Implementation of the Human Resources for Health Strategy in the Western Pacific Region

An Analytical Review
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Questions and indicators for the evaluation and monitoring of efforts to increase access to health workers in rural and remote areas through increased retention
Acknowledgements

We are very grateful to a number of people in multiple countries who collected data, prepared case studies and participated in various WHO human resources for health (HRH) meetings designed to analyse national HRH situations and plan future strategic interventions. This document, based upon earlier work by Professor Arie Rotem and Bronwyn Fields, was updated by Kathleen Fritsch to review the HRH situation in the WHO Western Pacific Region in 2011.
Executive Summary

This document is an updated\(^1\) background paper for the Meeting on an Action Framework for the Regional Strategy on Human Resources for Health, convened by the World Health Organization Regional Office for the Western Pacific in April 2011. A review of the human resources for health (HRH) situation across the Region is provided, within the context of ongoing health reforms and national efforts to achieve health equity and meet the health needs of populations, particularly those most vulnerable. Evidence-based HRH guidelines and selected initiatives that address priority and complex problems are highlighted to stimulate discussion and to map the way forward.

Every country in the world shares some of the same challenges in providing equitable access to quality health services for all. Achieving and maintaining an equitably distributed, competent and effective health workforce is an ongoing struggle requiring innovative, collaborative and comprehensive national and international planning and strategic actions. Policies, plans and interventions mandate strong political commitment and major sustained financial investments to support workforce development in the areas of greatest need—employment costs and pre-service education.\(^2\) Although progress has been made, it is recognized that approaches need to be focused more specifically on priority interventions to scale up HRH more efficiently and effectively.

Across the Region, countries are responding to the challenges by strengthening health workforce strategic planning (Key Result Area 1). Human resource management systems have been strengthened, through improvements in the collection and sharing of population and health data; better linkages of workforce planning to health service and educational sector planning; steps taken to reorient health services towards primary health care, health promotion and integrated care provision across the continuum of care; as well as the testing of strategies to reduce access barriers for disadvantaged groups.

Countries have intensified efforts to improve HRH production and development (Key Result Area 2). There are examples of increased participation of minority groups in the health workforce, and of concerted interventions in multiple countries to strengthen the quality and relevance of education and training. Evaluations of such interventions are limited.

HRH management and retention (Key Result Area 3) has been addressed by some countries through improvements to the geographic distribution of health workers as well as the implementation of evidence-based interventions to increase retention, fuel motivation and better manage performance; reviews of skill-mix, roles and functional requirements of health workers; as well as strategies to mitigate the effects of migration. Human resource management training is being delivered in some countries, and leadership initiatives are under way, improving capacities for health system and HRH strategic planning, policy-making and management.

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Governance, leadership and partnerships (Key Result Area 4) has continually been addressed through the following: introduction, review and/or strengthening of legislative and regulatory frameworks; planning; coordination of stakeholders and partners; improvements to the quality and safety of service delivery; and the establishment and sustaining of global and regional HRH, nursing and midwifery networks.

Despite these efforts, insufficient progress has been made in the delivery of universally accessible quality health services. Efforts must be made to address absolute shortages of qualified health workers, unbalanced distribution of workers and inefficient skill-mix, inappropriate training and education—not matched to patient and population needs, and poor motivation and retention in most lesser-resourced countries. The continued shortage of qualified health workers in remote and rural areas impedes access to health-care services for a significant percentage of the population and impedes progress towards attaining the Millennium Development Goals. A low proportion of countries have succeeded in increasing financing for HRH. The Regional Action Framework will address common priority workforce challenges across countries, recognizing the necessity of policies and strategic interventions specific to each country context.
1. Introduction

Over the past decade, multiple international and regional resolutions, calls to action and guiding strategies have been issued to address the health workforce crisis and to support workforce scaling up:

1. In 2001, the World Health Assembly (WHA) supported the call to strengthen the nursing and midwifery professions by passing resolution WHA54.12, representing the commitment of the World Health Organization (WHO) and Member States to scale up the health professions.

2. The World Health Report 2006, World Health Assembly resolutions in 2004 and 2006 (WHA57.19, WHA59.23, WHA59.27) and a Regional Committee resolution in 2006 (WPR/RC57.R7) urged Member States to take concerted actions to address health worker shortages by rapidly scaling up health workforce production, strengthening nursing and midwifery professions, strengthening workforce management and retention, and mitigating the adverse effects of migration of health workers.

3. In March 2008, the Kampala Declaration from the First Global Forum of Human Resources for Health requested governments to “assure adequate incentives and an enabling and safe working environment for effective retention and equitable distribution of the health workforce”.

4. The G8 Communiqué of July 2008 restated the need to assure the effective retention of health workers.

5. The November 2008 report of the Commission on Social Determinants of Health urged governments and international partners to address specifically the imbalances in the geographical distribution of health workers in rural areas as a structural determinant of poor health outcomes.

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9 The Kampala Declaration and agenda for global action. Geneva, World Health Organization (acting as the host organization for, and secretariat of, the Global Health Workforce Alliance), 2008 (http://www.who.int/workforcealliance/knowledge/resources/kampala_declaration/en/).


6. In 2010, WHO outlined various options for raising sufficient resources and removing financial barriers to access to health services, especially for the poor.\textsuperscript{12}

7. The global Strategic Directions for Strengthening Nursing and Midwifery Services 2011–2015\textsuperscript{13} and evaluation indicators symbolized a collaborative endeavour by WHO, nursing and midwifery leaders, Global Advisory Group for Nursing and Midwifery (GAGNM) members, regional nursing networks and WHO collaborating centres in formulating a framework for action with five key result areas to strengthen the contributions of nurses and midwives to improved health outcomes.

8. The Bangkok Outcome Statement, issued by participants in the Second Global Forum on Human Resources for Health in January 2011, called for concerted action on coherent policies and plans across sectors, with development partners, for sustainable HRH investments complementary to domestic funding.\textsuperscript{14}

9. The Seoul Declaration on Noncommunicable Disease Prevention and Control in the Western Pacific Region, endorsed by a dozen countries in March 2011, called on Member States to strengthen health systems and provide adequate human and financial resources for noncommunicable disease programmes.\textsuperscript{15}

In August 2009, during the Meeting on the Regional Strategy and Initiatives on Human Resources for Health, which was convened by the WHO Regional Office for the Western Pacific, Ministry of Health representatives reviewed implementation of the Regional Strategy on Human Resources for Health (2006–2015), discussed HRH initiatives including the draft code of practice on the international recruitment of health personnel, and shared lessons learnt. The recommendations of the meeting are presented in Table 1 and are linked to relevant key result areas (KRAs).\textsuperscript{16}

\begin{itemize}
\item[\textsuperscript{15}] Seoul Declaration on Noncommunicable Disease Prevention and Control in the Western Pacific Region. Manila, WHO Regional Office for the Western Pacific, 2011 (http://www.who.int/nmh/events/2011/seoul_deci_201103318.pdf).
\end{itemize}
Table 1: Recommendations of the Meeting on the Regional Strategy and Initiatives on Human Resources for Health, 2009

<table>
<thead>
<tr>
<th>Key result areas</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRA 1: Workforce responsiveness to</td>
<td>• Advocate for political commitment</td>
</tr>
<tr>
<td>population health needs</td>
<td>• Strengthen data collection and management</td>
</tr>
<tr>
<td></td>
<td>• Develop and disseminate tools and templates</td>
</tr>
<tr>
<td></td>
<td>• Reduce inequalities</td>
</tr>
<tr>
<td>KRA 2: Workforce development, deployment</td>
<td>• Develop or strengthen frameworks for quality improvement</td>
</tr>
<tr>
<td>and retention</td>
<td>• Address career pathways</td>
</tr>
<tr>
<td></td>
<td>• Strengthen continuing professional development</td>
</tr>
<tr>
<td></td>
<td>• Mentor new graduates</td>
</tr>
<tr>
<td></td>
<td>• Harmonize guidelines and procedures</td>
</tr>
<tr>
<td>KRA 3: Workforce governance and</td>
<td>• Prepare, monitor and evaluate national HRH strategic plan</td>
</tr>
<tr>
<td>management</td>
<td>• Set up national body for HRH collaboration</td>
</tr>
<tr>
<td></td>
<td>• Promote in-country HRH champions</td>
</tr>
<tr>
<td></td>
<td>• Establish ethical professional standards and codes of conduct</td>
</tr>
<tr>
<td></td>
<td>• Strengthen professional and managerial capacities for improved HRH governance</td>
</tr>
<tr>
<td></td>
<td>• Create mechanisms for country ownership consistent with the Paris Declaration</td>
</tr>
</tbody>
</table>

The 2011 regional meeting was convened to review HRH developments and trends and to accelerate implementation of the Action Framework for the Regional Strategy on Human Resources for Health. Further input from Member States and stakeholders on priority areas for action and accompanying monitoring and evaluation indicators will be obtained.

This background paper provides an updated review of the HRH situation across the Region within the context of health reforms and evolving population health needs. Selected initiatives that address priority workforce problems are highlighted, as well as a proposed framework for further discussion on HRH action planning.
2. Background

2.1 Brief overview of the Regional Strategy on Human Resources for Health

The *Regional Strategy on Human Resources for Health (2006–2015)*, endorsed by the WHO Regional Committee for the Western Pacific in resolution WPR/RC57.R7 in 2002, provides a range of policy options and practical guidance to Member States in developing and sustaining a health workforce that is sufficient, competent, responsive and adequately supported to meet population health needs. The strategy comprises five interrelated strategic objectives organized around three key result areas: (1) a health workforce that is responsive to population health needs or demand; (2) effective and efficient workforce development, deployment and retention or supply; and (3) workforce governance and management. The strategy also suggests national and operational actions to achieve them, WHO-enabling responses and monitoring and evaluation indicators.

The WHO Regional Committee, when it endorsed the strategy in 2006, requested to be kept informed of the progress made in its implementation. The report to the Regional Committee will be submitted in October 2011.

The strategy’s original HRH vision, “Achieve equitable access to quality health services for all and effective health system performance through a balanced distribution of a competent and supported health workforce,”18 has been updated to better reflect future population health needs (Box 1).

HRH Vision 2020: Population with access to an adequate, competent, productive and supported health workforce.

- Adequate: number, distribution, skill-mix
- Competent: pre- and in-service education, training and accreditation
- Productive: performance evaluation and quality improvement
- Supported: leadership and management

**BOX 1: HRH VISION 2020 – DETAILED DESCRIPTION**

“Universal coverage for access to quality health services, particularly for the most vulnerable and excluded groups, with improved patient and community health outcomes, through a balanced distribution and efficient skill-mix of a multi-professional, motivated workforce able to prevent and manage a full range of conditions and empower people and communities to manage their own health needs as fully as possible.”


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2.2 Codes of practice on the international recruitment of health personnel

Increasing numbers of health workers are migrating, with patterns of migration becoming more complex and involving more countries. Migration from countries already experiencing a crisis in their health workforce is further weakening health systems, and is recognized as a significant obstacle to the achievement of health-related Millennium Development Goals (MDGs).

A number of countries have put in place bilateral or multilateral agreements regarding the international recruitment of health personnel. The Seventh Meeting of Ministers of Health for Pacific Island Countries endorsed a Pacific Code of Practice for Recruitment of Health Workers in 2007.\(^{19}\)

The Sixty-third World Health Assembly, following a global consultative process, adopted the WHO Global Code of Practice on the International Recruitment of Health Personnel in 2010.\(^{20}\) The Global Code serves as a reference for establishing and improving legal and institutional frameworks for the international recruitment of health personnel.

The Global Code is voluntary and applies to all health personnel, recruiters and organizations in both the public and private sectors. Member States and other stakeholders are strongly encouraged to use the Global Code, as it sets out guiding principles and encourages the setting of voluntary standards to promote an equitable balance of interests among health personnel, source countries and destination countries. The Global Code “recommends a transparent framework to promote voluntary national and international compliance, including voluntary mechanisms for effective information sharing and monitoring.”\(^{21}\)

The Global Code addresses the following key issues:

- recruitment practices and treatment of health personnel – aimed at ensuring ethical recruitment and employment (such as fully informed decision-making by health personnel, fair and just recruitment and contractual practices, and equal treatment of migrant health workers as compared with the domestically trained health workforce);
- mutuality of benefits – aimed at ensuring that both source and destination countries derive benefits from international recruitment of health personnel (such as measures by destination countries to mitigate potentially negative impacts on source countries by providing technical and development assistance, support for training, support for retention and support for return migration);
- national workforce sustainability – aimed at encouraging countries to take action to educate, retain and sustain an appropriate health workforce based on their specific needs, articulated through: evidence-based workforce planning; strengthening educational institutions and curricular innovations; and effective measures to strengthen health systems, using a multisectoral approach;

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• data gathering and research – aimed at ensuring a sound evidence base for development and implementation of effective HRH policy and plans;
• information exchange – aimed at promoting strengthened information exchange on international health personnel migration and health systems nationally and internationally;
• implementation, monitoring of the Code and institutional arrangements – aimed at seeking input on the draft guidelines for implementation and monitoring of the Code, including minimum data sets and other materials, which are being sought through public hearings;22 and
• partnerships, technical collaboration and financial support to assist implementation of the Code and support health system strengthening in developing countries and those with economies in transition experiencing critical health workforce shortages and/or limited capacity to implement the Code.

