2009; Dieleman and Harnmeijer 2006; Islam 2007; UNDESA 2009a)

<table>
<thead>
<tr>
<th>HRH performance fields</th>
<th>Policy/Regulation/Legislation</th>
<th>Management systems</th>
<th>Personnel administration/Employee relations</th>
<th>Performance management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy/Regulation/Legislation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of national and linked district HRH policy that addresses community level and MNRH workers in public and NSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of job classification system that includes community cadres and service functions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation and benefits system used in a consistent manner to determine salary upgrades and awards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Management systems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff supply, retention and loss</strong></td>
<td><strong>Personnel administration/Employee relations</strong></td>
<td><strong>Performance management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of CHWs, nurse and midwives and TBAs at community level to population (2.28) (Speybroeck 2006)</td>
<td>Salary: average earnings, average occupational earnings and income among HRH</td>
<td>Job descriptions and duty statements are present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The distribution of HRH in urban and rural communities</td>
<td>Health and safety in the workplace, standard operating procedures, protocols and manuals</td>
<td>Supervision (especially clinical supervision) schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution by age, of HRH by sector (state/non-state), by sex</td>
<td>Incentives, monetary and non-monetary, teamwork, practice, functional partnerships</td>
<td>Frequency of supervision visits to the field planned that were actually conducted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution of HRH by occupation, specialisation or other skill-related characteristic</td>
<td>Job descriptions and duty statements are present</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of staff in dual employment/employed at more than one location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of vacancies, posts filled, duration in job, proportion of HRH unemployed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours worked compared with hours rostered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of human resources information system</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The existence of a functioning HR planning system</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days of absenteeism among health workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of entry to and exit from the health workforce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of nationally trained health workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR dedicated budget and community services identified</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education, training and competencies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existence of a formal in-service training component for all cadres</td>
<td>Existence of a management and leadership development program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Community /Consumer engagement in HRH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client satisfaction, number of patient contacts</td>
<td>Mechanisms for involving community and HRH in pre- and post-service curriculum development and review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of community meetings attended and evidence of community participation</td>
<td>Community involvement in: policy development, recruitment, selection, performance management and supervision</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of a formal relationship with community organisations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Health system strengthening criteria

**Equality**
Are HR distributed equitably or inequitably?

**Access**
Is access to care inhibited by lack of competent personnel in rural and distant communities?

**Efficiency**
Is the quality of care affected by access to qualified personnel, provider behaviour or incompetence?

**Quality**
Is personnel use inefficient because of lack of HR planning and coordination?

**Sustainability**
Are personnel supported or given incentives? (e.g. through community financing system?)

---

**MDG 5 associated targets**

5.1 Maternal mortality ratio: reduce by three quarters by 2015

5.2 In high MMR countries: 50% of all births to be assisted by a SBA by 2010 and 60% by 2015. Globally, 85% of all births assisted by SBA by 2010, 85% and 90% by 2015 (UNCPD 1999)

5.3 Percentage of women 15–49 currently using contraception

5.4 Annual number of births to women 15–19yrs per 1000 women in that age group

5.5 Percentage of women 15–49yrs attended at least once during pregnancy by SBA and percentage attended by any provider at least four times

5.6 Women who are fecund and sexually active but are not using any method of contraception and report not wanting any more children or wanting to delay the birth of the next child

---

**Key to acronyms in Table 3**

CHW: community health worker  
HR: human resources  
HRH: human resources for health  
MMR: maternal mortality ratio  
MNRH: maternal, neonatal and reproductive health  
NSS: non-state sector  
SBA: skilled birth attendant  
TBA: traditional birth attendant

---
Linking health system framework building blocks with progress towards the Millennium Development Goals

It is clear that harmonising monitoring and evaluation systems across all aspects of the health system framework building blocks is essential in order to make progress towards all of the MDGs. This in turn strengthens the health system itself. Figure 4 illustrates how linking all building blocks in the WHO health system framework ensures that they are considered together in relation to planning, implementation and evaluation. The six sides of the hexagon represent the six components of health systems, with health needs and objectives determining priorities. The spiral in the centre, taken from action research (Kemmis 1983), represents the process involved in addressing health needs and objectives in order to meet all the MDGs. This includes initial planning, followed by action, monitoring and evaluating then revising the plan or modifying the action.

