Maternal, neonatal & reproductive health workforce

IMPROVING THE QUALITY OF HRH INFORMATION

A focus on the providers of maternal, neonatal and reproductive health care and services at community level in selected Asia and Pacific countries
Discussion paper 1

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ACRONYMS

AAAH	Asia and Pacific Action Alliance for Human Resources for Health
ADB	Asian Development Bank
ANC	antenatal care
ANMC	Australian Nursing and Midwifery Council
AusAID	Australian Agency for International Development
CHIP	country health information profiles
CHW	community health worker
FIGO	Federation of Gynecology and Obstetrics
FK-UGM	Faculty of Medicine, University of Gadja Mada
GHWA	Global Health Workforce Alliance
HIS	health information system
HMN	Health Metrics Network
HR	human resources
HRH	human resources for health
HRIS	human resources for health information system/s
ICM	International Confederation of Midwives
ICPD+5	United National International Conference on Population Development + 5
IUD	intra uterine device
IMCI	integrated management of childhood illness
KPI	key performance indicator
Lao PDR	Lao People's Democratic Republic
MDG	Millennium Development Goal
MNRH	maternal, neonatal and reproductive health
MoH	Ministry of Health
MoHFW	Ministry of Health and Family Welfare
NDoH	National Department of Health
NGO	non-government organisation
NHA	national health accounts
OHS	occupational health and safety
PHC	primary health care
PM	performance management
PNC	postnatal care
PNG	Papua New Guinea
PTT	*pegawi tidak tetap* (non-permanent employees)
RACHA	Reproductive and Child Health Alliance
SBA	skilled birth attendant
TBA	traditional birth attendant
UNCPD	United Nations Commission on Population Development
UNDESA	United Nations Department of Economic and Social Affairs
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
UTS	University of Technology Sydney
VHW	village health worker
WHO	World Health Organization
WPRO	Western Pacific Regional Office of the World Health Organization

A note about the use of acronyms in this publication

Acronyms are used in both the singular and the plural, e.g. MDG (singular) and MDGs (plural).
Acronyms are also used throughout the references and citations to shorten some organisations with long names.

INTRODUCTION

Accurate, accessible and quality information about the providers of maternal, neonatal and reproductive health (MNRH) care at community level, how they are performing as well as how they are managed, trained and supported, is central to workforce planning, personnel administration, performance management (PM) and policy making. A number of documents have identified the need for timely, reliable, detailed and consistent workforce data in order to provide evidence to justify requests for both new and ongoing investment in human resources for health (HRH) development (WHO 2008a; Dal Poz et al. 2009). This information is critical to quality service delivery, and at the community level this includes health workers delivering evidence-based packages of care to women and newborns and making emergency referrals to facilities beyond the community.

The community is often the first point of contact people have with the health system and it is at the household level that the activities of the health sector are ultimately directed (Wagstaff and Claeson 2004). People-centred health care is a key principle of primary health care (PHC) and health workers and HRH management processes have an important role in 'enabling people to increase control over, and to improve, their health' (WHO 1986). The community level has received renewed attention due to the revitalisation of PHC. Primary health care reform has highlighted the need to better link community-level care with district-level services (WHO 2008b), improving the support of HRH and strengthening referral mechanisms.

Health workforce information, along with information concerning service delivery, finance, governance and the supply of medical products, vaccines and technologies, make up a country's health information system (HIS). This system produces relevant and quality intelligence necessary for decision making (WHO 2008a). Information about the workforce also contributes to monitoring progress toward the Millennium Development Goals (MDGs). Skilled health workers at delivery are the key to reducing maternal mortality which constitutes the first target of MDG 5. Although no specific target has been agreed upon to increase the proportion of skilled birth attendants (SBAs), the United Nations International Conference on Population and Development + 5 (ICPD+5) has set a goal to have 90% of all births attended by a SBA by 2015 (UNCPD 1999). MDG 5 is the goal towards which least progress has been made. Maternal mortality remains unacceptably high in many developing countries, with an estimated 61% of women delivering alone or with an unskilled attendant, and access to reproductive health services, including family planning, remains limited (UNDESA 2009). At community level, health workers are also involved in the collection of data that contributes to the assessment of progress towards all aspects of MDG 5 as well as other data that forms part of a country's HIS. This highlights the importance of health worker skills in gathering information for monitoring health service delivery as well as for monitoring health workforce performance.

Maternal mortality remains unacceptably high in many developing countries, with an estimated **61% of women delivering alone** or with an unskilled attendant.

Despite the importance of accurate information about health service personnel and the context in which they practise, little is known about providers at the community level. The purpose of this discussion paper is to:

- describe some information flows and gaps concerning the workforce that provide MNRH care and services at community level
- discuss potential stakeholders' HRH information needs and uses
- provide recommendations for improving the availability, quality and use of HRH information.

This paper may be of particular use to district managers as well as non-government organisations (NGOs) and donors wishing to improve their knowledge management and exchange practice in the Asia and Pacific regions.

The conclusions about HRH information availability, quality and use in this discussion paper are drawn from an analysis of information systematically collated for a report on MNRH personnel at community level in10 countries. This report includes profiles of MNRH staff at community level in Bangladesh, Cambodia, Fiji, Indonesia, Laos, Papua New Guinea (PNG), the Philippines, the Solomon Islands, Timor-Leste and Vanuatu. The analysis of HRH country information is restricted to documents that are available through electronic databases, on the internet and those accessed through in-country contacts. However, a key strength of the paper is the fact that its conclusions are drawn from a synthesis of information from a wide range of sources, including grey and peer-reviewed documentation as well as key informant knowledge.

THE NEED FOR QUALITY INFORMATION ON HRH IN MNRH AT COMMUNITY LEVEL

At the community level, information about the workforce is needed to provide a picture of staff supply, productivity, competence and responsiveness. This information contributes to knowledge about staff performance (Dieleman and Harnmeijer 2006) so that gaps and problems can be identified, interventions planned and the need for additional resources justified.

Health service managers require such information to establish appropriate staffing levels, training needs and to ensure staff members are deployed in the most suitable way. HRH indicators also provide important information for benchmarking, ensuring patient safety and allowing comparisons between different components of a health system (Hornby and Forte 2002).

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Staff supply concerns the availability, retention and loss of staff and includes information about staff numbers, their distribution, employers, roles, work attendance and absenteeism, resignation and retirement. This enables an assessment to be made in terms of the current workforce stock, which may include health workers employed by the state, or non-state sectors, including private practitioners who may also be self-employed. Interventions such as workforce planning forecasting, recruitment drives, task shifting activities or multi-sectoral partnership agreements for service delivery may be planned with community-level input by managers at the district level using this information.