2.3 Remote and rural health worker retention policy recommendations

Although half of the world’s population currently live in rural and remote areas, most health workers live and work in cities, as illustrated in Figure 1. This workforce distribution imbalance, combined with acute health workforce shortages, significantly impairs the equitable provision of health services to a large percentage of the population, slowing progress towards achievement of MDGs and achieving health for all. WHO, in response to calls to action from global leaders, Member States and civil society, formulated a comprehensive set of strategies and policy recommendations to support countries in retaining health workers in rural and remote areas.23

Figure 1: Rural/urban worldwide distribution of physicians and nurses

The WHO rural and remote policy recommendations address two interrelated aspects of access to health workers in remote and rural areas, namely: (1) factors influencing health worker decisions/choices on practice location; (2) and critical areas of health system responses. The categories of intervention are education, regulatory interventions, direct and indirect financial incentives, and professional and personal support. The intervention domains and 16 WHO global policy recommendations are summarized in Table 2.


Table 2: Categories of intervention for rural and remote retention

<table>
<thead>
<tr>
<th>Category of Intervention</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Education</td>
<td>A1 Students from rural backgrounds</td>
</tr>
<tr>
<td></td>
<td>A2 Health professional schools outside of major cities</td>
</tr>
<tr>
<td></td>
<td>A3 Clinical rotations in rural areas during studies</td>
</tr>
<tr>
<td></td>
<td>A4 Curricula that reflect rural health issues</td>
</tr>
<tr>
<td></td>
<td>A5 Continuous professional development for rural health workers</td>
</tr>
<tr>
<td>B. Regulatory</td>
<td>B1 Enhanced scope of practice</td>
</tr>
<tr>
<td></td>
<td>B2 Different types of health workers</td>
</tr>
<tr>
<td></td>
<td>B3 Compulsary service</td>
</tr>
<tr>
<td></td>
<td>B4 Subsidized education for return of service</td>
</tr>
<tr>
<td>C. Financial incentives</td>
<td>C1 Appropriate financial incentives</td>
</tr>
<tr>
<td>D. Professional and personal support</td>
<td>D1 Better living conditions</td>
</tr>
<tr>
<td></td>
<td>D2 Safe and supportive working environment</td>
</tr>
<tr>
<td></td>
<td>D3 Outreach support</td>
</tr>
<tr>
<td></td>
<td>D4 Career development programmes</td>
</tr>
<tr>
<td></td>
<td>D5 Professional networks</td>
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<td></td>
<td>D6 Public recognition measures</td>
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</tbody>
</table>


Suggested questions and indicators for the evaluation and monitoring of interventions to increase access to health workers in rural and remote areas through improved retention are found in Annex 1. Utilization of a mix or package of interventions is of great importance as no single intervention can sufficiently address retention. All policy measures are contextually bound; therefore, their adoption at both micro and macro levels must be ensured. Dr V Lin and colleagues, in a recent policy brief analysing incentives and the deployment of primary health care workers in the Region, re-emphasized this dual approach so that individual-level behaviour change is reinforced by the organization and health system.

Lin et al. offer templates to guide policy decision-making based on different country contexts, related to stage of development (Table 3) as well as whether or not a workforce shortage exists and the way in which primary health care is provided (Table 4). The authors further suggest that the short-term focus of incentives should be on material and professional benefits, while a longer-term focus should be given to changing the status and models of service delivery of primary health care.

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24 Ibid: 40.
### Table 3: Country contextualized policy options

<table>
<thead>
<tr>
<th>Country context</th>
<th>Characteristics of health service</th>
<th>Possible policy measures</th>
</tr>
</thead>
</table>
| Low income – high proportion of population in rural area | Limited facilities, low utilization of primary health care services, strong belief in traditional health care, brain drain of more skilled health workers to other countries | **System level/labour market** - primary care workers substitution for doctors and other skilled workers, training in situ to service areas  
**Individual level** - Mandatory service in public health facilities and underserved areas; allowances for primary care services |
| Medium income – high proportion of population in rural area | Need to expand rural primary health care, growing consumer desire for quality services, some high standard tertiary care facilities in urban areas | **System level/labour market** - Increased production of doctors, nurses, primary care workers  
**Individual level** - Specialist training for career progression but linked to primary care service, social network (e.g. Rural Doctor Society) to support doctors  
**Organization level** - Improve infrastructure and equipment in primary health care services |
| Medium income – moderate proportion of population in rural area | Well-developed urban-based tertiary care facilities, emerging private sector services, competition between public and private sectors for labour, growing consumer preference for quality Western medicine | **Organization level** - Improve infrastructure and equipment in public sector  
**Individual level** - Career advancement measures for doctors working in unattractive settings, financial incentives for public sector practice  
**System level/labour market** - Local recruitment/training/placement, increased production of primary care workers and nurses |
| High income – low proportion of population in rural area | Universal coverage provided but increased concern about quality | **Individual level** - Special allowance for doctors, dentists, pharmacists and nurses  
**System level/labour market** – Local recruitment/training/placement  
**System level/health care** – Primary care as gatekeeper |

Table 4: Policy measures with most potential according to context

<table>
<thead>
<tr>
<th>Organizational arrangement</th>
<th>Health system context</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Workforce shortage</td>
</tr>
<tr>
<td>Solo practice</td>
<td>Better pay and other</td>
</tr>
<tr>
<td></td>
<td>amenities</td>
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<tr>
<td></td>
<td>Clinical support</td>
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<tr>
<td></td>
<td>Continuous professional development</td>
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<tr>
<td></td>
<td>Workforce substitution</td>
</tr>
<tr>
<td></td>
<td>Outreach services/visiting specialists</td>
</tr>
<tr>
<td></td>
<td>Telemedicine</td>
</tr>
<tr>
<td>Health centre</td>
<td>Outreach services</td>
</tr>
<tr>
<td></td>
<td>Visiting specialists</td>
</tr>
<tr>
<td></td>
<td>Higher salaries and better conditions</td>
</tr>
<tr>
<td></td>
<td>Workforce substitution</td>
</tr>
</tbody>
</table>


2.4 Transforming health professional education

Low standards and poor quality of education and training of health professionals in many countries have resulted in a health workforce ill-prepared to respond effectively to rapidly changing and complex existing and future health systems and population health challenges. Establishing academic standards and regulatory frameworks are important actions to improve quality education and accreditation capacities in Member States.

The World Federation for Medical Education and WHO have produced a series of global standards in medical education that address minimum quality, both nationally and internationally. These standards have been used by a number of medical schools in the Region.

The Global Standards for the Initial Education of Professional Nurses and Midwives, published in 2009, support educational programmes in meeting a global standard, as research has demonstrated that a more highly educated nursing workforce not only improves patient safety and quality but also saves lives. The goal of the standards is to establish educational criteria and assure outcomes that:

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• are based on evidence and competency;
• promote the progressive nature of education and lifelong learning; and
• ensure the employment of practitioners who are competent, who provide quality care, and who promote positive health outcomes in the populations they serve.

The issuance of the global standards was consistent with later recommendations of the Commission on Education of Health Professionals, which promoted global cooperation by relevant bodies, including WHO, United Nations Educational, Scientific and Cultural Organization (UNESCO), World Federation for Medical Education, International Council of Nurses and World Federation of Public Health Associations to set standards that function as “global public good” to support countries in locally adapting and implementing such standards, to protect consumers and populations in the face of a globally mobile workforce.29

The publication of Educating Nurses: A Call for Radical Transformation by The Carnegie Foundation for the Advancement of Teaching30 in 2010 was a significant and timely event, given the implications for nursing and midwifery education, from profound changes in environmental contextual factors, health systems, service delivery and nursing practice. The study group’s research findings highlighted the need for redesigning or “transforming” nursing education, focusing on effective means of preparing nurses to practise safely, in a socially responsible way amid ongoing nursing workforce shortages, including faculty shortages and increased demands and complexities of patient care. Simply producing more nurses is neither sufficient nor safe, without concomitant attention to the quality of educational preparation, particularly the education–practice gap. Studies are demonstrating that better patient outcomes correlate not only with sufficient nurse staffing levels but also hospital staffing of nurses with a baccalaureate degree.31

The researchers concluded that nursing teachers need to approach teaching as an “integrated practice”,32 based on advanced knowledge of the practice of nursing and requiring critical reflection, continuous learning, capacity to change and to question change, and ongoing development. Among a number of recommendations put forth to strengthen nursing education, it was advised that educators should be supported in learning how to use narrative pedagogies in the classroom (and skills labs) to enable nurses to develop narratives of patients’ clinical histories, signs and symptoms, within their life contexts. Narrative pedagogies are effective in developing students’ sense of salience, clinical reasoning and clinical judgment. The research undertaken provides detailed insights into how outstanding educators bring together the “hows, whys and what fors” of nursing by promoting:

• contextualized knowledge (within the clinical context and the context of the patient’s life);
• clinical reasoning and multiple ways of thinking; and
• ethical comportment and formation—formation of a professional nursing identity, by shaping nurses who will think and act ethically, who will respect the diversity of values and

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33 Ibid.
the ambiguity inherent in clinical practice, and who will remember that the correct action in nursing is always about the patient.

The publication of this vision of “transformed” nursing coincided with the centennial anniversary of the Flexner Report, also developed under the auspices of The Carnegie Foundation, which brought about major transformations in medical education. A national medical education study was also released in 2010, calling for reform of medical schools and residency.34

In April 2010, the global, independent Commission on Education of Health Professionals presented a global analysis of the current state of health professional education. The Commission recognized a major transformative opportunity for improving health worldwide by reforming the vision, programmes and systems of health professional educational institutions to train health providers to meet people’s needs, empower communities and enhance human well-being.35 The Commission’s global, multiprofessional, analytical approach to health professional education, its vision (Box 2), and its recommendations and suggested areas for reform (Table 5) were reported in the December 2010 issue of The Lancet.36

**BOX 2: VISION OF THE COMMISSION ON EDUCATION OF HEALTH PROFESSIONALS FOR THE 21ST CENTURY**

“All health professionals in all countries should be educated to mobilize knowledge and to engage in critical reasoning and ethical conduct so that they are competent to participate in patient and population-centred health systems as members of locally responsive and globally connected teams. The ultimate purpose is to assure universal coverage of the high-quality comprehensive services that are essential to advance opportunity for health equity within and between countries.”


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<table>
<thead>
<tr>
<th></th>
<th>Proposed education reforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Adoption of competency-based curricula that are responsive to rapidly changing needs rather than being dominated by static coursework. Competencies should be adapted to local contexts and be determined by national stakeholders, harnessing global knowledge and experience.</td>
</tr>
<tr>
<td>2.</td>
<td>Promotion of interprofessional and transprofessional education that breaks down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams. In addition to specific technical skills, interprofessional education should focus on cross-cutting generic competencies, such as analytical abilities; use of both evidence and ethical deliberation in decision-making; leadership and management capabilities; and communication skills.</td>
</tr>
<tr>
<td>3.</td>
<td>Exploitation of the power of information technology for learning through development of evidence, capacity for data collection and analysis, simulation and testing, distance learning, collaborative connectivity, and management of the increase in knowledge.</td>
</tr>
<tr>
<td>4.</td>
<td>Adaptation locally but harnessing of resources globally in a way that confers capacity to flexibly address local challenges while using global knowledge, experience, and shared resources, including faculty, curriculum, didactic materials, and students linked internationally through exchange programmes.</td>
</tr>
<tr>
<td>5.</td>
<td>Strengthening of educational resources, since faculty, syllabi, didactic materials and infrastructure are necessary instruments to achieve competencies. Faculty development needs special attention through increased investments in education of educators, stable and rewarding career paths, and constructive assessment linked to incentives for good performance.</td>
</tr>
<tr>
<td>6.</td>
<td>Promote a new professionalism that uses competencies as the objective criterion for the classification of health professionals, transforming present conventional silos. A set of common attitudes, values and behaviours should be developed as a foundation for the new generation of professionals.</td>
</tr>
<tr>
<td>7.</td>
<td>Establish joint planning mechanisms in every country to engage key stakeholders, especially ministries of education and health, professional associations, and the academic community, to overcome fragmentation by assessment of national conditions, setting priorities, shaping policies, tracking change and harmonizing the supply of and demand for health professionals to meet the health needs of the population.</td>
</tr>
<tr>
<td>8.</td>
<td>Expand academic centres to academic systems, extending the traditional discovery-care-education continuum in schools and hospitals into primary care settings and communities.</td>
</tr>
<tr>
<td>9.</td>
<td>Link together through networks, alliances, and consortia between educational institutions worldwide and across to allied actors, such as governments, civil society organizations, business and the media to overcome the constraints of individual institutions and expand resources.</td>
</tr>
<tr>
<td>10.</td>
<td>Nurture a culture of critical inquiry as a central function of universities and other institutions of higher learning.</td>
</tr>
</tbody>
</table>
A consultation on the transformative scale-up of medical, nursing and midwifery education was jointly convened by WHO and the United States President’s Plan for AIDS Relief (PEPFAR) in Geneva in December 2010. Consultation convenors recognized that changing the education of health professionals requires broad-based action that spans the health, education, finance and labour sectors. Transformative scaling up of health professional education addresses the three underlying challenges of quantity, quality and relevance. Dr Margaret Chan, Director-General of WHO, during the meeting, highlighted two important aspects of transforming education. First, without adequate numbers of appropriately trained, motivated and remunerated staff, who are distributed in an equitable manner, health systems cannot deliver health services and poverty-reduction strategies will not work. Second, impressive and creative innovations are already under way in matching school curricula with national priority health needs and in retaining faculty and staff—we have much to learn from these innovations already under way.

