

Teaching of Public Health in Medical Schools

*Report of the Regional Meeting
Bangkok, Thailand, 8–10 December 2009*



**World Health
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**World Health
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Executive summary

The Regional meeting on ‘Teaching of public health in medical schools’ was conducted on 8 – 10 December 2009 at Bangkok, Thailand. The general objective of the meeting was to strengthen teaching of public health in undergraduate medical schools in the South-East Asia Region. There were 85 participants/temporary advisers mainly from medical schools and schools of public health from nine countries in the Region and 12 WHO staff who attended the meeting. In the opening session, the President of Chulalongkorn University welcomed the participants, the WHO Regional Director for South-East Asia delivered an address and the meeting was opened by the Deputy Permanent Secretary, Ministry of Public Health, Royal Thai Government. The meeting was organized under three themes: (i) Current situation in teaching of public health in undergraduate medical schools; (ii) Effective/innovative curriculum and methods in teaching of public health in undergraduate medical schools; and (iii) Regional strategic framework for strengthening teaching of public health in undergraduate medical schools. The key conclusions and recommendations of the meeting were:

Conclusions

- In the light of the changing paradigm of public health and revitalization of primary health care, public health in medical education needs to have a renewed focus.
- Medical doctors are leaders of the public health team and need to be trained to have adequate proficiency to meet the demands of health care systems and the health needs of the people.
- While the health system needs to provide medical care to the sick, it also needs to protect, maintain and further improve the health of the population who do not manifest disease symptoms.
- Medical schools have the responsibility to produce medical graduates who are proficient to deliver preventive, promotive, curative and rehabilitative care. It is especially important that medical graduates are trained to address the social determinants of health and manage the current and emerging health challenges.
- Currently many medical schools in the South-East Asia Region are engaged in diverse and rich practices in public health teaching and learning. However, the curriculum, teachers, teaching-learning methods and assessment and evaluation methods in medical schools need strengthening.
- The responsibility of teaching public health in medical schools is beyond the department of preventive and social medicine. Other disciplines should also play an active role in teaching public health.
- Stakeholders such as the government, medical councils, medical associations, NGOs and INGOs, national and regional networks (SEARAME, SEAPHEIN, medical councils network etc) can play a critical role in improving teaching of public health in undergraduate medical schools.
- The regional strategic framework for strengthening teaching of public health in undergraduate medical schools may be utilized by countries to strengthen public health teaching.
- The Guidelines for Social and Preventive Medicine/Community Medicine/Community Health curriculum in undergraduate medical education produced by WHO-SEARO were presented. Countries are encouraged to adapt and use these according to country-specific needs.

Recommendations

Member States

- (1) To organize national meetings/workshops/consultations to explore avenues to further orient and strengthen teaching of public health in medical schools in alignment with current and emerging public health needs and develop a time-bound action plan.
- (2) To strengthen teaching of public health in undergraduate medical schools, Member States should:
 - Review the curriculum for public health teaching.
 - Explore and include innovative teaching methods (including student assessment).
 - Strengthen continuing professional development system for public health teachers.
 - Taking action to create an enabling environment to ensure harmony between national health needs, health programmes and public health teaching in medical schools.
 - Establish a mechanism for continuous quality improvement of public health teaching and establish/strengthen accreditation system for medical schools.
 - Involve teachers from related disciplines, stakeholders and other sectors in teaching of public health in undergraduate medical schools.
 - Take steps to involve teachers from related disciplines, stakeholders and other sectors in teaching of public health in undergraduate medical schools.

WHO

- (1) To finalize the regional strategic framework for strengthening teaching of public health in undergraduate medical schools and assist countries to adopt/adapt and utilize it.
- (2) To continue advocating to governments and other stakeholders the importance of teaching of public health in medical schools in view of the global health scenario, climate change and economic downturn.

- (3) To support countries in adaptation/application of guidelines for social and preventive medicine/community medicine/community health curriculum in undergraduate medical education and disseminate to medical schools.
- (4) To establish an expert group in public health and medical education to improve teaching of public health in undergraduate medical schools.
- (5) To support countries to establish/strengthen accreditation system for assessment of public health teaching in medical schools.
- (6) To support establishment of WHO Collaborating Centres in Public Health Teaching or the Regional Training Centre in Public Health Teaching.

Introduction

1. Introduction

The South-East Asia Region bears 25% of the global population and 30%–35% of the global disease burden. Robust health systems based on primary health care (PHC) and public health interventions are the most effective means to reduce the disease burden. It is unfortunate that public health receives little attention in this part of the world. There is an imbalance between preventive and curative care. Public health usually occupies a back seat. To improve this situation, the health workforce, especially medical doctors need to be properly trained in public health to be more responsive to the entire range of health problems and needs of the community.

Medical doctors have become the focus because, in general, they are the most respected health-care providers, besides being the leaders



of the health-care team. People listen to what they say. Today, most doctors are in favour of diagnosing sick people who come to see them at health-care facilities, giving treatment and using advanced medical technology. The team members merely assist doctors in carrying out these procedures.

Medical doctors would appreciate and value public health more if the teaching of public health in undergraduate medical schools is interesting, relevant and effective. For this purpose the Regional meeting on “Teaching of public health in medical schools” was organized in Bangkok, Thailand 8-10 December 2009. It was an advocacy meeting to raise awareness of concerned faculty, administrators and stakeholders on public health on the current teaching of public health in medical school and identify areas, if any, that should be strengthened. The meeting focused on the situation of the teaching of public health in medical school in South-East Asia and globally. The opinions and experiences of experts in curriculum, teaching-learning, assessment, and programme management were shared. The strategic framework for strengthening teaching of public health was proposed. The meeting methods consisted of keynote address, presentations, panels, group work, group work presentation and discussion.

There were 97 participants mainly from medical schools and schools of public health from nine countries in South-East Asia Region except DPR Korea and Timor Leste. The capacity of the participants ranged from university and school administrators, department head and faculty members from Department of Preventive and Social Medicine/Community Medicine/Social Medicine, other clinical departments in Faculty of Medicine and from Faculty of Public Health. In addition, there were representatives from regional networks of medical education association, medical council, public health education institution, nursing and midwifery educational institution and WHO staff from the regional and country offices.

2. Opening session

2.1 Welcome remarks

Professor Dr Pirom Kamol-ratanakul, President Chulalongkorn University, welcomed all participants and said, he was honoured that WHO had invited the Faculty of Medicine, Chulalongkorn University to co-host this important meeting. He recognized the importance of public health especially when there is a crisis in health care system. He saw the need to strengthen teaching of public health in medical schools to meet the challenges of health systems.

He hoped that the meeting would raise awareness among participants and Member States on the teaching of public health in medical schools and the role medical doctors should play in the current scenario to meet the societal needs. He hoped that the meeting would create active interaction that led to practical suggestions.

2.2 Address by the Regional Director

Dr Samlee Plianbangchang, WHO Regional Director for South-East Asia, said that the importance of teaching of public health in medical schools has long been recognized. Such teaching may be in the form of preventive and social medicine; community medicine; or community health. The main purpose of this meeting was to review the situation at undergraduate level and to see whether such teaching may need further orientation in light of the changing paradigm in public health today. Among others, macroeconomics and social determinants are becoming the “essence” of public health development. Primary health care, through public health interventions will help ensure “reaching the hard-to-reach”; or “reaching the unreached” to achieve health for all.

Dr Samlee said that medical doctors are facing a “multitude of problems” in health. They have to be able to balance curative, rehabilitative as well as protection, maintenance and improvement of health through public health interventions. Public health interventions applied mainly at the “primary level” of health care focus on “health promotion” and “disease prevention”, taking into consideration in these processes “health determinants” and “health risks”. A strong public health system and robust public health programmes for facing these formidable challenges are needed. Among others in this perspective, there is a need to strengthen “public health workforce” through effective teaching of public health especially in medical schools.

In order for medical graduates to be able to tackle today’s public health problems they should:

- be adequately proficient in public health.
- be able to work effectively in the “multisectoral and multidisciplinary environments”.
- effectively adapt to the constant change in “health paradigm”.
- be involved in public health education and research including training and supervising community-based health workforce.
- support the functioning of “public health facilities”, such as public health laboratory and disease surveillance.

- get involved in health activities, beyond the boundary of medical institutions
- look at their clients in a more “holistic manner”, and
- help medical staff better understand clients’ life, both before and after the institutional care.

Dr Samlee mentioned that the teaching of public health in medical schools should go much beyond the department of preventive and social medicine. It should be a multi-departmental responsibility, All other departments should also abide by this responsibility. Public health is a field of multiple disciplines and multiple sectors.

Dr Samlee thanked participants for their interest and thanked Professor Dr Adisorn Patradul, Dean, Faculty of Medicine, Chulalongkorn University, the speakers at the opening session and the keynote speakers.

2.3 Opening remarks

Dr Sathaporn Wongjaroen, Deputy Permanent Secretary, Ministry of Public Health, Royal Thai Government delivered the opening address on behalf of the Permanent Secretary. He thanked WHO for selecting Thailand as the venue for this important regional meeting. Due to a number of health problems in the last decade he felt that the role of health professionals especially medical doctors has become increasingly important and more critical. The conventional medical education covering diagnosis and treatment on an individual basis may not be sufficient for the people to live a healthy life. He said that there is a need to incorporate public health perspectives in medical education.

Dr Sathaporn mentioned that Thai Medical Education regularly organized national conferences to re-orient medical education to appropriately respond to country health system needs. The 8th National Conference on Medical Education held in July 2009 emphasized four aspects: people-centered health care, ‘humanistic medicine’, health promotion and appropriate medical technology. Doctors should be able to provide humanistic care, enhance health promotion and work with other partners to achieve “All for Health” and “Health for All” goal. This requires effective teaching methods. Dr Sathaporn concluded that the public health approach and public health teaching in medical schools is welcome and should be strengthened. He believed that active participation and fruitful discussion would make the meeting successful.

3. Objectives

General Objective

To strengthen teaching of public health in undergraduate medical schools of South-East Asia Region.

Specific Objectives

- (1) To review the situation of public health teaching in undergraduate medical schools in countries of South-East Asia Region and globally.
- (2) To share experiences and identify effective/innovative teaching contents and methods to improve teaching of public health in undergraduate medical schools.
- (3) To discuss and develop the regional strategic framework for strengthening teaching of public health in undergraduate medical schools.

2

Keynote address

This chapter contains two keynote addresses by two internationally known figures: (1) Dr Prawase Wasi on teaching of public health in medical school and (2) Dr Amorn Nondasuta on the strategic route map: its implications for training institutions.



1. Teaching of public health in medical school: Dr Prawase Wasi

Health is a whole and is an integral part of total human and social development. For survival of mankind, a new thinking demands a paradigm shift from profit to health. Public health should be the Sumum Bonum of mankind. There is a great need to develop public health consciousness and leadership to steer the world toward this new goal. Medical doctors should meet this challenge. They should provide leadership in health care reform for a more cost-effective system.

Public health should be looked at in a new manner. Good health must precede ill health. Health promotion must deal with determinants outside the usual public health sphere.

Attempts have been made to teach public health to medical students from the beginning. Over time, public health and medical education have become increasingly separated. Medical students being trained in highly sophisticated tertiary medical care lose their instinct for public health. Various attempts have been made to change the situation. Departments of preventive and social medicine were set up in medical schools. Later, a community health curriculum was introduced. In the early 1980s, spearheaded by the Rockefeller Foundation, clinical epidemiology as an academic discipline was introduced in various medical schools around the world in order to transform one-to-one care to population-based medicine. All the above-mentioned attempts have not had much success in restoring public health leadership among future doctors.

As the health care crisis is real, medical education should have a prominent role, or even better, a leading role in national health systems reform. Medical schools should try to increase quality care at lower cost. Clinical teachers must be aware of the national situation and apply clinical, economical skill. If the clinical teachers practice clinical decision analysis in their patient care, it will automatically create a new culture and new scientific clinical skill. Together, they will send reverberations throughout the patient care system, leading to more cost-effective health care.

Another and more plausible measure to cut cost and improve the quality of care is to develop a good community health system which is much more cost-effective than the large hospital-based system. The community health system includes self care, family care and community care. It has at least seven objectives: (1) take care that no one is without care in the community,

(2) promote sufficiency economy, (3) take care of all common illnesses, (4) control diabetes and hypertension, (5) take care of the aged at home by home visiting nurses, (6) control diseases, and (7) health promotion.

The community hospital is at the strategic centre of the community health system. Doctors at the community hospitals, contrary to the medical specialists in the big hospitals, have system perspectives and managerial skills. They are more likely to understand policy dimensions, not just technical ones, and therefore can assume new health leadership roles.

The medical students should be trained at the community hospitals. The medical schools should help in strengthening the community hospitals and the latter should serve as the base for medical students' training. Moreover, at community hospitals, medical students will be better prepared to assume new health leadership roles. They can practice more clinical skills and comprehensive care, have more opportunity to carry out research, can learn to develop managerial skill as well as to understand policy issues.

A new public health needs a new paradigm of the medical school and medical education. Linkages between the medical schools and the community hospitals will reorient the medical schools toward wider health perspectives, thus enabling them to take part in health systems research and policy issues. Medical students should be based in the community hospitals to learn about community health and develop a good community health system which will have a profound effect on health systems reform for health for all in the long run.

2. The strategic route map: Its implication for the training institution: Dr Amorn Nondasuta

If we ever succeed in revitalizing PHC this time around, things should be done differently. A more dynamic development of people who take health in their own hands is needed. Service delivery should be shifted to development. There is an urgent need for strategic innovation.

Based on the vision inherent in the concept of health for all and primary health care, at least three areas need to be developed. They are (1) behavioural change of the people, (2) people develop themselves and (3) sustainable community development.

A Strategic Route Map (SRM) is proposed to be an innovative tool to link all aspects of these developments and to reach the destination in a given time frame (behavioural change). The essence of SRM is to develop strategies to strengthen ties between each pair of components in the community: manpower, finance and organization.

SRM is a strategic management instrument that defines various aspects of the strategy and provides direction for success. It is a communication instrument that provides all stakeholders and manpower with information that leads to the alignment of work of all partners. It is a monitoring system that monitors success of a strategy by measuring performance and provides information to assist decision-making.

There are three forms of SRM with different functions: (1) the strategic-route map (SRM): generally unchanged during a given time frame (4-5 years); (2) the strategic-linkage model (SLM): a combination of chosen strategies to be implemented in a shorter time frame (2 years); and 3) the plan of action: a 1-year activity-linkage model.

