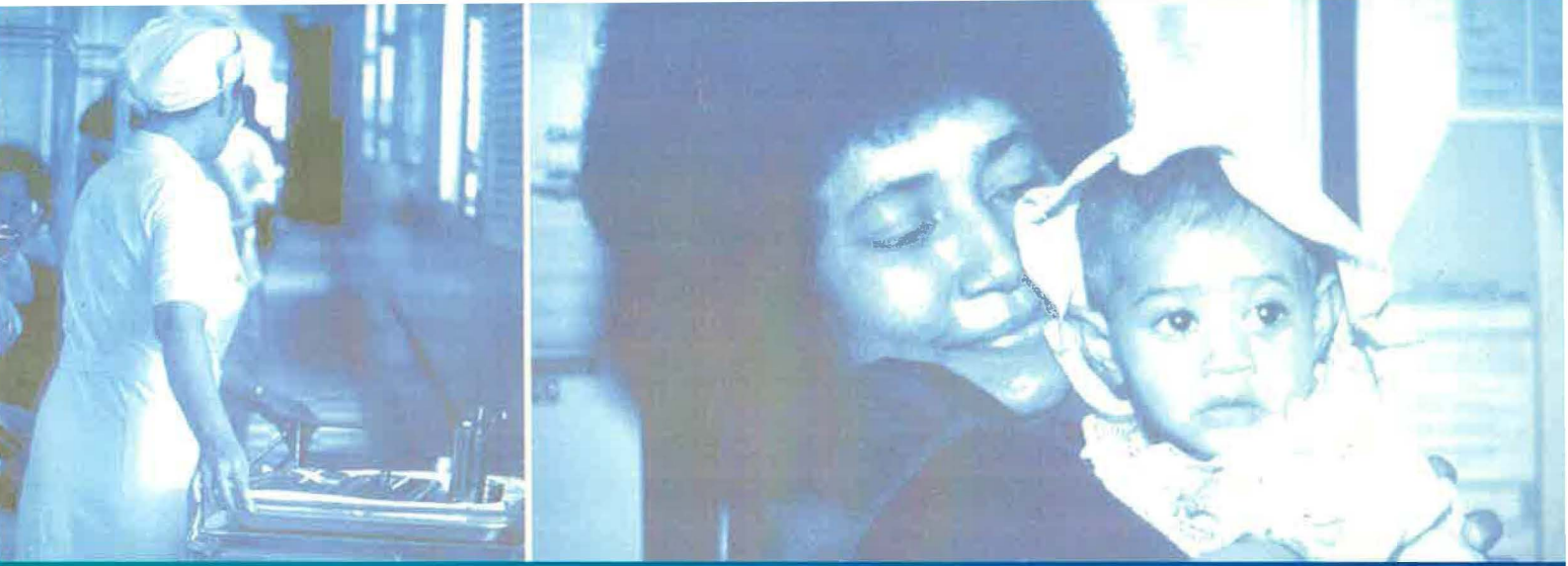

Strategic Action Plan for Nursing and Midwifery Development in the Western Pacific Region

World Health Organization
Western Pacific Region

Strategic Action Plan for Nursing and Midwifery Development in the Western Pacific Region

Background

Recognizing that health system functions and service delivery are significantly impacted by the critical and growing shortage of human resources for health, particularly of nurses and midwives, a *Strategic Action Plan for Nursing/Midwifery Development* is necessary. It serves as a coherent framework to focus concerted efforts and partnerships addressing nursing/midwifery human resource and health system issues that impact health service access and quality of care at all levels of the health system.

The *Strategic Action Plan for Nursing/Midwifery Development* is closely linked to the *Regional Strategy on Human Resources for Health* (Regional HRH Strategy) 2006 – 2015,[1] with nursing as a key component. It is also aligned with the global *Strategic Directions for Strengthening Nursing and Midwifery Services*,[2] which serves as a global framework for monitoring progress in nursing/midwifery development. It represents the operational nursing/midwifery action plan accompanying the Regional HRH Strategy, and reflects the unique and dynamically changing scope of nursing and midwifery practice in response to current and future health needs and priorities, advances in knowledge and technology, health system development, service delivery and health financing changes.[3] The strategic action plan also provides guidance in facilitating and monitoring the contributions of nursing and midwifery services to the achievement of Millennium Development Goals. Nurses and midwives play vital roles in providing equitable access to quality health services. They are committed to addressing the needs of the most vulnerable groups, including those in rural and remote areas with higher levels of poverty and lower literacy levels.

The Regional HRH Strategy is intended to guide WHO's collaboration in strengthening the capacity of countries and areas to ensure that their health workforces are responsive to population health needs, enhance health system performance and service quality, and improve health outcomes. It provides a range of policy options and strategic actions for Member States, though it is not intended to replace the need for country-specific strategies aimed at ensuring sufficient, balanced, competent, productive, and responsive and supported health workforces.

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[1] Resolution WPR/RC57.R7, endorsed by the Western Pacific Eighth Regional Committee meeting, 22 September, 2006.

[2] World Health Organization. *Strategic Directions for Strengthening Nursing and Midwifery Services*. Geneva, 2002.

[3] The scope of nursing practice, rather than being limited to specific tasks and functions, includes the provision and evaluation of competent and compassionate holistic direct care, across the continuum of care, often under quite difficult circumstances; health service leadership and management; education and teaching; as well as the undertaking of research, health policy formulation and the evaluation of interventions and costs. The practice of nurses and midwives is protective of fundamental human rights and dignity (*Universal Declaration of Human Rights*, 1948) and guided by ethical codes of practice, with particular importance placed on vulnerable groups, such as women, children, the elderly, and refugee, migrant and marginalized or stigmatized groups. Sources: International Council of Nurses. *ICN Position Statements: Scope of Nursing Practice and Nurses and Human Rights*. Geneva, 2004; World Health Organization. *WHO's Contribution to the World Conference against Racism, Racial Discrimination, Xenophobia and Related Intolerance*. Geneva, 2001; World Health Organization Western Pacific Region. *Nursing Care of the Sick: A Guide for Nurses Working in Small Rural Hospitals*. Manila, 1998.

Crucial challenges confronting the nursing and midwifery health workforce and health services

The strategic nursing and midwifery action plan serves as a framework to guide interventions aligned with the priority building blocks of health system functioning and strengthening.[4]

The Western Pacific Region is experiencing a nursing/midwifery crisis due to ongoing shortages (see Annexes 1 and 2), inequitable distribution and skill-mix imbalances. Nurses and midwives deliver core services at all levels of the health system and across the continuum of care. They comprise the largest proportion of the health workforce in most countries, are in short supply, located primarily in urban areas, and are often sub-optimally utilized.

A number of developing countries in the Region have health worker densities below 2.5 per 1000 population (see Annex 2), the threshold below which it is extremely difficult to sustain basic health services, including the achievement of adequate immunization coverage, skilled attendance at birth and reductions in maternal, infant and under-5 mortality rates.[5] The health workforce in the Western Pacific Region ranges in size from more than 10 per 1000 population in Australia, Japan and New Zealand to less than 1 or 2 per 1000 population in Cambodia, Papua New Guinea, the Solomon Islands and Vanuatu. All countries report staffing shortages to some extent, especially of experienced nurses/midwives and other health workers. Countries also report geographical, regional and/or speciality shortages. The major issues are shortages in rural and/or remote areas and in urban areas in poorer socio-economic locales, significantly hindering timely access to quality health services by vulnerable population groups.