Information about waiting times (for example, how long it takes for a pregnant woman to receive an antenatal check at the aid post), can shed light on the available numbers of staff as well as staff productivity. Other examples of productivity might be gained from data concerning the number of household visits made, or the number of family planning counselling sessions held by each health worker. Information about efficiency in the workforce can be compared with agreed benchmarks, enabling managers to gauge what improvements may be required, and in what areas.

Financial or non-financial incentives may be provided to improve productivity or supervision enhanced to help improve practice. Knowledge about staff competence involves the collection of data on the quality of education and training, health worker knowledge, skills and attributes in MNRH and the achievement of required competencies needed to perform specific functions such as normal delivery or the insertion of an injectable contraceptive. Managers may use this information to upgrade skills through in-service training and to better monitor individual and team competence through improved PM systems and audit processes. Professional organisations and education and training institutions may undertake curriculum reviews and development based on such information.

Information about staff responsiveness relates to data about client satisfaction with the service they receive. It also concerns information about how quickly and accurately staff members are able to detect danger signs and symptoms in order to treat, manage or refer, thereby preventing or reducing the risk of death or disability. This information may be used by supervisors to assess adherence to protocols and feed into staff PM. Incentives such as promotion may be awarded on the basis of performance excellence.

This information provides insight into individual performance at the community level but more is required in order to better understand the management, policy and regulatory environment that affects how individuals and teams of health workers operate at the community level. Examples of this information include details about staff supervision, selection and recruitment policy and processes, training regimes, incentives, job classification systems, conditions of service, national human resources (HR) policy, certification and professional regulation. In addition, information about logistics and infrastructure helps to build a profile of the supportive mechanisms that provide health workers with drugs, equipment and reproductive health commodities as well as transport and communication systems for referral and advice.

OVERVIEW OF INFORMATION SOURCES, GAPS AND ISSUES AT THE GLOBAL, REGIONAL AND NATIONAL LEVELS

There are a number of sources of workforce information, but there are many information gaps and conflicting data at the global, regional and national levels. At the global level, numerical data on the supply of health workers can be accessed from the World Health Organization (WHO) atlas on health workers (WHO 2009a), the World Health Statistics Report (WHO 2009d) and the online WHO Statistical Information System (WHO 2009c). Unlike Europe, Africa and the Americas, the Asia and Pacific regions currently lack a health observatory which provides access to comprehensive information about health systems in countries, including HRH data.

At the regional level, the WHO Western Pacific Regional Office provides access to workforce data through the online country health information profiles (CHIPs) and health databank (WHO and WPRO 2009). However, detailed data concerning health worker roles and function in MNRH, or information about how they are managed or educated and trained and at what level they are employed, is not available. These WHO sources provide incomplete data on community health workers (CHWs). For example, ratios of CHWs to 1000 people are only provided for Fiji (0.13), PNG (0.60), Cambodia (0.13)(WHO and WPRO 2009), Bangladesh (2) and Timor (<1) (WHO 2009a); these densities falling somewhat below the recommended value of 2.28 (Speybroeck et al. 2006). However, data for the three other countries in the Asia region for which CHW information is available quote higher ratios (Maldives 16, Myanmar 9 and Nepal 6) (WHO 2009a). It is unclear what cadres are included in these figures as a large range of formal and informal workers can be incorporated in this or the nursing and midwifery group. Information is available in these databases concerning nursing and midwifery numbers; some are disaggregated by rural or urban location but not according to community service. No data is available on other workers such as traditional birth attendants (TBAs), village health workers (VHWs) and workers in other sectors who may be involved in the provision of MNRH care and services, including school teachers and community development workers.

Information on SBAs can also be sourced from MDGs reports (UNDESA 2009). However, there is no information about the distribution of this cadre, including how many SBAs work at community level or facility level and how they are managed and interact with TBAs and other health workers. Stanton et al. (2006) point out a number of improvements that could be made in the collection of data on skilled birth attendance. Their detailed analysis of the coding of country-specific providers and facilities in the survey data files suggests that more careful attention needs to be paid in international survey programs to accurately classify the type of health care provider and type of facility used for delivery. This is especially pertinent where country-specific cadres of providers (i.e. midwifery assistants, CHWs, TBAs) and facilities are used. They call for the documentation of the skills and training of various cadres of providers, as well as the basic or comprehensive obstetric care capacity of various types of facilities to assist in the assessment of birth attendants as 'skilled providers' as defined by WHO (Stanton, Blanc et al. 2006).

According to Chan et al. (2010), data on health financing, HR and infrastructure in low and lower middle income countries are still too poor to monitor basic information on the inputs of the health system. Many countries do not have the technical capacity to accurately monitor their own health workforce. Data are often unreliable and out-of-date, common definitions and statistical analytical analysis are absent, and the skills needed to make crucial policy assessment are lacking (Dal Poz et al. 2009). Ministries of health do not always collect information on all cadres. For example, the Ministry of Health (MoH) in India has excluded roughly 1.5 million CHWs from its estimates of HRH. A separate occupational code is not included in the current data classification system; however, some of these workers may be included under nursing and midwifery (Dal Poz et al. 2009).

The Kampala Declaration and Agenda for Global Action issued at the First Global Forum on HRH calls for 'countries to create health workforce information systems to improve research and to develop capacity for data management in order to institutionalise evidence-based decision-making and enhance shared learning' (WHO and GHWA 2008). At country level, there have been some efforts to build national capacity in HRH information systems (HRIS). The Health Metrics Network (WHO 2008a) and the Capacity Project (Capacity Project 2009a) have undertaken much work in this area along with the USAID Health System 20/20 Programme (Kombe et al. 2008). However, work in MNRH and HRIS has been limited. One example from Malawi highlights efforts to link information systems in order to track the deployment and training of family planning and reproductive HRH, including those at community level (Schenck-Yglesias et al. 2003).

HRH INDICATORS FOR HEALTH INFORMATION SYSTEMS

There have been a number of efforts to identify HRH measures for HIS and health systems research. As a result, there has been a proliferation of tools for collecting and processing HRH information. These have a variety of foci including HRH planning (Kolehmainen-Aitken et al. 2009), rapid assessment for HRIS strengthening (Capacity Project 2009b), monitoring and evaluating HRH (Dal Poz et al. 2009; WHO 2009b), examining particular cadres such as nursing and midwifery (WHO and UTS 2008), assessing HRH as part of a health information systems analysis (WHO and HMN 2008) or as part of a health systems situational analysis (Islam 2007). These tools draw upon a number of indicators that make up data sets used to collect information and make assessments.

