Editorial

The focus of this special issue is “human resources for health: working together for health”, the theme of World Health Day 2006. As such the articles in this issue cover salient features of human resources, such as Professionalism in Medicine; Nurses of the Community, by the Community, and for the Community; Human Resources for Health; Dimensions and Challenges; Health Volunteers; Migration of Health Workers; Privatization in Technical Education; Human Resources for Primary Health Care; Human Resources in Decentralized Health Systems, and Teaching Managerial Skills to Medical Students.

The section on Notes and News and Publications Corner covers issues of topical interest.

The main objective of the Regional Health Forum is the exchange of information, experiences, ideas and opinions on all aspects of public health and health development. The publication is intended to serve as a platform where people can express their views, observations and experiences rather than as an official medium of the World Health Organization’s policy.

Readers are invited to forward their contributions in the form of articles, essays, letters, or comments written in an informal, anecdotal style. Suggestions on improving the Forum are also welcome.
World Health Day Message from the Regional Director

Health systems all over the world are highly dependent on their health workers to provide skilled, effective, efficient and compassionate care. While the human resource is a strategic capital in any organization, it is more so in service-oriented organizations dealing with health care.

In most countries, the health sector is a major employer of human resources, with the wage costs estimated to account for 65-80% of renewable health system expenditure. Health workers are people whose primary interest is to improve, protect and maintain the health of people.

According to latest estimates, there are over 39.2 million health care providers in the world. Although WHO’s South-East Asia Region accounts for 26% of the total world population, only 12.8% of those providers are working in the Region.

Current evidence reveals that coverage of health interventions, such as deliveries by skilled birth attendants and measles immunization, is higher in countries and areas with greater numbers of health workers. Estimates show that 2.4 health care providers (doctors, nurses and midwives) per 1000 population are needed to attain 80% coverage rate for deliveries. Although the South-East Asia Region has 2.1 health care providers (doctors, nurses and midwives) per 1000 population, four countries have less than one health care provider per 1000 population. There is also a direct relationship between the number of skilled health workers and a reduction in maternal, infant and child mortality rates.

In the context of the South-East Asia Region, migration of doctors began several years ago, particularly from India, Sri Lanka, Bangladesh, and Nepal. Recent studies indicate that out of the annual output of qualified professionals in medicine from India, 2.8% had gone abroad to work. Another study from Sri Lanka shows that, between 1993 and 2000, out of a total of 826 graduates, 22% (185) did not return from their postgraduate training abroad. Annually, approximately 200 doctors from the government sector go to work abroad from Bangladesh. While this has increased foreign exchange earnings, it is difficult to justify this migration, especially when the needs of the affected countries are not met. Therefore, there is a need to find ways of adjusting the movement of health professionals globally. Both, source countries and receiving countries need to develop comprehensive policies in support of skilled health workers.

The magnitude of health workers’ shortage in the Region needs careful analysis. To mitigate this problem, synergies need to be developed through realignment of existing priority programmes, and preparing health workers for their changing roles in the ever changing global scenario.

In the current situation, a careful examination of the role of the health workforce can provide a better understanding of priority needs, such as the three health-related MDGs – reducing child mortality, improving maternal health and combating HIV/AIDS, TB and malaria, which require robust health systems staffed with adequate health workers who have the relevant skills. However, lack of appropriate human resources remains the single most serious obstacle in implementing relevant health programmes to achieve these goals.

Furthermore, attending to disadvantaged populations, managing community-based, people-centered approaches, and responding to the emergencies of various types are indeed challenges to the health workers today.
The educational policy for health professionals should ensure that there are adequate number of graduates to support the health systems. Teaching health professionals should be student-centered, emphasizing the balance between institution and population-based interventions. An early exposure to clinical and field practice settings will allow students to better understand the health needs of people in the community.

Greater efforts should be directed towards research for realigning the health workforce for better access to health services by the entire population. Responsiveness to psycho-social needs of individuals and communities, ethical-minded practice and professionalism beyond self-interest are the hallmarks expected of health workers. We should improve information for better planning of human resources to ensure improved quality of service delivery through an appropriate mix of health workers.

On World Health Day 2006, let us re-dedicate our efforts to “Working Together for Health” to improve the health of all people.

