

**Regional Strategy on Strengthening
Health Workforce Education and
Training in South-East Asia Region
(2014–2019)**



**World Health
Organization**

Regional Office for South-East Asia

SEA-HSD-379
Distribution: General

Regional Strategy on Strengthening Health Workforce Education and Training in South-East Asia Region (2014–2019)

© **World Health Organization 2015**

All rights reserved.

Requests for publications, or for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – can be obtained from SEARO Library, World Health Organization, Regional Office for South-East Asia, Indraprastha Estate, Mahatma Gandhi Marg, New Delhi 110 002, India (fax: +91 11 23370197; e-mail: searolibrary@who.int).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

This publication does not necessarily represent the decisions or policies of the World Health Organization.

Printed in India

Contents

	<i>Page</i>
1. Introduction.....	1
2. WHO normative contributions.....	2
3. Health workforce: The regional context from South-East Asia.....	8
4. Transformative health professional education: status of application of WHO recommendations	11
5. Strengthening health workforce education and training in the Region: Vision, mission, goals and strategic objectives.....	13
6. Success factors for implementation of the Strategy	18

Annexes

1. Health workforce: global context	19
2. Health professional education systems: selected country self assessment....	22
3. Scope of application of the top five recommendations relevant to Member States in the Region	50
References.....	61

1. Introduction

The United Nations General Assembly resolution 66/288, “The future we want”^[1], in 2012 recognizes that health is a precondition for and an outcome and indicator of all dimensions of sustainable development. The enjoyment of the highest attainable standards of health is one of the fundamental rights of every human being, without distinction of religion, political belief, economic or social condition^[2]. Poor health is one of the root causes of vulnerability and poverty, while in turn poverty, inequality and social exclusion further contribute to ill health.

Healthy populations and well-performing national health systems are fundamental for equitable, inclusive and sustainable development. The attainment of health objectives requires coordinated action and solidarity at the international, regional, national and local levels.

By 2014, some countries were not on track to achieve the health-related Millenium Development Goals (MDG). Weak health systems and inadequate access to health services by populations in need are the root causes. Both the unfinished goals, and the emerging health agendas – in particular NCDs, injuries and mental health – require adequate health delivery systems for which a trained and skilled health workforce is the most critical determinant of health systems functioning.

Universal health coverage (UHC) means that all people have access without discrimination to nationally determined sets of the required promotive, preventive, curative, palliative and rehabilitative essential health services including access to essential, safe, affordable, effective and quality medicines. UHC also envisages that the use of these services does not expose the users to financial hardship by excessive out-of-pocket (OOP) expenditure. UHC is one of the key instruments to achieve better standard of health of the population.

The past decade, following the *2006 World Health Report* on human resources for health (HRH), saw increased recognition of the crucial importance of HRH, as reflected by numerous World Health Assembly resolutions. Despite some encouraging progress in health workforce development, challenges remain in the WHO South-East Asia Region. These include, low investment in HRH, fundamental discrepancies between demand and supply of health workers, and inadequate HRH planning. As a consequence, health workforce shortages, lack of competency, inequitable distribution, poor work environments, and shortage of medicines and medical equipment are not uncommon in Member States.

Future demands for the health workforce are affected by the evolving disease burden. This is characterized by a greater need for prevention, treatment and care of noncommunicable diseases; demographic changes resulting in increased ageing population for which different cadres of health workforce catering to the specific needs of health-care and psychosocial support to the elderly will be needed.

2. WHO normative contributions

The World Health Report 2006^[3] analyses the important role played by adequate numbers of committed health workforce with proper skill-mix, especially at the primary health-care level, in achieving good health outcomes^[4]. Contribution of nurses to population health is significant, and a higher density of nurses increases the availability of vaccination services and ensure that more children are vaccinated. After controlling for other determinants, level of income does not contribute to improved immunization coverage. Lack of health workers can be a major constraint in vaccination coverage in developing countries^[5].

To address the critical shortage of the health workforce in rural and disadvantaged areas, WHO in 2010 issued global policy recommendations on increasing access to health workers in remote and rural areas through improved retention^[6]. Table 1 describes all 16 recommendations clustered in four groups of policy interventions: education, regulatory, financial incentives, professional and personal support.

Table 1: WHO global policy recommendations on increasing access to health workers in remote and rural areas

Interventions to improve attraction, recruitment and retention in remote rural areas	WHO 2010 global policy recommendations	
	Quality of evidence	Strengths of recommendation
A. Education		
A1 Students from rural backgrounds	Moderate	Strong
A2 Health professional schools outside major cities	Low	Conditional
A3 Clinical rotations in rural areas during studies	Very low	Conditional
A4 Curricula that reflect rural health issues	Low	Strong
A5 Continuous professional development for rural health workers	Low	Conditional
B. Regulatory		
B1 Enhanced scope of practice	Very low	Conditional
B2 Different types of health workers	Low	Conditional
B3 Compulsory service	Low	Conditional
B4 Subsidized education for return of service	Low	Conditional
C. Financial incentives		
C1 Appropriate financial incentives	Low	Conditional
D. Professional and personal support		
D1 Better living conditions	Low	Strong
D2 Safe and supportive working environment	Low	Strong
D3 Outreach support	Low	Strong
D4 Career development programmes	Low	Strong
D5 Professional networks	Low	Strong
D6 Public recognition measures	Low	Strong
	2 very low, 13 low 1 moderate quality	8 strong 8 conditional recommendations

In Table 1, despite low quality of evidence (only one of moderate and 13 low and two of very low quality), there are eight out of the total 16 that were strongly recommended. The remaining eight are conditional recommendations. Among eight strong recommendations, that of recruitment of students from rural backgrounds and on curriculum reform reflecting rural health issues (under education strategies), six others belong to the professional and personal support category, which are low-cost and easy to implement (such as improved living conditions, safe and supportive work environment, outreach support to rural health workforce, career ladders and progressions, support of professional network and public recognitions) have been strongly recommended.

Global concern and movement on transformative health professional education was triggered by the 2009 WHO-initiated programme on transformative scaling up of health professional education. The programme aims to increase production and improve quality and relevance of health professional education. The Global Independent Commission on Education of Health Professionals for the 21st Century was established and launched its independent report in December 2010^[7]. Among other things, it calls for reform in health professional education throughout the world to meet health needs of populations.

Transformative learning of conceptual approaches consists of three fundamental shifts:

- (1) from fact memorization to search, analysis and synthesis of information for decision-making;
- (2) from seeking professional credentials to achieving core competencies for effective teamwork in health systems; and
- (3) from non-critical adoption of educational models to creative adaptation of global resources to address local priorities.

The report suggests close linkages between health systems and health professional education with a three-dimensional framework of education:

- (1) institutional design, which specifies the structure and functions of the education system;
- (2) instructional design, which focuses on processes of learning; and
- (3) educational outcomes, which deal with the desired results.

Institutional design is determined by three aspects:

- (1) systemic level (stewardship and governance, financing, resource generation and service provision);
- (2) organizational level (ownership, affiliation, internal structure); and
- (3) global level (stewardship, networks and partnerships).

Instructional design involves:

- (1) criteria for admission;
- (2) competencies, as they are defined in the process of designing the curriculum;
- (3) channels of instruction; and
- (4) career pathways, which are the options that graduates have on completion of their professional studies.

To achieve the goal of transformative and interdependent professional education for equity in health, the Commission offers 10 major recommendations for reform in both instructional and institutional reform. Six are for instructional reforms (competency-driven, interprofessional and transprofessional education, IT-empowered, local–global, educational resources, and new professionalism), and four are institutional reforms (joint planning, academic systems, global networks and culture of critical inquiry).

The conceptual thinking by the Commission is not easy to translate into policy and actions. In parallel, in 2013, WHO published 11 recommendations for transforming and scaling up health professional education and training^[8]. The recommendations offer guiding principles for transformative education, and provide sound policy and technical guidance, particularly in pre-service education and continuous professional development. It offers recommendations on how best to achieve the goal of producing graduates who are responsive to the health needs of the population. There are 11 recommendations, along with quality of supporting evidence (low, moderate, high), strength of the recommendation (low, conditional, strong), and key considerations for implementation (see Table 2).

Table 2: Eleven recommendations on transformative health professional education.

Recommendations	Quality of evidence	Strengths of recommendation	Key considerations
I. Faculty development			
1. Design and implement continuous development programmes for faculty relevant to evolving health-care needs of communities	Moderate	Conditional	Promote and reward teachers, institutional culture, appropriate goals and priorities and conduct needs assessment
2. Mandatory faculty development programmes that are relevant to the evolving health-care needs of their communities	Low	Conditional	Appropriate goal and priorities, needs assessment, develop different programme
3. Innovative expansion of faculty through recruitment of community-based clinicians and health workers as educators	Low	Conditional	Based on context, up-skilling and in-service education for educators, support scaling up of such educators
II. Curriculum development			
4. Adapt curricula to the evolving health-care needs of communities	Low	Conditional	Regular review and update, working with existing institutional structure and with continuous evaluation
III. Simulation methods			
5. Apply simulation methods of contextually appropriate fidelity levels in the education of health professionals	Moderate	Strong	Availability of experienced staff, space and equipment; seamless integration with curriculum
IV. Direct entry of graduates			
6. Direct entry of graduates from relevant undergraduate, postgraduate or other educational programmes into different or other levels of professional studies	Moderate	Conditional	Give consideration in any study and implementation process

Recommendations	Quality of evidence	Strengths of recommendation	Key considerations
V. Admission procedures			
7. Targeted admissions policies to increase the socioeconomic, ethnic and geographical diversity of students	Low	Conditional	Mechanism to ensure completion of the programme, accompanied by curriculum reform and considering preferences of the applicants
VI. Streamlined educational pathways and ladder programmes			
8. Streamline educational pathways, or ladder programmes, for the advancement of practising health professionals	Low	Conditional	Avoid duplication programme, commitment of senior faculty, clear regulation, budget plan, and community contribution
VII. Inter-professional education			
9. Inter-professional education (IPE) in both undergraduate and postgraduate programmes	Low	Conditional	Both quantity and quality relevance, availability of resources and programmes
VIII. Accreditation			
10. Accreditation of health professionals' education where it does not exist, and strengthen the same where it does exist	Low	Strong	Based on standard, legislation support, independently and transparently, with systematic periodic evaluation.
IX. Continuous professional development (CPD) for health professionals			
11. CPD and in-service training of health professionals relevant to the evolving health-care needs of their communities	Moderate	Conditional	Focusing on the areas where there is a shortage of resources.
	4 Moderate 7 Low	9 Conditional 2 Strong	

The guideline also mentions the good practices of governance and planning including political commitment at the highest level; formal collaboration between MoH, MoE and other related sectors; consultative national plans to produce and retain graduates; and strengthening national and subnational institutional capacities and mechanisms.

Despite seven scores of low quality of evidence out of a total of 11, only two were strongly recommended: use of simulation methods in the education of health professionals and accreditation of health professionals' education. The other nine are conditional recommendations based on country context. Annex 1 synthesizes the global context of the health workforce.

3. Health workforce: The regional context from South-East Asia

Critical shortage of health workforce remains a problem in the Region; five (Myanmar, Indonesia, Bhutan, Timor-Leste and Bangladesh) out of 11 Member States are facing a critical shortage of health workforce. The regional average is slightly below the benchmark of 22.8 doctors, nurses and midwives per 10 000 population (see Table 3). All Member States are also equally coping with maldistribution indicated by a significant urban, rural and geographical gap in their health workforce. In Maldives where the health workforce density is higher than the regional threshold, maldistribution is noted at the atoll level where transportation facilities are inadequate. The doctor:nurse ratio is also below average in Bangladesh with more doctors than nurses.