In the 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 skill-development 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; the diagnosis and management of acute and chronic diseases; the performance of minor surgeries; pre-natal, post-natal care as well as deliveries, in addition to 24-hour emergency care.

Regardless of the title, advanced practice nurses and other non-physician primary health care providers have played an important role in meeting the health care needs (both curative and preventive) of the Pacific island countries for over 20 years, especially in remote or rural areas and sparsely populated locations where it is not cost-effective to post a doctor. 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

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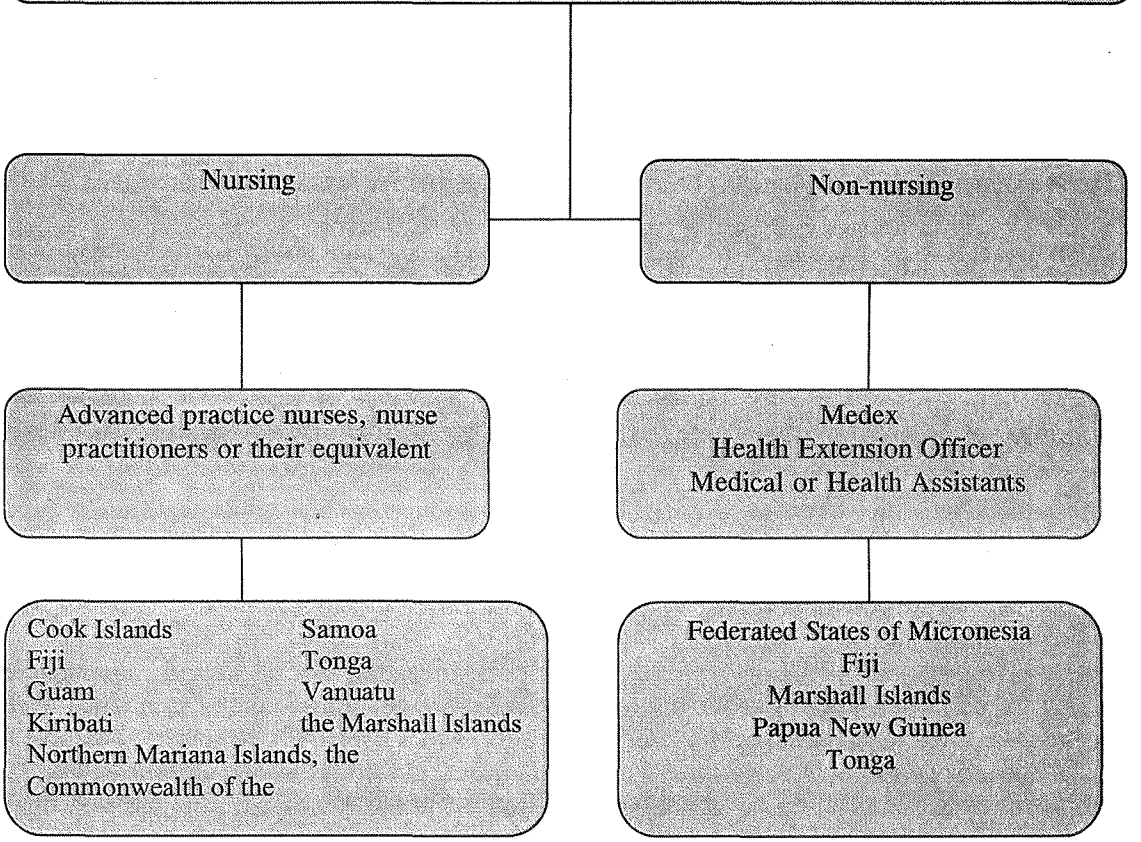
[4] The six building blocks of a health system: health services; health workforce; health information; medical products and technologies; health financing and leadership and governance. Source: World Health Organization. *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes*. Geneva, 2007.

[5] World Health Organization. *The World Health Report 2006: Working Together for Health*. Geneva, 2006.

communities.[6] The utilization of appropriately educated advanced practice nurses (nurse practitioners) in providing primary care has been supported by evidence from developed countries indicating that such nurses can produce as high quality care and as good patient outcomes as primary care physicians.[7] Figure 1 is a schematic representation of the categories and varying titles of advanced practice nurses and other non-physician primary health care providers in the Pacific island countries.[8]

Figure 1
Advanced practice nurses and other non-physician primary health care providers in the Pacific



Effective and efficient health service delivery is impacted by the nursing/midwifery workforce shortage in both developed and developing countries. Delivery of midwifery and mental health services, particularly in rural and remote areas, remains a significant problem in a number of Asian and Pacific Island countries. Population health needs and the quality of health services, negatively impacted by the nursing/midwifery shortages, skill-mix imbalances and mal-distribution (concentration of nurses and midwives in urban areas) are also worsened by

[6] World Health Organization, Regional Office for the Western Pacific. *The work of WHO in the Western Pacific Region: Report of the Regional Director*. Manila, 2001.
[7] Reeves, L *et al. Substitution of Doctors by Nurses in Primary Care (Review)*. Hoboken, New Jersey, John Wiley and Sons Ltd, 2006.
[8] World Health Organization, Regional Office for the Western Pacific. *Mid-level and nurse practitioners in the Pacific: Models and Issues*. Manila, 2001.

unplanned migration from rural to urban areas or abroad. Inadequately functioning health systems, including resource and infrastructure limitations, poorly equipped facilities; insufficient logistical support to maintain essential medicines and immunizations and unsafe and/or non-hygienic health facilities, inaccessibility to emergency obstetric care; high out of pocket expenditures for health care in a number of countries, as well as a weak knowledge base of the health workforce are also factors that hamper planning, policy development, and programme operations.[9]

Nursing/midwifery migration and structural imbalances

Widespread shortages of nursing and midwifery personnel in the Pacific Island countries have been noted through regional and global survey data from Member States from 2001 and earlier to the present time. The migration of nurses/midwives and other skilled health workers within (from rural to urban areas) and between the Pacific islands and beyond, to Australia, New Zealand, the United States and other countries, can be expected to continue due to many factors such as low salaries, poor working conditions and quality of life issues, linked to higher salaries and other educational and professional development opportunities overseas. Health workers in the South Pacific islands migrate to Northern Pacific islands where salaries are higher. Those in the Northern Pacific Islands (Guam, the Commonwealth of the Northern Mariana Islands, for example), if they have achieved satisfactory passing scores on health professional examinations for overseas graduates, may migrate to the US mainland. During the meeting of Ministers of Health for Pacific Island Countries in Apia, Samoa, in March 2005, working groups explored policy options and agreed on policy frameworks and strategic actions in the areas of workforce management, recruitment, retention, return migration and education and training. Subsequently, in 2007, Pacific Island Ministers of Health endorsed the *Pacific Code of Practice for the Recruitment of Health Workers*, as a key recommendation of the *Vanuatu Commitment.*[10]

The external migration of nurses from the Philippines has impacted both educational and service quality, and that experience could apply to other countries attempting to rapidly scale-up the nursing/midwifery workforce without sufficient standard setting and good governance mechanisms rigorously implemented and monitored.