This iterative and constantly changing process of observing, acting and reflecting should systematically involve all key stakeholders in a coordinated and consistent approach to the development of indicators and assessments of performance at the input, process and output levels. These processes, as well as the components of the health system building block and the form of the health system framework itself, are affected by factors in superstructure. These go beyond materials and infrastructure to include macroeconomics, culture, institutions, power structures, roles and rituals of the society.

The approach outlined in Figure 4 provides a comprehensive, three-dimensional picture from a systems perspective that facilitates an understanding of the co-determination of events so that interventions can be better designed, delivered and proactively modified in a consistent and ongoing manner. This means that poor performance can be identified early at the input stages, including the factors that contribute to this assessment and the ways in which they interact to affect practice. Changes can be made to complex interventions, management processes can be adapted and, if possible, adjustments can be made to accommodate change at the health systems level and beyond.
Figure 4. The relationship between health system strengthening and achieving the MDGs

(Dawson and Gray 2010)
The discussion so far has focused on conceptual approaches to planning, implementing and evaluating HRH performance in MNRH at community level, but examples of actual country experience helps to place this in context. Key lessons can be drawn from countries which have brought about significant reductions in maternal mortality due to improved access to reproductive health through the provision of essential services. These lessons highlight the need for an integrated health systems approach to HRH in MNRH.

Sri Lanka
In Sri Lanka, the professionalisation, broad coverage and use of midwives (Levine 2007) has been a central HRH approach in MNRH. Public health midwives (PHM) at community level cover a population of approximately 3000 people and report to a supervising public health midwife at the district level. PHMs are clinically competent as well as being recognised as credible and respected professionals (Rizzuto and Rashid 2002b, p. 16). The Ministry of Health undertook a staged process of replacing TBAs with PHMs and discontinuing TBA training in an effort to increase skilled attendance at births at the community level (de Silva 2007). Demand for TBA services declined from the 1950s, while demand grew for facilities that were easily accessible to remote areas (Pathmanathan et al. 2003, p. 41). National management processes ensured that strict training standards for midwives were maintained during the period of expansion from 1930 to 1950 and a supervisory structure maintained quality during this phase. PHMs were also supported by equipment, transport and allowances.

In addition, the employment of relatively low-cost PHMs in Sri Lanka meant affordable access to maternal care at community level (Pathmanathan et al. 2003). This contributed to the MMR which dropped from 250 per 100,000 live births in 1935 to 58 in 2005 (de Silva 2007). Employment of relatively low-cost midwives in Sri Lanka meant affordable access to maternal care at community level. This reduced the maternal mortality ratio which dropped from 250 for every 100,000 live births in 1935 to 58 in 2005.

Malaysia
The sharp decline in maternal mortality in Malaysia from an MMR of nearly 1500 per 100,000 live births in the 1930s to less than 58 in 2005 (UNDP 2007) was the result of a number of factors including the establishment and regulation of a new midwifery cadre. Midwives were deployed as front-line CHWs to provide maternal care and the number of registered midwives doubled in 1971 and slowly increased over the next 10 years. In the late 1970s, the 18-month community midwife training was upgraded and expanded to include child health and basic outpatient care. The cadre became known as community health nurses, raising their status and improving the range of MNRH care and services at community level (Pathmanathan et al. 2003, p. 87).

Community health nurses are supervised by certified nurse midwives (three-year basic training + 12-month midwifery course) or public health nurses (additional one-year training) (Pathmanathan et al. 2003, p. 83). They use a competency-based approach founded on protocols and manuals involving a written supervisory checklist that covers facility maintenance, record keeping and interpersonal skills. Supervisors provide community health nurses with regular on-the-spot feedback on clinical and programmatic issues (Rizzuto and Rashid 2002a). Supervisory midwives provide support for community health nurses in emergency situations through either hands-on clinical assistance or by facilitating referral to hospitals. Midwifery practice at community level is guided by a manual of procedures and clinical protocols produced in 1988.

A colour-coded risk approach for the referral of pregnant women was implemented in 1983, and in-service management training using problem-solving approaches is employed to overcome communication and attitudinal barriers between midwives and nurses in rural services and hospital staff. Midwives also receive in-service training in clinical skills as well as in community mobilisation. Despite a lack of evaluation studies showing an impact upon referral, it
is likely that the HR interventions contributed to the increase in hospital admissions for complicated cases (Pathmanathan et al. 2003, p. 98).