Table 3: Health personnel per 10 000 population, (2014)

	Physicians	Nursing and midwifery	Physician, nurse and midwives	Doctor: nurse ratio
Democratic People's Republic of Korea*	27.6	40.7	68.3	1.5
Bangladesh	3.6	2.2	5.8	0.6
Bhutan	2.6	9.8	12.4	3.8
India	7.0	17.1	24.1	2.4
Indonesia	2.0	13.8	15.8	6.9
Maldives	14.2	50.4	64.6	3.5
Myanmar	6.1	10.0	16.1	1.6
Nepal	1.7	5.0	6.7	2.9

	Physicians	Nursing and midwifery	Physician, nurse and midwives	Doctor: nurse ratio
Sri Lanka	6.8	16.4	23.2	2.4
Thailand	3.9	20.8	24.7	5.3
Timor-Leste	0.7	11.1	11.8	15.9
Regional average	5.9	15.3	21.2	2.6
Indicative benchmark			22.8	

Source: WHO World Health Statistics 2014

* As there is no report in WHS2014, figures are estimated from country HRH profiles for number of doctors, nurses and midwives in total population.

Technical note:

1. Estimates of health personnel densities refer to the active health workforce, i.e. those currently participating in the health labour market. Data are derived from multiple sources, including national population censuses, labour-force and employment surveys, health-facility assessments, and routine administrative information systems.
2. Due to the wide diversity of available information sources, there is considerable variation in the coverage and quality of data. Figures may be under- or over-estimated wherein it is not possible to determine whether or not they include health workers in the private sector, or due to the double counting of health workers holding two or more jobs at different locations. In addition, health service providers may be working outside the health-care sector, in unpaid and/or unregulated conditions, or not currently engaged in the national health labour market.

Slow progress was noted even after the Twenty-ninth Health Ministers' Meeting and the Fifty-ninth Session of the Regional Committee in Dhaka in 2006 which adopted the Dhaka Declaration on Strengthening the Health Workforce in Member States of the South-East Asia Region and a resolution (SEA/RC59/R6) on Strengthening the Health Workforce in South-East Asia. In addition, the Regional Committee endorsed the draft Regional Strategic Plan for Health Workforce Development (SEA/HSD/289) in 2007. Having been thoroughly reviewed, the Regional Strategic Plan for Health Workforce Development is still valid and has to be fully implemented by Member States.

In response to the global call for action to transform the health professional education to ensure a better response to emerging health needs of the population in the 21st century in September 2012, the Sixty-fifth session of the Regional Committee adopted a resolution SEA/RC65/R7 on Strengthening Health Workforce Education and Training in the Region.

This resolution refers to broader cadres of the health workforce, and not focusing only on select groups such as community health workers.

A Regional Network on Health Professional Education Reforms was formed in 2012 after the launch of the Lancet Commission report. With a start-up grant from the China Medical Board, five countries in Asia, namely Bangladesh, China, India, Thailand and Viet Nam, formed a network for reforming health professional education^[9]. Subsequently, this network was named Asia-Pacific Network on Health Professional Education Reforms (ANHER), with additional countries of the Asia-Pacific as members. The ANHER members had collectively developed and adopted a common protocol and tools to survey their national and institutional levels of medical, nursing and public health education, as well as assess final-year graduates on their attitudes, competencies and readiness to serve in rural health services. These evidences serve as a platform for national strategies to transform their health professional education systems to be more responsive to health needs of the population, the demographic, epidemiological and economic changes, as well as health systems dynamics^[10,11].

The resolution urges Member States to, *inter alia*, conduct a comprehensive assessment of the current situation of health workforce education and training, based on an agreed regional common protocol. The assessment serves as a foundation for evidence-based policy formulation and implementation for strengthening the health workforce education systems. At the same time, the resolution also requests the Regional Director to support Member States in conducting the assessment, convene regional technical consultations to review the results of the country assessments, and formulate a Regional Strategy on Strengthening Health Workforce Education and Training in South-East Asia. The Regional Director was also requested to submit the Regional Strategy on Strengthening Health Workforce Education and Training to the Sixty-seventh Session of the Regional Committee in September 2014.

These concerted parallel movements are important contributing factors for transforming health professional education systems at the country, regional and global level. The Prince Mahidol Award Conference in January 2014^[12] discussed the transformative learning for health equity, bringing together health professionals, educators and key stakeholders in

fostering commitment towards improving and strengthening their institutional and instructional dimensions of education to lead to health equity.

Annex 2 synthesizes the country self-assessment, using a common protocol, of health professional education systems including national, institutional and student assessment of various cadres of professionals such as physicians, nurses and those in public health. Eight Member States have so far submitted a report.

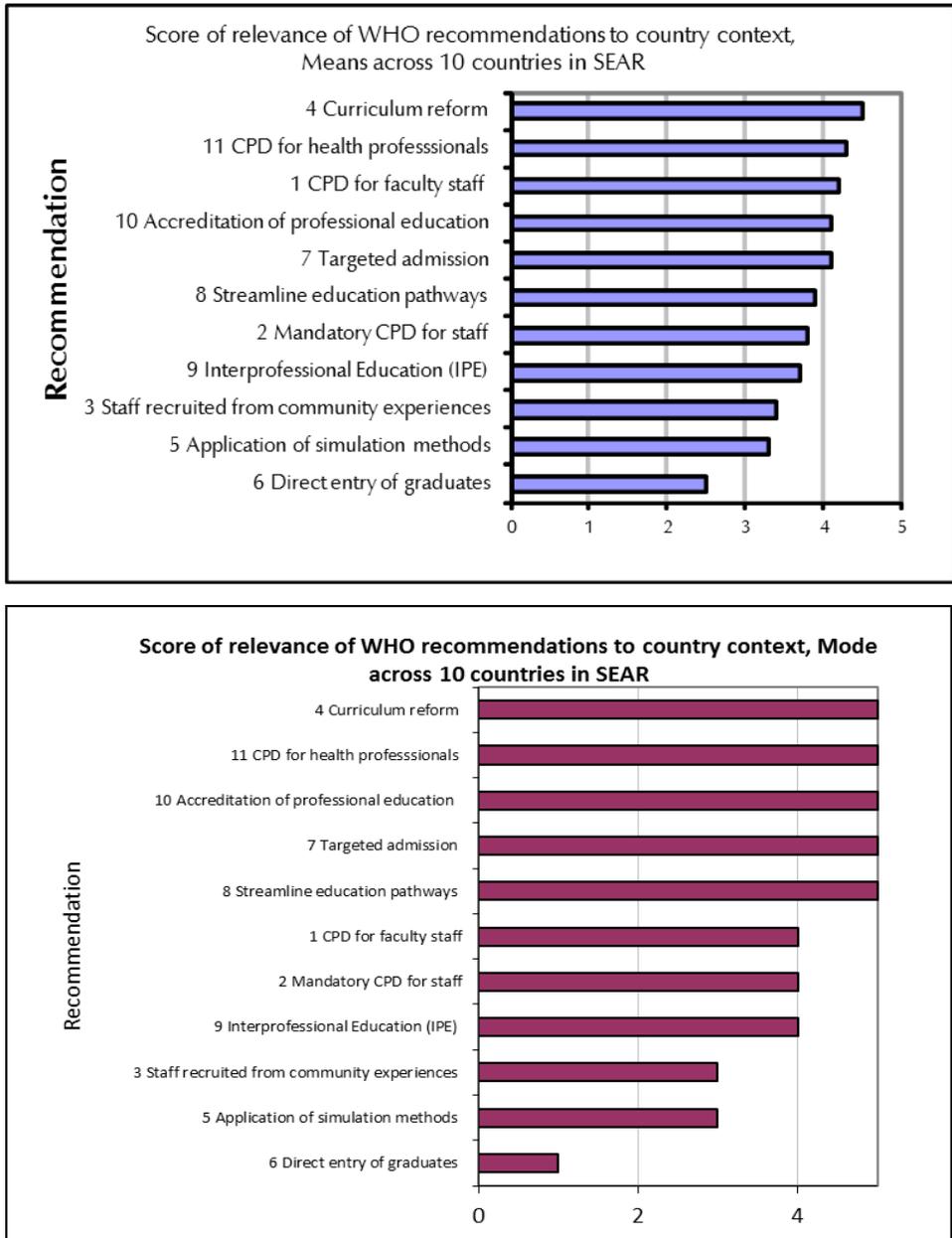
4. Transformative health professional education: status of application of WHO recommendations

A questionnaire survey was sent to all 11 Member States in South-East Asia on the relevance of 11 recommendations proposed by WHO in 2013 (see also Table 2)⁸ on scaling and transforming health professional education to the country context using a scoring of 1-5, and the scope of application using a qualitative description. Ten country focal points completed the survey questionnaire (see Figure 1).

The survey results clearly indicate that the top five recommendations, using an average score of more than four, are relevant to the country context in the South-East Asia Region: curriculum reform, continued professional development of health professionals, continued professional development for faculty staff, accreditation, and targeted admissions. The three least relevant recommendations are direct entry of graduates, application of simulation methods, and staff recruited from community experiences.

These top five relevant recommendations are analysed for the scope of their application by each of the 10 Member States. In Annex 3, Table 1 to Table 5 describe the scope of the application by each Member State, focusing on the three categories of the health workforce: physicians, nurses and midwives, and the public health cadre. This understanding is important for drafting the Regional Strategy on Strengthening Health Workforce Education and Training in the Region.

Figure 1: Score of relevance of WHO 11 recommendations to country context, mean and mode



Source: Survey from 10 countries of the WHO South-East Asia Region

5. Strengthening health workforce education and training in the Region: Vision, mission, goals and strategic objectives

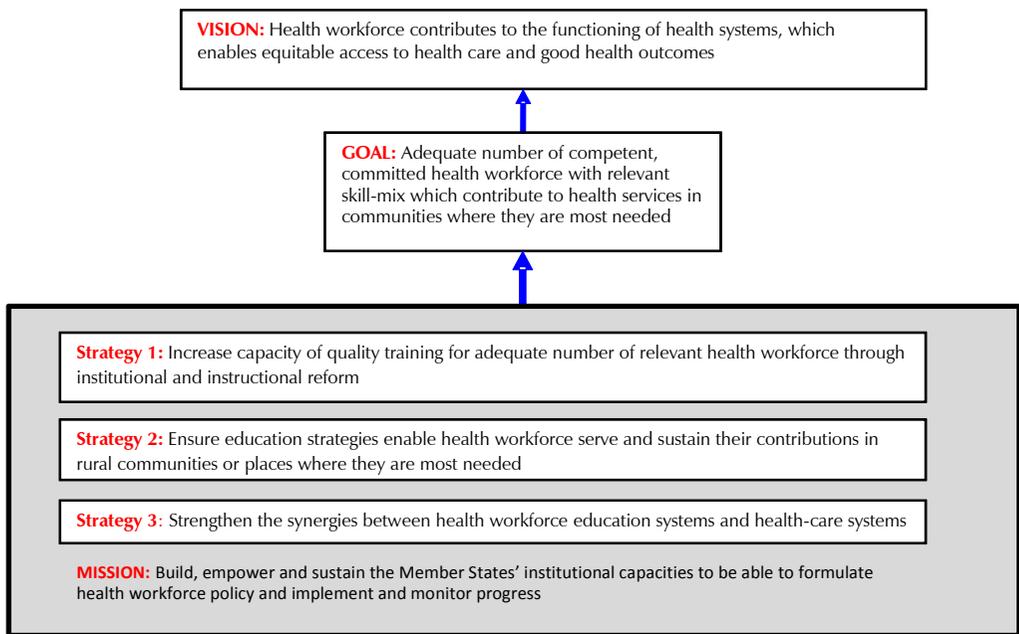
A review of the Regional Strategic Plan for Health Workforce Development in the South-East Asia Region (2007) concluded that the strategic plan is still valid and needs to continue. Though there is no assessment of the outcome of the implementation of the plan, the progress made was observed. For example, several Member States had produced their national strategies and/or country Human Resource for Health profiles (see Box 1). However, the outcome of the implementation of these national health workforce plans is yet to be assessed.