Structural imbalances within and between occupational groups and lack of skills appropriate to meet local needs or changed circumstances exist in nearly all countries in the Region. The range of problems is quite variable. In Mongolia, the key problem is a relative oversupply of doctors and an undersupply of nurses, with many qualified medical practitioners working outside the health sector. While acute shortages are found in Australia in specific medical and nursing specialities such as mental health, midwifery, orthopaedics, emergency care and anaesthetics, more general nursing shortages exist both in Australia and New Zealand, as well as the lesser-resourced island countries. Shortages of mental health nurses exist in most of the lesser-resourced island countries, along with nursing and midwifery overall workforce shortages. In the face of workforce shortages, many posts remain unfilled due to public sector spending caps stalling expansion of the health workforce.

Nursing/midwifery education and continuing professional education

[9] *The Health Workforce Issues in the Western Pacific Region,* World Health Organization Western Pacific Region, 2006.

[10] World Health Organization Western Pacific Region. *Vanuatu Commitment.* Manila, 2007.

Within the less-resourced Pacific Islands there are 20 nursing schools, eight of which are located in the southern Pacific islands. Five are located in the northern Pacific. Papua New Guinea has seven of the 20 nursing schools, inclusive of government and faith-based institutions, all linked to Universities. The nursing schools in the South Pacific, with some exceptions,[11] are in institutions under the Ministries of Health, while those in the North Pacific are established within community colleges or universities, whose mandatory accreditation processes and procedures are dictated by the relevant associations or national accrediting bodies. Nursing and midwifery education in the Asian mainland is traditionally medically and disease oriented with severe limitations in the numbers and qualifications of nursing/midwifery faculty. Continuing professional education courses and/or post-basic programmes of study are offered in all countries, as well as sub-regionally, through the Pacific Open Learning Health Network (POLHN); the Fiji School of Nursing and Fiji School of Medicine; the University of Papua New Guinea, Divine Word University and Gorka University; the National University of Samoa; the Kiribati Midwifery and Public Health Training Programmes; the Vanuatu College of Nursing Education; the College of Micronesia, the University of Guam and via the American Pacific Nurse Leader's Council (APNLC), the South Pacific Chief Nursing Officer's Alliance (SPCNOA), the Pacific Basin Area Health Education Centre (AHEC), among others.

A lack of linkage between health service needs and health professional education and training leads to inappropriate educational content and training outcomes. The standards and quality of education and training of health workers remain low and poor in some countries. In the context of globalization, continued and emerging new pandemics of communicable diseases, as well as rising rates of noncommunicable, mental health problems and chronic diseases, social-environmental changes, the effects of violence, innovations in technology and communications, and ongoing health reforms, health workforces in many countries are not prepared to respond effectively to present and future population health challenges. Data concerning health professional school intakes and outputs, as well as the effect on service needs of overall shortages and continued migration, is not routinely reported nor analysed across countries.

The majority of schools in developing countries have insufficient financial and human resources as well as physical infrastructure and library, computer and clinical learning laboratory limitations. Successful completion of nursing and midwifery programmes is negatively impacted by the poor math, science, and writing and problem-solving skills of incoming students. The basic competencies of nursing/midwifery programme graduates are often negatively influenced by inadequate clinical supervision and non-practicing, non-expert clinical nursing/midwifery educators. Many countries, face significant shortages of nurse educators, specifically experienced expert nurses who have also completed advanced formal studies in educational teaching/learning and assessment methods focused on the promotion of student-centred learning, problem-solving and critical thinking.

Pre-service and in-service training curricula can be aligned to meet national health needs and improve health care practices by improving teaching and learning methods, through the use of evidence-based tools and guidelines and by means of networking partnerships and collaboration between institutions and health services to ensure quality and uphold standards of health professional education and training. In view of technological advances, the emergence of new diseases and new discoveries in the medical field of nursing and midwifery, there is a need to

[11] Nursing and midwifery education in Samoa takes place at the National University of Samoa, under the authority of the Ministry of Education.

provide continuing education for health workers, including those in rural and remote areas, through various learning modes including distance and open learning.

Nursing/midwifery, the overall working environment and systems management

Human resource and health systems management capacities need strengthening in most countries in the Region, as many leaders and managers are insufficiently prepared to succeed in their leadership roles and produce important outcomes in the health sector.[12] Application of traditional knowledge and clinical education skills, without appropriate management and leadership experience and skills, may be less than beneficial to patients and populations unless all parts of the system supporting patient and community care are in place and working efficiently, including staff, information, drugs, supplies, equipment and consultation, referral and transportation systems.

Conditions of employment require standardization within the Ministry of Health structural framework and job descriptions for supervisory roles and responsibilities; performance evaluation and disciplinary activities need to be strengthened. Factors contributing to low motivation of nurses and midwives and other health professionals include weak management and supervisory systems, perceptions that salaries and/or benefits are inadequate, lack of incentives and career pathways, and inconsistent rewards for good performance and discipline for poor performance. The multiplicity of contributing factors negatively impact deployment, retention and the quality of care, as positive practice environments have been found to be strongly correlated with job satisfaction, work performance and quality patient care.[13]

Human resource management, leadership and organizational system problems can all contribute to significant and costly harm or errors in patient care in both developing and developed countries. Resolving those problems requires sound leadership and management skills to facilitate and support the efforts of capable and motivated team members in taking the measures required for improving the quality of health services and through the development of supportive political, regulatory and organizational systems.[14]

Monitoring Progress in Nursing and Midwifery

The nursing/midwifery HRH workforce data on the exact numbers of nurse/midwife migrants in and out of countries are scarce, as are up-to-date standardized data sets enumerating the core data categories of: demographics; numbers of registered/licensed workers; workforce participation/productivity; workforce distribution; workforce additions and losses. A nursing/midwifery HRH information management system (IMS) bi-regional project is underway to delineate those core data elements necessary for workforce strategic planning, research and policy-making. The nursing/midwifery IMS project is linked to a broader HRH IMS regional project.

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[12] Dwyer, J and Paskavitz, M. An urgent call to professionalize leadership and management in the health care workforce. *Management Sciences for Health Occasional Papers*, 2006, 4:1-19; and Egger, D. et. al. Strengthening management in low-income countries. In: *Making health systems work* [Working paper No. 1]. Geneva, World Health Organization, 2005.

[13] International Council of Nurses. Positive *Practice Environments: Quality Workplaces = Quality Patient Care*. Geneva, 2007.

[14] Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Root causes of sentinel events. In: *Sentinel event statistics - June 30, 2006*. Oak Brook Terrace, Il, USA, JCAHO; and Dwyer, J and Paskavitz, M. An urgent call to professionalize leadership and management in the health care workforce. *Management Sciences for Health Occasional Papers*, 2006, 4:1-19.

The most recent *WHO Global Survey for Monitoring Progress in Nursing and Midwifery* has addressed numerous facets of the nursing/midwifery situation in the Region. As in WHO survey results analysed in 2001,[15] preliminary data analysis of 2005 to 2006 survey results continues to reflect variable and insufficient contributions of nurses and midwives to policy-making as well as insufficient implementation and/or monitoring of national nursing/midwifery strategic plans of action. These findings reflect the need for continued support of leadership capacity-building for nursing/midwifery personnel and more concerted efforts to strengthen the effectiveness of support to Member States to maximize the contributions of nurses and midwives for effective health service provision and meeting of priority health goals.