HRH indicators can be defined as 'a measurable variable (or characteristic) that can be used to determine the degree of adherence to a standard or the level of quality achieved' (Quality Assurance Project 2009). HRH indicators have been grouped into categories by various authors. Hornby and Forte (2002) present 12 areas, while Dal Poz et al. (2009) outline selected key indicators for monitoring and evaluation in four areas: stock and distribution, labour activity, productivity, and renewal and loss.

Few data collection tools include specific indicators that allow for the collection of HRH data at the primary level, and there is an even greater paucity of indicators that include community-level information. Collecting HRH data at community level would require the inclusion of cadres such as lay or non-clinical health workers, as well as traditional and cultural workers. This highlights a need for additional occupational categories or space allocated for a description of them. In addition, fields are also required that help to capture quantitative data concerning how these cadres interact with each other and how they are supported by policy and management processes. Indicators that facilitate the collection of information concerning the role of community members in HRH process are also pertinent and contribute to a better understanding of community participation.

There are a range of fields from which indicators can be drawn to gather information about HRH at community level. These areas have been listed in Figure 1. The indicators cover fields of policy, management and education and training areas. They capture information concerning supply, productivity, competence and responsiveness as well as the key areas highlighted by Hornby and Forte (2002) and Dal Poz (Dal Poz et al. 2009).

Collecting information about personnel who provide MNRH services at community level may require the adaptation and modification of generic indicators. The development of indicators and those selected depends upon the objectives of the evaluation itself and the perspective taken. Approaches can range from a focus on the economic viability of the workforce to a management perspective health systems approach to the use of a human rights framework to assess practice such as that suggested by Thompson (2004). An overview of the mechanics of developing and using human resource indicators is provided by Hornby and Forte (2002) which includes an assessment of the management situation in order to determine what HRH indicators best fit with current PM needs. Kongnyuy and van den Broek (2008) highlight an evidence-based approach to developing context-specific criteria and indicators for HRH performance through a consultative process.

Three workshops were held with stakeholders to establish standards for women-friendly care. The first involved the collating of evidence from existing guidelines and agreeing on objectives, structure, process and outcome criteria for each. In the second, participants agreed on a final list of standards and criteria, and the third workshop involved the selection of criteria to audit. This approach ensures 'buy-in' from stakeholders and staff, and ensures consensus and ownership which is probably conducive to the success of a performance-management process.

This discussion paper has identified the need for quality information on HRH engaged in MNRH at community level and the types of information required in order to plan interventions and justify resources to improve performance. The discussion paper will now provide a brief overview of cadres at community level and their roles in MNRH and then consider what information is available in key indicator fields and identify the gaps in knowledge.

Key to acronyms in Figure 1

CHWs	child health workers
HRH	human resources for health
HR	human resources
MNRH	maternal, neonatal and reproductive health
TBAs	traditional birth attendants

FIGURE 1. HRH INDICATOR FIELDS

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

Policy/Regulation/Legislation

- Presence of national and linked district HRH policy that addresses community-level and MNRH workers in private and non-state sector
- Presence of job classification system that includes community cadres and service functions
- Compensation and benefits system used in a consistent manner to determine salary upgrades and awards
- Formal processes for recruitment, hiring, transfer, promotion, disciplinary actions
- Employee conditions of service documentation (e.g. policy manual)
- Presence of a formal relationship with unions (if applicable)
- Registration, certification, or licensing is required for categories of staff in order to practise

Management systems

Staff supply, retention and loss

- Ratio of CHWs, nurses and midwives and TBAs at community level to 1000 people (2.28 recommended by Speybroeck et al. 2006)
- Distribution of HRH in urban and rural communities
- Distribution by age, distribution of HRH by sector (state/non-state), distribution by sex
- Distribution of HRH by occupation, specialisation or other skill-related characteristic
- Proportion of staff in dual employment/employed at more than one location
- Number of vacancies, posts filled, duration in job, proportion of HRH unemployed
- Hours worked compared with hours rostered
- Presence of HR information system
- Existence of a functioning HR planning system
- Days of absenteeism among health workers
- Ratio of entry to and exit from the health workforce
- Proportion of nationally trained health workers

HR dedicated budget and community services identified

Personnel administration/Employee relations

- Salary: average earnings, average occupational earnings and income among HRH
- Health and safety in the workplace, standard operating procedures, protocols and manuals
- Incentives: monetary and non-monetary
- Teamwork practise and functional partnerships

Performance management

- Job descriptions and duty statements are present
- Supervision (especially clinical supervision) schedule
- Frequency of supervision visits to the field planned that were actually conducted
- Relative number of specific tasks performed correctly by health workers/adherence to protocol etc.
- There is a formal mechanism for individual performance planning and review
- Peer review mechanisms
- Level of job satisfaction, level of staff motivation
- Education, training and competencies
- Existence of a formal in-service training component for all cadres
- Existence of a management and leadership development program

Community/Consumer engagement in HRH

- Client satisfaction, number of patient contacts
- Frequency of community meetings attended and evidence of community participation
- Presence of a formal relationship with community organisations
- Mechanisms for involving community and HRH in pre- and post-service curriculum development and review
- Community involvement in: policy development, recruitment and selection, performance management (i.e. supervision)

BRIEF OVERVIEW OF HRH CADRES AT COMMUNITY LEVEL IN SELECTED ASIA AND PACIFIC COUNTRIES

Health workers who provide MNRH health services in communities are part of a large PHC workforce that includes practitioners employed by the public and non-state sectors who may be based in facilities or reside within the community itself. These health workers are usually multi-functional and provide other services such as child immunisations and first aid; they dispense drugs and refer patients with chronic conditions. A focus on MNRH care and services provides an opportunity to examine which cadres are engaged in this work, their specific roles and functions, and the human resource issues related to this practice. This is useful in the light of the need to accelerate progress towards MDG 5.

The term 'community level' refers to community-based MNRH care which 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.

Human personnel at community level can be broadly categorised into three main groups: nursing and midwifery professionals, CHWs and traditional or cultural practitioners. These three categories are described below with examples. Workers in other sectors may also be involved in the provision of MNRH care and services, including school teachers and community development workers.

Skilled birth attendants

The term 'skilled birth attendant' (SBA) is generally applied to workers in the nursing and midwifery cadre (WHO ICM FIGO 2004). However, in some circumstances CHWs may have received specialised training in midwifery, qualifying them as SBAs. Examples of cadres within the SBA category are given in Table 1.