Box 1: Achievement on HRH plan and profiles

- Bangladesh human resource for health country profiles (2013)
- Bhutan HRH country profiles (2014)
- Democratic People’s Republic of Korea strategic plan for the development of public health human resources (2011–2015), and country HRH profiles 2012
- Indian Twelfth Five Year Plan (2012–2017): social sector (including health and education), and National Health Profiles (2012): chapter 5 on human resources in health sector
- Indonesian national workforce development plan 2011–2025, and Country Coordination and facilitation
- Maldives National Health Workforce Strategic Plan (2014–2018)
- Myanmar Health Workforce Strategic Plan 2012–2017
- Nepal summary finding of HRH database (2013), Nepal HRH Strategic Plan (2011–2015)
- Timor-Leste HRH country profiles (2012), and National Health Workforce Plan 2007–2015
- Thailand Health Profile, including chapter on health workforce, was maintained for the last two decades by Ministry of Public Health.

It should be noted that the Strategic Plan on Strengthening Health Workforce Education and Training in the Region aims to foster and strengthen country capacities in implementing their own ongoing national strategies on the health workforce, with a focus on transforming health workforce training. Scaling up the transformative health workforce education alone is not enough, it must be backed up by interventions which support the retention of health workforce in areas of service where they are mostly needed.

Figure 2: Conceptual framework of goals, missions and strategic approaches



The conceptual framework in Figure 2 gives an overview of how to achieve the vision and goals through the three inter-related strategies framed under the mission of empowering Member States to be able to formulate, implement and monitor progress of their health workforce policies.

Vision: Health workforce contributes to the functioning of health systems which enables equitable access to health care and good health outcomes.

Goal: Adequate number of competent, committed health workforce with relevant skill-mix which contribute to health services in communities where they are most needed.

Mission: Build, empower and sustain the Member States' institutional capacities to be able to formulate health workforce policy, implement and monitor progress.

Strategic objectives:

The strategic objectives are to:

- (1) Increase capacity of quality training for adequate number of relevant health workforce through institutional and instructional reforms (see Box 2).
- (2) Ensure education strategies enable the health workforce to serve and sustain their contributions in rural communities or places where they are most needed.
- (3) Strengthen the synergies between health workforce education systems and health-care systems.

Box 2: Major components of instructional and institutional reform of health professional education^[7]

Instructional reforms should:

- adopt competency-driven approaches to instructional design;
- adapt these competencies to rapidly changing local conditions drawing on global resources;
- promote interprofessional and transprofessional education that breaks down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams;
- exploit the power of information technology to advance learning;
- strengthen educational resources, with special emphasis on faculty development; and

- promote a new professionalism that uses competencies as objective criteria for classification of health professionals, and that develops a common set of values around social accountability.

Institutional reforms should:

- establish in every country joint education and health planning mechanisms that take into account crucial dimensions, such as social origin, age distribution, and gender composition, of the health workforce;
- expand academic centres to academic systems encompassing networks of hospitals and primary-care units;
- link together through global networks, alliances, and consortia; and
- nurture a culture of critical inquiry.

Given the three Strategic Objectives, Table 4 proposes a few key actions by these objectives and a few key monitoring indicators.

Table 4: Actions by Strategic Objective and monitoring indicators

Strategic Objectives	WHO actions	Country actions	Monitoring Indicators
I. Increase capacity of quality training for adequate number of relevant health workforce through institutional and instructional reforms.	<ol style="list-style-type: none"> 1. Convene regional consultation on translating evidence on effective scaling and transforming health professional education into country actions. 2. Support, enable cross-country learning and sharing. 3. Address specific needs of Member States with limited in-country production capacities through inter-country collaboration for training. 	<ol style="list-style-type: none"> 1. Strengthen political and financial commitments for investment in health workforce education. 2. Based on outcomes of comprehensive assessment of health workforce education systems involving all relevant stakeholders (both instructional and institutional), prioritize and implement actions. 3. Based on outcomes of long-term projection of demand for different cadres of 	<ol style="list-style-type: none"> 1. WHO: <ul style="list-style-type: none"> • Regional consultations convened. • Inter-country collaboration agreed. 2. Country : <ul style="list-style-type: none"> • Increased investment in health workforce education system. • Based on country action plans: number of health workforce training institutes accredited, application of IPE, CPD, curriculum reviews (including socially accountable graduates), use of simulation, ICT for learning, improved

Strategic Objectives	WHO actions	Country actions	Monitoring Indicators
	4. Monitoring progress annually by consultation workshop and reporting requirement.	health workforce, produce cadre mix including mid-level health workforce ^[13] and other potential task shifting.	infrastructure, apply targeted admission, application of national licensing exam, additional number of health workforce trained. <ul style="list-style-type: none"> • Socially accountable graduates (rural attitude, intention to work in rural settings, etc.).
II. Ensure that education strategies enable health workforce serve and sustain their contributions in rural communities or places where they are most needed.	1. Convene regional consultation, translating evidence on effective education strategies for rural retention into country actions.	1. Strengthen political and financial support for implementing education strategies which support rural retention. 2. Based on the outcome of assessment of the scope of application of five out of the 16 WHO global policy recommendations on rural retention (2010), its effectiveness and scale-up as appropriate.	1. Scope (national/sub-national) and number of cadres which apply education strategies in support of rural retention 2. Policy/legislative/regulatory framework in support of rural retention 3. Before and after policy, average number of years that remain in rural health services, percentage of absenteeism.
III. Strengthen the synergies between health workforce education systems and health-care systems	1. Provide technical support strengthening M&E systems. 2. Mid-term reviews of five-year strategic plans.	1. Effective collaboration/interlink between health workforce education and health service systems. 2. Devise policy and regulatory framework for private health workforce education institutes to be socially accountable. 3. Strengthen use of health workforce information systems.	1. Functioning HRH focal point/unit in the MoH. 2. Improved collaboration between health workforce education and health systems. 3. Improved social accountability by private health workforce education institutes. 4. Improved use of health workforce information.

6. Success factors for implementation of the Strategy

Given the slow progress since the launch of the 2007 Regional Strategic Plan for Health Workforce Development in the South-East Asia Region and in the implementation of the Regional Strategy on Strengthening Health Workforce Education and Training in the South-East Asia Region (2014–2019), a few key success factors have been identified.

- (1) Political and financial commitment by Member States.
- (2) Functioning focal point/units in MoH who are able to translate the regional strategies into national policy and actions for which intersectoral actions are needed, notably by ministries of education, finance, labour and employment, civil service commission and health, and related health professional councils.
- (3) Cross-country learning, sharing and supporting are additional factors contributing to success.
- (4) Convening by the WHO Regional Office for South-East Asia proceedings to monitor progress and achievement, not only of health workforce education but also of holistic health workforce systems such as management, information systems and rural retention. This can be monitored through reporting by Member States on a regular basis, and this can be mandated through the reporting requirement, such as every two years, in the Regional Committee resolution in September 2014.

Annex 1

Health workforce: global context

The third Global Forum on Human Resources for Health held in Recife, Brazil in 2013^[14] updated the global progress achieved since the first global forum on HRH and the Kampala Declaration in 2008, followed by the second global forum in Bangkok in 2011^[15], in terms of health workforce. It also introduced the concept of availability, accessibility, acceptability and quality as health workforce development goals^[16] (see Box 3).

Box 3: Global health workforce situation: available, accessible, acceptable and quality^[17]

Availability refers to the sufficient supply and stock of health workers, with relevant competencies and skill mix, that correspond to the health needs of the population. It is noted that 83 countries fall below the threshold of 22.8 skilled health professionals per 10 000 population.

Accessibility refers to equitable access to health workers, including in terms of travel time and transport, opening hours at work and corresponding workforce attendance, whether the infrastructure is disability-friendly, referral mechanisms and the direct and indirect cost of services, both formal and informal. Access is one of the national goals: "all people, everywhere, shall have access to a health worker". Variations in spatial accessibility to health services are an inherent feature and challenge in most countries.

Acceptability refers to the characteristics and ability of the workforce to treat everyone with dignity, create trust and enable or promote demand for services. Acceptability is enhanced when users of services have access to a health workforce that meets their expectations in terms of its profile, sex and age composition, its skills mix, and cultural awareness. Using the sex distribution of physicians and the ratio of nurses to physicians as proxies for acceptability, it was observed that there is a wide variation in health workforce configurations and no major pattern in skill mix. Only high-income countries demonstrated a tighter clustering in the ratio of nurses to physicians.

Quality refers to the competencies, skills, knowledge and behaviour of the health worker as assessed according to professional norms and as perceived by users. Of 36 countries having accurate data, 33 have some formal or informal mechanism for accrediting educational institutions in place or being developed, 27 countries have started to or plan to improve the quality of education of health professionals, and 35 countries have mechanisms in place to regulate access to the practice of medicine, dentistry and pharmacy. The situation is more varied in the case of midwifery and nursing. However, the effectiveness of such mechanisms is not always clear. In general, there is no proactive surveillance of the quality of practice in the form of periodical site visits. Performance is deemed to be correct in a reactive manner, such as until a complaint is lodged or some error, misbehaviour or health problem is detected.

The global review for the Third Global Forum throws up a few common themes^[16]:

- There are shortages of some categories of health workers, and more are predicted.
- Although skills-mix imbalances persist, advanced practitioners, midwives, nurses and auxiliaries are still insufficiently used in many settings.
- Availability and accessibility continue to vary widely within countries because of the difficulties in attracting and retaining workers.
- Adapting education strategies and the content of pre-service education is a major challenge.
- Health workers need to be continually motivated in an enabling environment.
- Performance assessment and quality of care are afforded insufficient priority.
- Capacity to estimate future needs for human resources for health and design longer term policies varies between countries.
- Human resource information data and systems to meet the needs of decision-makers require strengthening and investment.

It is noted that countries that have shown progress in improving the essential availability, accessibility, acceptability and quality dimensions have in common strong political commitment. They have also strived to improve the health workforce in a systematic manner, linking health workforce development initiatives with broader action to strengthen health systems, and that maintain continuity of policies and implementations.

To narrow the deficiencies in health workforce, 10 action points were proposed:

- (1) Recognize the centrality of the health workforce in translating the vision of UHC into improved health care on the ground.
- (2) Assess the gap between the need for a health workforce, actual supply (stock, skills mix and competencies) and the population's demand for health services.
- (3) Formulate human resources for health policy objectives that encapsulate the vision for the health system and services.
- (4) Build the data, evidence base and strategic intelligence required to implement and monitor the policy objectives and sustain effective management.
- (5) Build and sustain the technical capacity to design, advocate for and implement policies.
- (6) Build political support at the highest level to ensure continuity in the pursuit of universal health coverage.
- (7) Reform the governance of institutional human resources for health environment.
- (8) Assess the cost of the various scenarios of health workforce reforms.
- (9) Encourage international partners to focus their support and report on their official development assistance for building the capacity of health systems.
- (10) Encourage international partners to address transnational issues and strengthen global human resources for health governance, collaborative platforms and mechanisms.

Annex 2

Health professional education systems: selected country self assessment

Eight out of the 11 Member States of the Region submitted self-assessment reports of their health professional education systems. The key messages are outlined below:

1. Bangladesh

Context

To minimize health workforce shortage, significant increases in capacities in education through establishing new faculties and colleges and improving the quality of training were noted. The Bangladesh Medical and Dental Council (BMDC) and Bangladesh Nursing Council (BNC), professional regulatory bodies, ensure the quality and standards of doctors, training and practice of dentists and nurses. Though a comprehensive national health development strategy covers the health workforce development plan, there is a lack of effective coordination across ministries and between public and private training institutions as well as inadequate political commitment.

The density of health professionals was 5.4 doctors and 2.1 nurses (total 7.7 doctors and nurses) per 10 000 population. This health workforce population density is three times below the global indicative benchmark of 2.28 per 1 000 population. Bangladesh is one of the countries facing critical shortage where maldistribution (measured by the urban-rural gap and regional gap) aggravates the situation. Skill-mix is a problem, with doctors outnumbering nurses; the country has one doctor per 0.4 nurses [2.5 times more doctors than nurses], male doctors outnumber females (6:1), reflecting limited opportunities for females in access to medical education. Urban areas have almost 17 times more doctors than rural areas^[18] (see Table 1).