The various stakeholders that need to be involved in meaningful educational reforms, as illustrated in Figure 2, include (1) the drivers of reform—the people and communities serviced; (2) the implementers of reform—national regulatory and accreditation authorities, in partnership with professional associations; (3) national health, educational and financial leaders; (4) the service sector; (5) public and private sector educational institutions; and (6) development partners.

Figure 2: Stakeholders needed to expand and reform health professional education


37 Transformative scale-up consists in a process of education and health systems reforms that address the quantity, quality and relevance of health care providers in order to contribute to universal access and improve population health outcomes.” Transformative scale up of health professional education. Geneva, World Health Organization, 2011:4.

The implementation of research agendas and the dissemination and uptake of findings are essential in guiding interventions to transform education. The Institute of Medicine’s Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing has put forth such research priorities (see Box 3).39

**BOX 3: RESEARCH PRIORITIES FOR TRANSFORMING NURSING EDUCATION**

- Identification of the combination of salary, benefits and job attributes that results in the most highly qualified nurses being recruited and retained in faculty positions.
- Analysis of how alternative nurse faculty/student ratios affect instruction and the acquisition of knowledge.
- Capture of how optimal nurse faculty/student ratios vary with the implementation of new or existing teaching technologies, including distance learning.
- Identification of the features of online, simulation and telehealth nursing education that most cost-effectively expand nursing education capacity.
- Capture of the experience in nursing schools that include new curriculum related to expanded clinical settings, evidence-based practice, and interprofessional and patient-centred care.
- Identification and evaluation of new and existing models of nursing education implemented to ensure that nurses acquire fundamental competencies needed to lead and engage in continuous quality improvement initiatives.
- Identification or development of an assessment tool to ensure that nurses have acquired the full range of competence required to practise nursing in undergraduate, postgraduate and continuing education.
- Analysis of the impact of a range of strategies for increasing the number of nurses with a doctorate on the supply of nurse faculty, scientists and researchers.
- Identification of the staff and environmental characteristics that best support the success of diverse nurses working to acquire doctoral degrees.
- Identification and testing of new and existing models of education to support nurses’ engagement in team-based, patient-centred care to diverse populations, across the lifespan, in a range of settings.
- Development of workforce demand models that can predict regional faculty shortages.

3. Human Resources for Health: Regional Analysis of Issues and Future Demands

Every country in the world shares some of the same challenges in providing equitable access to quality health services for all. The challenge to deliver quality health services is still beset by the existing health workforce crisis: absolute shortages of qualified health workers; unbalanced distribution of workers and inefficient skill-mix; inappropriate training and education—not matched to patient and population needs; and poor motivation and retention. A low proportion of countries have succeeded in increasing financing for HRH. These constraints on HRH continue to undermine effective performance of health services in poor countries.

Health services are provided in an ever-changing environment where demographic, epidemiologic, technologic, economic, political and social trends influence service needs and demand. Though the Western Pacific Region is making better progress towards the health MDGs than other WHO regions, progress is unequally spread both within and between countries, with rural and poor populations lagging behind. Reducing the numbers of maternal and child deaths continues to be an urgent priority.\(^{40}\) The Region grapples with mounting negative effects of climate change, health risks, ongoing natural disasters and other public health emergencies. While globalization increases worldwide transmission of communicable diseases, health disparities continue to grow, populations continue to age and chronic conditions continue to increase. Estimates suggest that the older population in this Region will grow faster than in any other WHO region.\(^{41}\)

Four out of every five deaths in the Western Pacific Region are due to the most common noncommunicable diseases (NCDs)—cancer, cardiovascular diseases, chronic respiratory conditions and diabetes.\(^{42}\) The poorest people have the highest burden of NCDs, as they have greater exposure to risk factors and less access to preventive and therapeutic services. These trends and interrelated contextual factors challenge health systems to develop more integrated and comprehensive models of prevention, risk reduction and care provision, and to more efficiently use available resources and reduce disease complications. Figure 3 illustrates how shifting the focus of financing towards prevention and reduction could contribute to reduced health care costs. One dozen Member States endorsed the Seoul Declaration in March 2011, calling for strengthening of health systems and provision of adequate human and financial resources for NCD programmes.

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42. WHO Regional Office for the Western Pacific. *Op cit*. Ref 15.
Models of effective and efficient service delivery for people with disabilities and chronic conditions require “putting people first” as the focus of health services, a core primary health care value requiring health system responsiveness to a rapidly changing world and consumer expectations for better care. Integrated approaches to chronic care emphasize prevention, risk reduction and management; improved mental health care services; as well as long-term management of complex symptoms and multiple illnesses, including palliative care. New multi-professional models of service delivery and financing require supportive legislative frameworks, testing and evaluation, for service provision across the continuum of care, where people live and work—in homes, schools, workplaces and communities. Research is needed to compare costs, quality, outcomes and access associated with a range of primary care delivery models.

The increased demands for equitable, safe, high-quality and person-centred health care services necessitate that all health professionals are enabled, through their scope of practice, and supported in working to their full functional capacities. Many countries in the Region still have inefficient skill-mixes with nurses and midwives underutilized and focused on tasks versus meaningful patient- and community-centred contributions to patient and population health outcomes.

Nursing practice covers a broad continuum, from prevention and health promotion to coordination of care and chronic care provision, including palliative care. Transformations in work environments, in scopes of practice, in education and in service delivery are needed for health systems to deliver high-quality, accessible and sustainable care. The committee responsible for The Future of Nursing:
Leading Change, Advancing Health put forth four key messages relevant to rapid health system changes:

- nurses should practise to the full extent of their education and training;
- nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression;
- nurses should be full partners with physicians and other health professionals in redesigning health care in the United States of America; and
- effective workforce planning and policy-making require better data collection and an improved information infrastructure.

Educational transformation, therefore, must address entry-to-practice competencies matched to population health needs, enabling seamless service delivery for persons with chronic conditions. Such competencies are highlighted in Table 6.

<table>
<thead>
<tr>
<th>Patient-centred care</th>
<th>Partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interviewing and communicating effectively</td>
<td>• Partnering with patients</td>
</tr>
<tr>
<td>• Assessing change in health-related behaviour</td>
<td>• Partnering with other providers</td>
</tr>
<tr>
<td>• Supporting self-management</td>
<td>• Partnering with communities</td>
</tr>
<tr>
<td>• Using a proactive approach</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Quality improvement</th>
<th>Information and communication technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Measuring care delivery and outcomes</td>
<td>• Designing and using patient registries</td>
</tr>
<tr>
<td>• Learning and adapting to change</td>
<td>• Using computer technology</td>
</tr>
<tr>
<td>• Translating evidence into practice</td>
<td>• Communicating with partners</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Public health perspective</th>
<th></th>
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<tbody>
<tr>
<td>• Providing population-based care</td>
<td></td>
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<tr>
<td>• Systems thinking</td>
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<tr>
<td>• Working across the care continuum</td>
<td></td>
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<tr>
<td>• Working in primary care-led systems</td>
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</tbody>
</table>

The standards and quality of health professional education and training remain low and poor in most lesser-resourced countries, resulting in a health workforce ill-prepared to effectively respond to rapidly changing, complex health system and population health challenges. Nurses and midwives constitute the largest percentage of the health workforce in most countries. Therefore, WHO collaborated with partner institutions and networks on a cross-sectional survey of countries’ nursing/midwifery education, regulatory and practice situations from 2006 to 2009. The study aimed to:

- enumerate the nursing and midwifery workforce;

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• improve understanding of the regulations and systems in place for nursing/midwifery education and practice;
• identify curricular content, methods and resources available; and
• better understand the workplace environment.

In addition to overall workforce shortages, three main problem areas in nursing/midwifery education were identified (Table 7).

Table 7: Nursing/midwifery educational challenges in the Western Pacific Region

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Students</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe faculty shortages</td>
<td>Inadequate preparation for nursing education</td>
<td>Lack of adequate clinical facilities</td>
</tr>
<tr>
<td>Faculty not qualified</td>
<td>Financial support required</td>
<td>Lack of instructional equipment</td>
</tr>
<tr>
<td>Poor retention of faculty</td>
<td>Need to work and go to school</td>
<td>Needs not met for advanced equipment, health science libraries, computers with Internet access, access to computer training and clinical skills learning laboratories</td>
</tr>
<tr>
<td>Low salary, inadequate compensation</td>
<td></td>
<td>Lack of in-country nursing education programmes in some countries</td>
</tr>
<tr>
<td>Professional advancement difficult</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The problems documented in the study apply across health professional education institutions in lesser-resourced countries and settings. Faculty typically lack clinical expertise as well as any formal preparation in education, teaching and learning. The knowledge imparted to students, interpersonal interactions and practices displayed are often outdated, non-evidence-based and ineffective in enabling students to acquire the necessary astute clinical reasoning skills for safe practice.

Basic entry-to-practice competencies of new graduates are negatively influenced by gaps between classroom learning and mentored clinical learning as well as inadequate clinical supervision and role-modelling, often by non-practising, non-expert educators. Safe, high-quality services are continually eroded by shortages of formally prepared educators as well as multiple inadequacies in the promotion of student-centred, experiential learning, problem-solving and critical thinking within the clinical context.

Educational institutes in limited-resource countries make do with insufficient financial and human resources and overall physical infrastructure limitations, particularly in library holdings, computer and Internet access and clinical learning laboratories. Incoming students enter with poor math, science, writing and problem-solving skills.
Although progress has been made, key HRH issues identified in the *Regional Strategy on Human Resources for Health (2006–2015)* are as relevant today as they were in 2006 when the strategy was developed. These issues and challenges include:

- workforce shortages overall, combined with inequitable geographical distribution of health workers (particularly in rural and remote areas and poor urban locations);\(^{46}\)
- significant macroeconomic constraints and inadequate HRH financing;\(^{47}\)
- limited technical capacity for comprehensive HRH planning and management, including integration with health services planning and other sectors and linkages to budget and management cycles;
- lack of appropriate and coherent cross-sectoral national policies and strategies to support a sustainable health workforce (including health care financing);
- inadequate mechanisms and resources for regulation and oversight of the health workforce, including in relation to the growing participation of the private sector, in a number of countries;
- structural and skill-mix imbalances impeding the delivery of high-quality, patient-centred, equitable health services;
- difficulties in recruiting, motivating and retaining health workers, particularly in rural and remote areas, exacerbated by international migration in some countries; and
- poor quality of education and training; education and service system gaps; poor alignment of training and education with population health needs; insufficient production and faculty capacities; as well as overproduction of certain professions compared to others.


\(^{47}\) Ibid.
4. Human Resources for Health: Analysis of National Challenges and Future Demands

Despite the commonality of challenges, each country’s situation is unique, resulting in variation among countries in determining which issues are the most pressing. Selected country examples are presented.

Cambodia, Papua New Guinea, Samoa, Solomon Islands, Vanuatu and Viet Nam face acute overall shortages of health workers, with a density of less than 2.3 per 1000 population (including doctors, nurses and midwives only). Based on reported numbers of doctors and nurses only, the Lao People’s Democratic Republic also faces acute shortages. All of these countries also have workforce distribution inequities, with most health workers found in urban areas.

Countries with workforce densities below the 2.5 per 1000 population threshold have poorer maternal and child health indicators and outcomes, as well as slower progress towards achievement of health-related Millennium Development Goals. In China, analysis suggests that production of health workers exceeds absorption, with the number of graduates between 2000 and 2005 far exceeding the apparent increases in numbers of employed health workers. One university found that only 28% of its 2004–2006 medical graduates were currently working as doctors. Further investigation is needed to understand if this situation is the result of underemployment due to financial constraints (particularly with regard to employment of nurses) or over-production of health workers. Mongolia reports overproduction of certain health workers, particularly medical doctors. Despite this, neither China nor Mongolia is able to fill health worker vacancies in rural, remote and poorer areas, effectively resulting in a shortage of health workers in these areas.

Maldistribution of the health workforce is a shared problem throughout the Region. Health worker densities are generally lower in rural areas and remote areas than in urban areas, as are the qualifications of health workers. Although the Western Pacific Region is making better progress towards the health MDGs than other WHO regions, progress is unequally spread both within and between countries, with rural and poor populations lagging behind. Reducing the number of maternal and child deaths is the most urgent and obvious priority.

Many countries show considerable variation in health worker density between regions and between provinces. In Papua New Guinea, workforce distribution is lower in rural areas than in urban areas. Although approximately 86% of the population live in rural areas, 46% of the health workers are in hospitals located in urban areas. In Viet Nam, the South Central Coast region has lower health worker (all cadres) density than most other areas of the country, with provincial variations ranging from around 2.75 per 1000 to 2.0 per 1000 population.

Australia is experiencing an overall health workforce shortage that is worse in rural areas than in urban areas. The number of rural doctors is declining compared to urban doctors, and the rural workforce (doctors and nurses) is ageing more rapidly than the metropolitan workforce. Disparities exist for dentists, too, with the ratio of dentists per 100 000 population varying from 19.8 in remote areas to 58.6 in urban areas. Malaysia, which has a relatively high ratio of doctors to the population, reports densities varying from 1 doctor per 398 people in Kuala Lumpur, to 1 doctor per 3691 people in Labuan.