Community health workers

The diverse category of CHWs is used to describe practitioners who are often 'selected, trained and work within the communities from which they come' (Lehmann et al. 2004). The definition of a CHW depends on the health system they are working within and therefore it is not possible to create a standard set of functions for them as CHW tasks are assigned according to the local conditions (WHO 1989). CHWs perform a broad range of tasks in MNRH which can be classified as curative, preventive and promotive functions. These include health education and promotion, advocacy, community mobilisation, dispensing reproductive health commodities and drugs and basic clinical interventions and referral. In addition, CHWs perform a mix of health service functions and development functions, the latter involving mobilising the community to improve their social and economic as well as health status. Examples of cadres within the CHW category are given in the Table 2.

Traditional birth attendants

Traditional birth attendants (TBAs) are traditional or 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 or employed but receive direct payment from their clients in the community. However, in other contexts they play a more formal role. In Samoa, for example, TBAs, are licensed to assist in deliveries and are trained and supervised by midwives (WHO 2008b). In other settings, they may be involved in referring women to services and providing socio-cultural support before, during and after delivery. 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).

Key to acronyms in Tables 1 and 2

ANMC	Australian Nursing and Midwifery Council
ANC	antenatal care
CHW	community health worker
IUDs	intra-uterine devices
IMCI	integrated management of childhood illness
MoH	Ministry of Health
MoHFW	Ministry of Health and Family Welfare
N/A	not available/applicable
NDoH	National Department of Health
PNC	postnatal care
PNG	Papua New Guinea
PTT	*pegawi tidak tetap* (non-permanent employees)
SBAs	skilled birth attendants

TABLE 1. EXAMPLES OF SKILLED BIRTH ATTENDANT CADRES

COUNTRY	DESIGNATION	ROLE IN MNRH	TRAINING	COVERAGE (RATIO PER 1000 PEOPLE)
Cambodia	Primary midwife	Basic midwifery	1-year Diploma of Midwifery following post-basic training	0.10
	Secondary midwife	Can perform caesarean sections and abortions in authorised places[1]	3-year diploma	0.13
Fiji	Nurse practitioner	Acts as replacement doctor in some areas[2]	13-month additional diploma in addition to 3-year diploma	N/A
Indonesia	*Biden di desa* (PTT; village- based midwife)	Birth attendant, ANC and PNC[3]	3-year training course on completion of secondary school	0.22
Bangladesh	Community-based skilled birth attendant	Carries out home deliveries, referral in case of complication[4]	6-month training for those who had been trained and practised as family welfare assistants and family health assistants Practical Nursing – 1.5 years	0.019 (new cadre)
Philippines	Registered nurse	Carries out normal deliveries, ANC and PNC, insert IUDs	Diploma or Certificate of Nursing – 3 years plus additional midwifery training and in-service training from Marie Stopes	4.0
Papua New Guinea	Community health worker	Carries out normal deliveries at aid post health promotion, ANC and PNC	3-6 month module is being planned to upgrade CHW skills as auxiliary midwives[5]	0.61

Notes
1. Sherratt et al. 2006
2. ANMC 2006
3. Makowiecka et al. 2008
4. Ahmed and Jakaria 2009
5. PNG NDoH 2009

TABLE 2. EXAMPLES OF COMMUNITY HEALTH WORKER CADRES

COUNTRY	DESIGNATION	ROLE IN MNRH	TRAINING	COVERAGE (RATIO PER 1000 PEOPLE)
Bangladesh	Community health worker	Makes ANC home visits to promote birth and newborn-care preparedness, postnatal home visits to assess newborns, refers or treats sick neonate[1]	14-20 day training	0.31
	Family welfare assistant	Supplies condoms and contraceptive pills during home visits. May act as SBA if trained by MoH[2]	N/A	0.15
	Shasthya sebika	Female volunteer who disseminates family planning messages, registers pregnancy cases[3]	4-weeks basic training	0.45
Indonesia	Village family planning volunteers	Promotes family planning, organises meetings, provides information, organises income-generation activities, gives savings and credit assistance, collects and reports data[4]	N/A	N/A
	Peer health educator	Education and promotion[5]	3-day training	N/A
	Kader	Voluntary health worker. Basic clinic care and education[6]	IMCI trained	N/A
Vanuatu	Peer health educator	Delivers reproductive health information and education[7]	2-year certificate	N/A

Notes
1. Baqui et al. 2008
2. MoHFW Bangladesh 2009; Mridha et al. 2009
3. Ahmed 2008
4. Utomo et al. 2006
5. Senderowitz 1998
6. Bailey and Coombs 1996; Bowen 2006
7. Walker 1998

AVAILABLE INFORMATION ON HRH IN MNRH AT COMMUNITY LEVEL IN SELECTED ASIA AND PACIFIC COUNTRIES

This section will outline what information is available to those outside ministries of health about health personnel engaged in MNRH at community level in key HRH indicator fields across 10 countries in the Asia and Pacific regions. These countries are: Bangladesh, Cambodia, Fiji, Indonesia, Laos, PNG, the Philippines, the Solomon Islands, Timor-Leste and Vanuatu. This is derived from a desk-based mapping exercise undertaken by the HRH Hub and Burnet Institute. The source of this information is discussed, as well as critical gaps that need to be addressed, if more accurate assessments are to be about HRH in MNRH at community level by donors and international health NGOs in order to assist in planning aid policy and programs.

Policy, legislation and regulation

National HRH policies and plans exist for the 10 countries; however, few plans make specific reference to cadres at community level. The Bangladesh Health Workforce Strategy (MoHFW Bangladesh 2008) is one plan that aims to improve incentives to work in rural and remote areas and integrate more community-focused aspects into training programs. The health strategies and plans of nations, particularly those concerning MNRH, do not provide much consideration of HRH issues at community level. The Timor-Leste National Health Plan (MoH Timor-Leste 2008) is one example of a policy document that makes special mention of strategies to improve HRH skills in community-based approaches.

One government Act (Republic of the Philippines 1995) and a report on HRH in the Asia and Pacific regions were the only sources of information on CHW benefits (AAAH 2008). The latter report outlines the benefits that *barangay* (local administrative division) health workers are entitled to receive, including hazard allowance, subsistence allowance, longevity pay, laundry allowance, housing allowances and privileges, remote assignment allowance, free medical examination and leave benefits (AAAH 2008). To receive these benefits they must be registered with the local health board (Republic of the Philippines 1995). No details were available on the use of a benefit system for community workers in a consistent manner to determine salary upgrades and awards.

A number of country HRH plans and strategies highlight the need to improve formal processes for recruitment, hiring, transfer, promotion and community involvement; however, little detail is provided. The Cambodian National Health Plan (MoH Cambodia 2006), for example, aims to promote active local recruitment of trainees. Large gaps in information were identified in knowledge concerning community cadres within a national job classification system, documentation outlining community-level employee conditions of service and material concerning formal relationships with community organisations relating to health workers.