Basically, a triad of main strategies to influence behavioral change is needed. These will be complemented by a set of four sub-strategies. The main strategies are: (i) the SRM training, (ii) integration of SRM into development programmes and (iii) innovation management. The complementary strategies are (a) community-based planning, (b) data/ information management, (c) IEC system development and (d) networking/ knowledge transfer.

It is necessary to integrate technical measures delivered by health workers and social measures to tackle today's health problems. A management system should be designed to involve the people in decision-making with a more active role and responsibility. A paradigm shift with referral to health workers and the people is also necessary.

Implication for the country training institution (CTI)

There are three basic functions that the CTI could become involved in: (1) research and innovation (2) training and (3) networking and knowledge transfer.

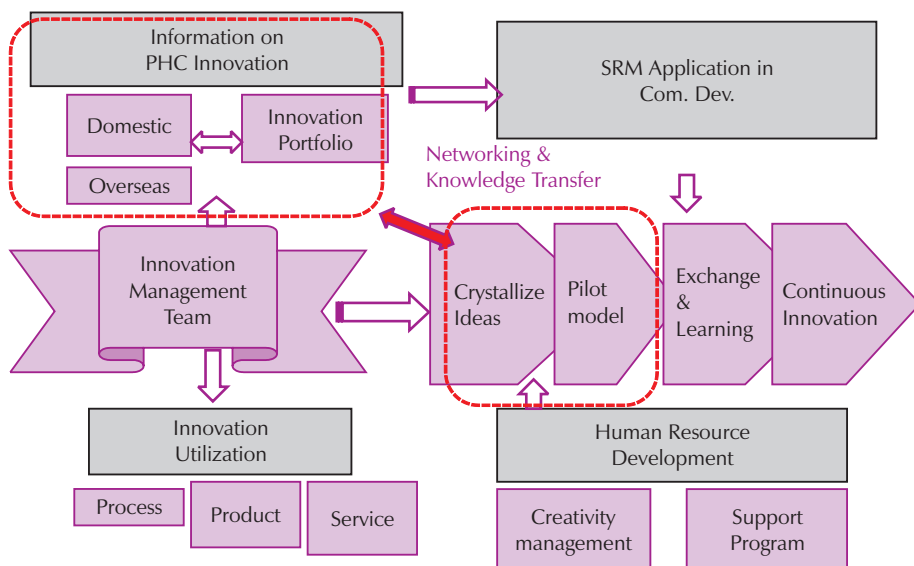
Research and innovation of PHC is mainly carried out by the community themselves. There are three areas of importance, namely, surveillance and screening, social intervention measures and the community development programme.

Those working at this level must have some technical background. Apart from this, there should be a crystallization/conceptualization procedure to make sure that innovations are not lost and can be applied in another context. This is where the CTI may become involved.

To build adequate manpower capability through training includes not only health personnel but also members of relevant organizations e.g. local administration and the community as well.

The CTI may become part of a network of training and PHC innovation institutions in SEAR. It may gather information on PHC innovation, create an innovation portfolio and facilitate exchanges through various means. The CTI may collect and analyze creative ideas, conduct experiments on innovation, and propagate results. The CTI may also propose strategy and policy change through appropriate channels. PHC Innovation management: Role of CTI is shown in the following diagram.

PHC Innovation Management: Role of CTI



3

Review of the reorientation of medical education

Background

During the mid-1950s, the medical education leaders in South-East Asia recognized the urgent necessity for readjustment of medical education to the actual needs of the Region. They also recognized that there were important trends in medical education for reorientation of the basic medical education



methods, including the shift in emphasis to the preventive and community approach.

A slight shift in emphasis was noted in the late 1960s and early 1970s when medical schools established community medicine departments, made some adjustments in their curricula to include community medicine and promoted educational science and technology for teachers in medical schools.

In the annual report of the Regional Director WHO for South-East Asia to the Regional Committee in 1976, it was noted that a large majority of doctors are not trained and equipped to meet the needs of the community in the matter of preventive, promotive and curative health care services, particularly in rural areas; that the training continues to be hospital-based, thus making the trainee doctor dependent on sophisticated aids and diagnostic services and giving him/her very little exposure to rural conditions.

The first meeting to review and facilitate the progress of the reorientation of medical education (ROME) in the Region was held in Surabaya, Indonesia in 1979 after the adoption of the Alma-Ata Declaration on Primary Health Care. The Surabaya meeting reached agreement on the terms “Community Medicine” and “Community-oriented Medical Education”, which hitherto had been used interchangeably by medical educators in the Region. The meeting also identified the primary roles of a medical graduate in the context of primary health care and emphasized the need for systematic, education-driven, competency-based curriculum development.

The second ROME meeting was held at the WHO Regional Office for South-East Asia, New Delhi in 1983 to identify strategies for ROME in the light of the Health for All goal and the need to take cognizance of the context and the societal environment.

In the meantime a number of programmes in medical education were being undertaken in the countries to make it more relevant to the needs of the community. But it was generally felt that these efforts were, by and large, isolated and ad hoc events which did not have a national impact and the reoriented educational responses to community.

The third ROME meeting was held in February 1987 which considered the broad lines, taking into account the social context, and to revisit the regional goals and targets, and to plan for the development of specific national level targets and mechanisms. In the same year the fourth meeting was held in November to consolidate the ideas, concepts and proposals expressed at the earlier meetings and synthesized all of them into a single document.

Philosophy and vision of reorientation of medical education

In response to WHO's definition of health and the health for all goal, the way medical education views health has been changed. The individual is a part of a complex human eco-system with several layers of organization ranging from the molecular to the cultural. Behaviours are key factors to health and disease and the family and the community is seen as "the patient". The emphasis is more on people and how to prevent disease and promote health as well as the health care system. The doctor remained the central health care provider.

Medical schools in the Region were, generally, modeled on European-American institutions. Medical students were privileged, trained in high technology biomedicine and aspired to work in urban settings, amongst middle class patients.

The reorientation movement in medical education has been evolved, where a doctor was expected to be the symbolic leader of a health team, each member making a distinct contribution and the entire team working in partnership with the community it served. To support this development, medical education had to be community-oriented, relevant to HFA/PHC using flexible teaching methods, student centered and integrated as much as possible. Emphasis was to be given to appropriate technology and comprehensive health care management.

The goal of reorientation of medical education in South-East Asia was that by 2000 all medical schools in the Region would be producing, according to the needs and resources of each country, graduate or specialist doctors, responsive to societal needs and possessing the appropriate ethical, social, technical and scientific and management abilities so as to enable them to work in the comprehensive health system based on primary health care.

The educational programme was proposed to be based on two fundamental principles: community-oriented and student-centered. The directions for reorientation included: medical education system as well as the health system as a part of social development; coordination with the health care system; a balance between the technological and humanistic approach; a more holistic approach; a balance between hospital-based tertiary and community-based care; learner-oriented methods and a problem-oriented and experiential approach.

The recommended strategies for ROME in the South-East Asia Region were as follows:

- (1) Promotion and development of a medical education policy- that is a part of the national health policy and is related to the national socio-economic development policy.
- (2) Development of a medical education system -responsive and relevant to the needs of the country in terms of quality and numbers of medical graduates and specialists produced.
- (3) Coordination of the medical education system and the health system - through the establishment of committees, councils etc. to functionally link the education of all health personnel with the other sectors, for, amongst others, health personnel planning and management.
- (4) Promotion and support of the medical education system - by ensuring political support and commitment from professional groups, licensing bodies and councils, and enlisting budgetary support and mobilizing community support.
- (5) Education programme reforms including student selection, content, teaching and learning activities and assessment methods.
- (6) Inter-country cooperation- for sharing concepts, lessons and experiences learned and for staff development.
- (7) Monitoring and evaluation to ensure relevance of the concepts and to ascertain that the directions and speed of progress of the reorientation activities are moving as planned.
- (8) Strengthening the role of WHO and other international organizations- to mobilize technical and other resources.

WHO supported a number of activities to medical schools to develop and implement their ROME programmes. Some of the key WHO-initiated support activities included regular review of concepts through regional and national level consultations at regular intervals and visits by consultants to countries, production of technical documents and provision of literature, research reports and information on different aspects related to ROME through the Health Information and Literature Library Services (HeLLIS) Network.

In the late 1990s, an assessment was conducted amongst a sample of medical schools to determine the progress made and the lessons learnt during the preceding 15 years. Overall there was a marked change in the attitudes

of the faculty and the senior policy makers in education and health to effect change in medical education systems in most countries in the Region. At the national level there were major strides taken to link medical education to the health care needs in the respective countries, while maintaining scientific quality of international standard. The medical schools have strengthened the education units.

In 1994 (10 years after the initiation of the ROME programme) questionnaires were sent to all medical schools in the Region that were listed in the then WHO Directory of Medical Schools and 20% of schools responded. It was found that there were positive changes under the ROME initiative in all the responding schools.

- The maximum change was the introduction of different forms of integrated and/or coordinated teaching, bringing together either vertical or horizontal integration.
- A curricula in a few schools has changed to a complete problem-based model, and a few others to an organ-system based model.
- Using field training areas or government facilities for student practice with more organized, objective based and systematic training activities.
- Teaching sessions in smaller hospital facilities in the community.
- Introduction of a community posting as a requirement either for graduation or as a part of the internship.
- Introduction of more time for electives which was somewhat compulsory course for students to take.

Conclusion

The ROME programme could be considered a successful development that helped to serve the community needs at that time. It was triggered by the HFA and the primary health care movement and helped to advance medical education per se in the Region.

Not all medical schools in the Region demonstrated equal change and innovation. Factors that accelerate or slow down the progress included: quality of leadership provided by the innovators, the deans and the staff; general climate/culture in each of the medical schools as well as the country as a whole; technical know-how and additional knowledge and skills among faculty that

was available in the medical schools; the regional teacher training centres as well as the national centres; resources and capacity for innovation and the external incentives including way of recognition and appreciation.

In the context of revitalization of PHC, it is rational for medical educators to revisit the medical education system in the Region especially with referral to the impact of teaching of community medicine and the health of the people.

4

Situation analysis of teaching of public health in undergraduate medical schools in countries of South-East Asia Region

The PSM/CM/CH curriculum in medical curriculum

In order to understand the areas that need to be further improved, a review of the current situation of teaching of public health in undergraduate medical education is essential. Prior to reviewing



the teaching of public health in the whole medical curriculum, WHO/SEARO organized an Expert Group Meeting in August 2009 in New Delhi to review only the Preventive and Social Medicine (PSM), Community Medicine (CM) or Community Health (CH) curriculum at the undergraduate level.

It was found that the PSM/CM/CH department curriculum is mainly responsible for the PSM/CM/CH curriculum. The curriculum/course is periodically reviewed when the whole medical curriculum is reviewed. Each medical school designs its own PSM/CM/CH curriculum. There is no national standard for the PSM/CM/CH curriculum.

The PSM/CM/CH curriculum is mostly theory-based where teaching/learning has no or limited linkage with other clinical courses. The curriculum content in some schools is not up date. Integrated and problem-based curriculum is practiced in some schools.

It is also found that, many faculties are not able to make their teaching/learning sessions stimulating for the students. Pedagogical skills of teachers are also lacking. A faculty development plan, continuing medical education or continuing professional development programmes for faculty in PSM/CM/CH departments are generally not available as compared with faculty in clinical areas. The institutional quality assurance mechanism is also not available.

In most schools, field visits or community placement for acquiring real life experiences are not organized effectively due to the lack of interest of organizers or paucity of funds. In examinations the subject is not assessed separately and due weightage is not given in the assessment. In many cases, an internship programme in PSM/CM/CH is not available.

The expert group meeting concluded that, since issues of public health are constantly evolving, the competencies of medical students in public health is mandatory. Lastly, the group reviewed and finalized the “Regional guidelines on PSM/CM/CH curriculum for undergraduate medical education” in the SEA Region.

Situation analysis on teaching of public health in undergraduate medical schools

Teaching of public health in undergraduate medical schools is broader than teaching of PSM/CM/CH curriculum. It covers teaching of public health in the whole medical curriculum and is beyond the responsibility of PSM/CM/CH

department. Experts from seven countries, namely, Bangladesh, India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand where there are medical schools were invited to write a country paper. The areas covered included status of public health among medical students, public health courses/subjects/topics/curriculum, teachers, teaching methods, practicum, assessment and evaluation, infrastructure, programme management and quality assurance. The key results are shown in Table 1.

Findings:

- (1) Medical graduates are not interested to build a career in public health because of a lack of understanding regarding the scope and value of public health. They feel that working in public health seems less prestigious and has low incentives compared to working in other clinical specialties or in the private sector.
- (2) The undergraduate medical curriculum in most countries is competency-based. A community-oriented curriculum, problem solving and integrated approach is also observed in some medical schools.
- (3) The public health curriculum or contents taught in undergraduate medical schools vary from country to country and from one school to another within the same country. Generally the topics covered are similar with a slight variation. The duration of courses is also varied. However, the total number of hours of public health courses are small compared to courses in medicine or surgery.
- (4) In some schools, students are introduced to public health in their first year and public health has been integrated throughout the curriculum. In some traditional programmes, public health is taught in the third or fourth year of the curriculum.
- (5) Most of the public health contents are taken care of by the Department of PSM/CM/CH. Some of the topics include, for example, national health policy and system, concepts of health and disease, demography or population study, preventive and social medicine/community medicine, primary health care, epidemiology, biostatistics, immunization, food and nutrition, health education, health promotion, family health/medicine, school health, environment health, and occupational health. There is a trend to integrate public health concepts in clinical courses as well.