The mix of health workers varies significantly among countries, and has implications for the efficiency of utilization of health resources. The number of nurses per doctor varies from less than one nurse per doctor in China and Macao (China), to more than four nurses per doctor in Brunei Darussalam, Japan and New Zealand. Some caution needs to be taken with international comparisons, as definitions of doctors and nurses vary somewhat among countries. Within the mix of health workers, some countries face challenges related to levels of professional qualifications and skills, particularly for workers employed in smaller or rural health facilities. In China, 18.5% of health workers at township health centres have had no formal medical or health-related education. Of the limited number of nurses working in rural areas in China, the majority have lower educational levels than nurses in urban areas, making it difficult to ensure provision of the full range of high-quality primary health care services. A midwifery review undertaken in Cambodia found that the competency of midwives was limited in key areas of service provision, and that the skills of primary-level midwives were significantly less than those of secondary-level midwives in the vitally important area of prevention of infection. A similar review conducted in Papua New Guinea also demonstrated that graduating midwives did not have the skills to manage the three main causes of maternal morbidity and mortality.

In the Pacific island countries, limited capabilities and resources associated with small population size and geographic remoteness impact on the availability of the full range of health workers, particularly

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54 Hine B. Human Resources for Health Sub-Sector Analysis, for ADB Project Preparation of Health Care in the South Central Coast Region. Manila, Asian Development Bank, 2008.
in medicine and different specialty areas. In a number of Pacific island countries, advanced practice nurses and other non-physician primary health care providers meet the health needs of widely dispersed populations living in small island communities spread over enormous expanses of the Pacific Ocean. These primary health care providers have received further advanced education and training to function as primary health care providers in rural and remote communities, providing the full range of community-based services, including: community development activities; health promotion and disease prevention; diagnosis and management of acute and chronic diseases; performance of minor surgeries; prenatal and postnatal care as well as deliveries; and 24-hour emergency care.

These health professionals play vital roles in meeting the needs of at-risk and vulnerable community members, including the poor, chronically ill, young and elderly. Surveys of community members in Fiji have revealed a high degree of satisfaction with nurse practitioners working in rural communities.\textsuperscript{61} The utilization of appropriately educated advanced practice nurses (nurse practitioners) in providing primary care has been supported by evidence from developed countries indicating that nurses can produce the same high-quality care and good patient outcomes as primary care physicians.\textsuperscript{62}

The Philippines’ health workforce is particularly impacted by the international migration of nurses. Between 1992 and 2004, more than 100 000 nurses left the Philippines to work overseas; annual departures rose dramatically during this period with some tapering off in the past few years.\textsuperscript{63} Migration is depleting the nursing workforce domestically, with rural areas particularly impacted. It is also contributing to the loss of doctors and other health professionals who are re-training as nurses in order to secure international work opportunities. Around 10% of examinees in the Nursing Board examination in December 2004 were medical doctors.\textsuperscript{64} A study conducted by the Health Alliance for Democracy (HEAD) found that 80% of doctors working in the public sector in the Philippines had applied to or intended to apply to work abroad, and 90% of municipal health officers were set to leave to work abroad.\textsuperscript{65} Malaysia also experiences a relatively high level of out-migration of nurses and doctors and has compensated by recruiting foreign health workers to fill vacancies. In 2006, 6% of all doctors and dentists in Malaysia were foreign professionals.\textsuperscript{66} New Zealand has followed a similar pattern, with increased out-migration of nurses coinciding with an increase in the registration of international nurses in New Zealand.\textsuperscript{67}

The increase in privately funded health workforce education has expanded the number of places for students to train, but has raised quality issues. In many countries, high demand for training (particularly for certain cadres) has led to a proliferation of institutions and graduates, often without


\textsuperscript{63} Imson M. Managing the mobility of health care workers: the Philippines experience. Presentation to the International Dialogue on Migration Seminar, 23 March 2006.


effective regulatory systems. In the Philippines, the number of nursing schools that provide full nursing courses rose from 170 in the 1990s to 491 in 2009.68 The number of graduates taking the Nursing Board examination each year tripled between 2000 and 2005. However, a study in 2005 found that almost 60% of nursing schools had low to very low performance, with fewer than 50% of their graduates able to pass the national Nursing Board examination.69 Twenty schools did not produce a single graduate who was able to pass the examination.70 In December 2010, the passing rate for the national examination had declined even further to 35.35%.71 The Philippines’ Commission on Higher Education (CHED) in Nursing is striving to take stronger measures to close nursing programmes or schools that have very low performance or that do not comply with minimum standards. Additionally, information about the percentage of graduates passing the national examination per school is released to the public to raise awareness of educational quality.

In the Lao People’s Democratic Republic, the number of students enrolled annually at the College of Health Technology in Vientiane quadrupled between 2001 and 2005, rising from 200 to 800 students, without a corresponding increase in resources for teaching and learning.72 Official student intakes into pre-service training programmes are based on a government quota system, with institutions subsidized to enrol a set number of students who pass the entry exam. However, institutions may also enrol additional fee-paying students. In some training courses, fee-paying students account for 80% of the total. As a result, educational quality has suffered due to significant increases in intakes without corresponding increases in faculty as well as poor quality of clinical supervision and mentoring. In Mongolia, training institutions no longer receive government funding and must generate income through enrolments, resulting in a demand-driven rather than health-service-needs-driven pool of graduates. The need to be self-funding encourages institutions to focus on quantity rather than quality,73 as well as a resulting over-production of medical graduates, as tuition fees are higher for medical students than for other cadres, such as nurses and midwives.

All countries in the Region report difficulties in **retaining and motivating health workers**, particularly for posts in rural areas. In many countries, the salaries of health workers are less, sometimes significantly, than the cost of living. Low salaries have a major influence on retention and performance. In Cambodia, public sector physicians earn around US$ 50 per month, and nurses earn around US$ 20 per month.74 These amounts, even when augmented with other entitled staff allowances, are insufficient to ensure full participation of the health worker in their public sector job. Dual public–private practice is common for doctors, midwives and nurses, particularly in urban areas, while rural health workers often supplement their salaries by farming, which leads to a reduction in the number of hours they spend working at health centres or hospitals. A study in 2005 found that a salary of around US$ 400 per month for doctors and US$ 200 per month for nurses would be necessary before most doctors and nurses would relinquish their private sector work and

69 Lorenzo F. et al. Op cit. Ref 64.
72 Interview with Director of College of Health Technology, Vientiane, 2006.
work only in the public sector.\textsuperscript{75} The second Cambodian Health Strategic Plan assigned special urgency to the implementation of salary reform in the health sector.\textsuperscript{76}

Hong Kong (China) faces a specific problem related to remuneration. As a result of shrinking budgets and increased demand for health workers, the Hospital Authority has reduced the starting salaries for new hires over successive years, while maintaining the salaries of existing employees. This has resulted in salary differences of up to 80\% for staff doing the same work,\textsuperscript{77} causing significant dissatisfaction among the health workforce.

It is important to note, however, that remuneration is only one element of many that impact retention and motivation.\textsuperscript{78} A comprehensive incentives package is likely to require financial incentives such as wages and performance-linked payments, as well as non-financial incentives such as professional development, workload management, flexible working arrangements, positive working environments and access to benefits and support.\textsuperscript{79} A detailed analysis of the complex factors that influence health workers’ decisions to relocate to, stay in or leave rural and remote areas is a key step in guiding appropriate interventions (see Figure 4).\textsuperscript{80}

These complex interlinked factors tend to be related to interpersonal aspects, health system characteristics and the overall socioeconomic and political environment. Underlying motivations strongly influence such factors, whether they are economic, sociocultural, religious or other factors, such as family ties.

\textbf{Figure 4: Factors related to decision to relocate to, stay in or leave rural and remote areas}

- **Personal**
  - Rural background (origin), values, altruism

- **Family and community**
  - Provision of schooling for children, sense of community spirit, community facilities available

- **Financial aspects**
  - Benefits, allowances, salaries, payment system

- **Career related**
  - Access to continuing education opportunities, professional development courses/workshops, etc., senior posts in rural areas

- **Working and living conditions**
  - Infrastructure, working environment, access to technology/medicines, housing conditions, etc.

- **Bonding or mandatory service**
  - Whether obligated to serve there


\textsuperscript{79} Ibid.

The provision of in-service continuing education and opportunities for professional development is critical to staff commitment and performance. In the Pacific island countries, limited opportunities for continuing education, training and professional development emerged as a key reason for migration. A recent report indicated that there were wide variations across Pacific island countries in terms of the existence and appropriateness of health worker education and training, as well as their type, frequency, coverage and quality.81

Challenges associated with the development and implementation of effective national HRH policy and strategic plans are compounded by the influence of multiple stakeholders over the production, recruitment, deployment and management of health workers. While developing the Philippines Human Resources for Health Master Plan 2005–2030, the project team listed 17 government and other agencies with responsibilities that directly influence the health workforce.82 In addition to a wide range of international organizations and bilateral development partners, there are more than 120 nongovernmental organizations (NGOs) working in the health sector in Cambodia.83

81 The University of New South Wales School of Public Health and Community Medicine. Mapping Human Resource for Health Profiles from 15 Pacific Island Countries. Report to the Pacific Human Resources for Health Alliance from the Human Resources for Health Knowledge Hub. Sydney, the University of New South Wales, April 2009.

82 Lorenzo F et al. Op cit. Ref 64.

5. Strategic Responses

Across the Western Pacific Region, countries are working hard to address the challenges associated with developing and sustaining a health workforce that is sufficient, competent, responsive and adequately supported to meet population health needs. Though countries have common workforce challenges, their unique health system, political, socioeconomic and topographical situations necessitate workforce policies and strategic interventions specific to each country context. The Region’s HRH Vision 2020 represents our purpose and values, while the HRH action framework serves as a guide for strategic workforce planning, implementation and evaluation.

HRH Vision 2020

"Universal coverage for access to quality health services, particularly for the most vulnerable and excluded groups, with improved patient and community health outcomes, through a balanced distribution and efficient skill-mix of a multi-professional, motivated workforce able to prevent and manage a full range of conditions and empower people and communities to manage their own health needs as fully as possible."84

The WHO HRH action framework to achieve the Region’s HRH Vision 2020 (Figure 5) conceptualizes the health system context in which HRH actions take place, highlighting the necessity of multisectional and multi-stakeholder collaboration for sustainable HRH improvement. The six interlinked thematic domains—human resource management systems, policy, finance, education, partnership and leadership—must all be taken into account in health workforce development and overall health system improvement.

Figure 5: Human resources for health action framework—tools for an effective and sustainable health workforce

The updated four key result areas (KRAs) of action planning and reporting are:

- strategic planning;
- HRH production and development;
- HRH management and retention; and
- governance, leadership and partnerships.

Highlights of selected national and subregional initiatives are presented under the relevant key result area.

**Key Result Area 1: Health workforce strategic planning**

Almost all countries in the Region have or will soon have HRH policy and strategic plans. All countries with a HRH crisis have HRH policy and strategic plans. These documents generally identify priorities and establish an action plan for the implementation of strategies to strengthen HRH. In the Region, all plans are integrated into the national health policies. Unfortunately, many of these plans are not costed, or are associated with costs that are not yet funded, resulting in limited or incomplete implementation.

Cambodia continued its review of the health workforce as part of the mid-term review of the Ministry of Health's Strategic Plan. A high-level steering committee was nominated to analyse and address HRH priority issues including workforce deployment in remote and rural areas, guided by WHO technical guidelines, workforce projections and educational reforms.

There is widespread awareness of the need for the health workforce to respond better to changing demographic, epidemiological, cultural and other determinants of health. In order to achieve this, data on population, health needs and service utilization need to be available to health planners and managers. National demographic and health statistics are collected in all countries in the Region, commonly disaggregated to province or district level. Information on causes of mortality and morbidity is generally available, and may be accessible by gender and by age group. Very few countries regularly collect health data disaggregated by ethnic group or socioeconomic status, except through special surveys. The Lao People's Democratic Republic Expenditure and Consumption Survey, conducted about every five years to collect and analyse social and economic information at the household level, was expanded in 2003 to include substantial sections on health and education. Another comprehensive household survey was implemented in 2010.

In Viet Nam, there are a number of regular surveys that collect health data at the household level, including the Viet Nam Household Living Standards Survey (conducted biennially since 2002), the Multiple Indicator Cluster Survey (last conducted in 2006), and the Demographic Health Survey (usually conducted every five years). These provide valuable information on health and other characteristics of different population groups, but variations in sample characteristics and data collected, particularly regarding living standards measures and use of health services, make analysis somewhat complex. In preparing the paper, Health equity in Viet Nam: a situational analysis focused on maternal and child mortality, the writing team used a combination of surveys, as well as provincial-level data from the Ministry of Health's Health Information System, to complete their

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analysis. While there is some disaggregation of data by ethnicity, this is usually limited to just a few of the largest ethnic groups, with smaller groups cited together.