In Malaysia, TBAs were included as part of the health care system; they receive training, a delivery kit and are registered. TBAs are also paid for each delivery they attend which they were required to report, enabling their delivery kit to be re-stocked. Midwives are trained to value these traditional practitioners and work alongside them. TBAs provide an important supportive role at community level, including being present at births with community health nurses, accompanying women to hospital and assisting with postnatal and newborn care. This approach has been successful in not only encouraging safe delivery practices but it hastened the move from TBA to midwife delivery (Rizzuto and Rashid 2002b, p. 13), thereby improving skilled attendance at delivery. The ratio of government midwives to live births improved from more than 1:300 in 1960 to about 1:120 (Pathmanathan et al. 2003, pp. 90, 4).

These lessons indicate that the mobilisation of HR cadres such as midwives and CHWs, with an emphasis on clinical performance and community participation, is critical at community level. Involving TBAs in the continuity of care alongside SBAs addresses the socio-cultural needs of women. Successful HR approaches show that attention must be placed on collaboration between health workers, regular supervision and quality training. The professionalisation of midwifery or of a skilled birth attendant cadre at community level is an effective strategy alongside the creation of an informal sector of human resources for MNRH comprised of community members themselves. There is a clear need to develop and build upon current local organisational structures that are part of the social fabric of the community. Experiences in Sri Lanka and Malaysia demonstrate this. However, all these achievements were accompanied by ongoing phases of health systems development with modest expenditures on maternal health care and services. It is important to note the contribution of policy at national level, poverty reduction strategies, gender empowerment, education and rural development initiatives.
The scaling up experiences of countries can contribute to an understanding of how selected aspects of HRH practice can be expanded in unison with policy development, financial commitment and improved leadership. Structural and economic changes can both enhance HRH performance and constrain it. This requires rigorous monitoring and evaluation practice so that decision makers can be alerted to potential problems so that adjustments be made. The Indonesian experience of scaling up the village midwifery program can provide some useful insights in HRH at community level in MNRH.

Indonesia
Following the International Nairobi Conference in 1987, at which governments pledged to reduce maternal mortality by half by 2000, the Indonesian government launched the Village Midwifery Program. This was in response to maternal mortality of over 400 per 100 000 live births and neonatal mortality of 32 per 1000 live births. The aim was to place an SBA in every village to provide MNRH care and services. Three years later in 1993, 60 000 community midwives had been deployed and about 20 000 maternity huts had been established with community participation (Utomo 2008). Midwife density increased from 0.2 to 2.6 per 10 000 people between 1986 and 1996 (Shankar et al. 2008).

Twenty years after its inception, progress towards reducing MMR and neonatal mortality ratio (NMR) has been made, but it was not as large as expected. MMR in 2003 was 307 per 100 000 live births and the NMR was 20 per 1000 live births. Despite its success in increasing density of SBAs and reducing socioeconomic inequalities in professional attendance at birth, the focus on outreach services has meant that the poor, particularly those in rural and remote areas, experienced increasing difficulties in accessing emergency obstetric care in hospitals (Hatt et al. 2007).

This is probably the result of lack of responsive referral systems (e.g. transport), low cultural acceptability which reduces demand for services, and the high out-of-pocket cost of emergency obstetric care (EmOC) services (Ronsmans et al. 2001). Despite the calculation that the ratio of village midwives per 2389 people would translate to roughly one midwife per 54 births per year (Hatt et al. 2007), evaluations showed that midwives actually attended fewer births than this. As a result, the midwives’ obstetric workload was generally low and affected by competition with TBAs, as well as the wide geographic spread of households. Consequently, midwives were not continually using and improving their clinical skills. Midwives’ case-management skills were also generally sub-standard due to the rapid nature of the program and low quality of pre-service training (Utomo 2008). Supervision and mentoring of midwives was not adequate and their varied duties, and often vague job descriptions, also meant that many midwives worked in isolation with few opportunities for job support or learning. This had a strong impact on retention (Shankar et al. 2008).

A number of modifications were made to the program (summarised in Figure 5) which coincided with contextual factors which significantly affected HRH practice. These included the economic crisis of 1997 which precipitated the introduction of a social safety-net program for the poor, and in 2003 decentralisation led to an increase in district-level decision making (Utomo 2008).