Relevant resolutions and declarations

Multiple World Health Assembly (WHA) Resolutions have been passed on strengthening nursing and midwifery (WHA 42.27, WHA 45.5, WHA 47.9, WHA 48.8 and WHA 54.12). WHA 54.12 on strengthening of nursing and midwifery services called for the World Health Organization to respond to country efforts in a variety of ways that include providing policy and technical advice, facilitating capacity-building and collaborative partnerships and supporting the enhancement of evidence-based decision-making. The South Pacific Chief Nursing Officers Alliance (SPCNOA), in 2006, also passed resolutions on nursing/midwifery strategic action planning and the enhancement and standardization of educational programmes in nursing. Based on WHA resolutions (WHA57.19; WHA59.23; and WHA59.27), the World Health Report 2006 and other declarations:

- Countries should establish comprehensive programmes supportive of recruitment and retention, equitable geographical distribution, balanced skill mixes and a skilled and motivated nursing and midwifery workforce.
- Countries should train health workers to meet their own needs first.
- Recruiting from countries in crisis should be avoided; and recipient countries should contribute to strengthening the education and training of workers in source countries.
- Educational partnerships should strengthen innovative and effective approaches used in educating and training health workers;
- Nursing and midwifery should be strengthened, including strategic action planning, human resource planning, education and management.
- WHO should provide technical support to Member States to revitalize health training institutions, to rapidly increase the health workforce, and to encourage training partnerships.

The World Health Nursing/Midwifery Global Advisory Group (GAG) and the WHO Executive Board (107th session, 2001)[16] have concluded that failure to strengthen nursing and midwifery could seriously impair health care quality, access to services, the well-being of this cadre of health workers, and the achievement of national and global health. As nurses and midwives play a crucial role in promoting the health of populations, the effective retention, recruitment and development of the nursing/midwifery workforce requires collaborative partnerships with others working on improving population health.

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[15] World Health Organization, Regional Office for the Western Pacific. *The work of WHO in the Western Pacific Region: Report of the Regional Director 1 July 2000 – 30 June 2001.* Manila, 2001.

[16] World Health Assembly. Fifty-fourth World Health Assembly: summary records of committees. Geneva, World Health Organization, 2001 (WHA 54/2001/REC/3).

Key partnerships and linkages with technical programmes

WHO, in association with Ministries of Health, has facilitated and supported twinning arrangements including resource-sharing, faculty sharing and capacity-building and institution-to-institution programme recognition agreements in the following countries:

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- Cook Islands {Auckland Institute of Technology and Manukau Technical Institute and the Cook Islands School of Nursing}
- Fiji (Fiji School of Nursing and James Cook University). The Fiji School of Nursing also provides pre-service and post-basic education for other Pacific Island Country nurses and midwives.
- Papua New Guinea (Provides advanced education for Solomon Island nurses and midwives).
- Samoa (University of Technology, Sydney; Charles Darwin University; Nagano University and the National University of Samoa (NUS). The NUS also provides pre-service and post-basic education for other Pacific Island Country nurses and midwives.
- Tonga (Auckland University of Technology and the Queen Salote School of Nursing)
- Palau Community College and the Yap State Department of Health, Federated States of Micronesia;
- University of Guam and University of Hawaii Schools of Nursing and Northern Pacific Island Community College Associate Degree Programmes in Nursing;
- Nursing/midwifery educational institutions and stakeholder partnerships between Laos and Vietnam and Chiang Mai University, Chulalongkorn University and Khon Kaen University, Thailand.
- The *Chinese Consortium for Higher Nursing Education*, an association of over fifty Schools of Nursing in China, convened by the Hong Kong Polytechnic University School of Nursing, aimed at strengthening nursing curricular, sharing experience, knowledge and resources.

In November, 2004, government nurses from 11 South Pacific Island Countries supported the establishment of an alliance of government nursing leaders, called the *South Pacific Chief Nursing Officers Alliance* (SPCNOA), to promote: (1) nursing unity, political advocacy and influence over health policy-making and planning; (2) information sharing and dissemination of potential best-practices; (3) support and mentoring among Member States; and (4) data gathering and reporting on World Health Assembly resolutions and other health and nursing decrees. The second meeting of the SPCNOA, co-sponsored by WHO, was convened in Apia, Samoa, from 3 to 8 September, 2006 at which time a constitution was approved and core areas of strategic action agreed upon. In the Northern Pacific, WHO continues, with other partners, to support the American Pacific Nurse Leaders Council (APNLC), an organization established 29 years ago to promote nursing development and communication among nurses/midwives of Pacific Island countries formerly or currently in association with the U.S. Government.

Networking with the Global Alliance of WHO Nursing/Midwifery Collaborating Centres and other partners, including faith-based organizations, has enabled the training of over 1500 nurses in essential HIV/AIDS knowledge, attitudes and skills in the China HIV/AIDS Nursing Leadership Initiative, a multi-partner project aimed at strengthening nurses capacity to effectively respond to the health needs of patients, family members and communities affected

by HIV/AIDS.[17] Subsequent to completion of the project evaluation, potential project continuation, dependent on funding availability and other factors, would address the health service gaps and related interventions required to enable nurses to more fully participate in, plan and evaluate chronic care and palliative care provision, across the continuum of care, particularly in community and home-based settings.

The World Health Organization strongly supports nursing/midwifery networks and alliances, such as the SPCNOA and APNLC and others, including academic institutions, national and international nursing and midwifery associations, and regulatory body representatives, with the expectation that the networks of nursing leaders and key partners will enhance or develop collaborative partnerships and strategic planning between government nurses, national nursing associations and other stakeholders.

Partners and agencies working in collaboration with WHO and Member States and playing key roles in developing and maximizing the contributions of nurses and midwives to health system performance include the International Council of Nurses, Sigma Theta Tau, academic institutions and WHO Collaborating Centres, Regulatory Authorities of the Western Pacific and South East Asian Regions, the United States Public Health Service, as well as various national, sub-regional and international professional non-governmental nursing and health associations. Potential funding sources include AusAID, NZAID, JICA, the Asian Development Bank, and the World Bank, among others. Linkages with a number of other WHO technical programmes, Human Resources for Health and Health Systems Development, Communicable Diseases, Communicable Diseases Surveillance and Response, Sexually Transmitted Infections, including HIV/AIDS, Child, Adolescent and Reproductive Health, Health Promotion and Non-communicable Diseases and Mental Health and Control of Substance Abuse also serve to strengthen nursing/midwifery programme planning, evaluation, monitoring and service delivery in priority disease areas and further the integration of services and training activities.

Dynamic and effective coalitions can shape a strategic action plan to more effectively address nursing/midwifery recruitment, employment and retention; to monitor and analyse nursing/midwifery workforce demand and supply; and to enable Schools of Nursing to maintain and improve nursing workforce competence at a time when the pressures of globalization necessitate the attainment of core nursing/midwifery competencies.

Goal of the strategic action plan for nursing/midwifery development

The *Strategic Action Plan for Nursing/Midwifery Development* in the Western Pacific Region provides a framework for action by WHO, partners and Member States aimed at improving nursing and midwifery service quality and contributions to health system development.