Population demographics and health data are the foundation of planning and prioritizing health services. It is vitally important that countries clarify the scope of health services for all service levels and facilities as the basis for identifying staff norms and projecting health workforce needs. **Workforce planning** must be closely linked to **health service planning**. In a number of countries in the Region, including Cambodia and Mongolia, comprehensive five-year health sector plans have been developed based on detailed situational analyses. The plans clearly link HRH priorities with health service delivery goals, describe actions to be taken and identify funding in an accompanying medium-term expenditure framework.

Similarly, the Papua New Guinea National Department of Health has identified HRH priorities as being integral to the achievement of its Corporate Plan 2009–2013 objectives. These priorities were incorporated into the National Health Plan for 2011–2020. The national health plan’s KRA that is focused on improved service delivery has four objectives, two of which closely link HRH and health services to address the needs of those most vulnerable:

- increase access to quality health services for the rural majority and the urban disadvantaged;
- rehabilitate and strengthen primary health care infrastructure and equipment;
- ensure that the right health professionals working in the right places are motivated and delivering quality services; and
- rehabilitate the hospital infrastructure.

The extent to which these integrated actions are reflected in countries’ longer-term health workforce plans needs to be explored further.

The WHO Western Pacific Region has prepared and disseminated a practical electronic workforce planning tool, the **Western Pacific Workforce Projection Tool (WWPT)**, which guides Member States in undertaking comprehensive situational analyses by supporting them in developing country-specific health workforce plans based on population growth estimates and other factors. The tool permits formulation of a number of alternative projections based on the altering of core variables, such as budget growth, profession-to-population ratios or other factors. Countries that have tested and/or are using the tool include Cambodia, China, Fiji, the Lao People’s Democratic Republic, Papua New Guinea, the Philippines, Tokelau and Viet Nam. The tool has also been used in the WHO regions of Africa, South-East Asia and Eastern Mediterranean.

Health workforce data, essential to workforce planning, are collected in every country in the Region. These data generally allow comparisons of density, qualification and other variables among different service types and levels within the health system. Unfortunately, few countries have comprehensive health-related **human resource management information systems** (HRMIS) capable of providing

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88 *Western Pacific Regional Workforce Projection Tool.* Manila, WHO Regional Office for the Western Pacific (http://www.wpro.who.int/sites/hrh/, accessed 24 March 2010).
the timely, reliable and complete data that are necessary to ensure fully informed decision making in planning and management. In some countries, such as China, analysis of health workforce trends based on qualifications is problematic due to variations in classification over time. In other countries, workforce data collected reflect only the qualifications of health professionals, not their current occupations, making estimations of service density less accurate. In addition, many countries lack capacity to collect data on health workers in the private sector or in other government agencies. Strengthening HRH data is a priority in HRH policy and strategic plans throughout the Region, including in the Philippines *Human Resources for Health Master Plan 2005–2030*, and the Mongolian *Health Sector Strategic Master Plan 2006–2015*.

In Cambodia, the *National Policies and Strategies for Human Resources for Health 2006–2010* seeks to **improve access to information** essential for the preparation, monitoring, review and adjustment of the health workforce plans. The Ministry of Health’s human resources database will be extended to include data relating to all ministerial employees, health personnel employed in other government departments and units, and data relating to people working in the private sector collected through the health professional registration and licensing system. The database will continue to be located in one department, but will be linked to other departments through the Ministry of Health intranet. A detailed annual report on the health workforce situation in both the public and private sectors of the health care system will be prepared jointly by the Departments of Planning and Health Information, Human Resource Development, Personnel and Hospital Services.89

Health authorities of the Lao People’s Democratic Republic approved a *National Health Information System Strategic Plan 2009–2015* in line with Health Metrics Network (HMN) methodology and are establishing a comprehensive HRMIS linked to the public service database. This information system will include a digital personnel file for every health worker in the country. In most Pacific island countries, HRH data sets are available but need to be consolidated. A recent survey of the HRH situation in Pacific island countries revealed: “The Ministries of Health had information on the number of personnel (nurses, doctors, dentist, etc.) currently working in the government health sector but knew very little about the education and training institutions and the annual turnover of health personnel of these institutions. Such information was largely held at the Ministries of Education and the various medical and nursing training institutions. Information on current vacancies was generally limited in all the countries.”90

A Human Resources for Health Minimum Data Set was developed by the WHO Collaborating Centre for Nursing, Midwifery and Health Development, University of Technology, Sydney, in collaboration with WHO Headquarters and the Offices of the Western Pacific and South-East Asia regions. The joint project aims to support Member States and areas in designing effective and efficient HRH management information systems to generate, process, report on and apply essential HRH data to health planning. This will help to address the inconsistent and incomplete health workforce data.

The minimum data set and fact sheets were developed to support the establishment and management of HRH information systems. Improved data collection, data reliability and data validity will result in improved HRH trend and forecasting analyses, will address both national and cross-border HRH issues, and will enable cross-country comparisons to be made. These tools, as well as workforce

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databases and country profiles, will be refined to provide a means of data-sharing between countries and to enable cross-country comparisons of HRH data.91

In order to ensure that health workforce data more accurately reflect the currently active workforce, not just those qualified to practise, the Australia nursing council routinely collects occupational data from nurses through a survey completed at the time of annual relicensing. The survey asks nurses for information such as average number of hours worked as a nurse per week, workplace by category (e.g. hospital, community clinic, training institution), current professional duties (e.g. clinical, management, teaching, research), and if not working in nursing, explores reasons for this and current alternative occupation. Papua New Guinea is in the process of implementing a similar system. Health workforce data are collected from all health care workers at annual renewal time and entered into the Health Care Practitioner Registration System. In China, the Ministry of Health has begun piloting potential nursing workforce surveys. Similarly, physicians, dentists and pharmacists in Japan are legally required to report every two years their employment status, including their workplace and position, to the Ministry of Health, Labour and Welfare.

Reorienting health services towards disease prevention and primary health care is a stated priority for most countries in the Region. In Papua New Guinea, a national human resource conference identified major deficiencies in the existing health delivery model and indicated that major reform was required to re-focus services on population health. The conference recommended a review of the current categories of health workers with a view to merge job groups and to strengthen health workers contribution to primary health care through training and multi-skilling.92 Some countries have made significant progress. In Malaysia, redirecting resources towards primary health care in order to increase coverage and quality has led to a significant change in the composition of health facilities. In 1956, the Ministry of Health had just 42 primary health care facilities compared to 65 hospitals. By 2006, the number of primary health care facilities had increased to 2965 (including 151 mobile clinics), while the number of hospitals had only risen to 134.93 By comparison, in Mongolia, the number of hospitals continues to expand, with the current ratio of 23.4 per 100 000 population being at least three times more than that of other countries in the central Asian region. The Family Group Practice system, introduced in 1999 and intended to be the core of primary health care services in urban areas, has not flourished, with only 232 practices operating in 2005,94 and with incomes of staff and investments in infrastructure and equipment deteriorating.95 In most Pacific island countries, health workforce plans articulate the requirements for primary health care, and describe arrangements for the implementation of an essential service delivery package at each level of the system. In the northern Pacific, however, a number of countries have outpatient or primary care clinics but lack full-fledged models of primary health care and necessary community collaboration and empowerment mechanisms.

In 1997, the Government of China initiated a Community Health Services (CHS) programme. By the end of 2002, 2406 CHS centres and 9700 CHS stations had been established, with distribution based

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93 Enhancing National Competitiveness through Effective Implementation in the Health Sector. Presentation by Dr Mohd. Nasir bin Mohd Ashraf, Secretary General, Ministry of Health, Malaysia.
on population ratios. These facilities provide basic clinical and public health services, including the management of chronic diseases, maternal and child care, elder care, immunization, health education and home care for eligible patients. Utilization increased between 2000 and 2002, the last year for which data are available, but it was found that many patients still preferred to visit hospitals, where the staff generally had higher-level qualifications than CHS staff.

More recent health reforms being implemented in China are focused on expansion of the medical insurance system; utilization of essential medication guidelines and supply systems; and specific reforms in primary health care, public health and public hospitals. Strengthening of grassroots-level health care institutions is a key area of focus with repairs and rebuilding under way for 2000 rural county hospitals, 2900 township hospitals, 3700 urban CHS centres and 11 000 health stations. Training is under way for 360 000 health care workers in township hospitals, 160 000 CHS workers, and 1.37 million village health workers. National public health services are being established for all residents, targeted towards maternal, child and newborn health, inclusive of home visits, aged care, and disease control and case management for communicable diseases and noncommunicable diseases, including mental health. Government subsidies for health care have been expanded. A broad range of incentives to encourage better qualified doctors and nurses to work in CHS have been initiated, including increased salaries and subsidies, accelerated promotions, on-the-job training and degree advancement education programmes. The impact of these incentives is not yet known.

Innovative approaches to reduce barriers to access to health services and to increase health worker coverage are being tested across the Region. Health equity funds have been used with success in Cambodia to increase access to and utilization of health services by the poor, and in protecting them from the impact of catastrophic health care costs. Initial pilot tests run by non-governmental organizations will be consolidated and scaled up through the implementation of the second Health Sector Support Program. Community-based health insurance schemes are also being piloted, aimed at developing pre-payment schemes for the near poor and others who could be otherwise impoverished by unexpected health care costs. In 2007, 39 district hospitals and six national hospitals had health equity funds, and nine districts offered community-based insurance schemes. Although largely funded by donors, the Government is now contributing to health equity funds.

Key Result Area 2: HRH production and development

Many countries and networks in the Region are focused on improving the quality, relevance and availability of workforce education and training.

Pacific Partners Investing in Nursing’s Future (PIN) Project - Nursing Faculty Development in Pacific Island Colleges and Universities – In December 2007, Friends of the College of the Marshall Islands Foundation received a PIN grant from the Robert Wood Johnson Foundation to address faculty development needs in the U.S. Affiliated Pacific Islands (USAPI) jurisdictions.

97 Ministry of Health, Cambodia. Op cit. Ref 76.
98 USAPI jurisdictions include the territories of American Samoa, Guam and the Commonwealth of the Northern Mariana Islands, as well as three independent Pacific nations (former United Nations trust territories managed by the United States) that have treaties or compacts of free association with the United States, i.e. the Federated States of Micronesia and Palau.
At the time, many of the northern Pacific nursing education programmes were operating with only one or two faculty members who have had little opportunity for formal education in educational pedagogy, including teaching methodologies and curriculum development. The programmes generally operated in isolation, with the only interaction among directors and faculty limited to their brief time together at annual American Pacific Nurse Leaders Council (APNLC) conferences. Between meetings, little to no interaction took place among the programmes as there was no forum for them to work together and communication options were limited.

The Pacific PIN Project has developed an infrastructure that supports its three faculty development objectives:

1. enhancing the instructional skills of current faculty;
2. developing new faculty and instructors who are competent clinical and didactic instructors/teachers; and
3. increasing the number of masters and doctorally prepared nurses in the jurisdictions.

The infrastructure supporting these three goals consists of sustainable collaborative relationships among the core partners (University of Guam, American Samoa Community College, Guam Community College, Northern Marianas College, the College of the Marshall Islands, the College of Micronesia-FSM, and Palau Community College) and the project’s resource partners, including the jurisdictions’ departments and ministries of health and other partners. There has been significant utilization of information and communication technologies, including web-conferencing tools, such as Elluminate, for hosting meetings and training. New strategies to share resources are under way locally, such as the Innovative Clinical Teaching Model Dedicated Education Unit (ICTM/DEU), which trains hospital and public health nurses so they are able to serve as clinical instructors, and subregionally, such as sharing faculty expertise in clinical specialty areas or in simulation techniques.

Core and secondary partners have developed a conceptual framework for ICTM/DEU and an accompanying strategic action plan for the overall project; they regularly report on monitoring and evaluation indicators. Faculty and nurse leaders have completed a series of three interactive faculty development workshops, clinical preceptor training has been implemented, and surveys on professional development needs of nurses and their interest in becoming faculty members have been completed. Faculty and nurse leaders have applied political advocacy skills during high-level briefings with overseas national health leaders, have prepared abstracts for disseminating information, and have coordinated and reported on regular discussions carried out using the Elluminate platform. Three nursing faculty members are undertaking higher degrees through flexible learning programmes. Everyone reported satisfaction with the regularity of communications but would like to explore sharing resources further.

An informal consultation on quality improvement and faculty development in nursing and midwifery education was convened by WHO Headquarters and the WHO Regional Office for the Western Pacific in January 2010, in partnership with Sigma Theta Tau International and the University of Hawaii. Participants agreed on a common aim to improve nursing and midwifery service delivery and educational outcomes through the application and evaluation of academic quality standards and guidelines; educational outcome or practice competencies within the context of primary health care; and faculty capacity-building interventions. Working groups developed three action plans to:

- develop, validate, apply and test evaluation criteria and processes for the global academic quality standards;
• formulate and operationally test, analyse and monitor nursing/midwifery educational outcome/practice competencies, linked to primary health care; and

• develop, test and evaluate faculty capacity-building core courses and supportive mentoring across a network of institutions.

An operational template with criteria for assessing nursing/midwifery academic quality standards has been developed and is being refined using a modified Delphi survey technique. Entry-to-practice competency sets have been revised, within the context of primary health care, building on the existing Western Pacific and South-East Asia regulatory competencies. These competency sets are being reviewed at the present time for later operational application in selected countries. Plans are under way to survey faculty development needs in lesser-resourced countries and to assess the potential of globally available courses for adaptation, piloting and evaluation.

