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

Background and problem statement

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 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 human resources for health (HRH) strategy, of which nursing is a key component. It is also aligned with the global *Strategic Directions for Strengthening Nursing and Midwifery Services,*[1] which serves as a global framework for monitoring progress in nursing/midwifery development. It represents the operational nursing/midwifery action plan to accompany the regional HRH strategy.

The regional HRH Strategy, endorsed by the Regional Committee in September 2006, 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.

Nursing/midwifery and health workforce

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 comprise the largest proportion of the health workforce in most countries. A number of developing countries in the Region have health worker densities below 2 per 1 000 population (see Annex 2). The health workforce in the Western Pacific Region ranges in size from nearly 13 to 14/1000 population in Australia and Japan, to less than 1/1000 population in Cambodia, Papua New Guinea and the Solomon Islands. All countries report staffing shortages to some extent, especially of experienced nurses/midwives and other health workers. Additionally, countries 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/locations.

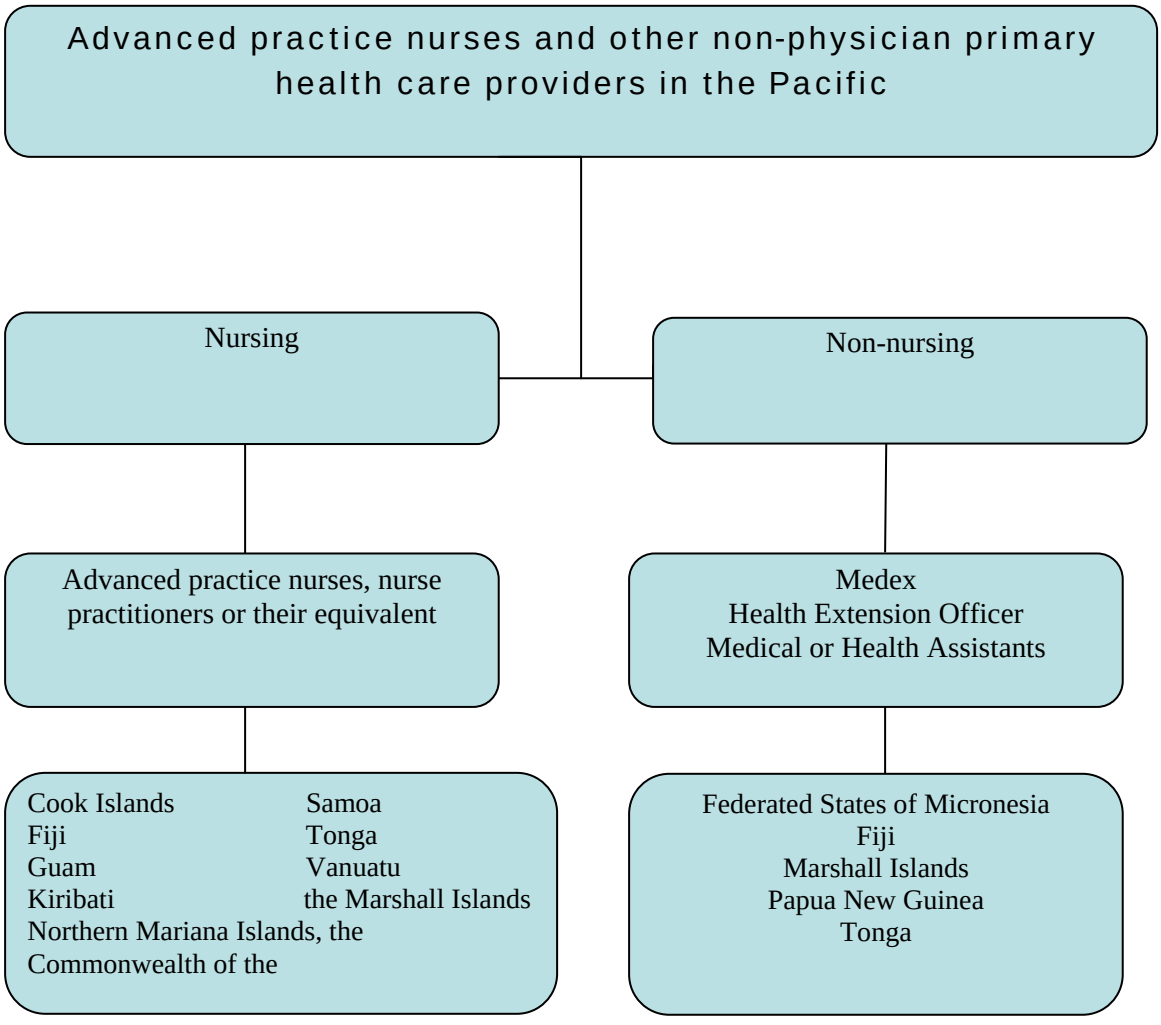
In the Pacific island countries, advanced practice nurses and other non-physician primary health care providers meet the health needs of widely dispersed populations living in small island communities spread over enormous expanses of the Pacific Ocean. These primary health care providers have received 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