Table 1: Public health teaching in medical schools of countries in the SEA Region

| Name of the country | Who teach public Health | When do they start | How long do they continue | Integration with other departments | Contents relevant to PH | Teaching Methods used | Field visit | Family attachment | Urban/peri urban setting | Assessment | Faculty members | Link with stakeholders |
|---------------------|-------------------------|----------------------------------|---------------------------|--|---|---|--|--|-----------------------------------|--|---|----------------------------------|
| Bangladesh | CM | 1st year | 4th year | Patel/OBS GIN/ SKIN/Path/ Pharma/Micro | PH/Behav.Sc/Epidemi/E health/PHC/Disaster/Accident | Lecture/Tutorial/ Day visit to PH inst/RST | RST 2 weeks 10 visits to PH inst | No | Yes | Formative/ summative by OSPE/SOE/ Written | Pre-graduate in CM/ Academic staff | No |
| India | CM | 1st year | 5th year | Yes | PHCE health/ Epidemiology/Bio stat/ Demography | Lecture/ demonstration/ tutorial/practical | Some | Some | Some | Formative and summative with written /oral and practical | Post-graduate in CM/ nonmedical | Court has focused on PH recently |
| Indonesia | PH & CM | 1st year | 5th year | Both vertical and horizontal using PBL | Med and health manage/population and demography/research methods/ Epidemiol/ family med/occup med | Lecture and clerk ship | Small group teaching/Clerkship in Puskesmas | Yes | Family doctors clinic for 1 month | NA | Postgraduate in Ph and Cm | No |
| Myanmar | PSM | 4th year | 4th year | No | Concept of health/PH/ ph laws/drug addiction | Large group/small group/ individual | RST 3 weeks, 3 hours per day, 5 days a week | Family health care visit 3 | 12 visit to places of PH interest | Class work/ written/oral | Trained in teaching technology and ed science | No |
| Nepal | CM | 1st | 5th | Some | Epidem, PH lab sc, sociology, anthropology, environment, CH diagnosis | Lecture/PBL/ Integrated/ student centred | Yes | NA | NA | NA | trained in teaching technology/Post graduate and ed.sc. | NA |
| Sri Lanka | PH/ CM | Varies from 1st year to 3rd year | 5th year | Some | NA | Group discussion/ family attachment/ research project | Yes, but varies from one university to another | Yes, but varies from one university to another | NA | NA | Postgraduates in CM | NA |
| Thailand | PM/GM/ FM/FM/ F&CM | 1st year | 6th year | NA | Epidemiology/PSM/PH/ evidence based PH/ Ph policy | Lecture/PBL/ case conference/ field visit/SWOT analysis | Yes | NA | Yes | Written/oral/ practical | Postgraduate in PM/Trop med/occ med/etc | Yes |

- (6) Public health related topics like social science, anthropology, health determinants, health information, evidence-based public health and current public health challenges such as impact of climate change are yet to be added in the curricula of many schools.
- (7) There is a move toward integrated teaching with teaching staff from various departments using problem-based approach, information technology and social networks.
- (8) Some medical schools are using horizontal and vertical integrated courses/modules/curriculum from year one and span throughout the curriculum while some use phase-wise integration for a certain period.
- (9) Teaching methods are varied. For theory, common methods include lectures, small group discussion, tutorials, seminars, group study and self-directed learning.
- (10) For practice, some schools arrange a day visit to public health organizations. In most countries/schools a structured family or community attachment programme is being implemented. This provides students with real-life situations, making the subject more interesting and meaningful to students. The duration of community placement varies from a few weeks, months to a few years. In some countries, internship in community medicine is available.
- (11) In most countries/schools, the teachers are medical postgraduates in either community medicine or public health. In some schools an additional qualification or training in educational science is preferred. Non-medical teachers in the field of sociology, anthropology, biostatistics and health education have been recruited in some colleges.
- (12) The faculty development programmes are not standardized. All teachers are encouraged to attend meetings, workshops or continuing medical education (CME). Most schools have a system for promotion of teachers by consideration of years of experience and academic achievement. It is observed that in some countries the number of trained teachers in community medicine is limited.
- (13) Both formative and summative assessment is being practiced in most schools. Some schools have credits in writing field reports and projects. Due weightage is not being given to public health issues in many schools. For theory, written exam is a common practice. For practice, students are assessed on their performance, community-based intervention, community project, reflection in the log book,

portfolio, Objective Structure Practical Examination (OSPE) as well as their attitude toward the practice of public health in medicine.

- (14) In some schools, there is a paucity of laboratory equipment and modern educational equipment. Books and journals in the area of public health are limited and not updated. Infrastructure in community medicine departments in most medical schools in some countries needs to be upgraded.
- (15) The programme management mechanism is not streamlined with the institutional mission and goal in most situations. Collaboration between the stakeholders and the administrative authorities is minimal. The commitment of school administrators in reforming the teaching of public health in line with the national health care reform is not clearly observed even though countries are moving in a big way in reforming their national health system.
- (16) Some schools implement the quality assurance system set by the national authority and have their own mechanism to ensure quality improvement in order to be recognized or accredited by the medical council or concerned authority. However, a standard in relation to education and training in public health in the undergraduate curriculum is not available.

5

Regional strategic framework for strengthening teaching of public health in undergraduate medical schools

The strategic framework for strengthening teaching of public health in undergraduate medical schools in South-East Asia has been developed based on the situation analysis of the teaching of public health in undergraduate medical schools in countries of South East Asia (Chapter IV). It was reviewed and adopted in principle in the Regional meeting on teaching of public health in medical schools in December 2009.



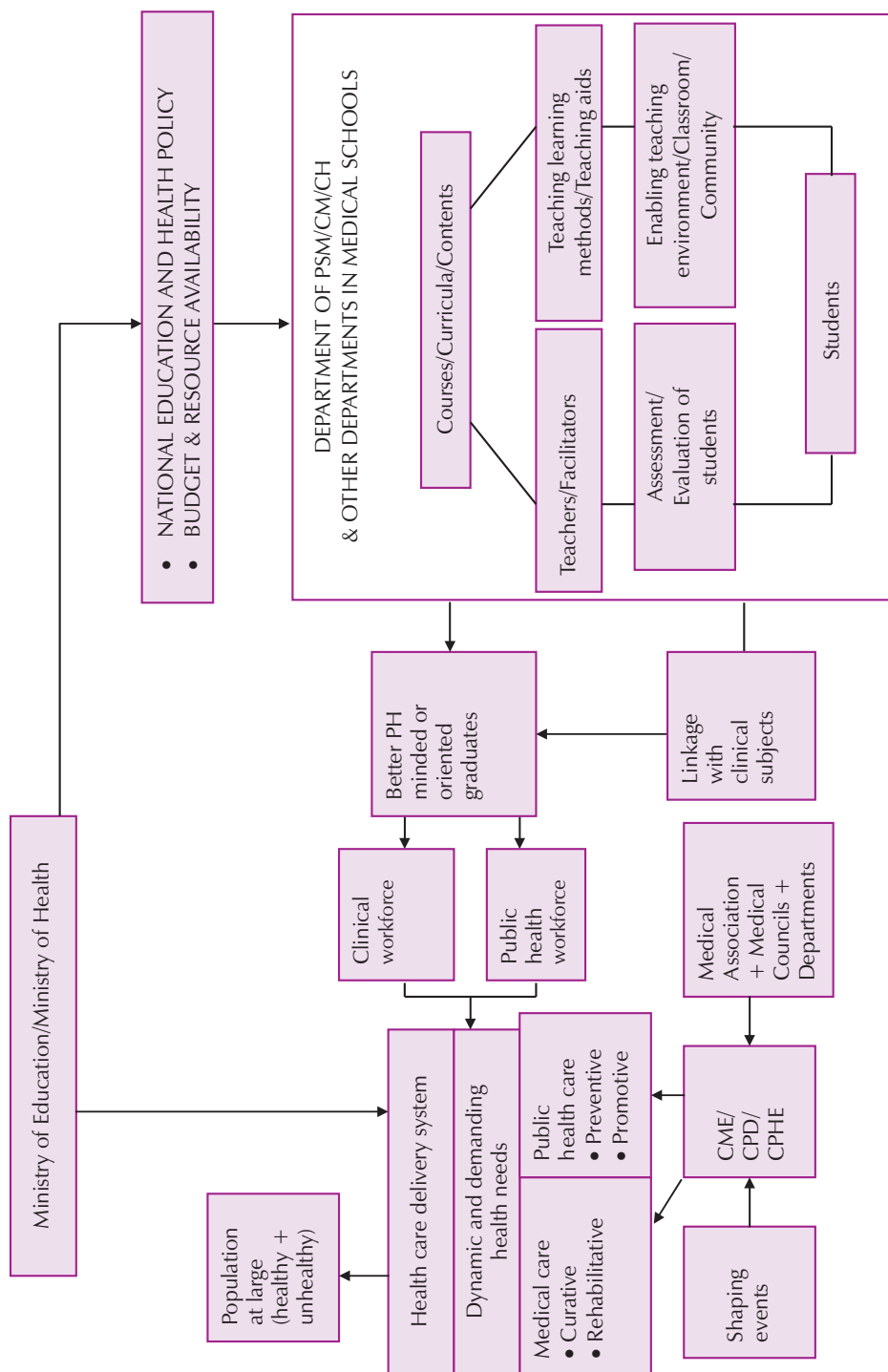
The framework was presented by Dr Myint Htwe, Director Programme Management, SEARO. The framework is based on a system approach: input–process–output. The teaching of public health in undergraduate medical schools includes both the teaching of PSM/CM/CH as well as teaching of related public health issues by other departments. It has been developed in line with revitalization of primary health care and the demands of the service sectors. It is aimed to provide strategic direction with some suggested actions to strengthen the teaching of public health in undergraduate medical schools. It is expected that the teaching of public health in medical schools in the Region will be improved which, in turn will lead to better orientation towards and appreciation of public health by medical graduates.

The framework focuses mainly on the key components in medical schools that need to be strengthened. However, external components that may affect medical education as well as components that need to be taken into consideration after graduation are also included. This is to ensure that medical doctors are well prepared and developed to meet the requirement of the health care delivery system and the needs of the population at large (Figure 1). Key components in PSM/CM/CH and the clinical department of medical schools include course/curricular/contents, teachers/facilitators, teaching-learning methods/teaching aids, enabling teaching environment/classroom/community, assessment and evaluation of students. External factors that have an impact on education direction include national education and health policy and the availability of resources as well as budget.

The main function of medical schools is to educate and train medical students to acquire the knowledge and skills that will enable them to maintain or improve the health of the people and prevent disability and deaths. They are responsible for supplying clinical medical doctors and public health professional for health care delivery systems. In the era of revitalizing PHC, medical schools are required to produce graduates who understand and see the value of public health, had a leadership role, and are able to implement public health interventions when needed at the community as well as at the higher level of health care delivery system.

The role and function of medical schools as well as the direction for curriculum and teaching-learning depends on many factors. The school mission, functions, roles and responsibilities are determined by the policy and guidance of the ministry they are under (education or health), as well as their parent organization (either a university, college or a foundation) and the school administrative team. In some countries, societal expectations or civil organizations also play a crucial role in defining the medical doctors they would

Figure 1: Regional Strategic Framework for Strengthening Teaching of Public Health in Undergraduate Medical Schools



like to have. Medical curriculum is mainly meant for quality control by the university as well as the medical council which sets the standard for medical curriculum and conducts accreditation of medical schools.

The key components in the medical schools are:

1. Course/curricular/contents

The medical curriculum can be competency-based or problem based. A horizontal or vertical integration can be seen for the whole curriculum or a part of the curriculum depending on the objective and decision of the medical school. The school which focuses on the community may develop community-oriented curriculum.

The department of PSM/CM/CH plays a key role in teaching public health to undergraduates. However, the courses or contents of public health should also be taught by other clinical departments or preclinical departments as well as departments or schools/institutes outside of medical schools such as schools of public health, schools of social science or research institutes.

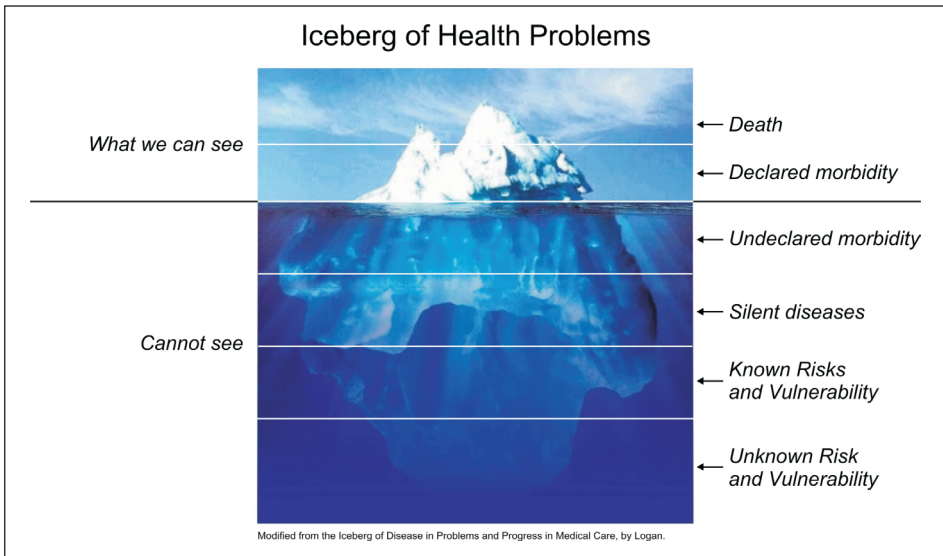
Common courses in public health in the undergraduate medical curriculum include epidemiology, biostatistics, health promotion, health policy and systems, preventive and social medicine, among others. These courses are usually taught by the PSM/CM/CH department. However, preclinical courses such as sociology/ anthropology or social sciences, population study, behavioural modification or communication also provide a good foundation for public health. Global trends such as the International Health Regulations, 2005, impact of climate change on health, and intellectual property rights could also be included.

The Iceberg model of health problems can assist in designing the curriculum (Figure 2).

The iceberg illustrates that a majority of illnesses or health problems have been neglected or are undetected by medical doctors. Death and mortality is of primary concern. It is easy to see sick or dying people from various causes who come to the health-care facilities with complaints of ill health. But death and declared morbidity is only the tip of an iceberg that appears above the surface of the water.

At the same time, there are people with symptoms or signs of illness who, for various reasons, do not or cannot access health-care facilities and may even

Figure 2: Iceberg of health problems



be unwilling or unable to come to health facilities for care. This health problem is called undeclared morbidity and lies unseen just beneath the “surface of the water”.

In addition, there are people who knowingly or unknowingly expose themselves to various types of health risks and vulnerability. These health problems lie under the “surface of water” and represent the major part of the health needs of the population. Those health problems that are a part of iceberg under the surface of the water are not easily seen by health-care providers and the public, but need public health interventions through the PHC approach. The medical curriculum needs to give more attention to the health problems that are “under the surface of the water” as well as taking into consideration the influence of socio-cultural factors surrounding health.

2. Teachers/facilitators

Teachers should acquire both technical knowledge and skills, and good moral and ethical judgment. Teachers are crucial role models for students. A number of students pursue careers followed by teachers they respect. Most teachers in medical schools have degrees in medicine. Those who teach independent public health courses are required to have a degree or advanced training in public health, especially in the area that they teach. It is important for teachers

to believe in and provide public health interventions that students could observe and learn from. Teachers who are committed to excellence in teaching and make students learn should be recognized and honoured.