The program modifications included lengthening the pre-service midwife training and providing short in-service training and skills-based retraining (McDermott et al. 2001). Management practices were improved, including performance management which incorporated supervision and career development (FK-UGM and WHO 2009; Hennessy et al. 2006a). Financial incentives were found to be sufficient to retain midwives in remote areas, although non-financial reasons affected their relocation to these settings once established with their family (Ensor et al. 2009). Financial incentives were introduced for TBAs to encourage referral to midwives (Analen 2007). A Workload Indicators of Staffing Need approach was introduced in selected provinces to improve workforce planning and management in the newly decentralised context (Kolehmainen-Aitken et al. 2009). This bottom-up approach began with health centre midwives. Midwife training and selection was also improved, leading to better coverage and competence (Hennessy et al. 2006b; UPCD 2003). These changes were made along with the development of EmOC, audits, and introduction of a comprehensive health policy in 2001 that included a Making Pregnancy Safer (MPS) strategy (Utomo 2008).
FIGURE 5. EXAMPLES OF STRUCTURAL AND ECONOMIC CHANGES IN INDONESIA WHICH IMPACTED ON IMPROVED HRH PERFORMANCE
(Adapted from Heywood and Harahap 2009; Shankar et al. 2008; Utomo 2008)

Village midwifery program: Indonesia

**Structural changes**
- Advocacy and leadership: safe motherhood seminars in the late mid-1990s involving President Suharto
- Human resources for health coverage: skilled birth attendance increased from 34% to 62% by 1998
- Improved education and skills: pre- and in-service competency based education introduced
- Monitoring and evaluation: clinical audits used to assess performance
- Management practice: National Ministry of Health midwife training and placement plan, clinical performance development and management system for nurses and midwives, WISN tool for workforce planning
- Community participation: village integrated service post (*posyandu*)

**Economic changes**
- Increased financial resources and coordination of finances: extended salary support and formalised administrative oversight eased the transition to private practice
- Procurement of drugs, equipment etc.: district control through decentralisation

**Areas that require strengthening**
- Clinical and communication training, mentoring and supervision, job description, ensuring adequate case loads, health information systems on private providers and legality of solo private nurse providers

**Key to acronyms and foreign words in Figure 5**
- HRH human resources for health
- WISN workload indicators of staffing need
- *posyandu* integrated village health service post
Towards a comprehensive approach

Discussion paper 2  Angela Dawson

There are some key lessons that can be learned from the Indonesian village midwife scale-up effort. Shankar et al. group these into ‘essential elements and monitoring points for scaling up skilled birth attendance’ (2008, p. 1226). These and other elements are included in Figure 6. There are similarities with the UNFPA model (2006) for scaling up community midwives, with an emphasis on the pertinent HR aspects of certification, supervision, clear responsibilities and realistic workload. Community participation and engagement contribute to the enabling environment which is further supported by political and economic reform brought about by resource mobilisation and effective management and leadership.

Ongoing monitoring and evaluation facilitates the modification of programs to suit the changing environment, contributing to the sustainability of interventions. Indonesia’s experience shows that HRH efforts must be coordinated with an efficient health information system, financial commitment, the appropriate supply of medical products, vaccines and technologies, quality service delivery and leadership and governance. Shankar et al. (2008) emphasise a systems top-down and bottom-up approach. This highlights the need for support from the existing health system in order to accommodate expansion that ensures quality as well as equity.

**FIGURE 6. ESSENTIAL ELEMENTS AND MONITORING POINTS FOR SCALING UP SKILLED BIRTH ATTENDANCE**

(Adapted from Shankar et al. 2008 and UNFPA 2006)
HRH AND COMMUNITY ENGAGEMENT:
SOME EXPERIENCES FROM THE PACIFIC

Community participation is an essential component of people-centred PHC (WHO 1978). Households are critical but under-rated actors in the health sector (Wagstaff and Claeson 2004, p. 69). They are not only users of services delivered by professionals but also ‘producers of health through the delivery of home-based interventions and in their everyday health behaviours’ (Wagstaff and Claeson 2004, p. 69). Community members can be actively engaged in HRH processes which can be facilitated by health workers with the support of HR management structures. This includes involvement in MNRH service delivery but also engagement in the selection and recruitment of HRH and their supervision and training. Recruiting staff from the areas where they are posted and work may improve retention and possibly effectiveness (IntraHealth 2008). This provides a strong link with communities, ensuring community empowerment as well as acceptance and support of health workers (Chaya 2007). However, the current extent to which the community is organised and motivated affects their involvement in HRH, output and performance (Mangelsdorf 1988).