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

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 communities.[2] 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.[3]

Figure 1



[2] 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.
[3] World Health Organization, Regional Office for the Western Pacific. *Mid-level and nurse practitioners in the Pacific: Models and Issues*. Manila, 2001.

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 unplanned migration from rural to urban areas and abroad; inadequately functioning health systems, including resource and infrastructure limitations, as well as a weak knowledge base of the health workforce, hampering planning, policy development, and programme operations.[4]

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.

The external migration of nurses from the Philippines has impacted both educational and service quality, an impact which 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 the 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

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

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

Universities. The nursing schools in the South Pacific, with some exceptions,[5] are in institutions under the Ministries of Health, while those in the North Pacific are within established systems of community colleges or universities, with mandatory accreditation processes and procedures as 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 services 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 service needs, in the context 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.

Aligning pre-service and in-service training curricula to meet national health needs and health care practices, improving teaching and learning methods, the use of evidence-based tools and guidelines and networking and collaboration between institutions, health services and partners are all important for ensuring quality and standards of health professional education and training. In view of technological advances, the emergence of new diseases and new discoveries in medical science, nursing and midwifery, there is a need to provide continuing education for health workers, including those in rural and remote areas, through various learning modes including distance and open learning.

Nursing/midwifery and overall human resource 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

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

leadership roles and produce important outcomes in the health sector.[6] Application of traditional knowledge and clinical education skills, without appropriate management and leadership experience and skills, may not be 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, role and responsibilities, supervisory; 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.

Human resource management, leadership and organizational system problems all contribute to significant and costly harm or errors in patient care in both developing and developed countries, the resolution of which require sound leadership and management skills, facilitating capable and motivated team members, in making the improvements required for the quality of health services to improve, along with supportive political, regulatory and organizational systems.[7]

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 to be linked to a broader HRH IMS regional project.

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,[8] 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 for leadership capacity-building of nursing/midwifery personnel and more concerted efforts to strengthen the effectiveness of support to Member States, to maximize the contributions of nurses and midwives to effective health service provision and priority health goals.

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[6] 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.

[7] 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.

[8] 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.

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 including, 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 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)[9] 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.

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.

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

- Tonga (Auckland University of Technology and the Queen Salote School of Nursing)
- Nursing/midwifery educational institutions and stakeholder partnerships between Laos and Vietnam and Chiang Mai University, Chulalongkorn University and Khon Kaen University, Thailand.

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 28 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 and, 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.[10] 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

[10] 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.

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; monitor and analyse nursing/midwifery workforce demand and supply; and 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 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 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 needs, including 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;
- 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 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.

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 established feasible targets for improving country-level nursing/midwifery HRH; incorporated into national nursing/midwifery and HRH strategic plans. Some of the Strategy indicators[11] are closely aligned with those of the global nursing performance indicators.[12] 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.

[11] World Health Organization, Western Pacific Region. *Draft regional strategy on human resources for health, 2006-2015*. Manila, 2006.
[12] *Strategic directions for strengthening nursing and midwifery services*. Geneva, World Health Organization, 2002.

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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.

Product	Activities	Milestones	Phase	Responsible parties	Comment
1. Core nursing/midwifery information data system (IMS) 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.	Working project plan available Domains and core data elements/indicators available. Final domains and data elements/indicators produced	**Phase 1: 2006**	WPRO (NUR, HRH, HIN); UTS HQ/NUR/EIP, CORE PARTNER AND STAKEHOLDER GROUPS; HRH EXPERTS	Particular attention to integration with other IMS data sets, global data element definitions into programmes in compulsory treatment and rehabilitation centres in priority countries Planned integration CHIPS, other data bases
2. Redesigned and updated nursing/ midwifery country data banks.	• Review of data banks and data sources. • Country nursing/midwifery data bank data collection. • Finalization of country data banks	Working group established Country data bank components agreed upon Data banks finalized.	**Phase 1: 2006-2007**	WPRO, MEMBER STATES, UTS, WORKING GROUP	Global nursing surveys, regulatory profiles and other data sources utilized.