Upgrading infrastructure, revising curricula and strengthening practical training all require time and money, but many governments are now placing a high priority on increasing funding in this area. In Viet Nam, the Government is using an Asian Development Bank loan, combined with funds from the Australian Government, to address urgent needs in the education and training of health workers. The Health Human Resources Sector Development Program will spend close to US$ 30 million to strengthen the quality of training of the health workforce in Viet Nam.\(^9\) Similarly, the Second Health Sector Support Program in Cambodia provides significant funds to strengthen pre-service and in-service training of health workers nationally. The programme is supported by pooled funding from the governments of Australia and the United Kingdom, a loan from the World Bank and a number of international organizations.\(^10\)

Cambodia and the Lao People’s Democratic Republic are carrying out interventions to improve the quality of workforce production. Education Development Centers have been established in both countries. These developments have been made possible through technical collaboration and support from the University of the Philippines’ National Teachers Training Center, Seoul National University, WHO and intensive teacher-training activities conducted in Manila in August 2010.

Papua New Guinea, with the support of WHO and the New Zealand Aid Programme (NZAID), implemented a technical project to improve the quality of midwifery education in 2009–2010. Subsequently, intensive scaling up of midwifery faculty capacities is planned to begin in Papua New Guinea in 2011, supported by the Australian Agency for International Development (AusAID).

In the Pacific islands, inter-institutional twinning arrangements between universities in Australia and New Zealand and those in lesser-resourced island nations, supported by AusAID and NZAID, have made significant and sustained contributions to faculty capacity-building, curricular improvements, educational infrastructure improvements and resource-sharing.

Pacific island countries work together to strengthen pre-service and post-graduate training for health workers. Training institutions in Fiji and Papua New Guinea act as regional centres, providing education that is relevant and accessible for health workers from countries too small to justify local

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Implementation of courses. These programmes are being strengthened to respond better to the needs of all Pacific island countries. For example, the Fiji School of Medicine accredited Vila Central Hospital in Vanuatu as a training centre for medical interns, allowing Vanuatu students to complete their medical training in country, rather than remaining in Fiji for a final year. The Fiji School of Nursing continues to enrol nurses and midwives from other island nations in its post-basic nurse practitioner course. The nurse practitioner graduates often undertake a period of clinical internship in their home countries, prior to working formally as mid-level practitioners.

The provision of continuing education in Pacific island countries is particularly problematic because of the low density and geographic dispersion of health workers. The deployment of in-country training coordinators and the growing contribution of the Pacific Open Learning Health Network (POLHN) are helping to address differences in coverage, relevance and quality of continuing education. An evaluation of POLHN in 2004 has linked higher job satisfaction with opportunities to complete POLHN courses and accessibility to quality continuing education in or close to the workplace.\textsuperscript{101}

Mongolia offers several continuing education programmes for primary health care workers. With WHO support, several local fellowship training programmes have been initiated in the following areas:

- pregnancy, childbirth, postpartum care and neonatal care;
- prevention and control of noncommunicable diseases;
- mental health and substance abuse;
- traditional medicine;
- communicable disease prevention and control;
- and environmental health, water and sanitation.

The fellowships, each lasting two to three weeks, target primary health care workers (nurses, midwives, doctors, bag feldshers, traditional doctors and laboratory technicians). More than 500 primary health care workers have been trained through such programmes.\textsuperscript{102} The Asian Development Bank also offers several continuing education programmes on maternal and child health in targeted areas.

Another integrated primary health care programme, which is being developed under a WHO/United Nations Trust Fund for Human Security (UNTFHS) project, will provide continuing education on common health problems, water, sanitation and hygiene, health care waste management and environmental health for rural aimags and soums covering eight aimags in Western Mongolia.

A key challenge is the coordination of training programmes by different partners. Another related challenge is the retention of health care workers in rural areas after completing the trainings, as low salaries, lack of incentives, poor social conditions and lack of quality local education dissuade health care workers from serving in rural areas for extended periods of time.

To improve the fit between the population and the health workforce, many countries are taking steps to reduce barriers to the participation of ethnic minorities and other disadvantaged populations.


\textsuperscript{102} Country data: Mongolia. Manila, WHO Regional Office for the Western Pacific, March 2011.
groups in health workforce training. In the Lao People's Democratic Republic, scholarships and bridging courses are provided to enable disadvantaged young people to achieve the prerequisite educational standards needed to gain entry to the primary health care worker course. The Ministry of Health includes affirmative action strategies in their new National Policy on Human Resources for Health. 

Preferential treatment will be given to female and ethnic minority applicants in higher-level medical education training and in senior health management training to address the under-representation of these groups at higher levels and in senior management. In Viet Nam, two Ministry of Health circulars were issued to increase the participation of women and ethnic minorities in health workforce training. Strategies included waivers of tuition fees, reduced entry requirements, and bridging or preparatory courses. Despite these measures, participation is still limited and implementation of policy is constrained by other financial barriers to students and to training institutions.

The Ministry of Health plans to review the impact of these policies on ethnic student enrolments and take action to strengthen implementation.

Health promotion is an important element of health care throughout the health system, and all health workers need to have the skills necessary to support patients in maximizing their health. In Viet Nam, the core medical curriculum was revised in 2006–2007 based on a thorough review of the knowledge, attitudes and skills expected of every graduate doctor. In the development of the “Blue Book”, as it is commonly known, a section on public health was added, and each health topic included knowledge of preventive measures, attitudes that recognize the preventable nature of many illnesses and complications, and skills in communication and health education.

An Informal Consultation on Community Health Nursing: China, which was held in Hong Kong (China) in August 2009, was co-planned by the Ministry of Health, China, the WHO Regional Office for the Western Pacific, the WHO Representative Office in China, the WHO Collaborating Centre for Community Health Services at The Hong Kong Polytechnic University School of Nursing, the WHO Collaborating Centre for International Nursing Development in Primary Health Care at the College of Nursing, the University of Illinois at Chicago, and the Maryknoll China Service Project. The informal consultation provided a forum for nurses, health leaders and partner stakeholders to discuss community health nursing in China, lessons learnt and innovative approaches to education and service delivery, and to plan and take steps to equip nurses in China to deliver primary health care or community health nursing services in an accessible, effective and quality manner.

Data analysis and implications for action from 12 surveys received from seven provinces in China, including Hong Kong (China), were discussed during the consultation. In mainland China, patients usually come to CHS centres, health stations and private clinics; in Hong Kong (China), home visits are made by community nursing staff from health stations. The roles of community health nurses were reportedly diverse, ranging from director and manager to nurse and educator. More diverse settings and roles are envisioned for the future. Community health nursing courses offered in China vary in duration, length, content and depth. Twenty-five per cent of respondents were dissatisfied with courses and indicated that:

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• courses needed to be adapted to local community needs;
• learning objectives and outcomes needed to be more explicit;
• community clinical sites and learning experiences needed to be established; and
• roles and job descriptions for community health nurses needed to be clarified.

Consultation participants identified two specific areas that require more attention to improve health services in the community—mental health and palliative care. Building on a primary health care framework, a proposal was developed representing 10 proposed pilot sites, aimed at enhancing nursing contributions to overall health reforms and health outcomes through improved community health nursing abilities and the development and implementation of core community health nursing functions. In August 2010, the China Community Health Association conducted a training-of-trainers programme for nurses from all the pilot sites.

Other projects have strengthened the outcomes and impact of specific training courses. In Viet Nam, competencies were defined for medical doctors and used to revise the education curriculum, “Centers of Excellence” were identified and asked to share their experience in specific fields with other training institutions, problem-based learning was introduced to a number of curricula, and an In-Service Training Network was established for reproductive health. The network aims to provide high-quality, competency-based, in-service training through a process of training and certification of trainers and practical training facilities. A review of the pilot after the first year of operation found that the benefits for trainees were significant, and the decentralized approach was appropriate and consistent with goals to increase the efficiency and effectiveness of in-service training.

A nursing training project in the Lao People’s Democratic Republic, supported by the Government of Luxembourg, was evaluated by a WHO-convened interdisciplinary evaluation team in 2008. Evaluators applied the draft WHO global academic quality standards for nursing/midwifery education and approached the evaluation as a shared learning process. The contributions of the school’s faculty, staff and students towards improved education, service delivery and access were found to be outstanding, particularly given the short-term nature of the project (less than three years). During that time, a new school was constructed, including classrooms, computer rooms, a library, clinical learning spaces, as well as dormitories, facilitating student and group cohesiveness and a supportive and clean environment. Faculty and students demonstrated skills in operational research and solid record and administrative management skills, all of which are key components of a successful educational institution. The students exhibited a sound capacity and ongoing service orientation towards community and primary health care, inclusive of core maternal and child safe competencies of beginning practitioners. Community members working with the students and community leaders voiced strong desires to continue working with students and described positive outcomes related to increased health literacy and prevention and management knowledge, as well as improvements in community water and sanitation.

The school was commended for instituting community and school rotations for students, requiring them to provide care to groups and clusters of people in communities who do not utilize health facilities, even though they may be at risk or sick. Community members who were interviewed...
Strategic Responses highlighted the need for increased attention to the broader aspects of community development, in addition to pure health programmes. Their comments reflected the findings of a regional survey of ministries of health and health professional education institutions, including survey responses from the Lao People’s Democratic Republic, which revealed a strong need for faculty capacity-building and curricular integration to address poverty and gender aspects of health.107

The lessons learnt through the nursing training project in the Lao People’s Democratic Republic should be applied in a broader context, taking into account the multitude of factors facilitating success, including: sustained donor financial support; technical support from a school of nursing in Thailand; committed provincial, health and educational institutional leadership and support; close physical proximity between the hospital and the provincial school of nursing; higher than average bed occupancy rates in the hospital with committed clinical supervisory staff and teachers; and most importantly, supportive community leaders and members. The continued formal education of nursing/midwifery teachers and expert clinicians has shown that success is linked to strongly committed public schools of nursing/midwifery and other stakeholders, such as those in Thailand, a country with similar language and culture. Continued technical and financial support was foreseen to be important requirements for sustained success and continued improvements. Students and faculty described how hard they had worked; such strong commitment requires ongoing and sustained support and mentorship.

The Ministry of Health in the Lao People’s Democratic Republic has launched a Skilled Birth Attendant Strategy aimed at tackling the high level of maternal and child mortality through health workforce training. The strategy seeks to improve access to skilled birth attendants by training more midwives and providing in-service training on safe delivery to existing staff, particularly those working in health centres and district hospitals. Cambodia is also implementing rapid scaling up of midwifery tutors and midwifery students.

Larger-scale interventions at the policy level have resulted in the establishment of a national network of rural training facilities in Australia, under the Rural Clinical Schools and University Departments of Rural Health initiatives. These initiatives aim to improve the coverage and quality of training arrangements and enhance workforce practice, flexibility and quality. There are now 14 rural clinical schools across the country, operated by 12 different universities.108 Placing training institutions in rural areas increases the exposure of students to rural health systems and makes it more likely that they will choose to work in rural areas after graduation. Institutions have also found that their graduates stay in rural areas.109

**Key Result Area 3: HRH management and retention**

**Resolving distribution imbalances** is a key concern of all countries in the Region. Initiatives to increase the number of ethnic minority health workers in the workforce are being used to address the shortage of health workers in rural settings, since many ethnic minority communities are located in rural or remote areas. Policies developed to mitigate the perceived disadvantages of working in rural

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and remote health facilities are not easily implemented. In China, the Government initiated policies to increase the salaries of staff working in primary health facilities to create more opportunities for primary health professionals, and to offer more training opportunities, but these policies are not widely enforced.\textsuperscript{110} Mongolia piloted a financial incentive scheme to encourage newly graduated doctors to work in rural areas under their first Health Sector Development Project. Results were mixed. The project identified the need for stronger oversight of participants, and the limited value of a single strategy in addressing the complex factors that influence workplace choice.

Doctors have been successfully encouraged to work in communes in underserved areas in Viet Nam through the establishment of permanent state staffing positions with adequate salaries and allowances from the State budget. Overall staffing in underserviced areas has improved subsequently.\textsuperscript{111} Rural bonuses have been used as financial incentives in Australia and New Zealand.\textsuperscript{112}

Understanding the reasons why health workers choose to work in rural or urban areas is an important starting point in resolving distribution imbalances, and there is a significant amount of research being undertaken. A study in Japan sought to identify the characteristics of a community that made it “attractive” to physicians and found that medical demand and the extent of urban amenities were better indicators of the density of doctors than population ratios.\textsuperscript{113} In China, studies are being undertaken to better understand deployment models and human resource standards in the health sector. A five-year pilot programme for recruiting certified doctors for rural townships will be evaluated to identify the short- and long-term impact on health workforce deployment and retention.\textsuperscript{114} In Australia, analysis of the reasons why medical graduates choose rural careers identified prior rural residence and/or extended rural exposure during medical training as the strongest predictors of the choice of a rural career. The study also found that professional support, career pathway opportunities, contentedness of spouse in rural communities, preparedness to adopt a rural lifestyle, educational opportunities for children and proximity to extended family and social circle were the most significant influencing factors.\textsuperscript{115}

**Understanding skill-mix and the roles of health workers** is an important element in improving the productivity of the health workforce. Based on their new National Policy of Human Resources for Health, the Ministry of Health in the Lao People’s Democratic Republic will review the roles of different categories of staff; address gaps in the skill-mix by expanding the skills of existing staff rather than creating new cadres; and identify possibilities for multi-skilling and task-shifting between staff categories to provide more efficient services and to overcome shortages of staff in particular areas. The cadre of primary health care workers was introduced in the country in the early 2000s to fill staffing and skill gaps in rural health centres. The primary health care workers are chosen by their community and trained in selected provincial (not large urban) centres. Their training focuses on the skills needed to perform effectively at the level in which they will work. Entry requirements are lower than for registered nurse training, with scholarships for bridging courses offered to those who


need them. They are required to return to work in their community for a minimum of three years after graduation.116 Similarly, Papua New Guinea has undertaken a review of its primary health care services and the skill-mix required to deliver these services to the rural majority and urban poor.117 Optimizing care to rural, remote and disadvantaged areas through the use of primary health care workers and/or nurse practitioners and other mid-level providers requires quality infrastructure, motivation of and sustained support to such health workers.