Table 1 Distribution of doctors, nurses and dentists per 10 000 populations

	Doctors	Nurses	Dentists	All	Nurse per doctor ratio
Division					
Barisal	1.7	0.9	0.3	3.08	0.5
Chittagong	4.8	3.6	0.3	8.8	0.7
Dhaka	10.8	2.8	0.5	14.2	0.2
Khulna	1.3	1.9	0.05	3.3	1.4
Rajshahi	2.1	1.1	0.0	3.2	0.5
Sylhet	2.2	0.4	0.0	3.2	0.1
Location					
Rural	1.1	0.8	0.08	2.1	0.7
Urban	18.2	5.8	0.8	24.9	0.3
Gender					
Male	4.5	0.2	0.2	5.0	0.05
Female	0.8	1.8	0.03	2.7	2.1
All	5.4	2.1	0.3	7.7	0.4

Medical education

There are 76 medical colleges (23 government and 53 non-government), 27 dental colleges (9 government and 18 non-government), 81 institutes of health technology (IHT) (7 government and 74 non-government), 111 medical assistant training schools (MATS) (8 government and 103 non-government), 21 nursing colleges (7 government and 14 non-government), 95 nursing institutes (43 government and 52 non-government), 27 midwifery institutes (all government) and 11 junior midwifery institutes (all government). Given these production capacities, the size of the health workforce consistently increases, but it is not sufficient to cater to the large population of Bangladesh.

The national strategic plan aims to produce experts and improve the quality of doctors. At present, there are 58 000 practising doctors and 76 medical colleges. Public medical schools are responsible for producing skilled doctors while private faculties established standards of excellence for medical studies and research in the country.

The Ministry of Health and Family Welfare and professional councils supervise and ensure that medical colleges are qualified. Public medical colleges are heavily subsidized by the government, have better infrastructure, equipment and teaching facilities. Private medical colleges are financed from tuition fees, teaching hospital service provisions and donations.

The MBBS curriculum was updated in 2012 focusing on competency and community orientation. Public medical education curriculum is planned to be updated every 10 years, while private curriculum is due for an update every five years in line with the dynamic health and health systems needs. National curriculum and mandatory training workshops, both public and private, are managed by the Centre of Medical Education (CME). Both public and private medical colleges have quality assurance schemes (QAS) and an organizational framework for implementing this quality assurance as required by Bangladesh Medical and Dental Councils as accreditation agencies. Though medical students have demonstrated a positive attitude about working in rural areas, their preferred choices are public health services in urban areas. Unfortunately, attrition of faculty staff is high, as there is no policy of financial incentive, performance-based payment, and career advancement opportunities to promote retention.

Challenges and weakness

- (1) There is no provision of formal performance assessment, neither on technical nor pedagogic competency, among public and private medical teachers. However, public medical colleges apply compulsory evaluation of teachers through annual confidential report (ACR), which is a formal performance assessment. It is to be noted that two (out of 53) private medical colleges apply a different mechanism such as feedback from students and peer evaluation.

- (2) There is a need for continuous professional programme (CPD) for teaching staff relevant to the evolving health-care needs of the communities and quality assurance of training, especially private medical colleges.
- (3) There is a need to establish regular monitoring and assessment of the institutional and instructional capacity in public and private medical colleges, their quality, and relevance of education to health needs of the population.
- (4) Practical orientation should be given to teaching staff emphasizing on student assessment techniques, e.g. objective structured clinical/practical examination (OSPE & OSCE), and the application of information technology in support of scaling up teaching.

Nursing education

The government, despite its total commitment to scale up nursing education due to critical shortage of nursing personnel, is faced with the problem of shortage of nurse educators. Building an adequate workforce of nursing teachers is an immediate priority.

Three public nursing colleges of three categories [BSc nursing colleges, nursing colleges (BSC course) and diploma nursing college] were chosen specifically for this study. The key informants were invited for in-depth interviews: 38 faculty and 4 adjunct faculty members from the Mohakhali nursing institute, and 28 teaching staff from diploma nursing colleges. All nursing colleges are supervised by the Directorate of Nursing Services (DNS) and Bangladesh Nursing Council (BNC).

There are no incentives for continuing education for nursing educators, nor any mechanism to monitor staff performance. Infrastructure such as library and training materials are inadequate. Student outcomes are used for purposes of quality assurance. The diploma and B.Sc. nursing colleges are working in collaboration with the medical colleges and teaching hospitals. Nursing students are exposed to community health services which contribute to a positive attitude to rural audiences.

Challenges, strengths and weaknesses

- (1) There is no academic calendar to guide the implementation of the educational programme in these nursing colleges. Hence there may be fragmentation and the curriculum may not be followed, and sometimes there is no reference available for assessment of progress and outcome.
- (2) Some quality assurance mechanisms exist for nursing colleges, though these are not robust. There should be strong quality assurance processes for all public and private nursing colleges.
- (3) There are no effective forums for professional nurses to communicate, share experiences and resources, and connect with policy-makers.
- (4) There is no innovative method (such as OSPE/OSCE) for the assessment of nursing competencies except practical and oral examinations.
- (5) Review and update of teaching methods is conducted by the MoH. There is no application of IT and other electronic learning platforms.

2. Bhutan

The shortage of health workforce has been an important issue with the health system in Bhutan. The progress of efforts by the government to improve quality and quantity of the health workforce has been slow. One short-term solution is to recruit expatriates, mobilize volunteers from abroad, and reinstate retired national doctors and nurses/technicians on a contract basis. The long-term solutions include increasing the number of graduates (MBBS, nurses, allied health professionals and technicians), the founding of the University of Medical Sciences of Bhutan (UMSB) in June 2013 and the establishment of new nursing colleges to scale up nurses' education. Under the National Health Policy (2011) the health-care system of Bhutan will continue to adopt the primary health-care approach with mutual integration of traditional and modern facilities.

Mechanisms to ensure quality and relevance of health workforce education and training

The Royal Institute of Health Science (RIHS) is the only training institute for health workforce in the country. The Ministry of Health is the sole employer of RIHS graduates and participates in intake capacity, deployment and management, as well as identifying training needs. Generally, the intake slot for pre-service training is determined collaboratively by the MoH, RIHS, Royal Civil Service Commission (RCSC), and the Ministry of Labour and Human Resources (MoLHR). The construction of a new building at the RIHS will lead to increased intake.

The Bhutan Medical and Health Council is responsible for quality assurance in medical education. However, it is recommended that the council should develop guidelines and standards for conducting licensing examination as there is currently no uniformity in training programmes. The council should also develop regulations for setting up minimum standards for all training programmes in the country, as well as guidelines for accreditation of existing institutes.

Support for health workforce education and training

Investment in health workforce education: The expenditure on health-care and HR development is largely financed by the Royal Government of Bhutan. During the 10th Five Year Plan (2009-2013) the expenditure for health workforce development and training was US\$ 5.63 million. The overall budget for the health sector for the 11th FYP is 6% of the total government expenditure and 3.6% of the country's GDP.

National production capacity

Medical doctors: As there is no medical school in Bhutan, the government selects around 20 candidates for the Bachelor of Medicine & Surgery (MBBS) course and five candidates for Bachelor of Dental Surgery (BDS) course based on academic merit, and sends them to other countries such as Bangladesh, Cuba, India, Myanmar, Sri Lanka and Thailand for education under the RGoB scholarships each year. In addition, since 2009 the government also provides cost-sharing with privately funded students as a

measure to overcome the health workforce shortage. In 2013, there were 190 doctors in the country.

Nursing and midwifery practitioners: Around 99% of nurses in the country are trained at the RIHS. The government also provides scholarships to 10-15 students per year to study nursing in neighbouring countries. There were 704 nurses in Bhutan in 2013.

Community health workers:

- **Health assistants:** The training for health assistants (certificate in primary health care) started in 1974 and the training covers a period of two years.
- **Bachelor of Public Health (BPH):** The course started in 2010. It is a new programme under collaboration between MoH and RIHS with technical support from WHO. The first batch of 26 candidates has been selected. Currently, there are 25 students under training at RIHS.
- **Medical technicians:** The course was initiated to address the acute shortage of health professionals. The first course was started in 1981 with the X-ray technician course. Currently, 10 categories of medical technicians are being trained. The course takes two years, six-months on campus and 10 months at the teaching hospital.

Capacity of RIHS as a medical/health institute

The institute is fully funded by the government. It is headed by a director and governed by the Governing Council. The standard operating procedure was developed to provide guidance for effective functioning of the institute. Currently, there are 30 faculty members. Most of them are multitasked and they teach almost all categories of students. Faculty is recruited based on criteria of rural experience, outstanding student profiles, professional experience and qualification. They are recruited from public hospital staff, outstanding students and lecturers from outside the country. Around 99% of the faculty are Bhutanese. In addition, the RIHS invites part-time lecturers from hospitals, MoH, and other relevant organizations which helps save cost as the institute does not need to pay regular salaries. However, invited lecturers provide valuable expertise for several courses.

The faculty members receive 15% of basic salary as university allowance in addition to the normal salary structure of a civil servant. The lecturers also get 10%-20% of the teaching allowance together with an opportunity for higher education and short-course training. Notably, before receiving the scholarship, lecturers are required to sign an agreement with the government that upon completion of study they will work in the institute for a duration twice that of the course. However, there are no non-financial incentives and performance-based payment system in the institute.

SWOT of RIHS

Strengths: Being owned and funded by the government, the institute has the flexibility to use its funds. The institute also maintains accountability and transparency on use of funds.

Weaknesses: The funds are unable to meet all the expenses and there is no alternative revenue-generating source. Strength of the faculty is inadequate.

Opportunities: Can diversify short- and long-term training to generate more funds. CME of health professionals can be provided by the institute with existing resources. The facilities and equipment of the institute can be hired to generate income.

Threats: The new private nursing colleges can pose competition. A decline in the member of donors and withdrawal in future, and brain drain of the health workforce can pose concerns.

Challenges

There are several issues that pose challenges. For example, shortage of health workforce, poor emphasis on career progression and professionalism of the mid-level health workforce, under-developed curriculum for allied health workforce, weak enforcement of health and medical regulations at the national and institutional level, and poor organization of CME and CPD remain areas of concern.

3. Democratic People's Republic of Korea

Democratic People's Republic of Korea consists of 12 provinces subdivided into 209 countries. These are further divided into terminal units such as 4000 ri and dong (a Ri is the administrative unit below rural county while a Dong in an urban area). The population in 2012 was 24.6 million. The male-female ratio is 95:100. Females live 7.9 years longer than males, whose life expectancy is 64.9 years. Total fertility rate is 2.03. Around 13% of the population is over 60 years, reflecting a rapidly ageing society. Over 60% of the population lives in urban areas.

There are a total 79 931 doctors with a density of 3.3 per 1000 population; 93 400 nurses with a density of 3.8 per 1000 population; and 6743 midwives with a density of 0.27 per 1000 population. By 2006, there were 44 760 household doctors engaged in the household doctor system, with each household doctor responsible for the health of 130 families. The increased number of household doctors demonstrates the government's commitment on prevention and health promotion activities under primary health care. Efforts were made to minimize the urban-rural and terrain-related gaps in the health workforce distribution. The urban-rural gap for community doctors is marginal and decreasing.

Education and health-care system

Education in Democratic People's Republic of Korea is publicly funded, universal, and free of charge for all students. Free education is compulsory until secondary level, and is run by the government. According to the well-organized education system, Democratic People's Republic of Korea has 14 medical colleges and over 200 health worker training facilities, including 64 nursing schools.

Democratic People's Republic of Korea has a national medical service and health insurance system which are offered for free. Democratic People's Republic of Korea has introduced an effective and efficient universal free medical treatment system for all with a high level of health achievement.