Samlee Plianbangchang, M.D., Dr.P.H.
Regional Director
Contents

Human Resources for Health

Professionalism in Medicine
  K R Sethuraman
  1

Nurses of the Community, by the Community, and for the Community in Thailand
  Khanitta Nuntaboot RN
  11

Human Resources for Health in India’s National Rural Health Mission: Dimension and Challenges
  S K Satpathy and S Venkatesh
  29

Health Volunteers: Third Workforce for Health-for-All Movement
  U Than Sein
  38

Migration of Health Workers: Perspectives from Bangladesh, India, Nepal, Pakistan and Sri Lanka
  B V Adkoli
  49

Privatization in Technical Education: The Case of Education of Health Professionals in Nepal
  Ramesh Kant Adhikari
  59

Human Resources for Primary Health Care in the South-East Asia Region: Categories and Job Descriptions
  Pak Tong Chol
  65

Human Resources in Decentralized Health Systems in Indonesia: Challenges for Equity
  Hasbullah Thabrany
  75

Teaching Managerial Skills to Medical Students Undergoing Health Services Programme: An Experience from Eastern Nepal
  Nilambar Jha, K C Premarajan, S Nagesh, Sanjay Kumar, Surya Raj Niraula, Sailesh Bhattarai, Deepak K C
  89

Child Health

District-level Variations in Infant Mortality in Sri Lanka: A Challenge to Achieving the Millennium Development Goal on Child Survival
  Rafiqul Huda Chaudhury, Prasanna Gunasekera, Dulani Gunasekera
  96
Comment

Notes and News 104
Publications Corner 109

Guidelines for Contributors 112
Human Resources for Health

Professionalism in Medicine

K R Sethuraman*

“Nothing is more estimable than a physician who, having studied nature from his youth, knows the properties of the human body, the diseases which assail it, the remedies which will benefit it, exercises his art with caution, and pays equal attention to the rich and the poor.” – Voltaire

Introduction – What is Professionalism?

Professionalism has been described by the American Board of Internal Medicine as “constituting those attitudes and behaviors that serve to maintain patient interest above physician self-interest.”¹ The word profession is derived from profess which means ‘to proclaim something publicly’. The act of ‘profession’ of commitment to an ideal to which the professional should conform is the essence of a profession. Physicians profess two things: to be competent to help the patients and to have the patient’s best interests in mind. Such commitment invites trust from their patients.

Physicians profess in two ways: the first is the public act of ‘oath taking’ during medical graduation ceremonies. This is truly the moment of transition – from being a student to becoming a professional. The oath, not the medical degree, professes the way the newly-acquired competencies are to be employed. Without the oath, the doctor is just a skilled worker. The second way of professing is implicit in the doctor-patient encounters: Whenever a physician asks the patient, “What can I do for you?” they commit themselves to having adequate technical expertise and to using that in the best interests of the patients. Such tacit commitment occurs every day between a physician and a patient. Otherwise, the patient would never willingly consult the physician.²

Profession and Vocation

To differentiate between a vocation and a profession, recent sociological literature has proposed a ‘checklist’ method. An occupation is considered to be a profession if:

- Practising it requires formal education;
- Its members enjoy control over their own training standards;
- Its members have their own disciplinary mechanisms;
- There is a scholarly journal devoted to its standards;
- Its practitioners enjoy relatively high social status, and
- Its practitioners have secured protection from state regulation as well as from market pressures.

The checklist method permits us to debate whether or not certain occupations, like librarian, social work and journalism are professions. Traditionally, a small number of professions, by virtue of their educational breadth and their importance in satisfying some fundamental human need, have been called “learned professions.” Medicine, law, ministry and other academic occupations have enjoyed this special status.³

---

* Director-Professor of Medicine and Head, Departments of Medicine and Medical Education, JIPMER, Pondicherry 605006. India; E-mail: sethuramankr@gmail.com
History of Professionalism

“Three kinds of medical practitioners are found in this world; firstly, the impostor in physician’s robes; secondly, the vainglorious pretenders and thirdly, those endowed with the true virtue of the healer” – Charaka (120–162 AD)