Considering the health-care reform movement and dynamic changes, there is a need for teachers to regularly update their knowledge and teaching skills in public health. Medical schools should have staff development and learning plans or continuing professional development plans. This could be in various forms from attending related meetings, conferences or workshops at the national, regional and international levels; formal study for a certificate or degree; participating in research or public health activities with partners, or even placement in a health-care facility to carry out public health interventions. The staff development plan should be developed by the staff, endorsed by the department head and approved by the school administrators. Sufficient funds need to be allocated or mobilized to ensure that the approved plan can be implemented. This will enable teachers to be up-to-date and skilled in their areas of teaching.

3. Teaching–learning methods/teaching aids

Public health courses are provided in both theory and practical classes. Theory classes are mainly delivered in the classroom. A variety of methods could be implemented to enhance students' critical thinking and problem-solving skills. Teaching aids including multimedia and information and communication technology can be utilized to make the learning more active and interesting.

Teachers in other clinical departments also play key roles in introducing and integrating public health concepts in the course. There is a need to harmonize what is taught by clinical departments and the PSM/CM/CH department. There should be a mechanism to ensure that key concepts and important interventions are not missed and are taught at the right time. For example, PSM/CM/CH may focus in general on the importance of promoting child health and prevention of illness in children. The paediatric course will provide details on how to promote child growth and development in each age group, the use of oral rehydration therapy (ORT) for the treatment of diarrhoea and the Expanded Programme on Immunization (EPI). In some schools, it is found that the use of a horizontal or vertical integrated approach in teaching clinical and community medicine is useful in promoting students' learning.

Students may practice what they learn in the classroom on public health in health-care facilities, in the field or in the community. This is an important

experience that needs to be arranged, with adequate hours, to enable students to apply what they learn in the classroom to real-life situations. Students should practice under the supervision of teachers. Staff in the field including members of the community with whom students have to work with could serve as good resource persons or teachers. A good relationship between the school and community is required. Proper orientation of people in the field on student supervision and assessment is essential.

4. Enabling environment/classroom/community

An enabling or supportive environment that promotes teachers' teaching and students' learning is very important in enhancing the teaching-learning process. In the classroom, there should be adequate space appropriate for the number of students, comfortable tables and chairs, functioning audiovisual aids, good light and ventilation. Textbooks and journals as well as adequate number of computers should be available and connected to the internet which should be accessible. There should be adequate space for teachers' offices, a lounge and restrooms. A students' lounge, cafeteria and dormitory should be available.

The selection of a community for students to practice in is crucial. Both the medical school and the community should benefit from such practice. Staff in the practice setting should be invited to teach and assess students as per the guidelines. Local government, community leaders and community members should recognize the presence of students in the community and comply with students' requests. Sites selected for field practice should provide adequate data and experience for students to learn. It is important to place students in a community hospital for a certain period of time to gain necessary clinical and management skills. Placement of students in the family will provide useful experience.

Other enabling environment includes effective programme management and establishment of a quality assurance programme in medical schools. The effectiveness of teaching also depends on the effectiveness of educational programme management. The school administrator or programme administrator should have a positive attitude toward public health, a good understanding of the medical curriculum and management skills. These may include coordination of teaching among departments within the schools of medicine and between departments or disciplines outside the school. Partnering with other organizations and resource mobilization are some of the skills required of the programme manager.

It is important for the medical school to have a quality assurance system. This is to ensure that the course contents, teachers, teaching–learning methods, students’ assessment and evaluation, an enabling environment and educational programme management meet the standards of quality. A school committee may be formed to regularly audit, assess and evaluate the performance of these elements. The results of the evaluation should be reviewed to improve performance. This has to be a continuous process. Continuing quality improvement is essential to ensure quality medical graduates for health care who meet the benchmark.

5. Assessment and evaluation of students

Assessment and evaluation is important to measure students’ learning against set criteria. The methods for assessment are varied. Students should be informed at the beginning of the course of the assessment and evaluation methods. Both quantitative and qualitative assessments may be required. Validity and reliability tools should be examined. Any bias that may occur due to different assessors should be minimized or avoided. The criteria for evaluation should be clear.

Conclusion

Teaching of public health in undergraduate medical schools is not the sole responsibility of departments of PSM/CM/CH. However, the focus should be on these departments, which teach most courses of public health. Effective teaching of public health by departments of PSM/CM/CH will eventually improve the overall teaching of public health in undergraduate medical schools. School administrators should review the medical curriculum with regard to the teaching of public health, especially the five key components and strengthen them as appropriate.

6

Views on strengthening teaching of public health in undergraduate medical schools

This chapter presents views of participants on the teaching of public health and on approaches for strengthening teaching of public health in undergraduate medical schools. Their views were gathered from a presentation, panels and group work and used for revising the regional strategic framework for strengthening teaching of public health in undergraduate medical schools in SEAR.



I. Presentation

Teaching of public health in medical school: Global scenario (Professor Dr Alistair Stewart).

Public health is perceived and recognized differently by people in different parts of the world. Studies and reports from America, Canada and Europe on teaching of public health in undergraduate medical education indicated problems in relation to curriculum/contents, teaching methodology and teachers. These led to students' non-satisfaction with the public health curriculum and regarding public health and its component subjects as peripheral or even irrelevant. With the challenges in health, it is proposed to strengthen the teaching of public health to improve public health service. This scenario is not much different from issues found in countries of South-East Asia.

Approaches to strengthen teaching of public health have been recommended by various organizations. These include the development of core competencies of public health practitioners, the development of the framework for strengthening public health education, research and practice, the identification of eight critical areas that should be provided in the curriculum (informatics, genomics, communication, cultural competence, community-based participatory research, policy and law; global health, ethics), the publication on best practices of public health in undergraduate medical education and the establishment of a regional teacher training centre.

Strengthening public health teaching cannot be done only by a change in the curriculum or teaching method but has to be at the institutional level and involves rethinking about undergraduate medical education in general. The community-oriented approach should be reflected in the medical school's vision, mission statement and policy as well as in all aspects of education (curriculum, teaching-learning methods, assessment, quality assurance, research) and management (faculty development, educational unit, networking with community and public health institutes, and funding).

II. Panels

Panel 1: Public health role in revitalizing primary health care

1.1 Public health as a global agenda (Professor Dr J.P. Gupta).

Most countries are facing multiple challenges that have an impact on health systems performance and on the health of people. There is a call for national

and global health agenda to tackle the challenges which may include investment in health to reduce poverty, building individual and global health security, promoting universal coverage, gender equality, and health-related human rights, tackling the determinants of health and strengthening health systems and equitable access.

India, among others, has a high number of health care facilities and medical schools, national policies on National Rural Health and National Urban Renewal Missions and the Institute of Public Health. However, India is also a big country with a large population and several health problems, low percentage of GDP on health and low budgetary outlays on health. In order to meet the global agenda on public health, India may need to take a relook at public health and the teaching of public health in medical education.

1.2 Public health: A spearhead in revitalizing Primary Health Care (Professor Dr Nilambar Jha)

The Alma-Ata Declaration on Primary Health Care (PHC) adopted in 1978 was a major milestone in public health. PHC is the key approach to achieve health for all. To make the goal achievable, there is a need to strengthen the teaching of public health to produce a five-star doctor. Based on Charles Boelen, a five-star doctor should be a good care provider, decision maker, communicator, community leader and team member. This could be possible through a community-based medical curriculum.

The MBBS programme at the B.P. Koirala Institute of Health Science, Dharan, Nepal, has an integrated, need-and community based-curriculum. Students are exposed to concepts of public health and socio-cultural structure and environment of the community in the first week of their programme. From year 1-5, students are educated and trained on public health concepts, management and skills through classroom activities, field visits, family attachment, health projects and community services. In the last semester of the fifth year, students participate in an internship programme where they are placed for six months at a teaching hospital and for six months at zonal and district hospitals.

1.3 Policy and advocacy for public health in medical schools (Professor Dr Adisorn Patradul).

A medical school has a role to link the national health policy and professional standards in development of the curriculum to ensure that the demands of the health systems, community and people are met. In addition to specialists,

medical schools are responsible to produce primary health care providers as well. In recent years, medical schools have recognized the importance of educating the medical students on public health and have attempted to improve the teaching of public health.

The Faculty of Medicine, Chulalongkorn University, Thailand advocates and promotes public health in the undergraduate medical curriculum. Strategies include early exposure, integration, multiple teaching methods, combined intra- and extra-curricular activities and a multi-professional approach. Public health related courses are offered from the first year through the fifth year of the curriculum. They include courses such as doctor and society, principles of preventive medicine, epidemiology and biostatistics, community medicine I & II, evidence-based medicine and family and community medicine. In addition, students are encouraged to join multidiscipline community health camps and health education activities as extra-curricular activities.

Panel 2: Perspectives on public health and teaching of public health in undergraduate medical schools

2.1 Perspective of a new medical graduate (Dr Passakorn Wanchaijiraboon).

The curative aspect is perceived by many new medical graduates in Thailand to be more interesting than the public health aspect since doctors practicing curative medicine are perceived to be more professional and making much more money than doctors practicing public health. Learning about community medicine is very theoretical and boring. The curriculum does not encourage students to understand the real public health problems. All of these points raise concerns and should be addressed.

2.2 Perspective of a community doctor (Dr Wiwat Wiriyakijja).

Globalization, economic crises, disasters, emerging diseases and other changes require medical schools to adjust the way they teach students to enable them to help people to adjust to new health needs. Community health care is the solution. Family attachment can improve the attitude and ethics of the students. It is evident that the community teaches students to become good people. Curative and rehabilitative care should be integrated with preventive and promotive care, and the overlapping part can be effectively done at the primary care level. The principle that should be further promoted is for everyone to be able to look after their health.

2.3 Perspective of a clinical teacher in medical school (Professor Sayeda Afroza).

In Bangladesh the medical curriculum addressing public health was developed in 1988 and was revised in 2002-2003. Public health concepts can be integrated in the teaching of paediatrics. Topics in paediatrics that could apply public health concepts are, for example, infant feeding, nutritional disorders, infectious and tropical diseases, growth and development and preventive paediatrics. In addition to theory, students are required to apply public health concepts in their practice during history taking and health examination and in the development of cost-effective investigation and treatment plans.

2.4 Perspective of the head of department of preventive and social medicine (Professor Abraham Joseph).

There are several facilitating factors to enhance public health teaching in medical schools. They are: a clear vision and mission statement of the institute, support of administrator and curriculum committee, active involvement of faculty in the department and other departments, appropriate size of class, use of problem based in the classroom exercise, good field practice areas, student centered approach, involvement of the community, appropriate assessment, good coordination with Ministry of Health and open feedback from faculty and community. Actual studying in the community provides better learning experience than reading from textbooks only.

2.5 Perspective of an administrator of a school of medicine (Professor Muhammad Amin).

The medical curriculum in Faculty of Medicine, Airlangga University is a competence based curriculum, with the use of evidence based learning method. Students are educated in a series of public health courses. In the first public health course, students learn the manifestations of the balance between knowledge and awareness on health, and what it takes to maintain healthy life and healthy environment. In the following course, students are expected to have a comprehensive understanding of the host-agent-environment interaction, including the health behaviour concept and health promotion strategy and programmes. In the third course, students learn about the Indonesian national health system and the health policy making process including primary health care centre and hospital administration, the concept of disease and health

problems and their control programmes. The last course in public health emphasizes clinical and field work in the community. It is expected that students will be able to provide comprehensive health care by applying multi-disciplinary medical sciences for the community in certain areas. The activity lasts for four weeks covering community activity or operational research, medical activity and case appraisal.

Panel 3: Contents of public health in undergraduate medical curriculum

3.1 Contents of public health offered by the Department of Social and Preventive Medicine/Community Medicine/Community Health (Professor Mahmuda Chowdhury).

In Bangladesh, public health topics are covered by the community medicine department. The topics are, for example, history and introduction to public health and community medicine, concept of health and disease, behavioural science, biostatistics, health education and communication, national and international health organization and national health programmes, epidemiology, public health nutrition, maternal and child health including family planning, immunity and immunization, school health, demography, entomology, environmental health, occupational health, primary health care, public health administration and disaster and accident.

Students' interest in public health can be enhanced by reducing the irrelevant and outdated topics and the issues that are already taught in other courses. Greater emphasis should be on the essential aspects of public health and public health experience.

3.2 Integrating public health in clinical teaching departments and inclusion of sociology/anthropology in medical curriculum (Associate Professor Dr Waraporn Eoaskoon).

Social science/anthropology provides medical students with an understanding of the social life/lifestyle and social behaviour of human beings, groups and society as well as their beliefs and customs. These will help them to understand human behaviour in accessing or not accessing health care services or compliance or non compliance with treatment and care as well as in approaching and gathering data from people for community diagnosis and for data analysis. It is suggested

that social science /anthropology concepts be included for medical students to better address public health issues. For example, doctor and society; impact of political, economic, education, legal and sociological change on health and social care; desirable health behaviour in relation to lifestyle and social system; socialization of medical students; suffering, medicine and culture change; human relationships; information technology; reflective practice of evidence-based, bio-psycho-social medicine, professionalism; ethical principles in the management of health and patients; environmental and social determinants of health.

Clinical departments could include the concept of social science and public health in their courses, for example, in the small group interactive sessions using case studies in epidemic, preventive medicine, health protection and health promotion; critical appraisal of published epidemiologic research on the effects of various environmental factors on particular diseases; hospital rounds with more emphasis on burden of diseases and the influence of socio-cultural factors on health decisions.

3.3 Guidelines for Social and Preventive Medicine/Community Medicine/ Community Health curriculum in the undergraduate medical education (Dr P.T Jayawickramarajah).

In August 2009, WHO-SEARO organized an expert group meeting to review the teaching of social and preventive medicine/community Medicine/ community health in the undergraduate medical curriculum. Guidelines to set minimum needs and improve quality of teaching of public health were proposed and finalized. The strategies used were designed to create an enabling learning environment to encourage positive attitudes amongst students, directed towards the institutional mission, community-oriented and integrated, involving local contexts, problem based and student centered and multi-disciplinary in approach. The guidelines proposed the objectives of public health courses in medical curriculum, the expected outcomes, the duration, the curriculum organization, the essential public health contents, the recruitment and development of teachers, the teaching-learning methods, the education resource, as well as the assessment and evaluation of students in both classroom and community practice. The guidelines also mentioned the rapport with the Ministry of Health for student placements and the collaboration for teaching students in the community and the constant review of competencies, resources and public health courses as a part of medical curriculum.