There were a number of references to the registration, certification or licensing required for nurse and midwives to practise (ANMC 2006). However, there is a lack of information regarding the practice and regulatory framework governing CHWs and other informal cadres, such as volunteers and TBAs. A World Bank report (Rokx et al. 2009) provides some information on the different accreditation bodies for privately- and publicly-trained nurses and midwives in Indonesia, while a conference presentation details barriers to midwife registration in PNG over the past nine years (Natera and Mola 2009).

Management: supply, retention and loss

Information on the supply of formal cadres, especially those employed by the MoH in the nursing and midwifery area, is more accessible than information concerning informal or self-employed cadres, such as solo nurse providers who practise illegally in Indonesia (Heywood and Harahap 2009). In addition to the WHO regional database sources, such as the secondary sources, CHIPs and the Health databank (WHO and WPRO 2009), there are other key sources of information pertaining to regional nursing and midwifery. The Australian Nursing and Midwifery Council website (ANMC 2006) provides country profiles which sometimes include numbers of personnel, such as in the case of the Cambodian and Fijian profiles. However, further details concerning nursing and midwifery distribution, retention and loss is unavailable.

Detailed information concerning nurses and midwives is also available at national level. For example, a World Bank Report on medical and nursing personnel provides ratios of personnel in urban, rural and remote locations (Rokx et al. 2009). A number of United Nations documents, such as those by UNFPA (2008) in Laos, provide information on numbers of auxiliary nurses, PHC workers and mid-level nurses (formal health workers), and details of the number of births attended by these workers as well as by TBAs and relatives. This draws upon national statistical data on current workforce and facility capacities. However, there is no disaggregation of the health worker data by community

There is a lack of information regarding the **practice and regulatory framework** governing CHWs and other informal cadres, such as volunteers and TBAs.

level, so it is not known how many formal health workers are available in a home-based or outreach capacity. NGO reports including The Bangladesh Health Watch Report (MoHFW Bangladesh 2008) provides HRH supply data at the community level. This data was gathered through a series of surveys over all six divisions of the country. Inventory lists of health workers were developed which include numbers of workers at community level including CHWs, drug sellers, TBAs and other traditional cultural workers. This is disaggregated by gender and rural and urban location. However, it is not apparent what MNRH services these cadres actually provide, nor is it clear what nursing and midwifery cadres provide community-level services.

Some government plans and reports provide information on the supply of community-level cadres. The Vanuatu Ministry of Health Accounts (Vanuatu NHA Team and WPRO 2005) and National Workforce Plan (MoH Vanuatu 2003) outline numbers of traditional healers at village level, although it is not clear how many of the listed numbers of nurse aides, nurses, midwives and nurse practitioners provide services at community level. MoH personnel inventories are a key source of country supply information, such as that provided by Yambilafuan (2009) at an HRH meeting. Data from these primary sources is available in some donor and WHO reports.

There is a range of information about HRH at community level in MNRH. An AusAID report (AusAID 2008), for example, that draws upon data from the Fijian Government, does not disaggregate data according to service at community level. However, a WHO report for Laos (WHO and WPRO 2007) provides numbers of village health volunteers, TBAs, village health staff and traditional healers across all provinces in the country, but it is not apparent what MNRH services they provide at community level. Other sources provide information about staff employed in the non-state sector. For example, a World Bank report gives the number of CHWs employed by the church in PNG, but it is unclear what number of the nurses employed are engaged in outreach work in communities (ADB et al. 2007).

Other areas of information about supply are concerned with dual employment and selection. Project evaluations provide some information on dual employment. A USAID project reports on a survey it undertook in the Philippines in 2006, which found that 25% of midwives practised exclusively in the private sector, while 47% provided dual public and private services (Gomez 2008). A World Bank report comments on the lack of data available on private midwife practice (Rokx et al. 2009). In the Philippines, a WHO report provides insight into community involvement in the selection of *barangay* health workers, which involves the village council or chair and the rural health midwife (Mañalac 2009).

There is an overall lack of information on ratios of TBAs and CHWs to population, as well as information about the distribution by age, gender, specialisation or skill of all nursing and midwifery professionals, CHWs, and traditional or cultural practitioners at community level. In addition, there is a scarcity of detail concerning labour activity such as employment rates, proportion of workers employed in the state or non-state sectors and dual employment. Ratios of exit from the community-level workforce are also not published.

Management: personnel administration /employee relations

Details about health worker remuneration were available from a limited number of documents. The Bangladesh Health Watch Report (MoHFW Bangladesh 2008) provides key information about CHW income in an NGO environment and in public posts, as well as details concerning extra incentives in the form of gifts from clients including money and clothing. A peer-reviewed article and a World Bank report gave details of salaries of nurses and village midwives in Indonesia (Ensor et al. 2009; Rokx et al. 2009). The media was also a source of information on salaries. For example, an article in the Fiji Times (Narsey 2008) reported that nurses' salaries may be as low as a quarter of what nurses could earn overseas. Low salaries are cited as a reason for high migration levels; however, it is not clear how this affects nurses who provide services at the community level.

Information concerning incentives for community-level workers is difficult to access. Some information about

Research studies in Bangladesh, such as that provided by Blum et al. (2006), have reported that providers of **home-based births are largely unsupervised**.

incentives for staff is available in government health and health workforce plans. Broad statements are made about incentives, whose aims range from encouraging workers to rural posts (MoH Vanuatu 2003) to improving performance (MoH Cambodia 2006; MoH Timor-Leste 2008; MoH PNG 2009). It is not evident how workers at community level will benefit from these incentive plans. Program evaluations shed some light on the impact of financial incentives. For example, in Indonesia and Cambodia small sums of money have encouraged TBAs and community volunteers to refer pregnant women to midwives (RACHA 2000; Chatterjee 2005; Immpact 2007). An evaluation of a training program in PNG reports on the incentives that village health volunteers and village midwives receive, including food, firewood, soap and other goods provided by the community and/or the supervising health centre in the absence of a regular stipend or salary (Alto et al. 1991).

There is limited information concerning teamwork functionality at the community level in MNRH and the ways in which staff support each other through peer supervision, consultation and mentoring. Some information is available concerning improved working relationships between CHWs, SBAs and the health workers in clinics in Timor-Leste through the introduction of a Family Health Promoters program (Snell 2005) and the teamwork of mobile community clinics that are part of the Cooperativa Cafe Timor-Leste Program (MoH Timor-Leste 2007; Cooperative Coffees 2009; USAID 2009). In Vanuatu, nurses reportedly work in the dispensary with a nurse aide and volunteers (MoH Vanuatu 2004); however, little information could be gleaned concerning their performance. Mobile teams also operate in Laos (Lao PDR MoH 2009a).