The noteworthy physicians in the history of medicine – physicians of the ancient Hindu, Confucian, or Hippocratic schools, Thomas Percival, Francis Peabody and William Osler, etc.- practised virtue-based ethics. However, for several centuries ‘the mercenary doctor’ has been a problem. "A doctor who can help a poor man and will not do so without a fee, has less sense of humanity than a poor ruffian who robs a rich man to supply his necessities. It is something monstrous to consider a man of liberal education tearing the bowels of a poor family by taking for a visit – as fee – what would keep them for a week," lamented Richard Steele (1672–1729). In Sanskrit, there is an ancient couplet, which says, "A physician is the elder brother of Yama, the Lord of Death, because Yama takes away only your life but the physician takes away your life and all your money!"

Plato had described two types of doctor-patient relationships. The first – ‘slave medicine’ in his parlance – is described thus: "The physician never listens from the slave any account of his complaints, nor asks for any; he gives some empiric treatment with an air of knowledge in the brusque fashion of a dictator, and then is off in haste to the next ailing slave." Plato contrasted this with the physician-patient relationship for ‘free citizens’ thus: “The physician treats their disease in a scientific way and takes the patient and his family into confidence. He never gives prescriptions until he has won the patient’s trust, and when he has done so, he aims to produce complete restoration to health by persuading the patient to comply with the therapy. ”

In the early 20th century, professionalism included issues like maintaining technical expertise and self-regulation of medical practice. Formulated by Talcott Parsons in the 1920s, these tenets formed the foundation of professionalism. In the developed world, technical expertise improved with the Flexner’s report of 1910 on Medical Education but quality of education is still a matter of concern in developing countries. Self-regulation by the profession has always been its Achilles’ heel: Most professional bodies do not effectively discipline their members; most do not publish records of their disciplinary actions, if any. Such shortcomings make it clear that effective self-regulation is non-existent and needs to be created.

The de-mystification of the medical profession in the 1970s and 1980s resulted in two great upheavals. First, medicine changed from an autonomous, publicly respected profession to one vilified in the public press. Doctors, once the ‘perfect angels,’ had fallen from the pedestal of public adulation. Second, health managers appeared to be potent rivals for the authority that physicians thought they owned. Sociologist Paul Starr commenting on the growing privatization and monetarization of medicine, described medicine as a “sovereign profession”, that once had reigned supreme, but was now threatened by the “coming of the corporation.”

Today, medical professionalism is in peril as several factors have weakened it. Increasingly, physicians encounter perverse financial incentives as well as restrictions, fierce market competition, and the resultant erosion of patients’ trust. Professionalism has virtually vanished in the battle between market competition of the ‘health care industry’ and ineffective government regulation of health care services.
Perspectives of Professionalism

Professionalism in medicine can be viewed from the perspective of professional virtues or that of professional obligations. Professional virtues are the desirable qualities and traits a physician ought to possess and professional obligations are what a responsible physician needs to understand and do.

Professional Virtues

"Virtue engenders excellence; therefore virtue ought to be fostered more than life." – Tiruvalluvar – Tamil Saint-Poet

Medicine has always been considered a "noble profession." The image of a doctor has always suggested integrity, loyalty and compassion – key aspects of a physician’s professional identity. The world over, communities have always acknowledged medicine’s vital role in healing the sick and permitted unique powers and privileges to those who practiced it. In turn, the societies expected medical professionals to altruistically serve the sick and suffering.

Some of the virtues a physician needs to commit to possess are:

- Fidelity to trust – essential for establishing rapport and for healing to occur;
- Benevolence – action taken for patient's welfare, and avoiding all avoidable harm;
- Intellectual honesty to accept when one does not know, having the humility to admit it and obtain assistance and specialist help;
- Courage to face the dangers of contagion, to possibilities of physical harm, and political retribution, and deceptions of various kinds; courage to be the patient's advocate in a commercialized health care setting;
- Compassion - empathize and feel something of the patient's plight in order to make scientific judgements that are morally defensible and suited to the life-world of a particular patient, and
- Truthfulness - enables the patient to make informed choices, on treatment modalities.

These are virtues obligated by the dyadic nature of the medical encounter between a physician and an individual patient.