Objectives and expected outputs

The nursing/midwifery strategic action plan has four expected outcomes, closely linked to four of the strategic objectives of the *WHO Western Pacific Regional Strategy on Human Resources*

[17] The project, which began in 2002, is a collaborative undertaking by the Ministry of Health; selected university schools of nursing; the China Nurses Association; the Catholic Medical Mission Board; the Maryknoll China Service Project; the University of Illinois at Chicago, College of Nursing; the Hong Kong Aids Foundation and WHO.

for Health, 2006 – 2015. The specific strategic objectives of the Regional HRH strategy, linked to expected strategic action plan outcomes, are:

1. **Ensure that health workforce planning and development is an integral part of national policy and health and development goals, and responsive to population and service needs.**

   Expected outcome 1.1: Uniform indicators, tools and information management systems (IMS) are available for monitoring nursing/midwifery resource levels and improving supply/demand projections, forecasting shortages and migration.

2. **Address workforce issues and needs, including deployment, retention, policy coherence, and the workplace environment, to ensure optimal workforce retention and participation.**

   Expected outcome 2.1: Research and policy option analysis implemented to develop:

   - evidence-based nursing and midwifery policies and workforce planning,
   - recruitment, scaling-up and retention strategies,
   - management and performance enhancement strategies, and
   - supportive systems to enable all health workers to work to their full scope of practice,

focused on improving the quality of health services and enhancing the work lives of nurses and midwives, tailored to the needs of individual Member States.

3. **Improve the quality of education to meet the skill and development needs of the workforce in changing service environments.**

   Expected outcome 3.1: Models, strategic approaches, systems, tools and standards developed to assess needs, map outcome levels, revitalize institutions, and apply core competencies in the formulation, standardization, assessment and evaluation and/or cross-recognition of educational programmes.

4. **Strengthen health workforce governance and management to ensure the delivery of cost-effective, evidence-based and safe programmes and services.**

   Expected outcome 4.1: Networks, interdisciplinary and multisectoral collaboration strengthened and sustained at regional and national levels to:

   - build political alliances, technical and financial support for strengthening nursing/midwifery to maximize its' contributions to national health and development goals;

   - develop effective approaches to strengthen nursing/midwifery leadership capacities and the inclusion of nurses and midwives in the development of health policies and programmes at all levels;

- enhance the contributions of nursing and midwifery services for achieving population health targets;

- ensure the safety of the public through the formulation and implementation of contemporary nursing/midwifery regulatory frameworks and processes which also support effective and efficient use of all categories of health workers.

The strategic action plan products, activities, expected results, major milestones and potential partners are presented in Table 1.

Implementation of the strategic action plan for nursing/midwifery development

The attainment of the strategic action plan expected outcomes and overall HRH strategic objectives requires rational and concerted actions to be taken by Member States, WHO regional and country offices and partner institutions and organizations. The action plan is designed to support the interventions and changes required to achieve the stated expected outcomes and strategic objectives. At the present time, budgetary estimates are non-final; final estimates are dependent on further, ongoing stakeholder consultations. The change process requires strong leadership, concerted, collaborative partnerships and networks, the development or revision of national plans, policy option analysis and implementation, as well as system or organizational change, with accompanying changes in practices, knowledge and attitudes. All of the steps require sufficient time for changes to be planned, implemented, accepted, monitored and evaluated, an extensive process, which will be expected to continue beyond the timeline presented in Table 1.

Table 1 identifies the key products, activities and milestones linked to each of the four key expected outcomes. The strategic action plan implementation involves a process designed in three phases:

- Phase 1 (2006-2007): Establishment, strengthening, sustaining of partnerships, assessments and mapping, programme planning; protocol, software and tool development;
- Phase 2: (2007-2008): Implementation and pilot-testing; and
- Phase 3 (2009-2010): Monitoring, evaluation and continued capacity-building to support sustainability of change.

Although the phases are listed sequentially, the phases may occur earlier in selected projects presently being implemented.

Key actions or activities are presented in Table 1, representing regional, national and sub-national or operational level activities necessary to support strategic and operational implementation of change. Strengthening nursing and midwifery contributions to national health and development goals requires broader, more synergistic partnerships beyond nursing alone, with consumers, civil society and other disciplines including health planners, economists, chief medical officers and others. Partnerships and linkages are included in the strategic action plan, reflective of the need for more coordinated, strategic and cohesive action to address health workforce- and health system-related problems, made possible through networks and partnerships.

Monitoring and evaluation

Monitoring and evaluation are integral components of the nursing/midwifery strategic action plan, to enable identification of problems and performance gaps, activity implementation and tracking and measurement of progress towards the key outcomes. In this regard, sets of monitoring and evaluation indicators for the HRH strategic plan objectives will be used in monitoring progress towards key outcomes of the nursing/midwifery strategic action plan. Within the strategy, countries are encouraged to establish feasible targets for improving country-level nursing/midwifery HRH; incorporated into national nursing/midwifery and HRH strategic plans. Some of the Strategy indicators[18] are closely aligned with those of the global nursing performance indicators.[19] Other mechanisms to monitor and assess progress and achievement include consultations, country health information profiles, regional and global HRH and nursing data banks, documents, reports and publications, and periodic surveys.

[18] World Health Organization, Western Pacific Region. *Draft regional strategy on human resources for health, 2006-2015.* Manila, 2006.

[19] *Strategic directions for strengthening nursing and midwifery services.* Geneva, World Health Organization, 2002.

Table 1: Strategic action plan

Expected outcome 1.1: Uniform indicators, tools and information management systems (IMS) available for monitoring nursing/midwifery resource levels and improving supply/demand projections, forecasting shortages and migration

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2006 - 2007	Core nursing/midwifery information data system (IMS) Minimum Data Set (MDS) domains and indicators and fact sheets.	• Prepare initial project plan • Form core partners and stakeholders groups to review the domains/indicators • Domains/indicators presented for discussion at regional meetings • Finalize draft set of IMS domains/indicators • Accompanying fact sheets drafted. • Accompanying fact sheets finalized.	**Milestones** Working project plan available Working domains and core data elements/indicators available for review **Outcome indicators** Final domains and data elements/indicators produced	Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases *HRH Information management systems (IMS) are crucial to improving health system access, equitable distribution of health personnel and efficiency. Well functioning HRH information management systems are an essential tool for monitoring equal access to basic nursing, midwifery and health services.*	WHO Western Pacific Region (Health Information; Human Resources for Health, Nursing Units); WHO Southeast Asian Region; University of Technology, Sydney; WHO Headquarters; Member States; Core Partners and Stakeholder groups; HRH and health information experts
2007 - 2008	Redesigned and updated nursing/ midwifery country profiles.	• Review of data banks and data sources. • Country nursing/midwifery country profile data collection. • Finalization of country nursing/midwifery profiles	**Milestones** Working group established Country nursing/midwifery profile components agreed upon **Outcome indicators** Updated nursing midwifery country profiles available		WHO Western Pacific Region (Health Information; Human Resources for Health, Nursing Units); Working Group