Details of community involvement as part of the MNRH team are only available from the Philippines. This government report outlines Women's Health and Safe Motherhood Teams which operate at community level in every *barangay* and include a rural health unit midwife (who heads the team), at least one *barangay* health worker and one TBA (Republic of the Philippines 2008).

Management: performance management

Some information on PM was available for countries such as Indonesia; sourced from a World Bank report (Rokx et al. 2009), a peer-reviewed article (Hennessy et al. 2006a) and a WHO University of Gadjah Mada report (FK-UGM and WHO 2009). However, the focus of these documents is on nurses and midwives at the facility level. The Bangladesh Health Workforce Strategy (2008) discusses the need for PM for all staff, but community-level workers are not specified.

An important part of PM is supervision, and there is limited information on the guidance providers receive at community level. Research studies in Bangladesh, such as that provided by Blum et al. (2006), have reported that providers of home-based births are largely unsupervised. The Bangladesh Government has recognised the need for clear lines of supervision for community-level SBAs (MoHFW Bangladesh and UNFPA 2004), and the engagement of family welfare visitors in the supervision of community-based SBAs is reported in a research paper by Ahmed and Jakaria (2009).

The need to improve supervision is also stated in national health workforce plans such as in the case of Laos (Lao PDR MoH 2009a) or in health plans such as the PNG's MoH National Sexual and Reproductive Health Policy (MoH PNG 2009), but the community level is not specified. Evaluations of projects present isolated examples of supervision at community level in PNG (Alto et al. 1991). A government circular from the Philippines sheds light on the supervisory expectations of nurses and midwives at community level. This includes who will be responsible for selecting *hilots* (TBAs) for training, providing training, monthly meetings and supervision (Republic of the Philippines Department of Health Office of the Secretary 1994). Research studies have also shed light on dual reporting, such as work in Indonesia that identifies village midwives in some districts being required to report to a local clinic doctor and also to the head of the village (Hull et al. 1998).

Overall, little material is available concerning job descriptions of HRH, and in some cases job descriptions do not exist for some cadres or are unclear. For example, Rokx et al. (2009)

discuss the lack of job descriptions attached to nursing grades in Indonesia, which impedes the introduction of a PM system. Details of the motivation levels of staff, including at the community level, are not generally available. National plans discuss the need to improve staff motivation and satisfaction levels of all staff (MoH Cambodia 2006; Lao PDR MoH 2009a). Project evaluations and media articles describe the lack of motivation of community staff due to low pay and the lack of clear policy on remuneration and incentives (Alto et al. 1991; Narsey 2008). Conference papers and reviews of HRH in the region have provided some information about government policy specifically designed to encourage retention of CHWs in the Philippines. However, the implementation of the Barangay Health Workers Benefit and Incentives Act has been challenging (AAAH 2008; Ronquillo et al. 2005).

Information in the performance area with respect to community-level staff involved in MNRH is comprised of plans for improving workforce management and some isolated examples from project evaluations in the field or isolated research studies. There is a lack of information concerning community involvement in HRH processes, such as recruitment and supervision, as well as how health workers might support each other in rural and remote community locations. General information about staff motivation and job satisfaction is reported in a number of documents but this is not accompanied by data.

Education and competencies

There is a large amount of material on public and private pre-service education and training of midwives and nurses. For example, the Australian Nursing and Midwifery Council (ANMC) provides an overview of nurse and midwifery courses and their length (ANMC 2006), while reviews of curricula in Cambodia (Herem 2000; Sherratt et al. 2006) and in PNG (Kruske 2006; Natera and Mola 2009) outline ways of improving the nursing and midwifery curriculum, including recommendations for community-level specialisation. Other key information about pre-service nursing and midwifery education can be located on MoH websites, such as the Fiji MoH website (MoH Fiji 2009), or in government reports (MoH Solomon Islands 2006). The range of nursing and midwifery curricula, numbers of graduates and qualifications possessed by midwives in Indonesia is described in a research study reported in a series of journal articles by Hennessy and Hicks et al. (Hennessy et al. 2006a; Hennessy et al. 2006b). For some countries, a number of documents contribute different types of information. For example, details on SBA training in Laos can be accessed from MoH documents regarding plans for training (Lao PDR MoH 2009b) and from UNFPA documents on the in-service teaching skills of staff (UNFPA 2008).

There is a lack of information concerning community involvement in HRH processes, such as recruitment and supervision, as well as **how health workers might support each other** in rural and remote community locations.

Information about in-service training is often available from NGO documentation such as the web report outlining The Blue Star Network, a project implemented by Marie Stopes International Australia and Population Services Pilipinas Incorporated, which provides support and training for independently operating midwives (Marie Stopes International 2009). Despite these examples of publications relating to nurse and midwife education and training, there is a lack of detailed material concerning targeted training for these practitioners at community level, whether it is in the form of clinical placement or specialist content, and the role of community members in this.

Documentation of the pre- and in-service training of CHW cadres is less accessible than that concerning nurses and midwives. NGO reports, including the Bangladesh Health Watch Report (MoHFW Bangladesh 2008), provide broad information about courses and the institutions involved in the training of nurses and midwives, as well as family welfare assistants and community SBAs. Project evaluations in PNG provide insight into the training of village midwives (Alto et al. 1991), village birth attendants and community sexual health educators (Cox and Hendrickson 2003). However, these are short-term training initiatives undertaken in specific areas, in contrast to the institutionalised national training of CHWs that is soon to be enhanced (Government of PNG 2009). Information from acts of parliament in the Philippines shed light on the government's plans for scaling up the

capabilities of CHWs through a new *barangay* health worker course, which also addresses nurse shortages at community level due to migration (Republic of the Philippines House of Representatives 2009).

Details of the competencies of health workers at community level in MNRH are mostly available for SBAs or for cadres engaged in delivery, such as TBAs. A UNFPA study (2008) in Laos of auxiliary nurses, PHC workers and mid-level nurses found that midwifery competencies are very low in all provinces at health centre level. Some of these staff may be providing outreach services to communities but it is not clear from the data.

Most births are shown to be attended by TBAs and family members, which may indicate that SBAs may not be available at the community level. Research studies also provide information about workforce skills at the community level. For example, a study in Indonesia (Makowiecka et al. 2008) found that village midwives were more likely to be on a temporary contract and were less experienced than health centre midwives. However, improvements in midwife training have been found to be effective, with research studies confirming less need for training for village midwives who had undertaken the new program (Hennessy 2006b).