Panel 4: Teacher, teaching-learning methods and assessment and evaluation of students in public health in undergraduate medical schools

4.1 Role model teachers in teaching public health (Professor Dr Thomas V Chacko).

Teachers of public health in most medical schools in India acquire a Masters degree in public health and are full-time teachers. They are mostly engaged in didactic teaching which makes the subject uninteresting to students. The status of teachers of public health in the minds of the students is also not high since this is measured by the income they earn.

The teacher is considered as one of the most powerful variables in educational environment. Teachers' actions, attitudes, enthusiasm, interest and skills in the subject influence learners directly. Teachers should possess effective public health teaching skills and effective public health service and have a good personality. They must see the challenges of community-based teaching and make the learning experience meaningful and appealing. They must engage in research and involve in programme planning, monitoring and evaluation of public health programmes to be familiar with community-based public health activities. They must be a good role model for students. A good image of the teachers will enhance students' interest in the subject and may probably lead to a career choice in public health.

4.2 Innovative ways of teaching public health in the classroom (Professor Dr Ashok Deorari).

Learning could be made more interesting by using appropriate information technology as an educational aide. Experience in developing the Essential Newborn Care Learning Resource Materials (ENC-LRM) to teach in the pre-service medical/nursing/midwifery programme in DPRK was presented. This multimedia tool is aimed to enhance a student's understanding and thinking, change attitude and hence facilitate skill development in newborn care. It can be used to teach in the classroom by teachers/tutor or for self-learning by students.

The tool was developed by a group of experts in India to cover required competencies. The contents were carefully selected and translated into a simple self-readable module. The module uses small group participatory learning methodology, self-reading, self-evaluation, demonstration, oral drill role play,

case discussion, group work, as well as video and clinical skill demonstration. It can be used with a small group of 12 students with 1-2 facilitators. The facilitation approach of the programme promotes active learning and attitudinal transformation.

4.3 Teaching public health in the field/community (Associate Professor Dr Prasert Assantachai).

In the 120-year-old Siriraj hospital medical school, the community medicine programme commenced in 1976 and was regularly fine-tuned. The programme comprehensively relates background and context of people and their health problems and needs in a real-life situation. It may be the only opportunity for some medical students to experience the ways people live in the rural community and gain insights of common diseases and health problems of the people they are going to serve. In addition, the subject provides ways to diagnose the health problems of a community rather than a single patient and to learn the effective methods of how to work with other people, as a team, especially with local officers, community leaders and health volunteers.

Recommendations for strengthening public health teaching are: (1) main objectives of public health teaching must be specifically tailor-made for each institute; (2) the Ministry of Public Health, medical school and local health authority should play an active role to create, participate, monitor and continuously improve public health teaching and (3) community medicine teaching must be regarded as an essential course on par with other main clinical disciplines and should start from the pre-clinical year through the final clinical year.

4.4 Assessment and evaluation of students' learning in public health (Professor Dr Firman Lubis).

Feedback obtained from proper assessment and evaluation of student learning in public health will lead to course improvement. There are various methods of assessment and evaluation used in medical education. The method has to be selected properly and it should be ensured that the assessment covers three domains of education, namely, knowledge (cognitive), skills (psychomotor) and attitude (affective). The assessment of critical analysis, empathy and problem solving both in clinical and public health learning should also be included.

Assessment and evaluation of students in the classroom and field/community can be done differently. In the classroom, for instance, multiple-

choice questionnaires (MCQs), observation methods of students' performance in presentation ability, critical thinking and analysis, communication ability, teamwork and activity during integrated problem-based learning and small group discussions can be used. While in the field/community, assessment and evaluation should be based, for instance, on the students' ability to conduct a good survey, field observation, understanding of the multiple factors affecting community and family health status, attitude (affective) towards public health situation, programme implementation, problem solving ability, case studies, report writing and presentation. Assessment and evaluation of students could be improved in a more conducive academic atmosphere, appropriate indicators in both quantitative and qualitative measurement, teachers' broad perspective of public health concepts and integrated instruments of biomedical, clinical and public health learning.

Panel 5: Role of various institutions in promoting and supporting the teaching of public health in undergraduate medical schools

5.1 Government/Ministry of Health (Dr Tin Tin Lay).

The South-East Asia movement in public health including the public health initiative, the strengthening of public health infrastructure and the regional network of public health educational institutions has led to formulation of country policy in public health. The government can laid down policy regarding public health activities including public health workforce planning, development and management, utilization of public health workforce and career development of public health workforce and public health education. The Government of Myanmar adopted a policy to uplift health, and strengthen health services including production of human resources. This is reflected in the national health plan as an integral part of the national development plan. Public health education has been identified as a key strategy in health development.

5.2 Medical Education Association: SEARAME (Professor Dr Khunying Kobchitt Limpaphayom).

The South-East Asia Regional Association of Medical Education (SEARAME) is a regional nongovernmental organization operated as the SEAR chapter of the World Federation for Medical Education (WFME), which is designated as a partner of the World Health Organization. The association aims to improve the quality and relevance of medical education at all levels; undergraduate, postgraduate and continuing professional development in line with WFME.

The teaching of public health should be based on global standards in medical education set by WFME. For example, the mission statement and objectives of the institute must describe the educational process resulting in the medical doctor competent at a basic level. Stakeholders including the community and the health authority should be involved in formulating the institute's mission statement and objectives. The curriculum must be based in on discipline, system, problem and the community and consist of contents that can be applied to meet the health needs of the people. It should have both horizontal and vertical integration of curricular components. There should be a linkage between medical practice and the health care system. Teachers should be well trained and have the ability to meet the needs of the population in the geographically relevant area. Clinical settings should include hospitals and clinics at all levels including primary health care, health care centres and other community health care settings. A wider range of stakeholders should be involved in course and programme evaluation and the development of the curriculum. The medical school must promote interaction with health and health-related sectors and the government. Curriculum contents should be regularly reviewed to meet the changes in the demographic profile, health/disease pattern and socioeconomic and cultural condition. Lastly, medical graduates should continue their professional development.

5.3 Public Health Educational Network: SEAPHEIN (Dr Ardini Raksanagara).

The vision of the South-East Asia Public Health Educational Institution Network (SEAPHEIN) is to be a collaborative network of public health institutes in SEAR for strengthening public health capacity. The objectives, among others, are to make public health education programmes relevant to meet health challenges of individual countries, establish collaborative programmes in education and training, strengthen capacity of Member States through faculty and student exchange, share information, teaching materials and methods. Due to the revitalization of primary health care and health care reform, there is a need for public health education reform.

Public health education used to be offered in medical schools at the postgraduate level. Under the USA model, public health education has been offered in a school of public health. With significant health problems related to behaviours, medical students should be knowledgeable and have skills in public health to tackle behaviour-related health problems. However, with too much to learn, how much public health should be provided in the undergraduate medical curriculum needs to be further discussed.

5.4 Medical Council (Professor Dr Vedprakash Mishra).

The Medical Council of India was established in 1934 under the Indian Medical Council Act, 1933, now repealed, with the main function of establishing uniform standards of higher qualifications in medicine and recognition of medical qualifications in India and abroad. The number of medical colleges had increased steadily following Independence. It was felt that the provisions of Indian Medical Council Act were not adequate to meet the challenges posed by the very fast developments and progress of medical education in the country. As a result, in 1956, the earlier Act was repealed and a new one enacted. This was further modified in 1964, 1993 and 2001.

The medical council has the role to maintain a uniform standard of medical education at both the undergraduate and postgraduate levels and recognize medical institutions. The medical council could set the standard of public health in the undergraduate medical curriculum. Quality of public health teaching can be inspected through the quality of the curriculum, teachers, teaching and learning methods and assessment methods.

III. Group work

Participants were divided into four groups to discuss four different topics based on their experiences and interest. Chairpersons were pre-assigned to each group. Group members selected a rapporteur and the person who would give the presentation.

Group 1: The public health contents in undergraduate medical curriculum and the issues in relation to horizontal and vertical integration

- It was agreed that students should be educated in public health to be able to look at the health of the population as a whole. They should be able to apply basic epidemiological principles in disease investigation, outbreaks, health promotion and disease prevention; contribute to health system performance as a member of the health team and foster healthy lifestyles in individual and the community to prevent environmental damage and promote social harmony.
- In addition, students should be able to identify the health needs of the population and sub-groups for planning, intervention, monitoring and evaluation; provide people-centered primary

health care including referral, continuing care and follow up; carry out community-based research and apply public health ethics and public health laws.

- Examples of the courses include: public health, community medicine, basic and applied epidemiology, biostatistics, demography, environmental and occupational health, sociology, family health, health promotion, community diagnosis, public health laws and community health research.
- Issues related to gender based violence, injury prevention, substance abuse, adolescent health, rational drug use, climate change, ethics and behavioural change and communication skills should also be addressed.
- The decision to have a horizontal and vertical integration of curriculum depends on the school policy and readiness of teachers. Both have advantages and disadvantages.
- Horizontal integration is the integration of the concepts into other curricular contents, e.g. organ systems, using problem-based learning methods. It provides a holistic view of health and health care. A number of new textbooks are available on integrated contents. It encourages self-learning methods, and energizes and glamorizes the teaching methods using IT, networking etc. However, the design and initiation of an integrated curriculum is challenging. Breaking departmental barriers is difficult and there are some administrative issues that need to be addressed.
- Vertical integration helps develop knowledge step by step, from the first year to the final year, as well as reinforcement of concepts and skills building. It makes public health teaching the responsibility of all departments, including clinical teachers. However, most teachers are not used to vertical integration. Orientation and training for teachers requires guidelines and time for training.

Group work 2: Teachers and continuing professional development

- Teachers of public health courses should have at least a post-graduate degree in public health and a training and assessment element in pedagogy.
- The recruitment of teachers should be based on a systematic selection system with prescribed criteria that are credible, transparent and accountable to ensure that only people fit (attitude and aptitude) for teaching are recruited. In institutions where there is a shortage

of experienced public health faculty, adjunct/ honorary faculty could be appointed.

- To keep pace with emerging public health challenges and advanced public health skills, every teaching faculty must undergo a continuing professional development programme which must be linked to their career advancement.
- There must be planned and structured medical education training sessions covering instructional development, educational leadership development and educational research /scholarship development etc at the certificate, diploma and degree level.
- Public health teachers should be encouraged to get involved in community-based public health activities by giving them opportunities to plan, monitor and evaluate public health programmes.
- WHO can support faculty capacity building through module developments, regional workshops, fellowship or networking. In addition, WHO could promote the establishment of WHO Collaborating Centres in Public Health Teaching or Regional training centre in public health teaching.
- WHO should support health system research activity in policy formulation, capacity building and research funding.

Group work 3: Teaching and learning, assessment and evaluation

- Teaching methods that can make public health more interesting or meaningful include the methods that are oriented toward student-centered/active learning, and contextual, outcome-based/competency-based, structured/systematic/innovative and evidence-based.
- Classroom-based lecture is the most common method that is appropriate for a large group of students. It can be used with interactive teaching or case-based teaching and use of teaching aides such as multimedia/IT/video. Other methods for classroom-based teaching include seminars (student-led, sharing learning experiences, facilitated by teachers), and small group learning (problem-based learning, and small group discussions, role play, debates, dramas).
- It is crucial to arrange community experience for students. This may be through community attachment (urban/peri urban/rural), community diagnosis/survey, micro health projects, family attachment, field assignments, field trips and rural postings. Diverse

primary health care settings available should be used (rural clinics, district hospitals, general/family practice settings or outpatient departments).

- Information technology that could be used to support teaching includes interactive CD ROMs, online learning (module-based, chat rooms, forums), simulations, computer-based, tele medicine (mobile learning, SMS).
- Teachers should exhibit positive role models, be professional, demonstrate leadership, be genuine and sincere and have good charisma and personality. They also should provide mentorship to guide students, colleagues and friends and provide opportunities for students to learn.
- The community should be involved or participate in the community teaching and benefit from the students' training. Students could be the primary care providers or act as family physicians during the family attachment. Student projects should be based on the needs of the community and should be in collaboration with the people, community, local government, health care providers and other sectors.
- Students should be assessed based on the course objectives. A range of assessment methods should be used for both formative and summative assessment. More weightage may be considered for in-course assessment.
- Assessment may be done at all four levels of Miller's Pyramid: know (MCQ, SCQ), know how (EMI, SEQ, SAQ), show how (OSCE) and does (portfolio, rating scale, log book). Self-assessment, community assessment, peer assessment and tutor assessment could be used.
- Assessment should cover three domains knowledge (MCQ, structured essay questions), skills (OSCE, research project) and attitudes (multiple ratings/reflective logs/notes/journals/portfolio).

Group work 4: Enabling environment and quality improvement

- An enabling environment for teaching of public health means the environment that promotes or is committed to teaching of public health, encourages community-oriented and community-based public health teaching-learning and the faculty of the institution recognize the importance of public health to be included in the

undergraduate medical curriculum. It instills a positive attitude among all stakeholders and creates “public health mindedness”.

- An enabling environment can be created by the institution, administration, academic and community. An institutional environment may include vision and mission statements, objectives, committed leadership, institutional obligation, recognition and reward system and effective management of the public health programme in the undergraduate medical curriculum. An administrative environment may include logistic support, allocation of proper time to teach public health, inclusion of all stakeholders and giving security to those who teach public health.
- An academic environment may include the integrated public health curriculum, orientation of staff and students on public health, exposure of students to the community early in the academic programme, exposure of students to the community throughout the undergraduate programme, involving all departments in teaching, adequate and available physical facilities for teaching (lecture halls, AV aides, lodging etc.), human resources (adequately trained staff etc.) and public health laboratories (setting, logistics).
- Community environment may include good rapport with the community, sharing of information and experience, good collaboration, working together and good community support to students during family/community attachment.
- It is important for the school to continue quality improvement of the medical curriculum through regular review and revision of the curriculum, assessment of the teachers’ performance and having an audit and assessment system particularly in the areas related to public health.

Conclusion and recommendations

Conclusion

- (1) In the light of the changing paradigm of public health and revitalization of primary health care, public health in medical education needs to have a renewed focus.
- (2) Medical doctors are leaders of the public health team and need to be trained to have adequate proficiency to meet the demands of health care systems and the health needs of the people.
- (3) While the health system needs to provide medical care to the sick, it also needs to protect, maintain and further improve the health of the population who do not manifest disease symptoms.
- (4) Medical schools have the responsibility to produce medical graduates who are proficient to deliver preventive, promotive, curative and rehabilitative care. It is especially important that medical graduates be trained to address the social determinants of health and manage the current and emerging health challenges.