Professional Obligations

Professions have a duty to protect vulnerable persons and vulnerable social values. Many values are vulnerable: individuals and societies may abandon the sick and the elderly, and permit unequal treatment based on gender, etc. Though humanism, trustworthiness and the preservation of important values are important for all members of any civilized society, the professionals are obligated to practice these values. When professionalism in core social activities such as medicine and law becomes unsteady, it marks the emergence of societal problems. Thus, professional obligations constitute an important stabilizing and morally protective force in a society.

Professionalism obligates doctors to be competent and updated in their expertise and proficiency. It obligates doctors to suppress self-interest in their service for the well-being of their patients. It obligates doctors to cultivate a fiduciary relationship with their patients and be trustworthy. It obligates medical institutions to promote society’s trust and not undermine it.

If medicine is a profession, then the medical team - physicians, nurses, physician assistants, social workers, nutritionists, physiotherapists and other care givers – is a
Professional Authority

The flip side of professional obligation is professional authority, which is derived from technical expertise. To the three types of legitimate authority that Weber described, viz., legal, traditional and charismatic authority, Parsons added a fourth type: expert authority, which is most applicable for professionals. People obey orders from physicians because they believe that physicians possess the expert knowledge that they do not have.3

In the 1970s, the concept of "expert professional authority" was criticized as being mostly a sham. Much of the clinical practice was shown to be merely empirical, not based on scientific evidence, not as uniform as any scientific practice ought to be and to be heavily influenced by economic and marketing forces. Such harsh criticism has ushered in the current push for practice of evidence-based medicine and clinical outcomes research.3

Unprofessional Relationship

"When a doctor does go wrong he is the first of the criminals. He has nerve and he has knowledge." – Sir Arthur Conan Doyle in "The Speckled Band"

A fiduciary relationship is one in which a person, usually with special expertise, agrees to act in the best interests of the other, e.g. a patient, generally in exchange for monetary reward. Besides the doctor-patient relationship, doctors are also involved in a range of other fiduciary relationships, as medical teachers, supervisors, senior colleagues or team leaders.

Inappropriate sexual behavior in fiduciary relationships is considered sexual harassment, even if there is no apparent resistance from the patient or client. In anonymous surveys, 3%-10% of doctors admit to a sexual relationship with a patient. In an Australian survey, it was found that 7.6% of psychiatrists, almost all male, reported erotic contact with patients during or after termination of treatment; about 4% of male psychiatrists in New South Wales have been reported for sexual abuse of patients.6

Charter on Medical Professionalism1

A charter was released by the Medical Professionalism Project, a joint effort of the American Board of Internal Medicine (ABIM) Foundation, the American College of Physicians-American Society of Internal Medicine Foundation, and the European Federation of Internal Medicine, in 2002. This charter has recently been revised.

The three guiding principles of the charter are:

- Primacy of patient welfare;
- Patient autonomy, and
- Social justice.

The 10 professional responsibilities included in the charter are:

Commitment to:
- Professional competence;
- Honesty with patients;
- Patient confidentiality;
- Maintaining appropriate relations with patients;
- Improving quality of care;
• Improving access to care;
• Just distribution of finite resources;
• Scientific knowledge;
• Maintaining trust by managing conflicts of interest, and
• Professional responsibilities.

A charter on medical/dental professionalism of the University of Western Ontario derives from the ABIM charter with minor differences. In lieu of “improving quality and access to care,” which are system issues beyond the control of an individual professional, the following principles have been added.  

• Commitment to cooperation and collegiality;
• Commitment to open and honest relationships with colleagues and third parties, and
• Commitment to improving the health of the community.

Charters are useful signposts that point out the correct path that health care professionals ought to take. However, critics say that charters and professional resolutions might influence individual behaviour in some instances, and are doubtful if these would have substantial collective impact on health care delivery in the current era of managed care.

Threats to Professionalism

There is a profound unease with the seeming primacy of economic factors currently affecting medical practice in most of the developed world. A special challenge arises in medicine because health care is often expensive and a third party generally reimburses these costs. Other professional relationships are different: a lawyer or an engineer charges clients directly for services rendered, and the clients can consider costs when they decide what kind of services they want. However, in medicine, the decisions are now heavily constrained by the payers’ decisions about whether a proposed treatment is “medically necessary” and appropriately cost-effective. This intrusion of third party payers into the health care decision-making process has significantly curtailed physicians’ accustomed professional independence.