Medical education

- (1) Management, curriculum and quality assurance (QA) of medical education: Under the guidance of the Education Committee, all medical colleges have established a management system in order to meet the needs of improving education.

The curriculum is designed for a 5.5-year course with 100 subjects on average. The courses consist of general basic education in Grade I, basic medical science in Grade II-III, and clinical years in Grade IV until graduation. The medical curriculum is updated every 3-5 years. Quality assurance (QA) is the responsibility of the Education Committee.

- (2) Financing: Medical education is financed by the state budget, and tuition is free for students.

Community health-care education

- (1) Management, curriculum and quality assurance (QA): Under the guidance of the Education Committee each in-service training centre is managed regularly. The curriculum includes the context necessary for the household doctors and the period of training is a week. The MoPH assesses the quality of education through the regular in-service training process review, assessment of health-care capacity and work in the health practice, and takes suitable measures.
- (2) Financing: It is funded by the state budget.

Education and training for the in-service health workforce

- (1) Regular management, curriculum and QA: In-service training centres are regularly managed under the combined guidance of MoPH and the Education Committee. MoPH assesses the quality of education through the regular in-service training process review and assessment of health-care capacity and work in the health practice, and takes suitable measures.
- (2) Financing: It is funded by the state budget.

Strengths

In Democratic People's Republic of Korea health workforce education including doctors' training, continuous education and in-service training is meeting the needs of the health-care service and the people, with the higher education system being based on the free education system and the regular health education system. For Democratic People's Republic of Korea the education system is perfect with universal free education, and there is a high-level educated health workforce and an extensive foundation of health workforce education.

Challenges

In Democratic People's Republic of Korea, the health sectors have been adversely affected by natural disasters for the past several years and by economic sanctions.

4. India

Based on the 2001 national census, India has 2.2 million health-care workers which include around 677 000 allopathic doctors and 200 000 practitioners. The health workforce density is 20 per 10 000 population, though there are difficulties in obtaining accurate health workforce data.

The current ratio of doctor per population stands at 1: 1501 whereas that of nurse per population is 1:1207. Inequitable distribution was noted: while 72% of 1.2 billion Indians live in rural areas, they are served by 40% of the total health workforce and 60% of the total health workforce serves the urban population.

At the national level the Ministry of Health and Family Welfare plays the role of the steward, whereas the state ministries of health and family welfare are responsible for implementing health programmes for their states. As a Constitutional mandate, health is a subject under the state.

Medical practitioners

In the past five years, 93 new medical colleges have been added to cater to an exponential growth in the number of student seats. To address the skewed distribution of medical doctors, the government builds up new public medical colleges at the state level where there are no medical colleges, and upgrades district hospitals.

Nursing and midwifery practitioners

Over the past seven years, 562 new post-basic BSc nursing colleges as well as 388 MSc nursing colleges were set up. The number of such schools and colleges increased from 1646 to 6347 which is an increase of 286%. A major percentage of the overall increase was in the already well-endowed non-high focus states, where it increased from 1284 to 4383. In the North-East, these institutions increased from a baseline of 50 to 116. In the small states, these increased from 37 to 70. It is worth noting that out of the total increase of 4701 nursing and midwifery institutions; 66% are in the large non-high-focus states and 32% in the large high-focus states.

Public health practitioners

The government of Assam initiated a three-year course with legal support for providing health services at sub-centres. However, in several states, preferential selection of workers with rural backgrounds for medical education was carried out based on the belief that these health workers tend to serve and remain in their native areas. The states introduced the first batch of the diploma in medical and rural health course in 2005. On 13 November 2013, the Cabinet approved the introduction of Bachelor of Science course to enable states to create a cadre of middle-level public health professionals and to be deployed as community health officers.

Finding solutions

India currently has a National Health Workforce Development Plan and also focuses on areas including:

- (1) increasing HR in medical education in government institutions;
- (2) enhancing the quality of HRH education and training;

- (3) bridging the gap between doctors and accredited social and health activists (ASHA);
- (4) creating public health career ladder from grassroots; and
- (5) harnessing and applying information technology in support of distant courses and e-learning.

Moreover, reforms have been made to increase the production of various cadres of health care providers in the country. In a recent notification, the Ministry of Health and Family Welfare has also made one-year rural service mandatory to secure admission into postgraduate courses from the academic year 2015-2016. There is a system for quality assurance in education by the Medical Council of India.

Task shifting is high on the agenda of actions. The National Rural Health Mission launched the Accredited Social Health Activist (ASHA) scheme in 2005 intended for the priority states. On the other hand, non-priority focus states introduced ASHA at a slower pace in 2008. Currently, the country has around 0.85 million ASHAs. Also, the national guidelines specify that all ASHAs have to receive 23 days of training in the first year, a total of seven modules, and a 12-day refresher course every subsequent year.

Medical education

The public medical colleges are under the authority of the local government while the private colleges are under the oversight of universities. However, strategies on institutional development on public or private medical schools are under the governments' regulatory role. Public medical schools are mostly financed by either the state or central government while private colleges receive tuition fees and donations from charitable institutes and alumni associations.

Student selection is mostly through national entrance examinations. Additionally, the medical curriculum of public schools covered new topics except information technology. Private colleges, however, have regular review or update of curriculum as mandated by the Medical Council of India. Retention strategies for teaching staff in public medical colleges include financial incentives such as non-practicing allowance (additional

25% of basic salary) and non-financial incentive such as opportunities to attend conferences and seminars. In contrast, private school staff benefit from financial incentives based on the number of classes or patients seen, career promotion tracks, fellowships, and research and financial support for continued medical education.

Nursing and midwifery education

Public and private nursing colleges are affiliated to a university. The governing boards of nursing schools with public ownership are appointed by the state chief ministers. The boards in private schools are appointed by the chairs of the relevant colleges. The main source of finance for private schools is tuition fees while the public nursing schools are 100% subsidized by the state government. Besides, students are chosen through a selection process which follows local area selection criteria in many instances. Private institutes conduct regular review or update of curriculum based on guidelines of the Indian Nursing Council. For retaining staff, public nursing schools offer only financial incentives which include non-practising allowance (additional 25% of basic salary). Staff get annual increment based on performance, years of experience and additional qualifications, performance appraisal-based promotions, career advancement, etc.

Public health education

Private institutes are affiliated to an academic institute of health sciences. In contrast, those in the public sector are affiliated to universities. Government institutes are funded by the state and students are provided education at minimal cost. Admission is on the basis of national entrance examinations and previous academic performance. The private universities follow preferences based on gender, geography and socioeconomic status. The curriculum includes biostatistics, epidemiology, public mind and voluntarism, humanities and social justice, cultural sensitivity and information technology in both public and private schools. Strategies to retain teaching staff in government colleges are few.

Community health worker education/training

In 2004, the Assam Legislative Assembly passed the Assam Rural Health Regulatory Act which provided for the establishment of a regulatory authority in the state of Assam which regulates and registers diploma

holders in medicine and rural health care (DMRHC) and their practice of medicine in rural areas. A municipal board or a town committee regulates the opening and functioning of medical institutes for education and training for the DMRHCs.

Challenges

Currently the policy of scaling up health workforce training envisages upgrading of district hospitals to medical colleges especially in districts where there are no medical colleges. Moreover, the government has increased undergraduate and postgraduate seats by plugging the gaps in existing medical colleges. Also, advancing the agenda of transforming health professional education is very challenging for state governments.

Weaknesses

Policies in India have addressed some critical points that have not been well adapted in terms of outdated, static and fragmented curriculum. This produced graduates with insufficient knowledge, skills and competencies. Graduates are not adequately responsive to the health needs of present and future populations and communities, for which transformative health professional education is required at both national and state levels.

5. Indonesia

National health profession education system

Indonesia has been experiencing extended reform in health profession education since the 1970s, when community-based education was introduced in line with the government policy to instal district health systems with community health centres as their backbone. Every medical and dental graduate was required to serve 3-5 years in the community health centres before pursuing specialization. During that era, health profession education was geared towards producing graduates (doctors, nurses, midwives, dentists, etc.) who were prepared to work in community health centres. Early exposure of students to community health centres was the focus of their curriculum.

In the 1980s, the Ministry of Education and Culture established various higher education committees for the major field of studies including health, with an aim to nationally standardize the curriculum contents. As a result, a subject-based national curriculum was endorsed. The Ministry of Health played a major role in regulating health profession education at the diploma level. A special agency – Agency for the Utilization of Health Workforce – was in charge of approving the curriculum, setting standards, and accreditation.

In the 1990s, pioneered by the Faculty of Medicine Universitas Gadjah Mada, a problem-based learning educational strategy was adopted by a few other medical schools. When Indonesia experienced political reform in 1998, the Government abolished compulsory services in community health centres by all health-related graduates. In line with the competence-based movement globally, the Ministry of Education issued a Ministerial Decree No.045/2002 that competence-based curriculum must be applied. To respond to this policy, the World Bank funded Health Workforce Service (HWS) Project was responsible to implement this policy under the Ministry of Education. By 2005, all 54 medical schools applied for competence-based curriculum, and the establishment of medical education units in each medical school was achieved. Under the Ministry of Health, the internship programme for medical graduates was successfully implemented in collaboration with the Indonesian Medical Association.

In 2004, a Medical Practice Law was enacted, and the Indonesian Medical Council (IMC) was founded in 2005 as mandated by this law. IMC has become a new super-regulatory body to regulate medical and dental education and practice, as membership of IMC draws from representatives of the ministries of education and health, Indonesian medical associations, the Indonesian Association of Medical Schools and Indonesian colleges of medicine. IMC is meant to become a new platform for all stakeholders involved in regulating medical and dental education. One of its contributions is to approve standards of competencies and standards of education. The first editions were issued in 2006. IMC also regulates the certification of medical and dental graduates before they are licensed to practice and grants them their credentials.

In 2006, the IMC signed an MoU with the Indonesian Medical Association and Indonesian Association of Medical Schools (AIPKI) to

implement national competence-based examination. On passing this exam a certificate of competence is issued. This certificate of competence is used to register with the IMC.

A mushrooming of medical and dental schools has happened in the last decade. This is also the case with other health professions such as for nurses, midwives and public health professionals. Initiated by AIPKI and supported by the Directorate-General of Higher Education (DGHE) of the Ministry of Education and Culture, the Health Profession Education Quality Project (HPEQ) was approved in 2009 and funded by the World Bank. It had three major objectives, namely to develop an accreditation system, strengthen national competence-based examinations and provide 40 competitive and innovative grants for medical schools which submitted proposals for quality improvement. Seven areas of health profession education joined this project, namely medicine, dentistry, nursing, diploma nursing, nutrition, pharmacy and public health. The role of DGHE is to facilitate associations of educational institutions for these seven professions and associations of professions in developing a high-quality education system.

Each health profession has a written policy paper which explains the nature of the profession, education, standards of competence, and standards of education. These are used to develop accreditation standards and procedures. With the enactment of standards of competence for each health profession education, many health profession education institutions have been driven to reform their curricula from subject-based to competence-based ones.

Fourteen associations signed up an agreement to set up the Independent Accreditation Agency for Health Profession Education in 2013. The role of the Ministry of Health in regulating health profession education at the diploma level has been transferred to the Ministry of Education and Culture. An independent agency for competence-based examination for health workforce was set up in 2013. This agency has trained hundreds of examiners for seven health professions and developed a competence-based examination system, both for the computer-based tests and OSCE. There are 12 OSCE centres across the country. Forty medical schools have received development grants from the government to improve their quality of education. An additional output of the HPEQ

project is the enactment of the Medical Education Law and the building of 19 academic hospitals in 19 medical schools owned by the Ministry of Education and Culture.