- (5) Currently many medical schools in the South-East Asia Region are engaged in diverse and rich practices in public health teaching and learning. However, the curriculum, teachers, teaching-learning methods and assessment and evaluation methods need strengthening.
- (6) The responsibility of teaching public health in medical schools is beyond the department of preventive and social medicine. Other disciplines should also play an active role in teaching public health.
- (7) Stakeholders such as the government, medical councils, medical associations, NGOs and INGOs (International NGOs), national and regional networks (SEARAME, SEAPHEIN, medical councils network etc) can play a critical role in improving teaching of public health in undergraduate medical schools.

- (8) The regional strategic framework for strengthening teaching of public health in undergraduate medical schools may be utilized by countries to strengthen public health teaching.
- (9) The Guidelines for Social and Preventive Medicine/Community Medicine/Community Health curriculum in undergraduate medical education produced by WHO-SEARO should be adapted and used these according to country-specific needs.

Recommendations for Member States

- (1) To organize national meetings/workshops/consultations to explore avenues to further orient and strengthen teaching of public health in medical schools in alignment with current and emerging public health needs with a time-bound action plan.
- (2) To strengthen teaching of public health in undergraduate medical schools, the member countries should:
 - Review the curriculum for public health teaching.
 - Explore and include innovative teaching methods (including student assessment).
 - Strengthen continuing professional development system for public health teachers.
 - Taking action to create an enabling environment to ensure harmony between national health needs, health programmes and public health teaching in medical schools.
 - Establish a mechanism for continuous quality improvement of public health teaching and establish/strengthen accreditation system for medical schools.
 - Involve teachers from related disciplines, stakeholders and other sectors in teaching of public health in undergraduate medical schools.
 - Take steps to involve teachers from related disciplines, stakeholders and other sectors in teaching of public health in undergraduate medical schools.

Recommendations for WHO

- (1) To finalize the regional strategic framework for strengthening teaching of public health in undergraduate medical schools and assist countries to adopt/adapt and utilize it.
- (2) To continue advocating to governments and other stakeholders the importance of teaching of public health in medical schools in view of the global health scenario, climate change and economic downturn.
- (3) To support countries in adaptation/application of guidelines for social and preventive medicine/community medicine/community health curriculum in undergraduate medical education and disseminate to medical schools.
- (4) To establish an expert group in public health and medical education to improve teaching of public health in undergraduate medical schools.
- (5) To support countries to establish/strengthen accreditation system for assessment of public health teaching in medical schools.
- (6) To support establishment of WHO Collaborating Centre in Public Health Teaching or the Regional Training Centre on Public Health Teaching.

Closing session

Two representatives from the participants were invited to express their views on the meeting. They expressed satisfaction with the opportunities given to listen and discuss on how to strengthen teaching of public health in medical schools that had not been discussed earlier. They would share the meeting results with colleagues and see how they could improve the teaching of public health in medical schools.

In his closing remark, the Regional Director, Dr Samlee Plianbangchang thanked all participants for their active participation. He said that conclusion and recommendations are mainly a process. Throughout the meeting a lot of contents were discussed. The goal was to see how medical graduates can play a role in public health. "Our expectations may be too high. We have to come to ground reality and practicality and identify strategies to move forward. We have to start with health systems," he said.

The Regional Director mentioned that medical graduates are trained primarily for medical care. It is an expensive investment in development of medical workforce. Medical doctors may be deployed to work at all levels of health care system and some may be involved in public health schools to teach, train and do research. Public health work requires multidisciplinary/multi-sectoral workforce including medical doctors. A lot of public health work can be done by non-medical people. “We have to provide the best care at people’s own set up. We have public health problems and we are producing doctors which may not be what is needed. There is considerable that workforce who can do preventive and promotive care and do it well. Medical doctors should support others to do the work. There is a need to produce more community-based health workforce for public health work., “ the Regional Director added.

“We do not expect medical graduates to do everything in public health. However, medical doctors should understand public health. In order to develop proper curriculum, there is a need to identify what medical doctors should know, should contribute to, must know and must do in public health. Medical graduates can contribute to public health by analysis clinical decisions for cost efficiency and cost effectiveness in medical practice, integration of promotive and preventive care in clinical practical/medical practice, understand priority health problems of the country, understand national health systems, understand national health policy, play a supportive role to population-based or community-based health services/health work and provide a clinical approach to patient care using technological approach.”, he said.

The Regional Director concluded that the countries should take the initiative in moving the recommendations forward. WHO country office could take the lead in resource mobilization and in organizing national meeting/workshop. The Regional Office would provide technical support as needed.

Programme

Day 1: Tuesday, 8 December 2009

- 0900–0925 Inaugural session
- Welcome Remarks
Professor Dr Pirom Kamol-Ratanakul
President, Chulalongkorn University, Bangkok
 - Address
Dr Samlee Plianbangchang
WHO Regional Director for South-East Asia
 - Opening Remarks
Dr Sathaporn Wongjaroen
Deputy Permanent Secretary, Ministry of Public Health,
Royal Thai Government

Business Session

- 1000–1020 Chairperson: *Dr Samlee Plianbangchang*
- Introduction of participants
- Nomination of chairperson, co-chairperson and rapporteur
- Announcement

| Technical Session | Theme I: Current perspectives in teaching of public health in undergraduate medical schools: Regional and global scenario |
|--------------------------|--|
| 1020–1045 | Keynote address on “Teaching of public health in medical schools” <i>Professor Dr Prawase Wasi</i> |
| 1045–1115 | Draft regional strategic framework for strengthening teaching of public health in undergraduate medical schools <i>Dr Myint Htwe</i> |
| 1115–1200 | Discussion |
| 1300–1320 | Teaching of public health in medical schools: A global scenario <i>Dr Alistair Stewart</i> |
| 1320–1450 | Panel 1: Public health role in revitalizing primary health care Moderator: <i>Dr S.D. Gupta, India</i> Speakers: <ul style="list-style-type: none"> • Public health as a global agenda <i>Professor Dr J.P. Gupta, India</i> • Public health: A spearhead in revitalizing Primary Health Care <i>Professor Dr Nilambar Jha, Nepal</i> • Policy and advocacy for public health in medical schools <i>Professor Dr Adisorn Patradul, Thailand</i> |
| 1450–1510 | Review of the Reorientation of Medical Education (ROME) <i>Dr Palitha Abeykoon</i> |
| 1530–1700 | Panel 2: Perspectives on public health and teaching of public health in undergraduate medical schools Moderator: <i>Dr Supattra Srivanichakorn, Thailand</i> Speakers: <ul style="list-style-type: none"> • Administrator of medical school <i>Professor Dr Muhammad Amin, Indonesia</i> • Head of PSM/CM/CH department <i>Professor Dr Abraham Joseph, India</i> • Teacher in medical school <i>Professor Sayeda Afroza, Bangladesh</i> • Community doctor <i>Dr Wiwat Wiriyakijja, Thailand</i> • Medical student/new graduate <i>Dr Passakorn Wanchaijiraboon, Thailand</i> |

Day 2, Wednesday, 9 December 2009

Technical Session **Theme II: Current scope and methods in teaching public health in medical schools**

- 0830–0845 Reflection of Day 1
Dr Jigmi Singay
- 0845–0905 Keynote address on “Strategic Route Map: Its implication for the training institution”
Dr Amorn Nondasuta
- 0905–1015 **Panel 3:** Contents of public health in undergraduate medical curriculum
Moderator: *Professor Myo Oo, Myanmar*
Speakers
- Contents of public health offered by Department of Social and Preventive Medicine/Community Medicine/ Community Health
Professor Mahmuda Chowdhury, Bangladesh
 - Integrating public health in clinical teaching departments and inclusion of sociology/anthropology in medical curriculum
Associate Professor Dr Waraporn Eoaskoon, Thailand
 - Guidelines for Social and Preventive Medicine/Community Medicine/ Community Health curriculum in the undergraduate medical education
Dr P.T Jayawickramarajah, Sri Lanka
- 1045–1200 **Panel 4:** Teacher, teaching-learning methods and assessment and evaluation of students in public health in undergraduate medical schools
Moderator: *Professor Rohini Seneviratne, Sri Lanka*
Speakers:
- Role model teachers in teaching public health
Professor Dr Thomas V Chacko, India
 - Innovative ways of teaching public health in the classroom
Professor Dr Ashok Deorari, India
 - Teaching public health in the field/community
Associate Professor Dr Prasert Assantachai, Thailand
 - Assessment and evaluation of students’ learning in public health
Professor Dr Firman Lubis, Indonesia

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|--------------------------|--|
| Technical Session | Theme III: Strengthening teaching of public health in medical schools |
| 1300–1430 | <p>Panel 5: Role of various institutions in promoting and supporting the teaching of public health in undergraduate medical schools</p> <p>Moderator: <i>Mr Abu Taher, Bangladesh</i></p> <p>Speakers:</p> <ul style="list-style-type: none"> • Government/Ministry of Health <i>Dr Tin Tin Lay, Myanmar</i> • Medical Education Association: <i>SEARAME</i> <i>Professor Dr Khunying Kobchitt Limpaphayom</i> • Public Health Educational Network: <i>SEAPHEIN</i> <i>Dr Ardini Raksanagara, Indonesia</i> • Medical Council <i>Professor Dr Vedprakash Mishra, India</i> |
| 1430–1700 | <p>Group Work: Strategic framework for strengthening teaching of public health in undergraduate medical schools in South-East Asia Region</p> <p>Group 1: Public health contents in undergraduate medical curriculum</p> <p>Group 2: Teachers and continuing professional development</p> <p>Group 3: Teaching - learning methods in classroom, health care facilities and field/community including assessment and evaluation of students in public health in undergraduate medical schools</p> <p>Group 4: Enabling environment and programme management for effective teaching of public health in undergraduate medical schools</p> |

Day 3: Thursday, 10 December 2009

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| 0900–0915 | Reflection of day 2 <i>Dr Muzaherul Huq</i> |
| 0915–1030 | Group work presentations and consensus building on the regional strategic framework for strengthening teaching of public health in undergraduate medical schools <i>Moderator: Dr Myint Htwe</i> |
| 1400–1430 | Conclusion and recommendations |
| 1430–1530 | Closing |

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Annex 3

List of documents

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| Situation analysis of teaching of public health in undergraduate medical schools in countries of South-East Asia Region | SEA/NUR/TPH/Meet1/6 |
| Country paper on Teaching of Public Health in Medical Schools, Bangladesh (By Prof Mahmuda Chowdhury) | .SEA/NUR/TPH/Meet1/6.1 |
| Country paper on Teaching of Public Health in Medical Schools, India (By Dr C S Pandav) | SEA/NUR/TPH/Meet1/6.2 |
| Country paper on Teaching of Public Health in Medical Schools, Indonesia (By Dr Firman Lubis) | SEA/NUR/TPH/Meet1/6.3 |
| Country paper on Teaching of Public Health in Medical Schools, Myanmar (By Prof Myo Oo) | SEA/NUR/TPH/Meet1/6.4 |
| Country paper on Teaching of Public Health in Medical Schools, Nepal (By Prof Ishwar Bahadur Shrestha) | SEA/NUR/TPH/Meet1/6.5 |
| Country paper on Teaching of Public Health in Medical Schools, Sri Lanka (By Dr Indika Karunathilake) | SEA/NUR/TPH/Meet1/6.6 |

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| Country paper on Teaching of Public Health in Medical Schools, Thailand (By Dr Waraporn Eoaskoon) | SEA/NUR/TPH/Meet1/6.7 |
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| Panel 4: Teacher, teaching-learning methods and assessment and evaluation of students in public health in undergraduate medical schools | SEA/NUR/TPH/Meet.1/12 |

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The documents are available at http://intranet/en/Section1243/Section2167/Section2168_15403.htm.

Text of the Regional Director's remark at the inaugural session

Professor Pirom Kamol-ratanakul, President, Chulalongkorn University, Professor Prawase Wasi, Professor Emeritus, Faculty of Medicine, Siriraj Hospital, Mahidol University; Dr Amorn Nondasuta, President, Foundation for Quality of Life, Thailand, Dr Sathaporn Wongjaroen, Deputy Permanent Secretary, distinguished participants, honourable guests, ladies and gentlemen:

WHO Regional Office for South-East Asia is very pleased to organize this regional meeting on “Teaching of Public Health in Medical Schools”. This is with special attention to the teaching at “undergraduate level”. The importance of teaching of public health in medical schools has long been recognized. Such teaching may be in the form of:

- preventive and social medicine;
- community medicine; or
- community health.

In medical schools, there is usually a department devoted to teaching one of these subjects. The main purpose of this meeting is to review the situation and to see whether there is anything in such a teaching that may need further orientation. This is especially in light of the changing paradigm in public health

today. We have to ensure that our medical graduates have adequate proficiency in today's public health.

Distinguished participants,

During the recent past, there have been significant changes in public health scenarios worldwide. Among others, "macroeconomics principle" is playing an important role in today's health development. Planning and managing public health programmes are influenced by modern thinking in macroeconomics. Macroeconomics is influencing the governments' decisions; on strategy to achieve "universal coverage" of health care and services; and decisions on strategy to ensure "unlimited access" to such care and services by "all people". At the same time, "social determinants" are becoming an "essence" for the development of public health programmes.

The programmes that are needed towards the attainment of the level of health that will permit "all people" to lead a "socially and economically" "productive and satisfied" life. "PHC approach", as we all know well, is the principal tool of public health endeavours towards this goal in health, that is, the goal of HFA. PHC, through public health interventions will help ensure "reaching the hard-to-reach"; or "reaching the unreached".

Ladies and gentlemen,

As all are well aware, we are facing a "multitude of problems" in health today. We have the "double burden" of diseases – communicable and non-communicable. We have to take the "best care" of the sick. We have to devote all our time to prolong the life of "sick people" through the application of medical sciences and technology, and we have to pursue the improvement in the quality of life of "those sick people" through "medical rehabilitation", to enable them to return to normal life, socially and economically. At the same time, the health of the people, who are not sick, must be protected, maintained and even further improved. This health "protection", "maintenance" and "improvement" must be pursued through "public health interventions", the interventions that are especially at "primary level" of health care, the interventions that focus on "health promotion" and "disease prevention", taking into consideration in these processes "health determinants" and "health risks". Indeed, today's emerging health challenges stem from various crises, such as: global economic downturn; global food crisis; global warming or climate change; and not the least, the pandemic influenza A(H1N1). These environmental and ecological factors are inter-linked and inter-related, forming vicious cycles in many aspects of human life, including health.

We need strong public health systems, we need robust public health programmes for facing these formidable challenges. Among others in this perspective, it is an urgent need to strengthen “public health workforce” in our countries. We have to review; and we have to improve education and training of our public health professionals and practitioners. In this connection, we believe that teaching of public health in medical schools can also take us a long way towards strengthening of “public health workforce” in our countries.