While physicians and their professional associations are preoccupied with struggles on issues of payment and political power, professionalism is seriously threatened. The New England Journal of Medicine has warned, on behalf of patients, against the “new medical-industrial complex” as inimical to the free exercise of professional responsibilities.

Another major threat to professionalism arises from the undue influence of the pharmaceutical industry over continuing professional education and research. Unlike issues related to managed care, the excessive dependence on drug industry is under the control of physicians and their professional associations. These issues may well subvert the effort to make professionalism relevant to contemporary medicine.

Challenges to Professionalism in the Third World

"The medical profession is under siege. The public increasingly distrusts us because we are too condescending to listen, too mediocre to keep up, and too greedy to truly care about their welfare." – S.Y. Tan, MD

In India and other developing countries, a doctor is greatly trusted, but more and more people are questioning the practice. However, “my-doctor-knows-what’s-best” type of blind trust is giving way, especially among the educated, to the realization that decision-making is the right of the patient.
There are numerous instances of unethical advertising by doctors. The regulatory councils look into such matters but no tangible action is taken and the doctor often goes scot-free. Of late, advertisements by hospitals and diagnostic centers vie with those put up by alternative systems of medicine, often proclaiming their superiority over others.

Hi-tech equipments are imported at great expense. Most of these equipments are in excess of the needs and paying capacity of patients. Health care centres use fee-splitting and other incentives to lure referrals from physicians. Is it ethical for the physicians to order expensive investigations without explaining to the patient how much it would cost to undergo the full treatment? It is estimated that about two thirds of rural families are in debt because of health care expenditure.

Another major problem in most developing countries concerning equipment imported from abroad has been the poor quality of service and maintenance. Is it ethical to procure costly equipment, which is not likely to function for long? Is it ethical for vendors to supply these items without effective after-sales service? Thairu has suggested that manufacturers, vendors and users regarding the sale and maintenance of equipments should agree upon a professional code.

Another unprofessional facet of health care in developing countries is the doctors’ tendency to prescribe fashionable and expensive drugs or irrational drugs with limited therapeutic value. The drug vendors and producers ‘push’ doctors into using their products by all means – fair or foul. This is responsible for distortions in drug production and consumption.

Article 25 of the Universal Declaration of Human Rights states, that everyone has the right to a standard of living adequate to the health and well-being of himself and his family. This includes food, clothing, housing and medical care and necessary social services. These rights raise the ethical issue of distributive justice in developing countries where resource crunch is a major problem. How to provide acceptable and affordable care to all is a challenge. Is it ethically permissible for the society to compel physicians to provide service in under-served areas and remote villages? Do the professional bodies not have the responsibility to influence the health policy and promote distributive justice? Sadly, they have, with a few exceptions, been passive spectators in the fight against discrimination in health care.

It is perhaps peculiar to India that modern science is employed for female feticide. Even after it has been made illegal, some doctors in India perform fetal-sex determination tests. Such abortion clinics thrive in the country in spite of the law against it. Gender discrimination, loaded against the girl child, is however quite prevalent in developing countries.

Recent media reports spoke of ‘exploitative research’ in the developing countries. An important safeguard is needed to avoid the exploitation of potentially vulnerable populations in these countries. Clinical trials should be limited to those that are responsive to the host country’s health needs.

Teaching Professionalism

"The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head." – Sir William Osler

There is widespread concern today among conscientious physicians, medical educators and the general public that medicine is becoming ‘unprofessional’ and that the profession is losing its commitment to protect the welfare of patients. How should medical schools respond to this challenge?
Importance of Role Models

Source credibility is an important principle of adult learning. Role models are therefore necessary to impart effective training and inculcate professionalism among learners.