Product	Activities	Milestones	Phase	Responsible parties	Comment
3. Research study for validation of data elements/domains and expansion to HRH overall professional categories.	▪ Finalize draft research protocol, tools. ▪ Research study implemented Research data analysed ▪ Research report disseminated, published	Planning consultations held; HRH expert contracted Study protocol circulated for review and translation Research undertaken in selected Member States Consultation regarding research results and implementation steps for change Report finalized and/or published.	**Phase 2: 2007** (research study consultations; phased technical support) Local costs/direct financial support to Member States: **Phase 2: 2007-08**	WPRO, UTS, HRH EXPERT, SELECTED MEMBER STATES	Research protocol must be feasible for undertaking in limited resource countries.
4. Software application/programme of nursing/midwifery HRH IMS sets.	▪ Computer-linked or tele-consultations with selected participating Member States, IT experts, HRH experts to apply software programming permitting data collection, analysis, reporting and sharing. ▪ Contract for programming signed. ▪ Software programming content, steps agreed upon.	Software programming development or acquisition written Consultation report produced Programming completed. Pilot testing of software completed.	**Phase 2: 2007** (consultation; programming fees; planned future linkages with health facility GPS mapping; IT online training courses)	WPRO, UTS, SEARO, SELECTED MEMBER STATES, IT and HRH experts WPR, UTS, HRH	Software programming to be applicable to low-resource settings, small and larger Member States.

Product	Activities	Milestones	Phase	Responsible parties	Comment
5. National nursing/midwifery HRH IMS systems.	▪ Software programming completed and pilot tested. ▪ Finalise HRH IMS software programming user guides and training materials ▪ In-country capacity-building, system maintenance, monitoring and support for sustainability. ▪ Evaluation of HRH IMS data sets, reporting and data sharing completed. ▪ Project meeting with stakeholders, Member States, partners, donor partners to report on outcomes and plan future interventions.	Country pilot HRH IMS data sets/software and pilot studies designed and implemented, accompanying timelines established.	**Phase 2: 2007-2009** Pilot testing and capacity-building (minimum 6 countries) County computer hardware/ and software licensures **Phase 3: 2009-2010** STC/APW evaluation, ongoing capacity-building and reporting contract Meeting costs [cost-sharing expected]	and IT EXPERTS, SELECTED MEMBER STATES	Overall project design places emphasis on capacity-building, future adaptations linked to existing and/or new technologies, capacity-building and system sustainability.

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.

Product	Activities	Milestones	Phase	Responsible parties	Comment
1. Increased capacity to implement and evaluate evidence-based policies to improve nursing/midwifery deployment, skill-mix, efficiency, workplace quality, management/ supervision and professional satisfaction.	▪ Form partnerships and steering group; ▪ Recruit nursing/midwifery HRH experts ▪ Conduct assessments to establish baseline data, objectives ▪ Develop project proposal ▪ Conduct consultations with partners, member states to reach consensus on research aims, approaches, methods, tools, monitoring and evaluation indicators ▪ Develop research protocol, accompanying tools, guidelines ▪ Conduct research studies in selected countries, including PICs, Philippines ▪ Data analysis, preliminary reports ▪ Conduct meetings of steering group, partners, Member States to analyse reseach results and policy	Partnership and steering group formed. Baseline assessments completed. Project proposal drafted. Consultation meetings held. Research protocol drafted. Missions to selected participating countries completed; research initiated.	**Phase 1: 2007** Communications, STC recruitment, steering group consultations; project proposal; baseline assessments. Consultations [cost-sharing expected] **Phase 2: 2008-2009** Research study costs, including country implementation, data analysis and reporting, meetings to analyse results **Phase 3: 2009-2010**	WPRO, WHO COLLABORATING CENTRES, OTHER INSTITUTIONS, WHO/HQ, PROFESSIONAL ASSOCIATIONS, ALLIANCES, INCLUDING THE SOUTH PACIFIC CHIEF NURSING OFFICERS ALLIANCE (SPCNOA), AMERICAN PACIFIC NURSE LEADERS COUNCIL (APNLC) RESEARCH TEAMS, ICN, AAAH	Emphasis on enhanced capacities to develop research proposals, monitoring and evaluation indicators, strategies and policies to address the workplace environment, career advancement, job satisfaction, retention, skill-mix and efficiency changes. Aim is for long-term