Lessons and challenges

- (1) Externally funded developmental projects are an important trigger for education reform; sustainability is a major concern when the project ends.
- (2) The coordination, integration and harmonization of efforts of the Indonesian Medical Council, Ministry of Health, Ministry of Education and Culture and professional associations need to be strengthened. Each stakeholder's role needs to be clarified and understood to avoid duplication and redundancy.
- (3) The sustainability and accountability of the two independent agencies needs to be strengthened. Genuine collaboration among professions can be tested after the Project ends in June 2014. Resource sharing among associations needs to be well defined.
- (4) The mutual relationship between medical schools and teaching hospitals and other health-care facilities and community-based health posts in education and service, namely the interface between education and service, needs to be strengthened.
- (5) Achieving an equitable distribution of health workforce across the country is challenging.
- (6) Building and sustaining institutional capacity in assuring the quality of education at input, process, output, outcome and impact stage is also challenging.

6. Myanmar

Currently, the country has four national health workforce development plans. The human resource development for health and medicine component in the Myanmar Health Vision 2030 (2001-2030), the human resource development component of the Rural Health Development Plan, the Development of Human Resource for Health Programme in the

National Health Plan (NHP) (2001-2016) and Health Workforce Strategic Plan (2012-2017) have been launched. Representatives from the Ministry of National Planning and Economic Development, Ministry of Finance, Ministry of Health, and the Ministry of Education, in collaboration with Department of Medical Science (DMS), Department of Health Planning (DHP), WHO and GAVI were key players in the preparation of national health workforce development plans. These plans provide clear directions that the MoH will make major investment in strengthening the capacity of the health profession universities and other training institutions to provide better quality education and cultivate the capacity of and work closely with the Health Professions Council. These plans further developed into medical, nursing and midwifery, and public health services education policies and strategies. However, the plans cover only the public education sector as there is no private educational institute for health workers in Myanmar.

In the past five years, the government has made a number of investments in the health workforce education including establishment of the University of Public Health in 2007 with support from WHO and an increase in production of HWF both in quantitative and qualitative terms. About 2400 doctors, 1200 nurses and 900 midwives were trained annually during 2006-2011. The government aims to increase the doctor-nurse ratio from 1:1.4 to 1:3, which is the ASEAN standard. This educational infrastructure and capacities are public facilities and are running under government budget. It is noteworthy that the country accords special attention to the training and education of community-based health workers to further strengthen the PHC approach.

In Myanmar, all medical and allied universities are public universities under the Department of Medical Science (DMS), one of seven departments under the MoH. There are five medical universities offering a 7-year MBBS degree with a year of internship. All universities follow a single standardized curriculum. The existing medical curriculum was reviewed and updated in July 2011. Each medical university has its own vision and mission, and plans for infrastructure, faculty and IT development. They all have administrative, financial and academic boards under the DMS and MoH. Medical universities currently have informal activities related to maintaining the quality of teaching. However, direct indicators used for

quality assurance/improvement of the medical universities is yet to be developed.

The nursing universities, nursing training schools and midwifery training schools are under the DMS and MoH. The main source of revenue is the MoH. The government body or school government board which steers the policy and directions of the nursing university is the Rector. The government body of nursing training school and midwifery training school is the Principal. The government (Ministry of Health) appoints the board or key administrators of the school. The strategic planning is developed and implemented according to the guidance and instructions provided by DMS. The vision and mission of the nursing university is to produce graduates who have knowledge and expertise in the nursing profession with a wide range of generic competence. The objective of the nursing and midwifery training schools is to produce competent nurses who are knowledgeable about promotion of health, prevention of illness and restoration of health; have the right attitude towards health care and the skills to provide quality health care for the community utilizing the potential for professional development.

The current basic/pre-service nursing and midwifery curriculum is developed under the guidance of the Ministry of Health and involves collaboration between DMS and DoH in line with the NHP. The BN.Sc curriculum was updated in 2011. Regarding the assessment of teaching-learning resources, it was revealed that infrastructure is adequate in all types of schools but there are deficiencies in IT-related capacity. In terms of quality assurance, there is no direct indicator used for quality assurance/improvement of the nursing universities and nursing and midwifery training schools.

The University of Community Health (UoCH) is providing public health training to undergraduate-level students and in-service basic health staff (PHS2) from the DOH and also community health worker (CHW) training. The undergraduate public health curriculum was developed in 1999. The vision and mission of UoCH is to produce health workers graduating in Bachelor of Community Health in order to provide quality health care to the rural population of Myanmar and to conduct training for the basic health workers from rural workplaces for their career growth. CHW curriculum was developed in cooperation with the Department of

Health (DoH), and the Department of Medical Science (DMS). The current CHW curriculum is relevant and up-to-date with the health systems' needs at the national level and local level. Regarding quality assurance, there is no direct indicator used for quality assurance of the school.

In Myanmar, it is crucial that health workforce education and training must be further strengthened to tackle educational and health challenges in order to train health-care providers to deal effectively with health challenges and deliver effective and responsive health service. For this, the country will need to assess the current situation, strengths and weaknesses, and threats and identify challenges and opportunities.

SWOT analysis:

Strengths

- (1) Currently the country has the HWF strategic plan which will ensure equitable accessibility of health service staff both in terms of quantity and quality. The Ministry of Health is very keen on effective investment on these issues.
- (2) Universities are fully supported by the government budget. As the budget for training institutions is increasing, the infrastructure and teaching-learning capacity can be enhanced and sustained effectively.

Weaknesses

- (1) In almost all the infrastructure facilities and all universities and training institutions, IT capacity is at a limited level and needs immediate intervention.
- (2) Teaching capacity is hampered by the lack of sufficient learning materials and resources.
- (3) Professional development courses for MWs, LHVs, and PHSs are still very limited.
- (4) Assessment of the level of effectiveness of the knowledge imparted by the training programmes is yet to become routine practice.

- (5) Continued professional education (CPE) is an essential component of staff development and should be centralized and organized in line with the comprehensive development plan of the health sector as a whole. It should not spread out to many actors and programmes. This will cover all disciplines of professionals in the health system.

Opportunities

- (1) The health system is now moving forward with the universal health coverage approach and HWF development will be prioritized. It is important to capitalize on the changing environment in the health system and move forward proactively.

Threats

- (1) Professional development initiatives for the private health sector are missing, both in terms of database and imparting standard CPE, though the sector is growing rapidly.
- (2) Sustainability of all efforts for an optimal staff development programme in terms of consistent availability of all types of resources.

Issues and challenges

- (1) Absence of formal accreditation system in line with standards set through the ASEAN network is a key challenge for education programmes. It will require significant investment to enhance the capacity of professional councils to meet these challenges.
- (2) Efforts at the country level to strengthen health workforce education and training in the Region are largely fragmented due to limited resources and lack of clear policy directions.
- (3) The production of the health workforce is yet to be synchronized with country needs and the capacity for deployment.
- (4) E-Learning should be introduced to address the limited knowledge-sharing issues for doctors in outreach areas.

- (5) Competency-based curriculum and assessment frameworks for students should be addressed and enforced universally.
- (6) The development and adoption of retention policy and a human resources masterplan is a challenge for HWF both in terms of deployment and sustaining the competency.
- (7) The human resource development plan accords attention to the utilization of professionals and skills in the provision of health services to some extent. In case of public health professionals such as midwives and PHS, human resource programmes have planned to produce an adequate number of health workers and utilize them in the coming year. However, the plans do not specify some specialities in clinical care such as neurosurgeons, medical oncology, nutrition, and forensic medicine to be produced adequately and utilized.
- (8) The existing HRH information system cannot fully support the decision-making of HRH planning and production.

7. Nepal

In 2005, Nepal's national burden of diseases was 29.514 DALYs loss per 1000 population. The total population of Nepal (2013) was 26.8 million as per world population datasheet, with the proportion of rural population being 83%. The gross national income per capita was US\$ 1500 (2013). There are 347 hospitals in the country (2013), of which nearly 70% are in the private sector. And the number of health centres providing primary care is 4048. There are 6263 medical doctors or 0.2364 doctors per 1000 population. The total number of nursing personnel is 14531, with the nurse population ratio per 1000 population being 0.2405.

Nepal has a five-year National Health Sector Strategy developed in 2010 for the period 2010–2015 (Nepal Health Sector Programme – Implementation Plan II, NHSP IP II). MoHP had formed a team including all stakeholders to develop strategies and plans. A series of meetings and workshops were organized with different stakeholders and feedback and comments from different groups and experts had been received. NHSP IP II [2010–2015] and the HRH Strategic Plan [2011–2015] have given due focus on utilization of a mix of professionals and skills in the provision of

health services. The HRH strategic plan has taken skills-mix as a cross-cutting issue in strategies and activities. NHSP IP II has accorded outstanding focus on community health workers and volunteers (especially female community health volunteers) as the health system has built on and extended to the community level through community health workers and volunteers.

Health professional education system

Innovative in medical education, the Nepal Medical Council 2013 accreditation standards mentioned that criteria should be developed by universities/institutions/academies for recruitment of students from rural and marginalized areas as well. The Ministry of Education provides scholarships under different categories and those graduates have to serve in rural areas for two years. The MoHP has made it mandatory for all PG graduates to serve in government-assigned hospitals for one year. There is a non-regular mechanism of coordination between the education and health sectors. Interactive dialogues between the health ministry, education ministry, health workforce education institutes (e.g. medical, nursing and midwifery and public health schools), and general public take place as and when required. There is a committee headed by the Minister of Education, called Higher Technical Education Development and Monitoring Committee, which is represented by MoHP, Nepal Medical Council, deans of institutes/universities and National Planning Commission. Letter of Intent to the proposed institutions are given through this committee. Generally, the Ministry of Education sets the agenda and calls the meeting.

Accreditation: The councils, namely medical and dental, nursing and health professional, are taking care of the quality and standards of the health workforce in respective fields. In addition, universities are also carrying out quality assurance and accreditation (QAA) of the institutes as a regular programme. The councils (Medical, Dental, Nursing and Health professional) provide the licensing of the institutions and certification of the curricula. The councils have set a standard for accreditation and licensing and are responsible to ensure the competencies of the health professionals in their respective fields. The Nepal medical and nursing councils have started taking licensing examinations to ensure competency levels. The competency tests of other health professionals have not yet been begun.

National HRH information systems: Within the MoHP no single department has overall responsibility for HRH. Responsibility is spread across three divisions: the Personnel Administration Division, responsible for recruitment, posting and promotion of health workers; the Human Resource and Financial Management Division, concerned with human resource planning and HR development; and the Policy, Planning and International Cooperation Division, responsible for fellowships and scholarship programmes. Another three units under the MoHP, namely the DoHS, Department of Ayurveda and Department of Drug Administration, also perform a number of HR functions.

Medical education: There are currently five medical schools owned by the government and another 15 are nongovernment. This is a huge increase compared to 2004. However, one of the government-owned schools is yet to start student intake. The majority of public schools are located within the capital city while the majority of private medical schools are located outside the capital. The information on special programmes was taken from six medical schools surveyed for other components and has been reported in the respective sections. There are 10 institutes, including NAMS, that are providing PG training. More than 1800 students are enrolled in the private medical schools and about 255 students in public medical schools. The number of students who graduated from 2007 to 2013 ranged from 142 to 195 in public schools and from 787 to 1094 in case of private medical schools.

Nursing and midwifery education: There are 15 government-owned nursing and midwifery schools and 169 non-government ones. The number of non-government schools has increased by almost three times since 2004. Among public nursing and midwifery schools five are located within the capital city and 10 outside. Among nongovernment nursing and midwifery schools, 128 are located outside the capital city and 41 within. The number of students enrolled in government schools ranged from 320 to 520 (2013), whereas it ranged from 1200 in 2004 to 5080 in 2013 at the professional level. For the number of students who have graduated, the segregated number was not available, and the total number of students who graduated in 2013 was 984 while it was 3647 in 2012. On the other hand, at the associate professional level, 160 students were enrolled in government-owned and 1680 students in nongovernment

sectors. The number of students graduating in 2011 was 1406. In 2012, it was 1584, and 1295 in 2013.