DISCUSSION POINTS

The conclusions from a desk-based review of available documentation concerning providers of MNRH services at community level summarised above reveals that there are difficulties in accessing information as well as gaps and inconsistencies in its quality. However, in order to establish what initiatives are required to address this situation, it is necessary to determine what actual community-level HRH information is needed about those providing MNRH services by whom and for what purpose. For example, a district maternal and child health program manager will require certain detailed information about the current staff supply for workforce planning. This differs from the information needs of a midwife providing outreach services and supervising nurse aides or TBAs.

Midwives maybe more concerned with information concerning the performance of these staff and the availability of continuing education for them. This section explores the types of community-level MNRH provider information that may be required by stakeholders in order to clarify what may be needed at various levels for decision-making.

Table 3 lists a range of community MNRH provider information that can be made available, collected, processed, analysed and utilised at various levels by health workers and managers. This would ideally be integrated into a larger system of data collection for health planning. The table identifies who might apply this information and for what purpose in a decentralised system.

The table outlines some possible scenarios but this is heavily dependent on contextual factors. This includes the size of the country and its population, the capacity of districts and provinces, and their level of political autonomy. In addition, the way in which HRH is organised, and how the HRH budget is disbursed and accounted for, decision-making processes and the socio-cultural context affect how and what information is collected and used. For example, workforce planning in Indonesia is highly devolved (Lloyd 2000) and involves the consideration of large numbers of personnel to meet the needs of 240.3 million people in this ethnically diverse and densely populated nation. In Vanuatu, capacity and population size issues have meant that the central government is largely responsible for overall planning (Premdas and Steeves 1992) in this largely Melanesian island archipelago of just over 200 000 people.

In a decentralised health system the district is essential to the implementation of services and management of resources including staff in MNRH at community level. Target setting and accountability in this area are also important tasks for district managers who require quick access to accurate information.

At district level the development of a system of information-gathering for monitoring and evaluating community-level personnel and their performance is critical. This requires the development of standard indicators for reporting which will feed into health systems assessment and mapping progress towards MDG 5. Effective district management, leadership and quality improvement processes are central to information systems which can be built through appropriate training for managers as well as community-level staff who are involved in data collection. In addition, the non-state sector and the public need to be engaged so that data is comprehensively collected using standard indicators.

This process will enable the collection of data about personnel employed in the private and NGO sector as well as informal, lay or volunteer workers. Innovative approaches to collecting and sharing these data could be utilised such as mobile phone technology, especially in remote or difficult-to-access locations. It also should be noted that both qualitative and quantitative HRH information needs to be collected. Descriptive data will help to understand the behaviour of health workers, their needs and the socio-cultural context.

Although health workers at village and sub-district level and those acting as district managers are the key personnel involved in the collection of information concerning personnel engaged in the provision of MNRH, clear links need to be maintained with the provincial and national levels.

Long-term plans requiring additional resources may need to be presented to provincial level, with data justifying the need. Allocation of district funds may be made at provincial level and requests for additional resources made to national Ministry of Health or Ministry of Finance and Treasury. Health workers at community level must be aware of the national, district and provincial policy, regulation and legislation that concerns their scope of practice. They must also be given the opportunity, through a regular system of consultation, to feed into the on-going revision of policy, regulation and legislation so they remain relevant and responsive to MNRH at community level.

Effective district management, leadership and quality improvement processes are central to information systems which **can be built through appropriate training for managers as well as community-level staff** who are involved in data collection.

Donors and NGOs need to not only be engaged in the collection and analysis of HRH information related to MNRH programs that they are funding and/or managing at community level, for their own planning needs, but they also require access to wider community-level HRH information. This is necessary to ensure that national, provincial and district HRH policy, regulation and legislation is complied with and that workforce commitments are in line with district needs and plans. Knowledge of government planning enables donors and NGOs to make investments that are consistent with the goals of aid effectiveness.

TABLE 3. POSSIBLE TYPES OF COMMUNITY MNRH PROVIDER INFORMATION REQUIRED AT VARIOUS LEVELS

Policy	Management
Village/Health-post level – nurses, midwives, child health workers, traditional birth attendants and community people	
Disseminate information about policy, legislation and regulation. Record and report information concerning implementation, community and workforce. Feedback to sub-district	Collect and report staff supply, retention and loss information using standard indicators to sub-district Undertake PM and report to sub-district as per agreed templates. Report feedback on salary, incentive disbursements and OHS to sub-district
Sub-district level – outreach staff, nurses, midwives, supervisors of health-post staff at health centre	
Disseminate information about policy, record community and workforce feedback and report to district Adopt HRH policy that is informed by stakeholder input	Report, collect and deliver community and health care staff supply, retention and loss information to district Discuss and develop PM indicators, undertake PM and report to district level as per agreed templates Report on salary, incentive disbursements and OHS
District level – district management team, district medical officer, district nursing manager at health centre and hospital	
Develop system for policy dialogue and debate to gain feedback from village and sub-district. Collate reports and send information to provincial level Develop district HRH plans based on national policy and provincial strategies but informed by community and workforce input Apply job-classification system, processes for recruitment, promotion, conditions of service etc., possibly modified to suit context from provincial and national guidelines	Process and analyse village-level and community outreach staff supply, retention and loss information for planning at sub-district and village levels and report to provincial level Develop and adapt PM system Analyse information and take management decisions. Report actions to province. Engage non-state sector in process Set system for monitoring and reporting salaries and incentive disbursements. Make available standard workplace health and safety operating procedures, protocols and manuals
Provincial/Regional level – Ministry of Health and hospitals	
Develop action plan that includes community-level MNRH personnel in response to community and workforce input from all districts Report all community stakeholder responses to policy to the province	Some analysis of regional staff supply, retention and loss information at all levels for workforce planning and resource allocation Collate PM information and report to national level Deliver financial reports to national level
National level	
Develop national HRH policy, regulation and legislation that includes community-level and MNRH workers in private and non-state sector, informed by standard reporting at village sub-district and district levels	Collate and analyse all regional staff supply, retention and loss information for monitoring and evaluation KPIs and policy making. Some useful MNRH HR indicators are SBA attendance, number of nurses, midwives and CHWs for every 1000 people Develop PM system with standard indicators adaptable to service level. Report to national level

Education and training	Community engagement
Disseminate information regarding in-service training opportunities, identify needs and report to sub-district	Identify community leaders/decision makers, characteristics, possible approaches, areas for involvement and rapport building. Report to sub-district Undertake and record community engagement in HRH activities. Report to sub-district
Disseminate information regarding in-service training opportunities and identify needs Make recommendations regarding those who require in-service training to district	Analyse community decision- making structures, plan engagement in HRH activities and develop and present reporting mechanism to district managers Modify community engagement plan, strengthen additional resources allocated/sought, if required, and report to district
Make decisions concerning who at community level should receive in-service training and in which areas. Plan for future needs	Plan for engaging community leaders based on approaches gathered from sub-district. Develop reporting mechanism. Assign budget to activities and implement them Report to provincial level on activities, with justification if further resources required Incorporate modifications into plan and assign resources
Collate information regarding those who received in-service training and report to national level Plan and disburse resources	Collation of community engagement approaches across province, report generated and policy recommendations
Collate and analyse all information concerning in-service training at community level and develop policy	Collate all HRH community engagement activities and formulate policy

SUMMARY

This paper has highlighted the need for information about the health workforce in order to make assessments concerning HRH productivity, their competence and responsiveness to patient needs. In addition, the discussion has identified key stakeholders and uses of information which enables policy, management and education and training interventions to be planned and implemented and appropriate resources targeted.