Product	Activities	Milestones	Phase	Responsible parties	Comment
	options. ▪ Develop plans for implementing policies, monitoring and evaluation ▪ Conducting national evaluations of impact of policy. skill-mix, workplace changes. ▪ Evaluation data analysis and report drafting ▪ Conduct meetings to review evaluation data and plan ongoing interventions, monitoring and evaluation strategies.	Meeting held. Report on meeting and policy interventions, strategies completed. Evaluation studies/missions completed. Evaluation report drafted. Meeting held. Report of meeting and future plans submitted.	National evaluations, STC, report drafting and conduct of evaluation, future planning meeting		monitoring and evaluation, institution of change to improve retention, workplace environments, satisfaction, outcomes. Continued donor/partner support is required for sustainability and monitoring/evaluating the impact of changes.

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

Product	Activities	Milestones	Phase	Responsible parties	Comments
1. Five year nursing/midwifery regional plan, inclusive of partner institutional and/or national plans.	▪ Convene discussions concerning regional education planning and form a multi-partner regional steering group. ▪ Conduct assessments of ongoing work in this areas and institutional needs assessments, workforce projections linked to demands, estimated supply needs, service need requirements, skill-mix, care of vulnerable population groups. ▪ Data analysis and strategic plan drafting ▪ Meetings to reach review/reach consensus on a regional model of nursing/midwifery education and strategy objectives, actions, monitoring/evaluation indicators ▪ Map the outcome levels of each of the regional schools of nursing to determine the possible movement throughout the region to integrate the educational pathways for nurses and midwives. ▪ Implement institutional capacity-building plans aimed at strengthening country educational institutions and	Consultative meetings held. Steering group formed. Project plan written. Planning meetings and consultations held. Participating institutions and Member States identified; assessment tools formulated.	**Phase 1: 2006-2007** Consultative meeting, project plan development by steering group. **Phases 1-2: 2007-2008** STP/institutional contracting, tool formulation, testing. Regional, country assessments (10 countries), mapping, data analysis, strategy drafting Meetings, model development, strategic planning [expect cost-sharing] **Phase 2: 2008-2009** Strengthen existing institutions, academic quality	WPRO; FORUM SECRETARIAT; MOH, MOE, ADB, AUSAID, PROFESSIONAL ASSOCIATIONS/NETWORKS; ACADEMIC INSTITUTIONS; REGULATORY BODIES; WHO CCs, SIGMA THETA TAU, PARTNER and DONOR ORGANIZATIONS	Plans to include assessments of current situation, rational production targets to best meet projected needs of the country; appropriate academic quality standards and appropriate clinical education; and recognition, accreditation processes. Mapping needed as a critical part of broader educational improvements, to establish each of output of Pacific schools of nursing in order to create possible steps and stairs to enable maximum upgrading to international standard without individuals leaving their country.

Product	Activities	Milestones	Phase	Responsible parties	Comments
	standards in developing countries. ▪ Conduct of periodic meetings of steering group and partners to monitor and evaluation progress of implementation of regional plan, based on established indicators with reports disseminated to all stakeholders.		standards in priority Pacific and Asian countries **Phase 3: 2009-2010** 1-2 annual meetings [expect cost sharing]		

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 support effective and efficient use of all categories of health workers.

Product	Activities	Milestones	Phase	Responsible parties	Comments
1. 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.	▪ 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 relevant training (and for use with multiple programmes) ▪ Taskforce established	Planning meeting held 6 months prior to agreed date. Meeting convened. Meeting report disseminated. Taskforce members identified.	**Phases 2-3: 2007-2010** Programme implementation timeline varies across countries [expect cost-sharing] Regional cost-sharing with other programme areas **Phase 1-2: 2007-2008** Expected cost sharing	WPRO; PARTNER INSTITUTIONS AND ORGANIZATIONS, PROFESSIONAL ASSOCIATION REPRESENTATIVES, DONOR PARTNERS, WHO CCs; ICN, MEMBER STATES, USPHS, UNIVERSITY OF IOWA, WHO/HQ	Participants to include senior nursing and HRH or medical officers of Ministries of Health, ORGANIZATIONAL, ASSOCIATION, PARTNER AGENCY, DONOR, INSTITUTIONAL, CC REPRESENTATIVES
2. Nursing/midwifery capacity and standards of care strengthened for patient/population safety, infection control, pandemic preparedness.	▪ Regional protocols developed for regional and national assessments. ▪ Data analysis ▪ Reporting, implementation of capacity-building and corresponding quality improvement programmers	Protocols drafted. Data analysed. Initiation of quality improvement programmes; monitoring/eval.	**Phase 3: 2009-2010**	MEMBER STATES; WHO/WPR, HQ, PARTNER INSTITUTIONS, ORGANIZATIONS, WHO CCs; ICN;	Joint initiatives with other WHO technical areas of work.