Public health education: In 2013 there were three public schools and 27 nongovernment-owned public health schools. Of the three government-owned, two are outside the capital city, while among the nongovernment-owned 15 are located within the city. In case of government-owned public health schools 120 students were enrolled in 2013 and 843 enrolled in nongovernment schools. The number of students who graduated in 2011 was 869 (1376 in 2012 and 401 in 2013).

8. Thailand

There are national strategies or plans for medical education dated 1956, 1964, 1971, 1979, 1986, 1996, 2001 and 2009. These strategies have been implemented in both public and private medical schools. National medical education forums are actively involved with stakeholders to draft these strategies. The vision of the current 7-year strategy is 'People-centred health care'. Its objectives are: 1) to revise and develop the health system and postgraduate training; 2) to provide support to population health enhancement, health promotion, disease prevention, health care and rehabilitation at the individual, family and community level; 3) to increase awareness and train medical doctors to promote rational drug use with the help of appropriate health technology. However, target achievement and its evaluation needs to be improved. Furthermore, the Code of Practice for health-promoting medical schools is a common commitment among all medical schools.

Additionally, there is the Thailand Human Resources for Health Strategic Plan 2007-2016, under the National Committee for HRH, which includes health professional education. It emphasizes the need to produce new physicians with competencies of the 'generalist' rather than the 'specialist', and encourages rural recruitment and hometown replacement.

There is an official forum or mechanism for interactive dialogue between the Ministry of Health, Ministry of Education, medical schools and the general public on the assessment of medical education in the country, the emerging health needs of the population, determinants of ill-health, and

contributions by medical schools to health systems development. Interactive dialogue is explicitly launched at the national medical education forum held every seven years. Wider stakeholders are involved in the forum, such as medical students and faculty, employers, patients, health professionals, NGOs and others. This mechanism is prescribed in the process of curricula approval regulated by the Office for National Education Standards and Quality Assessment (ONESQA). The Consortium of Thai Medical Schools is another mechanism to coordinate between deans of Thai medical schools, both public and private, and it is usually held every 45 days.

National HRH information systems have been made responsible by MoPH for reliable and timely production of evidenced information on HRH for decision making. Although there are limitations with data completeness and adequacy, this HIS information is used for decision-making and recommendations for improvement, including setting the national target for production of medical doctors. The Office of the Higher Education Commission and Office for National Education Standards and Quality Assessment (ONESQA) are the authorized bodies for approving degree and curricula. The authorized body for licensing and regulating the content of curricula is the Thai Medical Council operating through the Consortium of Thai Medical Schools. It is not specifically defined how often the curricula should be approved.

The Medical Council of Thailand is an authorized body for medical licensing. The professional core competencies (updated in 2012), include: professional habits, attitudes, moral, and ethics, communication and interpersonal skills, scientific knowledge of medicine, patient care, health promotion and health-care systems: individual, community and population health, and continuous professional development. The Commission of Higher Education, MoE set the standard criteria for Thai Medical School establishment (2003). For new medical degree programmes, the institution is required to meet the qualifications, have the resources and identify its readiness according to 14 standard criteria.

Currently, nursing education strategies are initiated by the Thailand Nursing and Midwifery Council with participation of all stakeholders. The vision of the current 5-year nursing education strategy is “Adequacy of qualified nurses to serve country demands” Its objectives are to:

(1) strengthen nursing schools for increasing production capacity relevant to demands. (2) increase quality of graduated nurses in Thailand, and (3) strengthen career advancement and the employment system to increase retention in the nursing career.

The Thailand Nursing and Midwifery Council plays the additional role of coordinator to organize official meetings. The main objective is to promote interactive dialogue among the ministries of public health and education, representatives of nursing schools (both public and private), and representatives of health-care service providers. The dialogues are particularly on assessment and evaluation of nursing education focusing on the effectiveness of nursing education in the country in terms of adequacy in numbers, quality of graduates and relevance to the population health needs and health systems. Moreover, there are nursing dean consortiums of MoE, MoPH, MoD and private nursing schools, which are another mechanism to coordinate among the deans. Meetings are usually held every two months.

All nursing curriculums and nursing schools in Thailand have to assess quality and be accredited by the Thailand Midwifery and Nursing Council. New nursing schools have to pass an accreditation standard every year for four years to ensure that they adhere to the standards to produce qualified nurses before they start to operate. The level of accreditation, classified into six grades is based on scoring and there are various terms of accreditation relying on the scoring system. Moreover, there is the Higher Education Commission and Office for National Education Standards and Quality Assessment (ONESQA) as the authorized bodies for external evaluation to review the quality assurance process in nursing schools every year.

As for public health education, it needs public health infrastructure which is initiated by this assessment and should be formalized and enhanced as the mechanism for policy, planning, research and development for the improvement of the public health workforce. Public health curriculum/subject standards should be developed and reviewed to monitor courses or the curriculum with the dynamics of the global and regional development status.

Annex 3

Scope of application of the top five recommendations relevant to Member States in the Region

Curriculum reform is viewed as the first of the top five relevant recommendations. Although almost all countries had some processes of curriculum reform, the scope of its application has yet to be strengthened to a wider application to all cadres of the health workforce, and the process and quality of curriculum reform have yet to be relevant to emerging health needs of the population. The curriculum reform has yet to extend to instructional reforms, in particular exposure of students to rural health service since the beginning, inter-professional education and team building (see Table 1).

Table 1: Scope of application of curriculum reform

Country	Scope of application
Bangladesh	<ul style="list-style-type: none">• Yes• Limited scale• Mostly applied in government institutes, partly in nongovernmental• Partially applicable in medical, nursing and public health education institutes
Bhutan	<ul style="list-style-type: none">• Yes• Widely applied at public institutes (nursing and public health education)• No private health institutes in the country at the moment
India	<ul style="list-style-type: none">• Yes• Limited to medical and very limited to public health education• Minimal in nursing education• Applied in both public & private institutions
Indonesia	<ul style="list-style-type: none">• Yes• Indonesia has experienced a massive reform in health profession education. Ministerial Decree No 045/2002 and Higher Education Law No 12/2012 requires all education programmes to apply competence-

Country	Scope of application
	<p>based curriculum. Associations of health profession education institutions have responded to this regulation supported by the Directorate-General of Higher Education</p> <ul style="list-style-type: none"> • Curriculum for all cadres had introduced competency-based curriculum for several years. Also, all medical schools, the majority of nursing schools and midwifery schools have incorporated low- and high-fidelity simulation tools in their programme. Major investments have been done for this purpose • Subject of discussion was related to readiness of soft and hard mechanisms
Maldives	<ul style="list-style-type: none"> • Scattered and limited scope of application in medical and nursing schools using both low- and high-fidelity simulation tools
Myanmar	<ul style="list-style-type: none"> • Yes • Limited • Applied in public institutes (medical, nursing and public health) • No private institutes in Myanmar
Nepal	<ul style="list-style-type: none"> • Yes • Widely applied by medical, nursing and public health schools, guided by evidence such as BoD, epidemiological and demographical transitions
Sri Lanka	<ul style="list-style-type: none"> • Yes • Limited application in most medical schools, post-graduate institutes of medicine, public nursing & paramedical schools • Better application in National Institute of Health Sciences • Limited application in private institutes
Thailand	<ul style="list-style-type: none"> • Yes • Limited, small-scale application to medical, nursing and public health institutions, both public and private
Timor-Leste	<ul style="list-style-type: none"> • No application

Instructional reform should be governed by three approaches

- (1) Strategic shifting from tubular vision to open architect and integrated with both education and health systems reform.

- (2) The principles of education redesign are:
- Competency-based learning both breadth and depth of competencies;
 - inter- and trans-professional learning and team building;
 - flexible and modular designs of curriculum;
 - experiential learning with community engagement;
 - level of learning: strike a balance between online and onsite learning for three goals of development:
 - information (more online than onsite);
 - formative and transformative learning (more onsite, inspirational, face-to-face onsite learning is vital); and
 - needs for integrated instructional learning: based on balance among online, onsite and in-field learning sites.
- (3) Continuous leadership development of health professionals covering both pre-service, in-service and post-service capacity development.

Though most countries have applied CPD for health professionals, the scope and effectiveness is yet to improve. It can be mandatory or voluntary, depending on country context and institutional capacity to manage and coordinate systematically. Some countries applied CPD as mandatory for professional re-licensing requirements (see Table 2).

Table 2: *Scope of application of continued professional development (CPD) of health professionals*

Country	Scope of application
Bangladesh	<ul style="list-style-type: none"> • Yes • Limited implementation of CPD and in-service training, poorly coordinated and not mandatory
Bhutan	<ul style="list-style-type: none"> • Yes • All practising health professionals are required to renew their licence every 5 years with a minimum of 30 credits for CPD requirement • CPD carried out by the respective clinical departments, divisions or programmes

Country	Scope of application
India	<ul style="list-style-type: none"> • Yes • Widely applied to public practitioners • Training programmes tailored to the changing needs of the community are imparted as part of “skill-building” or “skill-upgrade” of in-service care providers of all categories • CME in private providers exist, sometimes mandatory for re-registration, opportunities for CME are very limited
Indonesia	<ul style="list-style-type: none"> • Yes • CPD is mainly applied for medical doctors, nursing and midwifery practitioners who work in the public and private sector. Has yet to scale-up CPD to life-time learners. • Indonesia Medical Council enforces a mandatory CPD/CME linked with 5-year re-licensing requirement. CPD is arranged by associations of health professionals • Problems in measuring effectiveness and outcome of CPD on patient care were still a major challenge on the sustainability of CPD
Maldives	<ul style="list-style-type: none"> • No • CPD in Maldives is neither systematic nor planned • Ad hoc trainings and workshops are periodically organized by FHS, MOHG and IGMH • Opportunities for CPD are limited in remote areas due to the scattered nature of islands
Myanmar	<ul style="list-style-type: none"> • Yes • Widely applied to specialties in all medical, nursing and public health education institutes
Nepal	<ul style="list-style-type: none"> • Yes • CPD is mainly done through professional medical, nursing and public health societies • Medical council is working on mandatory CPD and re-licensing requirement, is in final stage of approval but yet to come into force • MOHP provides in-service training to its community health workforce through the National Health Training Centre

Country	Scope of application
Sri Lanka	<ul style="list-style-type: none"> • Yes • Applied in an ad hoc and voluntary manner, organized by the professional colleges • Needs to formalize CPD
Thailand	<ul style="list-style-type: none"> • Yes • Widely applied CPE, voluntary for medical professionals both public and private, a life-time medical licence • Thai Nursing and Midwifery Council enforces a mandatory CPE, 50 credits of continued nursing education (CNE) in 5 years as nursing re-licensing requirement, • No licensing requirement for Public Health Officers
Timor-Leste	<ul style="list-style-type: none"> • Yes • Institute of National Health, MoH, conducts in-service training, some of these are related to CPD. • CPD is not a mandatory requirement

Table 3: The scope of applying CPD for faculty staff is varied, but is generally limited, similar to CPD for health professionals and both are inter-related. Strengthening capacity of faculty members to the new paradigm of instructional reform requires a systematic approach in the design and implementation of the CPD programmes relevant to the evolving health-care needs of communities.