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2007-2008	**Phase II** Research study to assess overall HRH and IMS MDS systems, validate data elements/domains and operational capacities to extract, monitor and apply core data domains and elements for national and cross-border health planning efforts.	▪ Finalize draft research protocol, tools. ▪ Study implemented in agreed-upon countries of varying size and development. ▪ Study expanded in a phased manner to additional countries. ▪ Research data analysed ▪ Study report disseminated, with recommendations for necessary HRH IMS improvements, capacity building.	**Milestones** Planning consultations held; HRH expert contracted Study protocol circulated for review Study undertaken in selected Member States Consultations regarding research results and implementation steps for change **Outcome indicators** Report with recommendations published	Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases *HRH Information management systems (IMS) are crucial to improving health system access, equitable distribution of health personnel and efficiency. Well functioning HRH information management systems are an essential tool for monitoring equal access to basic nursing, midwifery and health services.* (research study consultations; phased technical support)	WHO Western Pacific Region; University of Technology Sydney; HRH and health information experts, selected member states; networks
2009 - 2010	**Phase III** National HRH, nursing/midwifery IMS systems with capabilities of extraction, application, use of core MDS domain elements.	▪ In-country capacity-building, system maintenance, monitoring and support for sustainability, application to policy formulation; cross-border data gathering ▪ Continued monitoring and evaluation of HRH IMS MDSs, reporting and data sharing via periodic surveys. ▪ Consultations with stakeholders, Member States, partners, donor partners to report on outcomes; continued needs; national/sub-regional policy planning	**Milestones** Interventions, technical support for country IMS and MDS systems and data inputs, reporting, policy option application Dissemination, sharing of MDS data, trend analysis implemented **Outcome indicators** Number of countries with updated /strengthened HRH IMS and/or MDS		WHO Western Pacific Region; University of Technology Sydney; HRH and health information experts, networks, member states

Expected outcome 2.1: **Expected outcome 2.1**: Research and policy option analysis implemented to develop:

- evidence-based nursing/midwifery policy and workforce planning,
- recruitment, scaling-up and retention strategies,
- management and performance enhancement strategies,
- supportive systems to enable all health workers to work to their full scope of practice,

with a focus on improving the quality of health services and enhancing the work lives of nurses and midwives, tailored to the needs of individual Member States.

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2008-2010	Increased capacity to implement and evaluate evidence-based policies and health systems research to improve nursing/midwifery deployment, skill-mix, efficiency, workplace quality, management/ supervision and professional satisfaction, aimed at improving access, efficiency, effectiveness and overall health outcomes.	▪ Form partnerships and steering group; ▪ Recruit nursing/midwifery HRH experts ▪ Conduct assessments to establish baseline data, objectives ▪ Consultations with partners, member states to reach consensus on research aims, approaches/protocols, methods, tools, monitoring and evaluation indicators ▪ Capacity-building and study implementation in selected countries; and/or by networks; institutions ▪ Monitoring and evaluation of capacity; impact of policy, skill-mix, deployment, and/or workplace changes. ▪ Periodic consultations/meetings to review evaluation data and plan ongoing interventions, continued capacity-building; monitoring and evaluation of outputs, outcomes, impact.	**Milestones** Partnership and steering groups formed. Baseline assessments completed. Project proposals drafted. Projects and/or evaluation studies implemented; reported on. **Outcome indicators** Number of Member States and/or networks carrying out research to generate/apply evidence for improved workforce, health planning	Goal 1 Eradicate extreme poverty and hunger (target 2) Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases Goal 7 Ensure environmental sustainability *Progress towards achievement of MDGs would not be possible without the strengthening of health systems, including increasing the accessibility, affordability, quality and efficiency of health systems.* *The strengthening of Primary Health Care Services and the quality of services provided can improve the health status of the poor and vulnerable.*	WHO Western Pacific Region; other WHO Regions; HQ; WHO Collaborating Centres and other institutions; professional associations, including the South Pacific Chief Nursing Officers Alliance (SPCNOA); American Pacific Nurse Leaders Council (APNLC); ICN; AAAH Research Councils/teams, including the WHO WPR Research network; the Pacific Health Research Council; Fiji School of Medicine; other medical and nursing schools.

Expected outcome 3.1: Models, strategic approaches, systems, tools and standards developed to assess needs, map outcome levels, revitalize institutions and apply core competencies in the formulation, standardization, assessment and evaluation and/or cross-recognition of educational programmes.

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2006- 2008 **2008-2010**	Nursing/midwifery regional, sub-regional, national educational plans, inclusive of partner academic institutions, nursing and midwifery leaders to strengthen nursing educational resources, faculty capacities; standards, resource-sharing; as well as efforts to facilitate upgrading of curricula, faculty, institutions to international level, recognition and competency validation, and accreditation processes. Ongoing support and facilitation of educational networks, technical suport and continuous dialogue between educational institutions; policy makers; service organizations, stakeholders, including consumers.	▪ Conduct assessments, gaps, institutional needs assessments, regulatory and workforce situational analyses. ▪ Protocol and tool development ▪ Comprehensive assessments ▪ Country profiles and ongoing mapping of the outcome levels of each of schools of nursing to determine the movement throughout the region, to integrate educational pathways, standards, share resources for nurses, midwives, nurse practitioners, other advanced practice nurses, including mental health nurses, others. ▪ Implement institutional capacity-building plans aimed at strengthening country educational institutions and standards in lesser resourced countries. ▪ Tools, guidelines, Implement plans, capacity-building, strengthening regional educational centres for nurse practitioner and community health nurses/midwives, other personnel providing the full range of PHC services to rural/remote and/or vulnerable populations.	**Milestones** Consultative meetings convened; network of institutions for mapping/assessment formed. Project plan written; tools developed or revised. Tools, guidelines, technical support given; Assessments completed. **Outcome indicators** Sub-regional educational/regulatory mapping reports finalized. Sub-regional, national educational strengthening, quality improvement, core curricular standard-setting action plans developed/implemented. Number of countries, institutions facilitating improved work environment, skills, continued professional development , supervision of rural, remote, peripheral nurse practitioners, midwives, other community health nurses, midwives, workers.	Goal 1 Eradicate extreme poverty and hunger (target 2) Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases Goal 7 Ensure environmental sustainability *Progress towards achievement of MDGs is not possible without the continued strengthening of the education, training and continued professional development of nurses, midwives, nurse practitioners, and other health professionals.* *Strengthening Primary Health Care Services, service quality and access of rural, remote and/or poor and vulnerable groups necessitates actions to improve working conditions, professional development and career opportunities of rural/remote health personnel.*	Member States; Consumer Alliances; Ministries of Health and Education; WHO Western Pacific Region; other WHO Regions; HQ; WHO Collaborating Centres and other academic institutions; regulatory bodies; professional associations, including the South Pacific Chief Nursing Officers Alliance (SPCNOA); American Pacific Nurse Leaders Council (APNLC); ICN; Sigma Theta Tau; Pacific Medical Association; Pacific Islands Health Officers Organization; Public Health Alliances; WHO/Partner Technical Networks.

Expected outcome 4.1: Networks, interdisciplinary and multisectoral collaboration strengthened and sustained at regional and national levels to:

- build political alliances, technical and financial support for strengthening nursing/midwifery;
- develop effective approaches to strengthen nursing/midwifery leadership capacities and the inclusion of nurses and midwives in the development of health policies and programmes at all levels;
- enhance the contributions of nursing and midwifery services for achieving population health targets;
- ensure the safety of the public through the formulation and implementation of contemporary nursing/midwifery regulatory frameworks and processes which also support effective and efficient use of all categories of health workers.