**Improving the retention, participation and motivation** of the health workforce is a key area of innovation in the Region, as countries struggle to achieve better health outcomes using their existing workforce. In Cambodia, the contracting approach to health services was tested at the district level in the late 1990s and early 2000s. Baseline surveys found high levels of absenteeism among health workers, particularly in remote provinces, but the contracting approach supported the provision of performance-related salary supplements, improved work environments and strengthened supervision, which resulted in significantly better attendance, quality of service and health outcomes.118 Lessons learnt from the early pilots are evolving into a more comprehensive programme of work, through scaling up and incorporation of concepts into the Cambodian public sector institutional context, with a focus on internal contracting and managerial autonomy.119

WHO and the Ministry of Health, Lao People’s Democratic Republic, convened a HRH technical working group meeting to review data and apply research findings to the analysis of policy options to increase rural and remote retention. These meetings culminated in December 2010 with the adoption of the *Health Personnel Development Strategy by 2020 (HPDS)* and the endorsement of a decree for financial incentives for rural civil servants by the Prime Minister’s Office.

In Hong Kong (China), where the Hospital Authority is not able to standardize the salaries of staff due to financial constraints, efforts are made to address other issues related to motivation and retention, particularly career progression and development. The One Nurse, One Plan initiative promotes personal career development plans for almost 20,000 nurses. The new career progression model guides nurses as they plan their move from novice to expert, including: appointment of preceptors and mentors; online core programmes for advanced practice preparation; training for specialization, as well as competency development for advanced nursing. Other measures to improve the working conditions of nurses in Hong Kong (China) include: increases in the supply of nurses; more flexible human resource policies that aim to improve the quality of nurses’ work life by employing more clerical and support staff for clinical areas, establishing 24-hour hospital pharmacies, and updating equipment used daily by nurses (e.g. electric beds). A substantial number of advanced practice nurse positions were created to improve clinical supervision and to promote nurse-led clinics for priority areas of chronic disease management. Efforts are also being made to improve career paths for doctors, to limit their work schedules to 65 hours per week and to explore opportunities for part-time work.

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Research in the Republic of Korea identified aspects of workplace climate that influence health workers’ job satisfaction and their intent to stay in a job or to leave it. Perceptions of the most important elements in workplace climate differed among professional groups, although all professions valued “work group warmth and friendliness”. Nurses’ job satisfaction was improved when the work climate encouraged conforming to job standards, whereas this was a negative influence on job satisfaction for paramedics. For administrators, “flexibility and innovation” were particularly important, while for physicians, feelings of pride and commitment to their organization were significant, as was “role clarity”. The findings of this type of research help health service managers understand how to better retain and motivate their health workforce.

There is growing awareness of the need to ensure a policy framework that supports working conditions that better meet the needs of health workers, if the available workforce is to be retained and motivated. It has been suggested that a key area for action to increase the nursing workforce is to tap into the pool of underemployed or non-working nurses—aiming at addressing the “return” of nurses to the workforce. In many countries, the shortage of nurses is not necessarily a shortage of qualified professionals, but a shortage of nurses willing to work as nurses under the current employment conditions. In Japan, analysis of the proportion of non-working nurses by gender and age group suggested that adjustments to the working conditions available to nurses during their childbearing years (such as part-time employment options) could increase the participation of nurses in the health workforce. Positive working environments—flexible, adequately resourced, supported, and facilitative of teamwork, autonomy and shared decision-making—are strongly correlated with workforce motivation and retention.

The Ministry of Health, nursing leaders and other sectors in the Philippines have begun piloting programmes to increase health service access in rural areas through the employment and up-skilling of unemployed nurses. Methods of sustaining such deployment initiatives require further research and evaluation.

Performance management has the potential to improve significantly the productivity of health workers, by improving knowledge and skills, changing attitudes, and ensuring workers feel appropriately recognized as valued members of the larger health system. Performance management can include many elements, such as supportive supervision, job descriptions, continuous education and performance appraisal. Supportive supervision is a human resource management tool that has the potential to provide continuous education, recognition and support, and appraisal linked to rewards or sanctions. Most countries have moved away from the concept of supervision as an “inspection” process that grades facilities or individuals based on a checklist of criteria and now

emphasize the provision of support for continuous improvement, where supervisors work with facility teams to develop and implement solutions for problems identified. While most countries have policies to provide quarterly supervision to each level of health service, few have sufficient budget to undertake supervision as planned.

Supervision provided by clinically competent health workers can also contribute directly to improved health service delivery. In Vanuatu, regular visits by an experienced midwife to provide support and education for nurses and midwives in remote health facilities have made significant contributions towards improving the safe delivery of babies in remote areas. Primary health care networks can offer improved access to quality services through up-skilling and outreach services delivered through a “hub and spoke model”.126

In China, the Ten Thousand Physicians to Support Rural Healthcare Project127 has doctors from urban hospitals providing clinical services and continuing education in rural hospitals and community health stations. In the first two years of the programme, doctors and nurses conducted 52,000 surgery demonstrations, facilitated discussions on difficult cases or deaths, conducted teaching ward rounds and provided nursing demonstrations.128 In Australia, scheduled visits by generalist and specialist doctors to remote health centres support the posted nurses in providing a full range of health services. Doctors’ visits supplement rather than substitute ongoing primary health care provided by nurses, enabling review of complex cases and local management of patients who would otherwise need to be referred to a higher level of the health system.

A multitude of strategies to increase staffing in rural areas are currently under consideration or in varying stages of implementation in the Region. These include requiring a period of rural service or mandatory training in unattractive service areas before the full licensing of medical doctors and other personnel. Though higher workforce densities in these areas result during the period of mandatory service, the interventions have limited influence on convincing health workers to continue working in rural or unattractive areas over the long term.129 Other inventions include increasing the inclusion of rural health facilities as practical training sites during pre-service and post-graduate training of health workers, rotating staff from higher-level hospitals to lower-level hospitals and health facilities (with an emphasis on service provision and on-the-job training of staff), and rotating staff from lower-level health facilities to higher-level facilities for in-service training. Studies that examine the deployment of nurse practitioners and other mid-level providers to rural, remote and outer island areas of the Pacific islands reinforce the need for sustained, meaningful clinical supervision, continuing education and professional development of health workers in rural and remote areas.130

129 Chopra M. Evidence from systematic reviews of effects to inform policy-making about optimizing the supply, improving the distribution, increasing the efficiency and enhancing the performance of health workers. A policy brief prepared for the International Dialogue on Evidence-Informed Action to Achieve Health Goals in Developing Countries. Khon Haen, Thailand, Alliance for Health Policy and Systems Research, 2006.
Many countries are looking at mitigating the impact of migration, aiming to ensure that both source and destination countries benefit from this level of workforce mobility. The Philippines’ 25-year Human Resource for Health Master Plan includes the management of domestic deployment and international migration as one of three priorities in Phase 1 (2005–2010).\textsuperscript{131} The extent to which the plan has been implemented, and the impact of its implementation on migration and deployment of the health workforce domestically, is not yet known. Research on migration has the potential to inform policy and action in both source and destination countries, and is an important element in current efforts to better manage migration. A study of the migration intentions of pharmacists in nine countries, including Singapore and Australia, found that remuneration was not a stand-alone factor influencing intentions to migrate, and recommended that comprehensive HRH policies on migration need to include both remuneration and professional development as mechanisms for encouraging retention.\textsuperscript{132}

A study of nurses from India and the Philippines working in the United Kingdom found that remuneration was the main trigger for the initial decision to emigrate, but other factors such as the cultural environment (particularly religion and gender-related issues), family support and support from migratory networks in the countries of origin and destination also influenced migration and the final choice of destination.\textsuperscript{133}

Building capacity for the management and planning of human resources is fundamentally important in any comprehensive reform process, and must be achieved at all levels of the health system—national, provincial and local or facility level. In many countries, human resource management units within ministries of health are being strengthened, with increased staff and skills. In China, the Health Human Resources Development Center was established in 1998 within the Ministry of Health, with responsibility for the management and development of health workers. The centre has grown to more than 200 staff from a diverse range of professional backgrounds, with more than half holding masters or doctoral-level qualifications. The centre publishes the national HRH journal, \textit{China Health Human Resources}. It has been designated a WHO Collaborating Centre for Human Resources for Health and will become the Sino-French Collaborating Centre for the Training of Human Resources for Health.\textsuperscript{134} In Mongolia, from 2004 to 2006, the number of staff in the Ministry of Health’s HRD Unit increased from two to seven professionals, responsibilities that had previously been divided among several units were consolidated, and funding was increased to enable staff to visit provinces to support implementation of new policies.\textsuperscript{135}

Across the Region, ministries of health are recognizing that managers at all levels need skills in managing human resources, just as they need skills in managing other resources. As many managers in the health sector have backgrounds in clinical areas, their pre-service training had not prepared them for the tasks that fall within their responsibility when they move into management positions.

\textsuperscript{131} Lorenzo F et al. Op Cit. Ref 64.

\textsuperscript{132} Ibid.


\textsuperscript{134} \textit{China Health Human Resources}, Health Human Resources Development Center, Ministry of Health, China (http://www.21wecan.com/english_wecan/chinaHealthHumanResources/7988bb89ce018d62694da04023c9e5ad.html, accessed 19 September 2012).

\textsuperscript{135} Hine B. \textit{Op cit.} Ref 73.
In many countries there are ongoing training and mentoring activities aimed at providing managers with the knowledge, skills and attitudes needed to effectively manage their staff and secure the best possible performance from them. Improving the understanding of human resource systems and workforce databases were the focus of a human resource management course in the Federated States of Micronesia, Solomon Islands and Vanuatu. While training outcomes are sometimes reported, the impact on human resource management and health service provision has not been well studied.

Key Result Area 4: Governance, leadership and partnerships

Most countries in the Region have **legislative and regulatory mechanisms** in place to provide stewardship and governance of the health workforce. The scopes of practice for the different cadres of health professionals have been legislated in many countries, and are under development or being reviewed in others. A national nursing taskforce has been formed in Cambodia to produce nursing competencies and standards of practice for service delivery and to compile existing legislation on the scope of nursing practice. The taskforce was formed subsequent to a successful national nursing and midwifery conference in November 2010, which placed emphasis on ethical and safe clinical decision-making in nursing care. The Ministry of Education in China, in 2011, separated nursing from medicine, enabling the awarding of nursing degrees instead of Bachelor of Medicine and Doctor of Medicine degrees to nurses. This policy decision will enable nursing education to be tailored to students’ professional development as “nurses”, permitting enhanced achievement of core nursing competencies important for improving health outcomes.

In Viet Nam, the Law on Examination and Treatment includes provisions for the accreditation of health workforce training programmes, requirements for the registration of health professionals and licensure of health facilities, patient rights and responsibilities and some complaints-handling mechanisms. All countries have some form of registration of health professionals, either through their ministries of health, national health professional councils or other regulatory bodies. Some countries have a national licensing examination, while others rely on the results of final examinations at the various training institutions. The introduction of a licensing examination in China in 1999 led to a significant reduction in the number of doctors eligible to use the title of “chief” or “assistant chief” by applying consistent standards throughout the country. Many countries require licensing with periodic renewal, and some link renewal to compulsory continuing education. Implementation of these quality assurance mechanisms is problematic, with access to continuing education a significant problem for a large proportion of the workforce. In Mongolia, many health workers from rural areas or small health facilities do not have access to continuing education, and so must instead pass an examination before their license renewal is approved.

Health professional legislation has been reviewed in most of the Pacific island nations, leading to the preparation of issues and options papers outlining the way forward. A website was developed for sharing information on nursing-related regulation, and a review of the role of the nursing council was undertaken in Fiji. Papua New Guinea has also undertaken a review of its health care professional regulatory legislation, and a new Health Care Practitioners Bill has been developed.

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A number of countries have established broad-based taskforces or committees to support the implementation of national HRH policy to facilitate the implementation of strategic plans and coordinate the actions of various stakeholders. In the Pacific, successive biannual meetings of the ministers of health mandated urgent attention to HRH matters, leading to the establishment of the Pacific Human Resources for Health Alliance (PHRHA) in 2008 as a platform for cooperation. In Australia, a National Health Workforce Taskforce was established in 2006 to support the development of practical solutions on workforce innovation and reform, based on the National Health Workforce Strategic Framework. In Mongolia, a High Level Coordinating Body for Human Resources for Health has been established with the Prime Minister as chairperson. Leadership at this level has the potential to facilitate action on key issues that involve multisectoral stakeholders, and if effective, will clearly demonstrate the Government’s commitment to HRH. In Viet Nam, the Ministry of Health plans to establish a Joint Committee on Health Human Resources, with a mandate to initiate studies and analysis, review findings and propose policy and other recommendations to the Government for improving health human resources.