Product	Activities	Milestones	Phase	Responsible parties	Comments
3. Leadership for Change programmes instituted, monitored and evaluated, nationally and sub-regionally, through collaborative partnerships.	▪ Leadership for change implementation, monitoring and evaluation in at least 6 countries. ▪ Networked communication established/sustained among programme graduates, between countries to support continued process of change/improvement.	Project plans developed for national and/or sub-regional programmes. Training workshops implemented. Team projects completed. Monitoring and evaluation visits completed.	**Phases 2-3: 2007-2010** [funds previously budgeted for 2006-2007; additional funds required for adding 2+ additional priority countries] **Phases 2-3: 2007-2010** web pages; internet connectivity; hardware/ software)	WHO, ICN, MEMBER STATES, PARTNER INSTITUTIONS	Sustained leadership development and change, policy implementation require national and regional planning and collaborative partnerships with recognized organizations, partners, as well as ongoing monitoring and evaluation of programme outcomes, impact and measures supportive of in-country sustainability of leadership TOT. Communication linkages lay the foundation for continued support, progress in making change.
4. Increased capacity in China, other Asian priority countries, to plan, implement and evaluate nursing education and services in community health, chronic and palliative care (including addiction prevention and care) and models of service delivery for chronic, palliative and community/home care.	▪ Convene partner consultations, identify experts ▪ Implement capacity-building fellowships ▪ 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	Partnership established; core working committee formed. Project plan and training materials developed and translated. Planning meetings held. Model projects implemented at	**Phases 1-2: 2007-2009**	WPRO, CHINA MOH, CHINA AND OTHER NURSING ASSOCIATIONS, UIC WHO CC, MARYKNOLL CHINA SERVICE PROJECT, PARTNER ACADEMIC INSTITUTIONS, FUNDING PARTNERS	Key links to ongoing nursing leadership in HIV/AIDS and chronic care initiatives in China, utilizing established partnerships. At least 1-2 other priority Asian countries to be identified.

Product	Activities	Milestones	Phase	Responsible parties	Comments
5. Increased capacity to analyse, develop, update, implement and monitor and sustain/strengthen regulatory and legislative systems and processes, including regulatory councils/boards.	indicators. ▪ Situational assessments. ▪ Technical experts and partners identified and recruited. ▪ Regulatory and legislative processes, systems developed and/or strengthened in selected identified priority countries.	pilot sites. Situational assessments completed. Partnerships established; and technical experts recruited. Legislative initiatives initiated.	**Phases 1-2: 2007-2009**	WHO, REGULATORY BODIES, PARTNER AGENCIES, ACADEMIC INSTITUTIONS AND CCs;	An integral component of WPR health systems work-plan.