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2006-2010 **2007-2010**	Increased political, technical and financial support for leadership capacity-building, implementation and monitoring of nursing/midwifery regional and national development plans by regional and sub-regional networks, alliances, bodies, to maximize contributions to health service access, quality and health outcomes. Nursing and midwifery capacity and standards of care strengthened for patient/population quality, including safety, infection control, emergency, disaster and pandemic preparedness.	▪ Conduct regional meetings bi-annually aimed at monitoring progress of implementation of nursing/midwifery and HRH strategic action plans; sub-regional meetings annually-bi-annually as per established schedules. ▪ Software licensure agreements obtained to support computer linked conferencing and training. ▪ Establishing and support chief nurses emeritus network and other sub-regional networks (University of Technology, others) ▪ Taskforces and/or networks established ▪ Regional tools or protocols developed needs assessments; progress, reporting ▪ Implementation of capacity-building, quality improvement, emergency and disaster training programmes; communication systems.	**Milestones** Planning meeting held 6 months prior to agreed date. Meeting convened. Meeting report disseminated. Taskforce members identified. Network charters written; web sites updated; developed. Protocols, toolkits, training modules drafted. **Outcome indicators** Number of countries strengthening quality improvement, safety; emergency disaster preparedness, response.	Goal 1 Eradicate extreme poverty and hunger (target 2) Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases Goal 7 Ensure environmental sustainability *Progress towards achievement of MDGs is not possible without strengthened and new partnerships; the promotion of safe and healthy settings, including health and community settings; and utilizing partnerships and, NGOs, civil society to improve quality, performance standards, effectiveness and efficiency of health services and service delivery.*	Member States; Western Pacific Region; Partner Institutions and Organizations; Professional Association and Consumer Representatives; Bi-regional, regional and sub-regional networks; donor partners; WHO Collaborating Centres and other Institutions; ICN; United States Public Health Services, Health and Human Services; University of Iowa; WHO/Headquarters.

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2006-2010	Leadership for Change programmes instituted, monitored and evaluated, nationally and sub-regionally, through collaborative partnerships, focused on strengthening nursing and midwifery contributions to improved health services and health outcomes.	▪ Leadership for change implementation, monitoring and evaluation initiated and/or sustained in at least 6 priority countries. ▪ Networked communication established/sustained among programme graduates, between countries to support continued process of change/improvement.	**Milestones** Project plans developed for national and/or sub-regional programmes. Training workshops implemented; Team projects completed/ **Outcome indicators** Team project reports disseminated. National training by national programme trainers continues. Monitoring and evaluation exercises, including outcomes and impact evaluation completed.	Goal 1 Eradicate extreme poverty and hunger (target 2) Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases Goal 7 Ensure environmental sustainability *Progress towards achievement of MDGs is not possible without strengthened and new partnerships; the improvement of human resource capacity; and improving capacities to contribute to improved availability, accessibility and quality of health services.*	WHO, ICN, Member States; Partner Institutions; Nursing leaders; Professional Associations
2007-2010	Increased capacity in priority countries, to plan, implement and evaluate nursing education and services in health promotion; community and public health; poverty and gender aspects of health chronic care, including home and palliative care (including addiction prevention and care) as well as models of service delivery for chronic, palliative and community/home care.	▪ Convene partner consultations, networks, identify, build linkages with experts ▪ Implement capacity-building fellowships, resource-sharing mechanisms. ▪ Develop project plan, training materials, educational curricula ▪ Implement plan in collaboration with partners, institutions ▪ Distribute bi-annual project reports ▪ Monitor and evaluate model projects, based on pre-established indicators. ▪ Situational assessments.	**Milestones** Partnership established; core working groups formed. Project plans and training materials developed and translated. Planning meetings held. Model projects implemented at pilot sites. **Outcome indicators** Situational assessments; training curricula; and/or programme evaluations completed.	*Progress towards the achievement of MDGs requires improved quality of community partnerships and involvement in health programmes, as key stakeholders, as well as health promotion efforts and interventions to reduce barriers to equity and the prevalence of diseases.*	WHO Western Pacific Region; Ministries of Health; Professional Associations; WHO Collaborating Centers and other Institutions; Mary knoll China Service Project, other stakeholders, including community partners.

Timeline [Budget estimates]	Product	Activities	Milestones and outcome indicators	Contributions to achievement of Millennium development goals	Partnerships, linkages
2006-2010	Increased capacity to analyse, develop, update, implement and monitor and sustain/strengthen regulatory and legislative systems and processes, including regulatory councils/boards.	▪ Technical experts and partners identified and recruited. ▪ Regulatory and legislative processes, systems, councils developed and/or strengthened in selected identified priority countries. ▪ Legislative reviews and/or updated implemented to address advanced practice nursing and midwifery scopes of practice; continued professional development and/or educational criteria; and/or competency validation measures.	**Milestones** Technical support provided. Legislative and/or regulatory council initiatives, capacity-building initiated. **Outcome indicators** Number of countries and/or councils supported in policy development, registration, regulation, accreditation. Number of countries with existing or updated legislation, regulations	Goal 1 Eradicate extreme poverty and hunger (target 2) Goal 4 Reduce child mortality Goal 5 Improve maternal health Goal 6 Combat HIV/AIDS, Malaria and other diseases Goal 7 Ensure environmental sustainability *Progress towards achievement of MDGs is not possible without strengthened legislation to address barriers impacting equity; safety, as well as protection of the rights to good health and safe care, by all, including the poor, minorities and other vulnerable groups.*	WHO; Regulatory Bodies; Partners; Agencies; Academic Institutions; Collaborating Centres; Networks; Consumers.

Table 2: Western Pacific Regional reported nursing workforce shortages[1]

Country		Shortage of small extent	Shortage to some extent	Great shortage	Very great shortage	No shortage	Numbers required to solve shortage
American Samoa[2]	Nurses		√				10
	Midwives	√					2
Brunei	Nurses	√					1%
	Midwives	√					1%
Cambodia	Nurses			√			3 000
	Midwives				√		5 000
China	Nurses			√			250 000 approx
	Midwives						
Cook Islands	Nurses				√		30
	Midwives			√			10
Fiji	Nurses		√				160
	Midwives		√				100
Hong Kong, China	Nurses	√					460
	Midwives	√					49
Japan	Nurses	√					41 600
	Midwives	√					1700
Kiribati	Nurses			√			50
	Midwives				√		50
Korea	Nurses					√	
	Midwives					√	
Laos	Nurses			√			3319
	Midwives		√				332
Malaysia	Nurses			√			70 000 approx.
	Midwives			√			No information available
Mongolia	Nurses			√			1536
	Midwives	√					434
Niue	Nurses				√		10
	Midwives				√		6
Papua New Guinea	Nurses		√				Unknown
	Midwives		√				Unknown
Philippines	Nurses					√	
	Midwives	√					
Samoa	Nurses				√		100
	Midwives				√		50
Singapore	Nurses		√				66[a]
	Midwives		√				
Solomon Islands	Nurses		√				90
	Midwives				√		404
Tokelau	Nurses			√			7
	Midwives						
Vietnam	Nurses	√					30 000
	Midwives	√					10 000

[1]WHO Global Nursing/Midwifery Survey, 2006 [based on preliminary data analysis

[2]Public health data

[a]Number of midwives needed included within nursing numbers

Table 4: Selected categories of human resources for health in WHO Western Pacific Region countries, 2007