A number of countries in the Region are achieving better coordination and harmonization of health sector stakeholders and maximizing the efficiency of external assistance through joint planning, monitoring and evaluation. In Viet Nam, the Health Partnership Group (HPG), chaired by the Ministry of Health and comprising representatives of donors and other agencies working in the health sector, aims to increase the coordination and efficiency of development assistance. The group contributes to health policy and strategy development and guides the Joint Annual Health Review (JAHR). Regular meetings facilitate stronger links between the Ministry of Health and development partners, support sector-wide policy dialogue and seek to ensure the effective and efficient utilization of all resources and contributions to the health sector. The first JAHR, completed in 2007, and subsequent reviews, will ensure that the Ministry of Health and donors share the same understanding of the health situation and plan and work collectively toward improving it. A series of joint performance indicators will be developed for use by the Ministry of Health and by external agencies.

Another example of stakeholders coming together around government policy can be found in the Lao People’s Democratic Republic. The Health Sector Wide Coordination mechanism, and a technical working group established within it to support HRH, bring together the Ministry of Health and development partners around an agenda based on the core components of the newly developed National Policy on Human Resources for Health. In Cambodia, the Paris Declaration on Aid Effectiveness is implemented through the Government’s Harmonization, Alignment and Results Action Plan. This plan is reflected in the Ministry of Health’s Health Strategic Plan 2008–2015, where the Ministry of Health has a dedicated strategic area focused on harmonization and alignment of results. Cambodia has a Joint Annual Performance Review that is intended to be the central event for policy dialogue and coordination. The strategic plan calls for strengthening the joint review


Strategic Responses and other mechanisms used for monitoring and evaluation (including the indicator framework) to reduce the need for donors to undertake separate monitoring activities.\textsuperscript{141}

Intensified efforts have been undertaken to further political commitments, effective partnerships and collaboration among key health and cross-sectoral stakeholders at country and regional levels through the deliberations and action plans of Member States, WHO and partners in addressing HRH priority gaps. Networks and alliances facilitating these efforts include the following: Asia Pacific Action Alliance for Human Resources for Health (AAAH); Pacific Human Resources for Health Alliance (PHRHA); Pacific Islands Health Officers Association (PIHOA); American Pacific Nurse Leaders Council (APNLC); South Pacific Chief Nursing and Midwifery Officers Alliance (SPCNMOA); Asia Pacific Emergency and Disaster Nursing and Partners Network (APEDNN); and WHO collaborating centres for HRH, nursing and midwifery.

The Pacific PIN Project is accomplishing its work through communication, close collaboration and support of a diversity of partners, as shown in Table 8.

\textbf{Table 8: Partners Investing in Nursing (PIN) grant partners}

\begin{tabular}{|l|l|}
\hline
\textbf{PIN nursing programme partners:} & \textbf{PIN supporting partners:} \\
Northern Marianas College & Bank of Guam \\
College of Micronesia - FSM & Friends of the College of the Marshall Islands Foundation \\
Palau Community College & American Pacific Nursing Leaders Council \\
College of the Marshall Islands & World Health Organization, Western Pacific Region and Headquarters \\
University of Guam & Pacific Island Health Officers Association \\
Guam Community College & University of Hawaii-Manoa, School of Nursing & Dental Hygiene \\
American Samoa Community College & United States Department of Health & Human Services, Region IX \\
& Kapiolani Community College Nursing Program \\
& Tripler Army Medical Center \\
\hline
\end{tabular}

The Australian Leadership Awards Fellowship programme conducted by the WHO Collaborating Centre for Nursing, Midwifery and Health Development at the University of Technology, Sydney has made important contributions to scaling up leadership capacity-building and professional development of nurses and midwives in the South Pacific. The WHO Collaborating Centre carries out this function as secretariat of SPCNMOA, which supports nursing and midwifery leaders in 14 South Pacific island nations. Thirty fellows from 10 countries took part in a study programme and workshop in Sydney, with financial support from the fellowship programme. Extensive pre- and post-workshop activities were provided by university faculty and staff, the WHO Collaborating Centre, SPCNMOA, in-country mentors, technical experts and the fellows themselves. The country team projects were aligned with SPCNMOA’s five priority areas: leadership, evidence-based policy, human resources for health, strengthened regulation and data literacy skills. Fellows were able to apply new knowledge and skills in using data in action plans and applying data to practice. They worked with others in their home countries, acted as role models, coaches or mentors to others and

\textsuperscript{141} Ministry of Health, Cambodia. Op cit. Ref 76.
facilitated teamwork. Further detailed outcome reports are available from the WHO Collaborating Centre.

Nearly 70 health professionals from 16 countries completed the first biregional infection control training course for lesser-resourced settings in November 2010, through the collaborative efforts of two WHO collaborating centres and the Hong Kong Hospital Authority. Those trained have completed national infection control assessments and are implementing country action plans to improve infection control and patient safety, with technical support from WHO and a number of infection control experts. Biweekly technical mentoring and support Elluminate conferences are held with nurses and other workers who have completed the course from the Pacific islands; colleagues from selected Asian countries have been joining these sessions.

The *Psychosocial Health and Disaster Training Package*, prepared by the WHO Collaborating Centre for Nursing and Midwifery Education and Research Capacity-Building at James Cook University, is now being made accessible through APEDNN, POLHN and other networks and institutions.

At the international level, continued strengthening of HRH is supported by a range of global networks, including the Global Health Workforce Alliance, Sigma Theta Tau International, the International Council of Nurses, the Global Network of WHO Nursing and Midwifery Collaborating Centres, and the Global Alliance for Nursing and Midwifery Communities of Practice.142

Through regular forums, these networks raise the profile of HRH issues globally, support the exchange of information and experiences in HRH, support capacity-building and enable international research and the identification of best practices. WHO supports HRH globally, including through research, and publishes the online journal, *Human Resources for Health*.

6. Conclusions

A review of the HRH issues and challenges faced by countries in the Region, and of the strategic responses being taken to address them, has identified several commonalities and differences. It is clear that most countries recognize the importance of the health workforce in achieving population health goals, and the links these have to broader social and economic goals. It is also apparent that concern for resolving HRH challenges is felt at the highest levels of government, and is evidenced in the formation of high-level, multisectoral committees or taskforces, decrees and policy frameworks to direct efforts to respond to the challenges.

Community or lay health workers, including traditional practitioners, play important roles in the primary health care systems of most countries in the Region. However, insufficient comparative and analytical data exist regarding their education, deployment, utilization, retention and effectiveness. While community or lay health workers have a multiplicity of titles and varying types and depths of training, a number of studies have indicated that they play important roles in child survival, malaria and other areas.¹⁴³ They can also play an essential part in furthering health literacy, community empowerment and resilience, all of which contribute to improved health. Primary health care system coverage can be improved through the use of adequately trained and supported community or lay health workers who are deployed to complement the work of health professionals, not to serve as direct substitutes for health professionals.¹⁴⁴

While many countries have policies, strategies and plans in place aimed at addressing workforce issues, it is clear that implementation is not easy. Disconnects still exist between health services planning and workforce planning, contributing to inefficiencies in training and deployment. In lesser-resourced countries, databases and other data sources, as well as HRH information management systems, are still not permitting sufficient data for minimum data sets and do not yet permit workforce analyses by gender, location (rural or urban) and ethnicity. Governments have not completely or consistently identified health service priorities, or delineated the roles and staffing norms for different facilities or services, further limiting the effectiveness of workforce planning efforts. Limited capacity for human resource management at the national, provincial and facility level, resistance from certain stakeholders and other factors all contribute to the difficulties that countries have in following through on policy-level commitments and implementing strategies and plans.

Cross-sectoral planning and coherent policy alignment across sectors, including health, education, finance and labour, are lacking and deserve more attention through facilitation of policy dialogue and decision-making across sectors with multiple stakeholders, including: all relevant ministries (finance, labour, education, health); the public and private health sectors; professional associations; nongovernmental and faith-based organizations; consumers and communities; and technical and donor partners. Government-wide, multi-stakeholder approaches are required to address

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the contextual labour market and health system strengthening issues underlying HRH shortages, particularly those in rural, remote and other underserved areas.

A growing amount of research that will inform policy development and planning is being undertaken throughout the Region, but more is needed to capture the unique characteristics of each country and its health workforce. To date, much of the research has been directed at better understanding the workforce situation, and the underlying causes of particular problems. The impact of interventions taken to resolve problems is seldom investigated, but in many countries, there has been little time for such impacts to be felt. Such research must become a priority as countries move forward with strategies to improve the health workforce situation. Monitoring and evaluation data are limited, reflecting the need to report on and analyse trends utilizing agreed-upon sets of core indicators. Furthering the dissemination of research findings and application of evidence to policy formulation and practice is also of utmost importance.

The negative effects of low investments in the health sector are widely recognized, but little action has been taken to increase health sector financing. Lack of funding is a key constraint to progress on improving the recruitment, deployment, retention and performance of the health workforce. In many countries, health facilities continue to be chronically under-resourced and health worker salaries remain significantly less than the cost of living. Limited government resources and the current economic downturn are both factors that make it difficult for countries to increase investments in health. Sustainable workforce investments require costed human resource plans, determination of resources required, analysis of the fiscal space, as well as the timeline and the predictability of external funding.

Urgent priority must be given to increasing financing for the health sector, including scaling up support from donors, if progress is to be made in achieving national and international health development targets. Integrated, coordinated donor support is essential to avoid fragmented, donor-driven or other potentially disruptive support that greatly impairs healthy system functioning. Multiple types of donor support could be applied, including: strengthening of the HRH information management system; infrastructure strengthening or rebuilding of educational institutions; faculty development efforts; curricular innovative changes; and ongoing technical support in lieu of financial contributions.

Unless adequate resources are secured, lack of investment will continue to be a major barrier to resolving many of the key HRH challenges, regardless of the appropriateness of other actions taken by governments and development partners.

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145 Donor support can also be in the form of technical support to workforce planning and management and information systems. Regulatory system strengthening is also important, as well as the piloting of incentive schemes. Funding is needed for the rehabilitation of educational institutions as well as for the upgrading of tutors. Volunteer faculty members from overseas can provide essential mentoring to local tutors and further their abilities to improve teaching/learning methods, curricular content and student/graduate outcomes. Efficiency and effectiveness of aid flows towards health workforce development. Geneva, World Health Organization, 2011.
## Annex 1

### Questions and indicators for the evaluation and monitoring of efforts to increase access to health workers in rural and remote areas through increased retention

<table>
<thead>
<tr>
<th>Stage</th>
<th>Questions to be asked</th>
<th>Indicators or measures of progress</th>
<th>Methods</th>
</tr>
</thead>
</table>
| **Design** | • Did the intervention respond to a documented need?  
                      • Is the choice of the intervention based on evidence or robust arguments? | • HRH situation analysis  
                      • HRH costed plan  
                      • Stocks and flows of health workers  
                      • Density of health workers in urban versus rural areas | • Labour market analysis  
                      • Demographic analysis (health workforce stocks and flows)  
                      • Surveys of intentions  
                      • Stakeholder analysis  
                      • Review of policy documents |
| **Implementation** | • Relevance: were the preferred choices of health workers or rural work identified? | • Factors that motivate health workers to go to, stay in or leave rural areas  
                      • Stated preferences for rural job attributes | • Survey of intentions  
                      • Focused group discussions  
                      • Discrete choice experiments |
|            | • Acceptability: have all stakeholders been engaged? | • Stakeholders consultations and engagement | • Stakeholder analysis |
|            | • Affordability: have all sources of funds been identified and secured? | • Budgets allocated for the proposed interventions | • Review of policy documents |
| **Results** | • Did attractiveness of profession/rural/remote areas improve? | • Total number of graduates of health professional schools  
                      • Preference for rural/remote areas | • Analysis of registry data  
                      • Surveys, focus group discussions |
|            | • Did recruitment of health workers in underserved areas improve? | • Total number of health workers recruited to rural areas  
                      • Proportion of new graduates entering rural practice | • Analysis of registry data or facility data |
|            | • Did retention improve? | • Turnover rates  
                      • Vacancies rates  
                      • Duration of stay/mean duration of service/survival rates  
                      • Proportion of health workers staying in rural areas (stability index)  
                      • Density of health workers in rural areas compared to urban areas | • Facility-based surveys  
                      • Analysis of registry data  
                      • “Survival” curves |
|            | • Did health system performance improve? | • Job satisfaction of rural health workers  
                      • Patient satisfaction (remote and rural populations)  
                      • Coverage of health services  
                      • Referral times  
                      • Health outcomes (e.g. maternal mortality ratio, infant mortality rates) | • Health workers satisfaction surveys  
                      • Patient/community satisfaction surveys  
                      • Facility-based surveys  
                      • Analysis of secondary data and statistics  
                      • Household surveys |
Nurses who recently passed the licensure test take their oath during a ceremony. Manila, 2009 (AFP)