We need to ensure that our medical graduates are adequately proficient in public health. We need them to be able to tackle public health problems of the community; the problems that stem primarily from environmental and ecological degradation. We would like to see our medical graduates able to work effectively in the “multisectoral and multidisciplinary environments”. Our medical graduates should join the “public health workforce” in efforts to reduce the “disease burden”, particularly, through “health promotion” and “disease prevention” strategies.

Medical graduates need to effectively adapt to the constant change in “health paradigm”, the change that is due to dynamics of the environment and the ecosystem. “Public health competence” is also needed for those who work in “medical institutions”, the institutions that are also the “referral facilities” for “continuum” of care for people in the community.

Public health can help ensure a “reasonable balance” of care, the balance between “preventive” and “curative” services. The role of medical doctors is more than providing “curative care” in institutions. But, they have also to get involved in public health education and research; they have to get involved in training and supervising community-based health workforce. Medical doctors have to support the functioning of “public health facilities”, such as public health laboratory and disease surveillance and many more areas in public health that need the involvement of medical graduates. Medical graduates will have to get involved in health activities, beyond the boundary of medical institutions.

Ladies and gentlemen,

Responsibility for teaching public health in medical schools should go much beyond the department of preventive and social medicine. This teaching, the teaching of public health in medical schools, is a multi-departmental responsibility, all other departments should also abide by this responsibility. And this teaching should be considered an obligation in today’s medical education. Public health can help medical personnel look at their clients in a more “holistic manner”, help medical staff better understand clients’ life, both before and

after the institutional care. Public health can help improve interdepartmental collaboration among various specialties in medical schools. Rather than a discipline, public health is a field of multiple disciplines and multiple sectors. Public health programmes need an application of a range of scientific know how in their development and implementation.

Ladies and gentlemen,

I thank all participants for their interest and for their interest and for their valuable time to attend this meeting. We have a diverse group of participants who can express their views on the subjects from different perspectives. We will hear the opinions of people from both inside and outside medical schools. I hope we would also hear about the expectation of the public, on what medical graduates can effectively contribute to the “total” well-being of people in society.

Let me also thank Professor Adisorn Patradul, Dean, Faculty of Medicine, Chulalongkorn University, for agreeing to co-host the meeting. My sincere thanks are extended to Dr Sathaporn Wongjaroen the Deputy Permanent Secretary of Public Health, the Royal Thai Government for agreeing to inaugurate the opening of the meeting.

I thank Professor Pirom Kamol-Ratanakul, President, Chulalongkorn University for graciously welcoming the participants. I most sincerely thank the two internationally known figures for agreeing to deliver keynote speeches, Professor Prawase Wasi and Dr Amorn Nondasuta. We look forward to hearing their inspired and thought-provoking speeches.

I hope that this regional meeting would contribute to innovative thinking and new ideas on the subject of Teaching of Public Health in Medical Schools.

Ladies and gentlemen,

With these words, I wish the meeting all success and a fruitful outcome. I wish all participants interesting and productive deliberations, and I wish them all an enjoyable stay in the city of Bangkok.

Thank you.

Text of keynote address by Dr Prawase Wasi

The present world crisis cannot be solved short of changing the objective of mankind. Long ago, Albert Einstein said, “We shall need a radically new manner of thinking, if mankind is to survive”. The present crisis is a crisis for the survival of mankind and the planet. Profit - driven development has led to social and environmental disintegration. One way to look at “a radically new manner of thinking” is to change the objective of mankind “From Profit to Health”. Health is the whole. Health is integral in total human and social development. Any compartmentalized development will disturb the whole or health. For survival of mankind, a new thinking demands a paradigm shift from profit to health. Public health should be the Sumum Bonum of mankind.

Public Health is the Sumum Bonum of Mankind

With this it follows that there is a great need to develop public health consciousness and leadership to steer the world toward this new goal. Public health should be looked at in a new manner. Public health is not only concerned with infectious disease epidemics and clean water. Although those components remain important,

Public Health
Consciousness and
Leadership

New Public Health is much more than that. Since health is the whole, health means a complete well being: physically, mentally, socially, and spiritually.

Good health must precede ill health. Prevention is much better and cheaper than cure. Health promotion must deal with determinants outside the usual public health sphere. It is said that 80 percent of good health determinants lie outside the usual public health boundaries. Issues like poverty eradication, education, culture, environment, community strengthening and public policies are very relevant to good health. New public health demands new leadership, and medical doctors should meet this challenge.

Medical care is in crisis all over the world. Advancement in medical technology brings a very difficult dilemma. On one hand, advances improve diagnostic and therapeutic measures, sometime to a miraculous level, which increases demand, either genuinely or falsely. On the other hand, the costs of new technologies are sky high, driving dramatic increases in health care expenditures to the brink of impossibility. In the United States, health care expenditure has increased to 16 percent of the GDP, the highest in the world both proportionally and in real terms. Yet, 40 million Americans are without health insurance coverage of any kind. This is a clear case of a non cost-effective system. High costs of technologies are leading to inequity in health care. The same pattern is occurring in every country. The high cost of medical care is depriving the poor of the opportunity of good health. Medical doctors should provide leadership in health care reform for a more cost – effective system. It is a moral obligation for medical schools and medical doctors to be leaders in making good health for all possible. Every doctor should be a new public health leader.

The Medical Care Crisis

Attempts were made to teach public health to medical students from the beginning. The early form of the medical school was not much separated from public health. In those days, it was almost automatic that most doctors did public health work. In time, public health and medical education have become increasingly separated. More and more, medical school hospitals are highly specialised in tertiary medical care with sophisticated technologies, and with less and less interest in public health. Medical students being trained in this kind of atmosphere lose their instinct for public health. Various attempts have been carried out to rescue the situation.

Teaching Public Health in the Medical School in Changing Situations

Departments of Preventive and Social Medicine were set up in the medical schools. Later, a community health curriculum was introduced. In the early 1980s, spear – headed by the Rockefeller Foundation, clinical epidemiology as an academic discipline was introduced in various medical schools around the world in order to transform one-to-one care to population-based medicine. Within the grip of the increasingly sophisticated tertiary care in the university hospitals, all the above mentioned attempts have not had much success in restoring public health leadership among future doctors.

A new paradigm of medical education is needed. As the atmosphere of university hospitals is more suitable for post-graduate medical training, undergraduate medical education should be re-designed, and its base should be relocated.

A New Paradigm of Medical Education

As the health care crisis is real and has encompassing effects, health systems reform should be a national priority. Universities must play active roles in this national health systems reform. Medical education should have a prominent role, or even better, a leading role in national health systems reform.

To curb the rapidly rising cost of medical care, medical schools should try to increase quality care at lower cost. This requires a new consciousness and new skills. Clinical teachers must be aware of the national situation and apply clinical economical skill. A new science of clinical decision analysis should be developed. In prescribing diagnostic investigations and therapeutic measures the clinical teachers should compare the costs and the effects of those measures and carry out the best cost-effective choices. This will be very scientific because in being able to do clinical decision analysis, clinical teachers must be well-versed in epidemiological data and possess the knowledge of specificity and sensitivity of the technologies being considered.

If the clinical teachers practice clinical decision analysis in their patient care, this will automatically create new culture and new scientific clinical skill. Together they will send reverberations throughout the patient care system, leading to a more cost-effective health care.

Another and more plausible measure to cut cost and improve quality of care is to develop a good community health system. A good community health system is much more cost-effective than the large hospital-based system. The community health system includes self care, family care and community care. It has at least 7 objectives: (1) Take care that no one is without care in the community. (2) Promote sufficiency economy. (3) Take care of all

common illnesses. (4) Control diabetes and hypertension. (5) Take care of the aged at home by home visiting nurses. (6) Control diseases. and (7) Health promotion.

A well-functioning community health system will promote good health to the maximum and care for most of the common illnesses, thus cutting down a great number of unnecessary visits to big, expensive hospitals, allowing them to increase quality care. Thus, a good community health system plays a vital role in health care reform.

The community hospital is at the strategic center of the community health system. Doctors at the community hospitals, contrary to the medical specialists in the big hospitals, have system perspectives and managerial skill. They are more likely to understand policy dimensions, not just technical ones, and therefore can assume new health leadership roles.

For new health development, there is a need for future doctors to be able to assume health leadership roles. The tertiary medical care – based atmosphere cannot cultivate new health leadership. The medical schools cannot and should not avoid the role of developing future new health leaders.

This is why the medical schools should work with the community hospitals.

The Community Hospital Medical School

The medical schools should help strengthening the community hospitals and the latter should serve as base for medical students' training. Clinical skills will be acquired at the community hospital more quickly than at the tertiary hospital.

Moreover, a more comprehensive care can be practiced at the community hospital. Medical students have plenty of opportunity to carry out research, clinical, epidemiological, and of the health system. They can learn to develop managerial skill as well as to understand policy issues. They will be better prepared at the community hospital to assume new health leadership roles.

Linkage between the medical schools and the community hospitals will reorient the medical schools toward wider health perspectives, thus enabling them to take part in health systems research and policy issues. The ability of the medical schools to affect health systems and public policies is very crucial for health systems reform as a whole.

A mere public health teaching in the old paradigm of the medical school will not work. There is a need to understand new public health, in which health is not concerned only with diseases, but is integral in total human and social development. Public policies become very crucial for a new health paradigm. New health leadership is required if Health For All is to be realized. The medical schools should meet the challenge of new health leadership roles. If not, they will be part of the health care crisis instead of the solution. The medical schools should try to understand the health care system in crisis and participate in health system reform. A new public health needs a new paradigm of the medical school and medical education. Linkage between the medical schools and the community hospitals in an attempt to develop a good community health system would be a noble beginning. Medical students based in the community hospitals which are strategic points for community health system development will automatically learn public health in a new manner. This new approach in public health learning of the medical students under a collaboration of the medical schools and the community hospitals to develop a good community health system, will have a profound effect on health systems reform for Health For All in the long run.

A New Public Health and a New Paradigm of the Medical School

Annex 6

Text of keynote address by Dr Amorn Nondasuta

The Strategic Route Map: Its Implication for the Training Institution

From: The Regional Conference on Revitalizing Primary Health Care
Jakarta, Indonesia, 6-8 August 2008

It was recommended that Member States shift from a focus on service delivery to a development oriented one in the country's social, political and economic contexts.

Through the ups and downs during the three decades of Primary Health Care, we may have learned one important lesson; that the orientation of our PHC strategy needs to be shifted from the usual service by CHWs to a more dynamic DEVELOPMENT of the people so that they can take health matters into their own hands.

So if we would ever to succeed in revitalizing PHC this time around, we have to do things differently from the way we did in the past. It will be self-defeating if we are to think that things could go on in the same old ways.

We do need INNOVATION now.

But where should we begin?

Strategic Innovation

Naturally, we may look at the vision inherent in the concept of Health for All and Primary Health Care that boils down to the following:

“People are able and willing to assume responsibility for their own and their family’s health, their environment and community, with faith and determination”

Next, we have to turn the vision into something more tangible. In the above statement, there are two elements that need further clarification; “responsibility” and “—community, with faith and determination”.

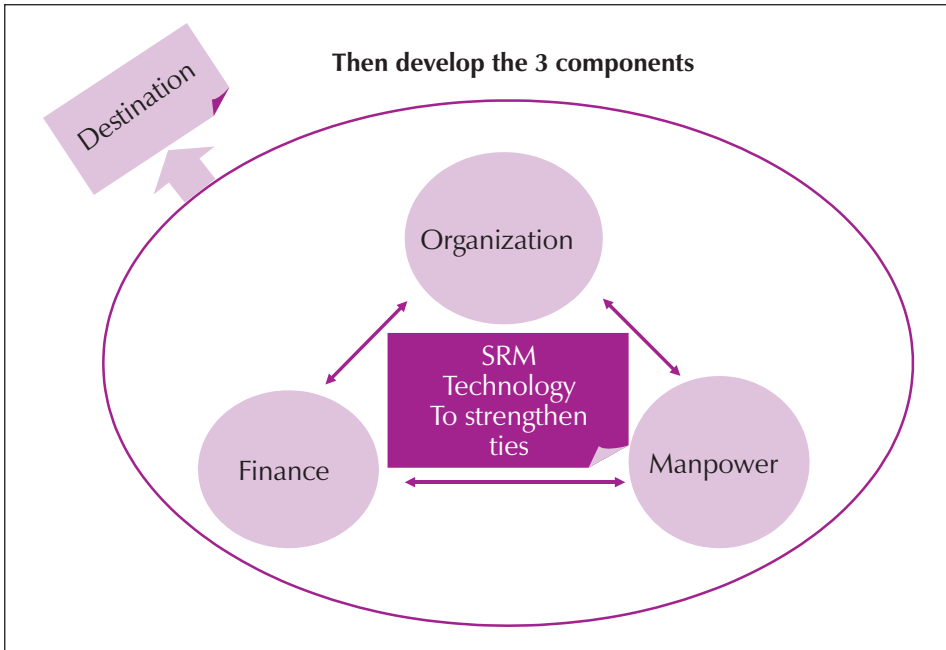
At individual level, we equate “responsibility” with “health behavior”. What we really need here is the positive change in health behavior of the people. By the same token, “—community, with faith and determination” denotes “sustainability”. It reflects a change at the community level. Community strength is the key.

From the analysis, we have at least three areas to be developed:

- (1) **Behavioral change of the people (target group):** Reflecting a shift of approach to PHC toward “Development”.
- (2) **People Develop Themselves:** A strategy is needed to ensure people’s ability to develop.
- (3) **Sustainable Community Development:** The strategy must include the strengthening of the community.

Clearly, there is a need to put all these inter-related aspects of development into order. We should have a set of destinations to be reached by 2015 (MDG). We do need to settle on the strategies to affect changes: What are our strategic objectives? What are their relationships? Who is going to do what, when, where?

Discover the potentials of the community



To answer these questions, A STRATEGIC ROUTE MAP (SRM) is required.

We start by identifying the components (pillars) of a strong community. They are the community's (1) organization (2) manpower and (3) finance. The strategies to strengthen ties between each pair of components are the essence of function of the SRM (see below).