A profiling exercise of personnel involved in MNRH at community level in 10 countries in the Asia and Pacific regions has identified a number of significant knowledge gaps concerning the management of this workforce, their education and training, and the relevant policies guiding all of these processes. The information gathered was pieced together from a range of sources that were often different in their perspective and contained conflicting information. The quality of the information was also variable, which is reflected in the range of methods employed in project evaluations, consultant reviews, research studies as well as regional and national health data. This highlights the fact that HRH indicators for staff engaged in MNRH at community level are not well defined and that information is not routinely or systematically collected, analysed and managed.

In order to improve access to and the quality of community-level HR information, consideration needs to be given to the information needs of health workers engaged in MNRH provision, as well as managers with responsibility for planning and coordinating service delivery. This will enable the development of an information system that is tailored to the requirements of the health system and the socio-cultural context. In a decentralised setting this needs to be accompanied by the development of appropriate indicators, training as well as partnerships with those engaged at community level, and stakeholders across the state and non-state sectors.

Based on the discussion above, a number of recommendations can be made regarding what HRH information is needed at community level in all aspects of MNRH and the indicators that are most useful in this context. In addition, some suggestions can be made concerning how this HRH information should be collected, shared and supported.

Planning an HR information system of community-level MNRH providers

The development of an HR information profile may be a useful step in the planning of such a system. This requires an assessment of the types of information – policy, management, education and training, community engagement – required by health workers and managers at various levels. A table such as that presented at Table 3 could be employed for an assessment of information needs for stakeholders at any level to plan their requirement and responsibilities. In addition, attention should be paid to the assessment of presentation formats needed by stakeholders which will facilitate access to and uptake of information. Appropriate training in data collection, management, analysis and reporting should also be planned, along with protocols for delivery and the application of required information. This will assist the development of key indicators to specify information in order to achieve standardisation and a systematic approach to collection and analysis.

Indicators areas

Community-level HRH data needs to be incorporated as part of a minimum data set. Indicators need to be qualitative as well as quantitative and be drawn from the following areas refined from those listed above:

Policy

- Job classification system that includes community cadres
- Compensation and benefits system used in a consistent manner to determine salary upgrades and awards
- Formal processes for recruitment, hiring, transfer, promotion and community involvement
- Employee conditions of service documentation (e.g. policy manual)
- Presence of a formal relationship with community organisations
- Registration, certification or licensing is required for all cadres

Management systems

Staff supply, retention and loss of staff engaged in MNRH at community level

- Ratio of CHWs, nurses, midwives, TBAs, VHWs at community level to population
- Distribution by age, sector and gender
- MNRH skill mix
- Proportion of staff in dual employment
- Presence of HR data system
- Number of vacancies, posts filled, duration in job, proportion of HRH unemployed
- The existence of a functioning HR planning system
- Ratio of entry to and exit from the health workforce

- Hours worked compared with hours rostered and days of absenteeism
- Community involvement in recruitment and selection
- Proportion of locally trained and recruited health workers
- Dedicated HR community-level budget

Personnel administration/Employee relations

- Salary: average earnings, average occupational earnings and income among HRH
- Health and safety in the workplace, standard operating procedures, protocols and manuals
- Incentives: monetary and non-monetary
- Teamwork practise and functional partnerships

Performance management

- Job descriptions
- Supervision (especially clinical supervision) schedule, community involvement in supervision
- Percentage of planned supervision visits to the field that were actually conducted
- There is a formal mechanism for individual performance planning and review
- Community involvement in performance management
- Peer review mechanisms
- Level of job satisfaction, level of staff motivation

Education and competencies

- Existence of a formal in-service training component for all cadres
- Existence of a management and leadership development program
- Mechanisms for involving community and HRH in pre- and post-service curriculum development and review
- Relative number of specific tasks performed correctly by health workers/adherence to protocol etc.
- Client satisfaction, number of patient contacts
- Number of community meetings attended and evidence of community participation

Standard indicators can be constructed from these areas. This involves assigning numerators and denominators for quantitative indicators and criteria for qualitative assessment. Agreement must be reached at district, provincial, national and regional levels so that agreed benchmarks can be realised in appropriate areas, ensuring informed HRH decision making and suitable resource allocation at community level.

In many countries in the Asia and Pacific region there is an active private, faith-based and NGO sector whose **data collection systems are not always apparent or included in national systems.**

The collection and sharing of information

In order to guarantee timely, reliable, detailed and consistent community-level workforce data, HRH information systems need to be strengthened at district, provincial and national levels. This involves the collaboration of the public, private, faith-based and NGO sectors.

A coordinated effort by the Ministries of Health, Finance and Education ensures that information from all indicator areas across the public sector can be collated. In many countries in the Asia and Pacific region there is an active private, faith-based and NGO sector whose data collection systems are not always apparent or included in national systems. Standard indicators as well as regular dialogue with these sectors will improve the quality and sharing of HRH data.

This highlights the need for donors and NGOs to take on the responsibility of quality HRH data collection, management and exchange as a routine part of their country programs. This requires regular reporting on the HRH components of their work to the relevant ministry officials and other agencies. These processes also help to ensure that information is available to other agencies and personnel to facilitate coordination of strategies, prevent duplication and build on successful efforts in the field.

Support required

In addition, donors have a responsibility to contribute to the strengthening of national information systems through direct investment in health systems research and development work that is rigorously documented and widely disseminated to all stakeholders.

This will also facilitate stronger linkages to regional databases such as the WPRO Country Health Information Profiles, which will contribute the necessary HRH information required for Health System in Transition Profiles under the planned Asia and Pacific Health Observatory.

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THE KNOWLEDGE HUBS FOR HEALTH INITIATIVE

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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.
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