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, 2005

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
1	American Samoa	2003	3.10	49	0.78	15	0.24	2	0.03	127	2.03	1	0.02
2	Australia	2004	12.78	54 800	2.73	9 400	0.47	18 600	0.93	159 600	7.94	14 500	0.72
3	Brunei Darussalam	2004	7.92	463	1.29	68	0.19	41	0.11	1 748	4.86	527	1.47
4	Cambodia	2004	0.70	2 122	0.16	241	0.02	577	0.04	4 516	0.35	1 754	0.13
5	China, PR of	2004p	...	1 892 000/x	1.46	(2001) 136 520	(2001) 0.11	(2002) 357 659	(2002) 2.78	1 286 000	0.99	(2001) 42 000	(2001) 0.03
6	Cook Islands	2003	6.63	27	1.47	18 /w	0.98	2	0.11	60	3.26	15	0.82
7	Fiji	2004	...	339	0.40	30	0.04	(2003) 87	(2003) 0.11	1 682	1.99	...	...
8	French Polynesia	2004 est	...	447/e	1.78	113/e, f	0.41	100/e	0.40	(2000) 824	(2000) 3.59	(2000) 93	(2000) 1.58
9	Guam	1999	...	166	1.11	31/f	0.21	(1997) 57	(1997) 0.38	(1997) 647/g	(1997) 4.34	...	...
10	Hong Kong /p,y	2005	7.95	11505/m	1.65	1941/m	0.28	1 583	0.23	35 465/n	5.09	4 917	0.71
11	Japan	2004	13.93	270 371	2.12	95 197	0.75	241 369	1.89	1 146181 /q	8.98	25 257	0.20
12	Kiribati	2004	3.28	20	0.22	3	0.03	2	0.02	238	2.65	32	0.36
13	Republic of Korea	2004	7.97	97 404	2.03	21 344	0.44	53 492	1.11	202 012	4.20	8 628	0.18
14	Lao PDR /s,t	2005	...	1 283	0.23	83	0.02	276	0.05	5291/r	0.93	...	...
15	Macao	2004	...	1024/e	2.20/e	150	0.33	...	...	1 063	2.33	...	...
16	Malaysia	2005	3.30	21 122	0.81	2 751	0.11	2 539	0.10	44 120	1.69	15 618	0.60
17	Mariana Is., Commonwealth of the	1999	2.53	31	0.45	3	0.04	4	0.06	123	1.77	14	0.20
18	Marshall Is., Republic of the	2000	...	24	0.46	4	0.08	2	0.04	152	2.93	...	...
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	2004	6.55	6 590	2.62	438	0.17	913	0.36	7 915	3.14	616	0.25
21	Nauru	2004	5.94	5	5.00/e	1	0.10/e	4 /u	0.40/e	48	4.75/e	2	0.20/e
22	New Caledonia	2002	8.84	476	2.20	126	0.58	97	0.45	1 128	5.23	83	0.38
23	New Zealand	2004	...	(2003) 8 790	(2003) 2.19/a,z	(2003) 1 582	(2003) 0.55/a,z	(2002) 3 808	(2002) 1.02/z	34 660/aa	8.54/a,z	3780/ab	0.93/a,z
24	Niue	2004	12.95	3	1.76	2	1.18	1	0.59	14	8.24	2	1.18
25	Palau	2005	...	(2003) 25	(2003) 1.23	(1998) 2	(1998) 0.11	(1998) 1	(1998) 0.06	111 /b	5.58	(1998) 1	(1998) 0.06
26	Papua New Guinea	2005	...	750	0.13	182	0.03	...	...	8 914	1.50	567	0.10
27	Philippines	2004	8.21	93 862	1.14	45 903	0.56	49 667	0.60	352 398	4.26	136 036	1.65
28	Samoa	2005	1.27	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	2005	6.78	6 748	1.55	1 277	0.29	1 330	0.31	19 820[/d]	4.56	347	0.08
30	Solomon Islands	2005	1.86	89	0.19 [/e]	52	0.11 [/e]	53	0.11 [/e]	620	1.30 [/e]	74	0.16 [/e]
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[/h]	0.39	23[/j]	0.23	(2002) 4	(2002) 0.04	342	3.37	(2002) 21	(2002) 0.21
33	Tuvalu	2003	5.02	4	0.42	2	0.21	2	0.21	30 [/k]	3.14	10	1.05
34	Vanuatu	2004 est	...	29	0.14	...	...	...	...	312	1.45	50	0.23
35	Viet Nam	2004	...	48 215	0.59	...	...	25 165	0.31	49 534	0.60	17 610	0.21
36	Wallis & Futuna	2003	...	11[/v]	0.74 [/a]	4	0.27	...	...	...	...	5	0.34

... Data not available.
est. Estimate
* Includes midwives.
p Preliminary
[/a] Only hospitals with reported number of hospital beds are included.
[/b] Rectified data.
[/c] Refers to registered nurse, licensed practical nurse and nursing assistant
[/d] Includes assistant nurses
[/e] Computed by HIN, WPRO
[/f] Refers to dental surgeons
[/g] Includes midwives
[/h] Refers to government doctors only
[/j] Includes dental officers and dental therapists
[/k] Includes Bachelor and Diploma graduate nurses
[/m] Refers to those with full registration on both the local and oveseas list
[/n] Refers to registered and enrolled nurses
[/o] Refers only to pharmacy technician
[/p] Health workers counted regardless of whether they are actually working in the profession or not
[/q] Includes nurses, public health nurses and assistant nurses
[/r] Includes medical assistants
[/s] Refers to all hospitals, ministries and health facilities at central, regional, provincial, and district level.
[/t] Includes medical staff of Ministries of Health, Public Security and Defence; Does not segregate between administrative (+/- 10%) and curative staff; Does not include non medical staff associated to the health system (maintenance, management, accounting
[/u] Dispensers only
[/v] Refers to physicians and specialists
[/w] Includes six dental nurses.
As of 7 August 2006