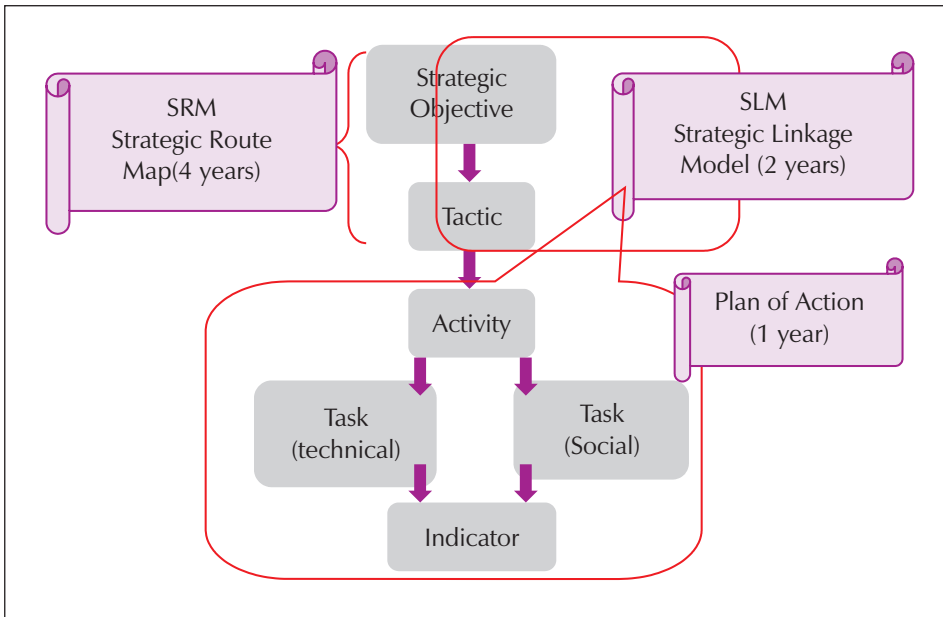
The SRM gives reason to the whole endeavor by stating clearly the destination to be reached in a given time frame (behavioral change).

Strategies must be managed

To state succinctly, the SRM is an instrument used to manage strategies. It does not replace but complement the application of a strategy. There are 3 forms of SRM with different functions:

- (1) The strategic- route map (SRM); used to describe the relationship among various strategic objectives and accompanying tactics (methodology). Generally unchanged during a given time frame (4-5 years).

Managing the strategy with SRM



- (2) The strategic-linkage model (SLM); a combination of chosen strategies to be implemented in a shorter time frame (2 years). Adjustment is made on this model to re-direct development.
- (3) The plan of action: a 1-year activity-linkage model that describes in detail the activity, task, performance indicator including key one, time frame of each task, budget requirement and responsible person(s).

Strategies for behavioral change

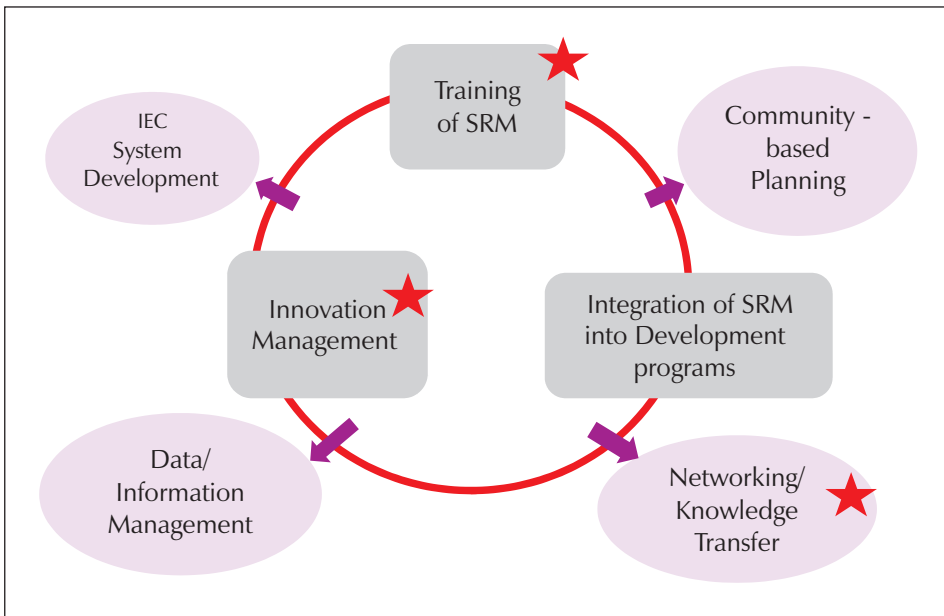
Basically, we need a triad of main strategies to affect behavioral change. These will be complemented by a set of 4 sub-strategies. The main strategies are:

- (1) The SRM training.
- (2) Integration of SRM into Development programs.
- (3) Innovation Management.

The complementary strategies:

- (1) Community-based Planning.
- (2) Data/ Information Management.
- (3) IEC System Development.
- (4) Networking/ Knowledge Transfer.

A Strategy for People's Behavioral Change



Summary

- A strategic-route map is a strategic management instrument that defines various aspects of the strategy and provides direction toward success.
- A strategic-route map is a communication instrument that provides all stakeholders and manpower with information that leads to the alignment of work of all partners.
- A strategic-route map is a monitoring system that monitors success of a strategy by measuring performances and provides information to assist in decision-making.

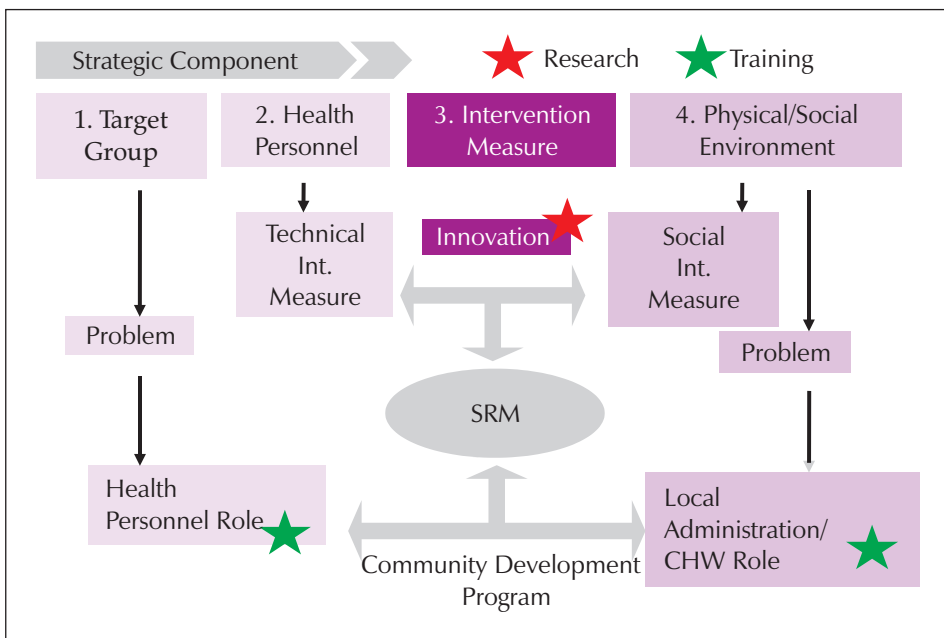
Managerial Innovation

Inappropriate health behavior is considered the root cause of modern-day health problems. Technical measure as provided by health workers cannot deal with it. Application of social measure to affect behavioral change is the only solution. Hence, it is important to integrate social measure with a technical one.

An appropriate management system should also be designed in order to involve the people in decision-making, together with more active role and responsibility.

A paradigm shift of the health worker and the people is also necessary.

SRM: Role of Country Training Institute(CTI)



Implication for the country training institution (CTI)

If SRM is used as the instrument to manage PHC strategies in a country situation, the strategic-linkage model (SLM) could serve as a background upon which areas of involvement are identified.

Essentially, there are 3 basic functions that the CTI could become involved:

- (1) Research and Innovation
- (2) Training and
- (3) Networking and knowledge transfer.

Research and innovation

Research and innovation of PHC is mainly carried out by the community themselves. There are 3 areas of importance, namely, the surveillance and screening, the social intervention measure and the community development program. This is reflected in the upper level of the SLM (An example of which is shown below).

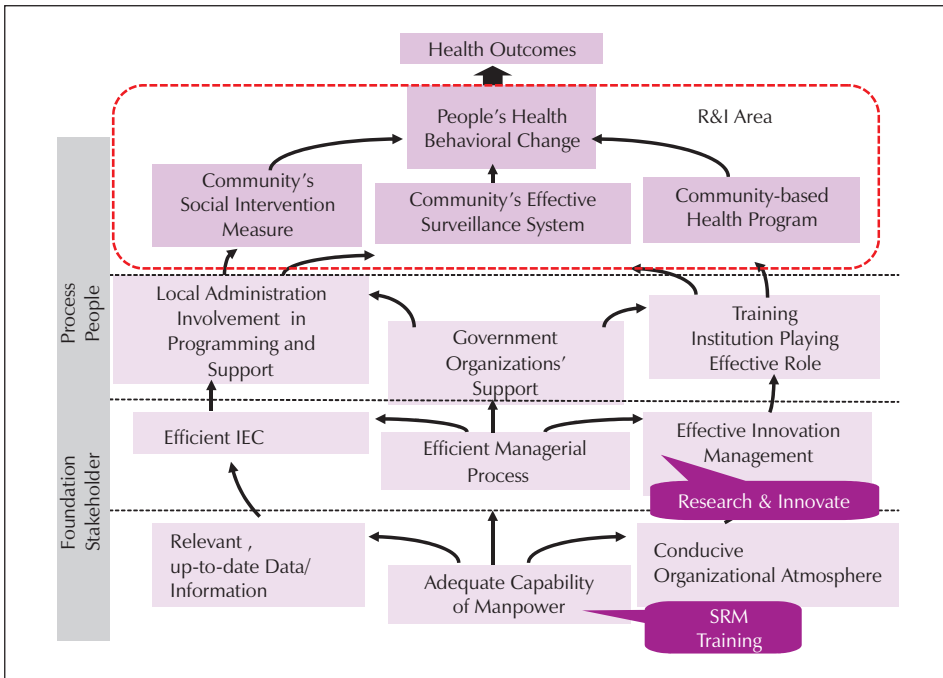
The work by the people at this level, however, must have certain technical background. Apart from this, there should be a crystallization / conceptualization procedure to make sure that innovations will not be lost and may be applicable in other context. This is where the CTI may become involved.

Training

To build up adequate capability of manpower through training as indicated in the SLM does not mean training of present or future health personnel but includes members of relevant organizations e.g. Local Administration and the community as well. This requires a wider scope of knowledge and experience on the part of the trainer.

Members of the CTI could familiarize themselves with SRM by either becoming involved in some capacity in the country's on-going SRM program or researching upon effective innovation management or both.

SRM : Role of Country Training Institute(CTI)

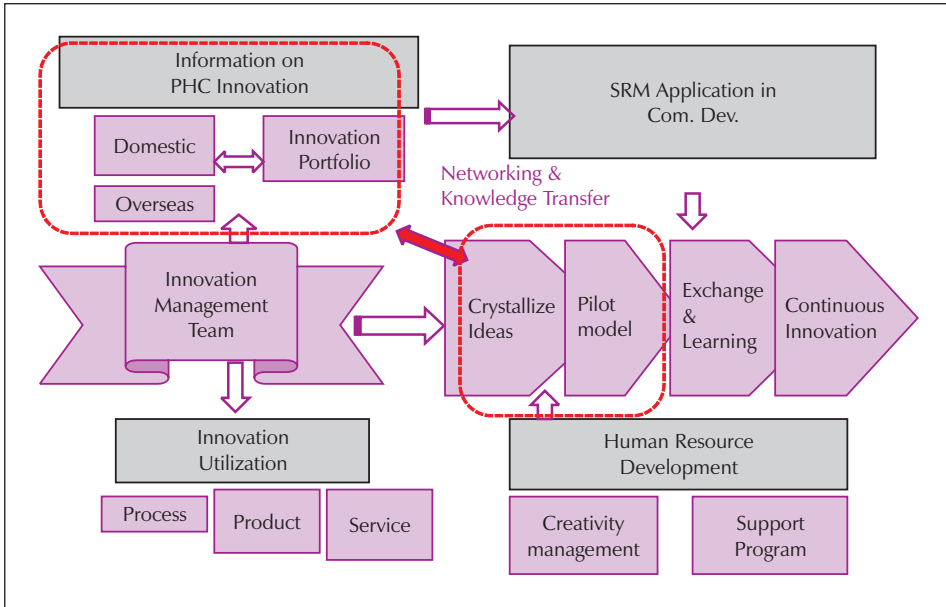


Networking and knowledge transfer

Following development pattern at country level, the CTI may become part of a network of training and PHC innovation institutions in SEAR. It may gather information on PHC innovation, creating innovation portfolio and facilitating exchanges through various means. The CTI may collect and analyze creative ideas, conduct experiment on innovation, propagate result. The CTI may also propose strategy and policy change through appropriate channel.

Innovation management scheme is shown in the following diagram.

PHC Innovation Management: Role of CTI



Annex 7

Agenda

- (1) Inaugural session
- (2) Keynote address
- (3) Review of Reorientation of Medical Education (ROME)
- (4) Situation analysis of teaching of public health in medical schools in countries of South-East Asia Region
- (5) Draft regional strategic framework for strengthening teaching of public health in undergraduate medical schools
- (6) Teaching of public health in medical schools: A global scenario
- (7) Public health role in revitalizing primary health care
- (8) Perspectives on public health and teaching of public health in undergraduate medical school
- (9) Contents of public health in undergraduate medical curriculum
- (10) Teacher, teaching-learning methods and assessment and evaluation of students in public health in undergraduate medical schools
- (11) Role of various institutions in promoting and supporting the teaching of public health in undergraduate medical schools
- (12) Strategies to strengthen the teaching of public health in undergraduate medical schools
- (13) Conclusions and recommendations
- (14) Closing

In responding to the revitalization at primary health care and health-care reform, health workforce (particularly medical doctors) should be aware of and appreciate the significance of public health in the wellness of people and use public health measures more in their interventions. The Regional Meeting on Teaching of Public Health in Medical Schools was held in December 2009 in Bangkok, Thailand to review the situation of public health teaching in undergraduate medical schools, and to propose actions to strengthen teaching of public health in the South-East Asia Region.

The report reviews the situation of the teaching of public health globally and in South-East Asia. Regional perspectives on public health and the teaching of public health in undergraduate medical schools are given. Various aspects of public health teaching based on the *Strategic framework for strengthening teaching of public health in undergraduate medical schools* are included. Topics covered include the curriculum/contents; the teaching-learning process including community practice and assessment and evaluation; teachers qualification and continuing development; and an enabling environment including school policy, administrative support and community partnership.



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