Table 3: *Scope of application of continued professional development for faculty staff*

Country	Scope of application
Bangladesh	<ul style="list-style-type: none"> • Yes • Limited scale • Mostly applied in government institutes partly, in nongovernmental. • Partially applicable for medical, nursing & public health education institutes

Country	Scope of application
Bhutan	<ul style="list-style-type: none"> • Yes • Widely applied at public institutes (nursing and public health education) • No private health institutes in the country at the moment
India	<ul style="list-style-type: none"> • Yes • Limited to medical and very limited to public health education • Minimal in nursing education • Applied in both public & private institutions
Indonesia	<ul style="list-style-type: none"> • Yes • Limited to a few institutions, mostly medical and nursing schools. The Ministry of Education and Culture appointed two institutions in 2006, namely the Department of Medical Education at the University of Indonesia and the University of Gadjah Mada, to conduct training for health profession teachers. In the Standards of Medical and Dental Education it is mentioned that each institution should have a master-level health profession educationalist. This is in response to curriculum reform. CPD for faculty development in many health profession education institutions is not yet systematically and effectively managed. Few institutions have applied a cycle of training needs assessment, training, appraisal and retraining based on appraisal results • Subject of discussion was related to readiness of soft and hard mechanisms
Maldives	<ul style="list-style-type: none"> • Scattered and limited scope of application in medical and nursing schools using both low- and high-fidelity simulation tools
Myanmar	<ul style="list-style-type: none"> • Yes • Limited • Applied in public institutes (medical, nursing and public health) • No private institutes in Myanmar
Nepal	<ul style="list-style-type: none"> • Yes • Limited to medical, nursing and public health institutions • Mostly public • Restricted to a few health-care needs, e.g. HIV/AIDS, malnutrition, safe motherhood, communicable diseases

Country	Scope of application
Sri Lanka	<ul style="list-style-type: none"> • Yes • Limited application in most medical schools, postgraduate institute of medicine, public nursing & paramedical schools • Better application in National Institute of Health Sciences • Limited application in private institutes
Thailand	<ul style="list-style-type: none"> • Yes • Limited small-scale application to medical, nursing and public health institutions, both public and private
Timor-Leste	<ul style="list-style-type: none"> • No application

Table 4: The scope of accreditation varies in terms of mandatory or voluntary, but generally countries have this mechanism in place. There is, however, a great need for improvement, such as ensuring a rigorous process, effectiveness of accreditation and rewards for good performers and sanction for non-adherence. However, accreditation bodies are mostly independent from educational institutes.

Table 4: *Scope of application of accreditation*

Country	Scope of application
Bangladesh	<ul style="list-style-type: none"> • Yes • Bangladesh Medical & Dental Council (BM&DC) and Bangladesh Nursing Council (BNC) act as accreditation bodies • An independent accreditation council to be established in future
Bhutan	<ul style="list-style-type: none"> • Yes • Nursing and public health programmes were accredited, while accreditations of other health training programmes are underway by the Bhutan Medical and Health Council
India	<ul style="list-style-type: none"> • No • Still under discussion, not yet implemented. Accreditation of BSc (CH) course by the Medical Council of India to ensure uniformity in content and delivery • Efforts are ongoing to bring accreditation of allied health professionals under one statutory body

Country	Scope of application
Indonesia	<ul style="list-style-type: none"> • Yes • According to the National Education System Law No. 20/2003 and Higher Education Law No. 12/2012 each study programme must be accredited, if not their graduates would not be recognized by the employers. The National Accreditation Board has conducted accreditation since 1995. Associations of health profession education institutions moved the Ministry of Education and Culture for their own independent agency as quality assessment for health professional education institutions that have special features (especially for clinical education). In 2013 a new Independent Accreditation Agency for Health Profession Education was established. At the moment seven health professions will be accredited by this new agency (medicine, dental, nursing profession, diploma nurse, nutrition, pharmacist, and public health). Other health professions will continue to be accredited by the National Accreditation Board • National License Examination is applied to medical and nursing graduates in order to get a license to practice
Maldives	<ul style="list-style-type: none"> • Yes • Faculty of Health Science (FHS), the only institution for training of health professionals and one of the faculties of Maldives National University, is fully accredited • Accredited by Maldives Qualification Authority (MQA) since 2000 • MQA's mandate is to assure the quality of post-secondary qualifications awarded in testimony of educational attainments
Myanmar	<ul style="list-style-type: none"> • No • Currently, no accreditation body for health professionals' education • However, there is a process in MoH for regulating the quality of medical education, though not called as accreditation
Nepal	<ul style="list-style-type: none"> • Yes • Regulatory bodies are the accreditation agencies for health professionals education, with adequate implementation • Nepal Medical Council, Nepal Nursing Council and Nepal Health Professionals Council are responsible for the accreditation • There is no separate accreditation body yet in Nepal

Country	Scope of application
Sri Lanka	<ul style="list-style-type: none"> • Yes • Accreditation by independent councils for medical and nursing education institutes, both public and private, equally enforced, though in need of strengthening
Thailand	<ul style="list-style-type: none"> • Yes • Accreditation by independent agency for medical and nursing education institutes, both public and private, equally enforced • National Licence Examination is applied to medical and nursing graduates in order to get a licence to practice
Timor-Leste	<ul style="list-style-type: none"> • No • University has been accredited, now the Ministry of Education is in the process of conducting programmatic accreditation for all universities and institutes in Timor-Leste

Table 5: It is recommended that rural retention of the health workforce be supported by targeted recruitment from rural, underserved or ethnic minority areas. For example, recruitment of Muslim female students for nursing and medical education, through government bonding and hometown placement, in Thailand ensures the availability and quality of the health workforce, and the position of culture and religion-sensitive health services to Muslim communities in the southern provinces. The scope of implementing this recommendation varies since effectiveness of selecting students without nepotism and ensuring their successful graduation is challenging.

Table 5: Scope of application of targeted admission

Country	Scope of application
Bangladesh	<ul style="list-style-type: none"> • Yes • District, freedom fighter and tribal quotas for medical and nursing, but not for public health • More targeted admission policies are required for better retention

Country	Scope of application
Bhutan	<ul style="list-style-type: none"> • No • No policy at the national or institutional level • Very limited application with special considerations as and when required
India	<ul style="list-style-type: none"> • Yes • Limited application, albeit policies exist but no implementation • Some states have made progress in recruiting students for Auxiliary Nurse Midwife (ANM) and BSc (Community Health) courses
Indonesia	<ul style="list-style-type: none"> • Yes • The Ministry of Education has developed a programme to admit students from underdeveloped districts and provinces. Public universities are endorsed to provide quotas for them. They are allowed to be admitted based on their high school achievements. This programme is called BIDIK MISI. The Government provides full scholarship • A few private medical schools were implementing this policy
Maldives	<ul style="list-style-type: none"> • Yes • Four FHS campuses outside Male' applied targeted admission of students from different geographically dispersed atolls and islands
Myanmar	<ul style="list-style-type: none"> • Yes • Admission policy of medical institutions has changed to accommodate the quota of students from remote or underserved areas
Nepal	<ul style="list-style-type: none"> • Yes • Applied only to government scholarship on the basis of ethnic, gender, geographical diversity • Medical Council requests universities to develop criteria for the same but universities have not yet complied to targeted admission of students from the rural and marginalized communities
Sri Lanka	<ul style="list-style-type: none"> • Yes • Widely applied in public schools • All undergraduate admissions are based on geographical and socioeconomic diversity of the districts

Country	Scope of application
Thailand	<ul style="list-style-type: none">• Yes• Widely applied for 20 years of target admission from provincial areas (CPIRD), and nine years for students from districts (ODOD)• Targeted admission of rural students for nursing education was implemented >30 years.
Timor-Leste	<ul style="list-style-type: none">• Yes• Though admission is based on academic competence, geographical balance is also taken into account

References

- (1) UN General Assembly Resolution A/RES/66/288 The future we want. Available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement> [access 27 May 2014]
- (2) Constitution of the World Health Organization available at <http://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1> [access 27 May 2014]
- (3) World Health Organization. The world health report 2006: Working together for health. Geneva, 2006
- (4) Balabanova D., Mills A., Conteh L., Akkazieva B., Banteyerga H., Dash U., Gilson L., Harmer A., Ibraimova A., Islam Z., Kidanu A., Koehlmoos T., Limwattananon S., Muraleedharan V., Murzalieva G., Palafox B., Panichkriangkrai W., Patcharanarumol W., Penn-Kekana L., Powell-Jackson T., Tangcharoensathien V., and McKee M. Good health at low cost 25 years on: lessons for the future of health systems strengthening. *The Lancet* 2013;381:2118-33.
- (5) Anand S, Bärnighausen T, Health workers and vaccination coverage in developing countries: an econometric analysis. *The Lancet* 2007, 369, (9569): 1277 - 1285, doi:10.1016/S0140-6736(07)60599-6
- (6) WHO (2010). Increasing access to health workers in remote and rural areas through improved retention. Available at <http://www.who.int/hrh/retention/home/en/index.html> [access 27 May 2014]
- (7) Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010 Dec 4;376(9756):1923-58. doi: 10.1016/S0140-6736(10)61854-5. Epub 2010 Nov 26.
- (8) WHO guideline 2013, Transforming and scaling up health professionals' education, Available at http://apps.who.int/iris/bitstream/10665/93635/1/9789241506502_eng.pdf [access 27 May 2014]
- (9) Asia-Pacific Network Health Professional Education Reform (ANHER), available at http://www.pmaconference.mahidol.ac.th/index.php?option=com_content&view=article&id=666&Itemid=174 [access 28 May 2014]
- (10) Asia Pacific Network for Health Professional Education Reform (ANHER), available at http://chinamedicalboard.org/grants/five_country_network_health_professional_education_reforms-12_100 [access 9 Feb 2014]

- (11) Asia Pacific Network for Health Professional Education Reform, available at <http://www.aaah-conference.org/12/sites/default/files/AAAH%20presentation%206%20Dec%202012.pdf> [access 27 May 2014]
- (12) Prince Mahidol Award Conference 2014: Transformative learning for health equity. Conference Proceeding, 27-31 January 2014. Available at <http://www.pmaconference.mahidol.ac.th/> [access 9 February 2014]
- (13) Global Health Workforce Alliance. Mid-level health workers for delivery of essential health services. A global systematic review and country experiences. Geneva: World Health Organization; 2013. Available at <http://www.who.int/workforcealliance/knowledge/resources/mlp2013/en/index.html>, accessed 27 May 2014).
- (14) WHO. Special theme: human resources for universal health coverage. Bull World Health Organ 2013; 91: 797-896.
- (15) Report on the Prince Mahidol Award Conference 2011, 2nd Global Forum on Human Resources for Health 25-29 January 2011, Bangkok, Thailand <http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/> [access 27 May 2014]
- (16) A universal truth: no health without a workforce. Executive summary. Geneva: World Health Organization; 2013. Available at <http://www.who.int/workforcealliance/knowledge/resources/hrhreport2013/en/> [Access 27 May 2013).
- (17) Campbell J., Buchan J., Cometto G., David B., Dussault G., Fogstad H., Fronteira I., Lozano R., Nyonator F., Pablos-Méndez A., Quain E., Starrsj A., and Tangcharoensathien V. Human resources for health and universal health coverage: fostering equity and effective coverage. Bulletin of the World Health Organization 2013;91:853-63.
- (18) Ahmed S, Hossain A, Chowdhury M, Bhuiya A. The health workforce crisis in Bangladesh: shortage, inappropriate skill-mix and inequitable distribution. Human Resources for Health 2011, 9:3. Available at <http://www.human-resources-health.com/content/9/1/3> [access 5 May 2014]

The United Nations General Assembly resolution 66/288, “The future we want”, in 2012 recognizes that health is a precondition for and an outcome and indicator of all dimensions of sustainable development. The attainment of health objectives requires coordinated action and solidarity at the international, regional, national and local levels.

The past decade, following World Health Report 2006 on human resources for health (HRH), saw increased recognition of the crucial importance of HRH, as reflected by numerous World Health Assembly resolutions. Despite some encouraging progress in health workforce development, challenges remain in the WHO South-East Asia Region. These include low investment in HRH, fundamental discrepancies between demand and supply of health workers and inadequate HRH planning.

By 2014, some countries were not on track to achieve the health-related Millennium Development Goals (MDG). Weak health systems and inadequate access to health services by populations in need are the root causes.

The Regional strategy on strengthening health workforce education and training in the South-East Asia Region specifically identifying priority activities to be initiated by WHO and Member countries, will guide and facilitate country initiatives on strengthening health workforce. WHO is totally committed to play the lead role in catalysing the implementation of this regional strategy.



**World Health
Organization**

Regional Office for South-East Asia
World Health House
Indraprastha Estate,
Mahatma Gandhi Marg,
New Delhi-110002, India
www.searo.who.int



SEA-HSD-379