No.	Country/ Area	Year	HRH Density	DISTRIBUTION OF HEALTH PERSONNEL (Per 1000 population)									
				PHYSICIANS		DENTISTS		PHARMACISTS		NURSES		MIDWIVES	
				No.	Density	No.	Density	No.	Density	No.	Density	No.	Density
1	American Samoa	2003	3.16	49	0.78	15	0.24	2	0.02	127	2.03	1	0.02
2	Australia	2007p	13.70	57 000	2.77	8900	0.43	17 300	0.84	182 200	8.84	16 800	0.82
3	Brunei Darussalam	2005	8.22	390	1.05	73	0.20	41	0.11	1 789	4.83	748	2.02
4	Cambodia	2004	0.70	2 122	0.16	241	0.02	577	0.04	4 516	0.35	1754	0.13
5	China, PR of	2006	...	1 994 854	1.55	(2001) 136 520	(2001) 0.11	353 565	0.27	1 426 339	1.11	(2001) 42 000	(2001) 0.03
6	Cook Islands	2004	7.57	22	1.22	20	1.11	1	0.06	52	2.89	11	0.6
7	Fiji	2006	...	315	0.37 [h]	42	0.05 [h]	40	0.05 [h]	1673	1.96 [h]	...	...
8	French Polynesia	2005	8.72	676	2.60	114 [i]	0.44	158	0.61	1141	4.39	131	0.50
9	Guam	2005	...	244 [a]	1.41	(1999) 31 [i]	0.21	...	...	...	...	...	...
10	Hong Kong	2006p	8.23	11 739 [b]	1.70 [b]	1976 [k]	0.29 [k]	1649 [h]	0.24 [h]	36 444 [l]	5.28 [l]	4648 [ab]	0.67 [ab]
11	Japan	2004	13.93	270 371	2.12	95 197	0.75	241 369	1.89	1 146 181 [l]	8.98	25 257	0.20
12	Kiribati	2006	...	30	0.32	(2004) 3	0.03	1	0.01	(2004) 238	2.65	(2004) 32	0.35
13	Republic of Korea	2007p	8.64	92 056	1.89	23 184	0.48	57 610	1.18	235 965	4.85	8711	0.18
14	Lao PDR	2005	...	1 283	0.23	83	0.02	276	0.05	5291 [n]	0.93	...	...
15	Macao	2006	...	1540 [c]	3.09	166	0.33	170	0.34	1212	2.43	...	...
16	Malaysia	2006	3.51	21 937	0.82	2940	0.11	4292	0.16	47 642	1.79	16 667 [w]	0.63
17	Mariana Is., Commonwealth of the	1999	2.52	31	0.45	3	0.04	4	0.06	123	1.77	14	0.20
18	Marshall Is., Republic of the	2004	...	31	0.51	4	0.07	2	0.03	115	1.88	...	...
19	Micronesia, Federated States of	2005	2.98	62	0.54	13	0.11	16 [o]	0.14	229	2.01	20	0.18
20	Mongolia	2006	6.70	7079	2.73	514	0.20	793	0.31	8359	3.22	646	0.25
21	Nauru	2004	5.94	5	0.50 [i]	1	0.10	4 [p]	0.40	48	4.75	2	0.20
22	New Caledonia	2006	7.96	519	2.16 [h]	120	0.5 [h]	150	0.62 [h]	1029	4.28 [h]	96	0.40 [h]
23	New Zealand	2004	...	(2003) 8790	(2003) 2.19	(2003) 1 582	(2003) 0.55	(2002) 3808	(2002) 1.02	34 660 [w]	8.54	3780 [ac]	0.93
24	Niue	2006p	14.11	4	2.31	3	1.73	1	0.58	13	7.51	2	1.16
25	Palau	2006	7.39	26	1.31	3	0.15	1	0.05	117	5.88	1	0.05
26	Papua New Guinea	2005	...	750	0.13	182	0.03	...	...	8914	1.50	567	0.10
27	Philippines	2004	8.20	93 862	1.14	45 903	0.56	49 667	0.60	352 398	4.26	136 036	1.65
28	Samoa	2005	1.26	50	0.27	6	0.03	3	0.02	136	0.75	37	0.20

No.	Country/ Area	DISTRIBUTION OF HEALTH PERSONNEL (Per 1 000 population)											
		Year	HRH Density	DOCTORS		DENTISTS		PHARMACISTS		NURSES		MIDWIVES	
				No.	Density	No.	Density	No.	Density	No.	Density	No.	Density
29	Singapore	2006	8.48	6931 /d	1.55	1323 /l	0.30	1421 /q	0.32	20 615 /x	4.60	312	0.07
30	Solomon Islands	2005	1.86	89	0.19	52	0.11	53	0.11	620	1.30	74	0.16
31	Tokelau	2003	...	3	2.00	3	2.00	(2000) 0	(2000) 0.00	10	6.67	(2000) 3	(2000) 2.00
32	Tonga	2003	...	32 /e	0.39	23 /m	0.23	(2002) 4	(2002) 0.04	342	3.37	(2002) 21	(2002) 0.21
33	Tuvalu	2003	4.71	4	0.42	2	0.21	2	0.21	30 /y	3.14	10	1.05
34	Vanuatu	2005	...	29	0.13	...	...	...	...	312	1.41	50	0.22
35	Viet Nam	2005	...	50106 /f	0.60 /f	...	...	28500 /r	0.34 /r	52 115 /z	0.63 /z	18313 /ad	0.22 /ad
36	Wallis & Futuna	2004	5.10	13 /g	0.87	4	0.27	1	0.07	47 /aa	3.15	11 /ae	0.74 /ae

... Data not available.
p Preliminary
/a Figure refers to physicians in Guam Memorial Hospital and includes licensed military physicians working on part-time basis
/b Figure refers to number of physicians, regardless of whether they are actually working in the profession or not, with full registration on both the local and overseas lists
/c Figure refers to 1149 physicians and 391 traditional Chinese medicine doctors
/d Figure includes 460 physicians who are not in active practice
/e Figure refers to government doctors
/f Figure refers to physicians in the public sector only
/g Figure refers to physicians and specialists
/h Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
/i Revised data
/j Figure refers to dental surgeons
/k Figure refers to number of dentists, regardless of whether they are actually working in the profession or not, with full registration on both the local and overseas lists
/l Figure includes 197 dentists who are not in active practice
/m Figure refers to dental officers and dental therapists
/n Figure refers to number of pharmacists, regardless of whether they are actually working in the profession or not
/o Figure refers only to pharmacy technicians
/p Figure refers to dispensers only
/q Figure includes 140 pharmacists who are not in active practice
/r Figure refers to pharmacists in the public sector only
/s Figure refers to registered nurses and enrolled nurses, regardless of whether they are actually working in the profession or not
/t Figure includes nurses, public health nurses and assistant nurses
/u Figure includes medical assistants
/v Figure refers to JD/midwives
/w Figure refers to nurses (registered) and midwives
/x Figure refers to 15452 registered nurses and 5163 enrolled nurses
/y Figure refers to bachelor and diploma graduate nurses

/z Figure refers to nurses in the public sector only
/aa Figure includes one nurse anaesthesia and four unauthorized nurses
/ab Figure refers to number of midwives, regardless of whether they are actually working in the profession or not
/ac Figure was also included in the number of registered nurses
/ad Figure refers to midwives in the public sector only
/ae Figure includes one unauthorized midwife