There are some documented experiences from the Pacific where community members are involved across key areas of HRH policy, management and education and training in MNRH. However, it is important to note that there is a paucity of detail due to a lack of data and rigorous evaluation. This is the result of a deficiency of analytical studies, poor implementation studies and a reliance on descriptive and project evaluation studies (ten Hoope-Bender et al. 2006, p. 228). Rigorous qualitative studies are also required to better understand the socio-cultural environment of demand, service delivery and health care management for MNRH (Levitt-Dayal 2009). Documented HRH experiences in the Pacific are also mostly isolated examples and there is usually no reference to other aspects of the health system or impact on health outcomes. This illustrates the pressing need to identify a more coordinated approach to planning, implementing and evaluating HRH interventions. Evaluation of HRH interventions on their own will not shed useful light on how they relate and interact with other interventions in order to gauge what has been achieved and how.

At community level there is much documented cooperation between the nursing and midwifery cadres, volunteers and TBAs. For example, in Vanuatu 180 active aid posts in villages are staffed by volunteers and supervised by a general nurse at the dispensary level, who in turn is supervised by a nurse practitioner, who also acts as manager, a midwife and general nurse in the health centre (MoH Vanuatu 2004, p. 23). In Samoa, TBAs work closely with nurses and midwives and are legally recognised as allied health workers and receive their training from midwives (WHO 2008a). Supervision is promoted by linking it to accreditation required for all PHC health staff, so there is a strong imperative to be involved in in-service training (Burnet Institute 2007, p. 14).

Both of these examples have not been thoroughly studied in context and with respect to the extent to which they were part of an integrated health systems approach. No monitoring and evaluation data is available. Although both Samoa and Vanuatu have high SBA coverage with 92.9% of births being attended by SBAs in Vanuatu and 100% in Samoa (WHO WPRO 2009), the MMRs are different. The MMR in Samoa is reported at 29 per 100 000 live births (2003–2008), while in Vanuatu an overall ratio is reported as 150 per 100 000 per live births (2003–2008) (UNICEF 2010a). The reasons for this difference are complex. Nurse and midwife personnel coverage in Samoa and Vanuatu is reported at 17 per 100 000 (WHO 2009), which is higher than the figure of 2.28 per 1000 population considered as the minimum number of personnel (doctors, nurses and midwives) required to deliver essential interventions to achieve the MDGs (Speybroeck 2006). However, Vanuatu’s population of 246 000 is spread over 83 islands which has an impact on access to services, whereas Samoa’s population of 179 000 is more densely concentrated on two main islands (UNDESA 2009b).

Socio-economic indicators and inequity may also go some way towards explaining the different MMRs in the two Pacific island nations, which are both categorised as lower middle income countries (World Bank 2008). The human development index of both countries has improved over the last 10 years, although Samoa has a higher human development index (0.771) than Vanuatu (0.693). There are considerable gender inequalities and disparities in economic and political decision making in both nations, with Vanuatu’s gender-related development index being lower than Samoa’s in relation to the country’s human development index (UNDP 2009). In addition, general government expenditure on health as a percentage of total expenditure on health in 2005 was 83% in Samoa and 65% in Vanuatu (WHO 2009). In Vanuatu, the government’s spending on health is reportedly roughly half of that spent by governments in surrounding countries (UNFPA 2008).
Despite potentially useful models of community and health worker partnership, HRH performance, health system functionality and maternal health outcomes are constrained by a number of issues in the Pacific. In Vanuatu for example, maternal health is constrained by geography, investment and low female participation in decision making. These examples indicate the need for structural and economic change requiring an integrated systems approach to planning, monitoring and evaluating HRH practice. Isolated examples of improved performance are useless on their own and highlight the problem with short-term project-based approaches to health development that do not progress to comprehensiveness. This concurs with the recent report on Making Aid Effectiveness Work for Family Planning and Reproductive Health which emphasises the need for adequate funding and indicators to monitor progress toward MDG 5 (Dennis 2009).

**SELECTING, IMPLEMENTING AND EVALUATING HRH STRATEGIES: WAYS FORWARD**

This discussion paper has demonstrated that enhancing HRH performance is a complex process that requires the use of a number of strategies across HRH as well as in other health system areas. It highlights the need for a more rigorous and well-coordinated approach to HRH planning, implementation and evaluation by linking activities across the health system.

The following points summarise practical guidelines for enhancing HRH performance in MNRH at community level gleaned from country experiences.

- HRH practices and their respective indicators need to be aligned or horizontally integrated with other HRH aspects, as well as vertically integrated with the HRH objectives of the organisation.
- HRH initiatives need to be horizontally aligned with other building blocks of the health system and vertically integrated with MNRH targets in order to achieve health system strengthening and progress towards MDG 5.
- HRH performance monitoring and evaluation must take context into consideration and performance in key areas that are linked to district, provincial and national objectives and at individual, team and management levels, including the participation of community members.
- Health system strengthening criteria provide a useful way of considering improvement according to standards that are acknowledged across other parts of the health system.
- Structural and economic change is required to ensure successful implementation of HRH interventions. This must be well monitored, incremental and aligned with a whole-of-system approach to change that is both bottom up and top down.
- Superstructure factors can have a major impact upon HRH; however, a whole-of-system approach may help to ameliorate this through effective monitoring and evaluation systems that facilitate ongoing modifications.
- Monitoring and evaluation systems must employ rigorous methods drawing on perspectives from analytical studies including epidemiological evidence as well as qualitative research.
REFERENCES


Burnet Institute 2007, Local Health Managers in Difficult Environments: Lessons learned; unusual successes; and a way forward, Centre for International Health, The Burnet Institute, Melbourne, Australia.

Chaya, N 2007, Poor access to health services: ways Ethiopia is overcoming it Improving access and equity through community-based initiatives, Population Action International.


Dawson, A and Gray, N 2010, Human Resources for Health in Maternal, Neonatal and Reproductive Health at the Community Level: A Synthesis of the Literature with a focus on the Asia Pacific Region, Human Resources for Health Knowledge Hub, University of New South Wales, Sydney.

de Savigny, D and Adam, T 2009, Systems thinking for health systems strengthening, Alliance for Health Policy and Systems Research, WHO.


Levitt-Dayal, M 2009, ‘Socio-cultural Factors Related To Health Service Provision In MNH’, paper presented to WHO Consultation on The Application of Socio-cultural Aspects of Accelerating the Achievement of MDGs 4 and 5, Bali, Indonesia, August 11−13.


Parco, K and Jacobs, B 2000, Knowledge, Attitude and Practices of Traditional Birth Attendants in Maung Russay: Scope and ways for improvement, Morimondo, Cambodia.


Rizzuto, R and Rashid, S 2002a, Skilled Care During Childbirth Country Profiles, Family Care International, New York.

Rizzuto, R and Rashid, S 2002b, Skilled Care During Childbirth: Country Profiles, Family Care International.


Towards a comprehensive approach

Discussion paper 2

Angela Dawson


THE KNOWLEDGE HUBS FOR HEALTH INITIATIVE

The Human Resources for Health Knowledge Hub is one of four hubs established by AusAID in 2008 as part of the Australian Government’s commitment to meeting the Millennium Development Goals and improving health in the Asia and Pacific regions.

All four Hubs share the common goal of expanding the expertise and knowledge base in order to help inform and guide health policy.

Human Resource for Health Knowledge Hub,
University of New South Wales
Some of the key thematic areas for this Hub include governance, leadership and management; maternal, neonatal and reproductive health workforce; public health emergencies; and migration.
www.hrhub.unsw.edu.au

Health Information Systems Knowledge Hub,
University of Queensland
Aims to facilitate the development and integration of health information systems in the broader health system strengthening agenda as well as increase local capacity to ensure that cost-effective, timely, reliable and relevant information is available, and used, to better inform health development policies.
www.uq.edu.au/hishub

Health Finance and Health Policy Knowledge Hub,
The Nossal Institute for Global Health (University of Melbourne)
Aims to support regional, national and international partners to develop effective evidence-informed national policy making, particularly in the field of health finance and health systems. Key thematic areas for this Hub include comparative analysis of health finance interventions and health system outcomes; the role of non-state providers of health care; and health policy development in the Pacific.
www.ni.unimelb.edu.au

Compass: Women’s and Children’s Health Knowledge Hub,
Compass is a partnership between the Centre for International Child Health, University of Melbourne, Menzies School of Health Research and Burnet Institute’s Centre for International Health.
Aims to enhance the quality and effectiveness of WCH interventions and focuses on supporting the Millennium Development Goals 4 and 5 – improved maternal and child health and universal access to reproductive health. Key thematic areas for this Hub include regional strategies for child survival; strengthening health systems for maternal and newborn health; adolescent reproductive health; and nutrition.
www.wchknowledgehub.com.au
Human Resources for Health Hub
Send us your email and be the first to receive copies of future publications. We also welcome your questions and feedback.

HRH Hub @ UNSW
School of Public Health and Community Medicine
Samuels Building, Level 2, Room 209
The University of New South Wales
Sydney, NSW, 2052
Australia
T +61 2 9385 8464
F +61 2 9385 1104
hrh@unsw.edu.au
www.hrhhub.unsw.edu.au