How can medical schools find physicians who can, without hypocrisy, teach these courses? They have to start with a faculty development programme on professionalism and create a critical mass of role models among the educators. Then they have to develop a programme on how best to transmit those values to the learners. Mentoring is clearly the most effective means of transmitting values. Another effective way is to create an environment for professionalism, not by telling students what to do, but by raising their awareness by asking questions. Feedback to tell the learners how they have evolved and rewarding them for their progress is very important as well.14

Relevant Issues for Future Professionals

Today's students need skills that will serve them well in future. Some of the important issues for future professionals are15:

- How forces such as managed care and drug industry threaten professionalism;
- How the field of medicine must adapt to the current reality and yet remain ethical;
- How to practice humanistic and compassionate medicine within the 10 minutes spent in seeing a patient;
- How to truly care for our patients if third party payers (insurance industry) decide which tests and which medicines are permitted, and dictate the time allocated to each case;
- The knowledge and the skills needed to adhere to the principles of professionalism even as health care reform continues, and
- Empowerment of the learners so that they – the future doctors – can lead the reform.

A Successful Model

The University of Chicago, USA emphasizes six principles (the “Six Cs”) in teaching clinical medical ethics.16 The “Six Cs” principles for teaching clinical ethics are:

- Clinically based - for relevance;
- Cases (real) - narratives for fidelity and effectiveness;
- Continuous - reinforcement of learning outcome;
- Coordinated - integrated approach of all issues pertaining to the case;
- Clean (i.e. simple case) - for clearer take-home messages and better impact; and
- Clinicians as instructors - for source credibility and all-round case discussion.

Informal Curriculum

The social milieu or “informal” curriculum of a medical school has great influence on values and professional identities acquired by its students. The Indiana University School of Medicine, USA runs a programme to foster a social environment that embodies and reinforces the values of competency-based curriculum. The school uses an appreciative narrative-based approach to encourage its students and faculty to be more mindful of relationship dynamics. They discover how much relational capacity already exists and how widespread is the desire for a more collaborative environment. Their perceptions of the school seem to shift, evoking behaviour change and hopeful expectations for the future.17
There are further questions that need to be addressed by every medical school. Some of them are:

- How to overcome the resistance to teaching professionalism;
- How to know that the professionalism curricula are working;
- How to develop a reliable and valid set of professionalism assessments tools, and
- Does educating professional behaviour ensure professionalism.

Evaluation

Periodic assessment of professional behaviour of the residents and other learners is needed. Giving them feedback in a non-judgemental way helps in further shaping their behaviour. In the Department of Internal Medicine, we use faculty staff as mentors of postgraduate residents. The residents are assessed using the checklist (vide infra) every six months, leading to five assessments during the three-year period. Their progress - or lack of adequate progress - is commented upon in a non-judgemental way.\(^\text{18}\)

### Resident Evaluation Checklist on Professionalism

<table>
<thead>
<tr>
<th>Marking:</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unsatisfactory</td>
<td>Satisfactory</td>
<td>Exemplary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Empathy in patient care.
(2) Appropriate fund of knowledge.
(3) Soundness of clinical judgment.
(4) Technical expertise with diagnostic and therapeutic procedures.
(5) Communication with patients, families and staff.
(6) Sensitivity and responsiveness to individual patient differences in economic status, ethnicity, age, gender and disabilities.
(7) Honesty in dealings with patients and colleagues.
(8) Accountability for actions.
(9) Conflict-resolution skills.
(10) Adherence to regulatory, institutional and departmental norms.

(Modified from – Catherine A. Marco. Medical Professionalism In Emergency Medicine Graduate Medical Education.)

Looking to the Future

**Fostering Professionalism – The Milieu**

We ought to create the kind of health care environment which is conducive for physicians to be truly professional, regardless of who controls it - the manager or the physician. Some of the major issues in health care organization and delivery are\(^\text{19}\):

- The ability to treat patients, using high standards of care, without undue concern about cost and insurance issues;
- Satisfaction in providing continuity of care to patients with chronic illnesses;
- Building and maintaining trusting relationships with patients and with the general public;
- Opportunities to participate creatively as 'patient advocates' to improve the health care system;
Good information systems and audit for more effective patient care and continuous improvement in quality;

The ability to exercise professional curiosity through meaningful clinical research and outcome assessment;

Open and fair communications with other members of the health care team, including managers, and

Reasonable working conditions and income levels.

Fostering Professionalism – The Strategies

Ethical principles are difficult to implement in a corrupting environment. Therefore, a major commitment by all stakeholders to establish and maintain ethical standards in all aspects of health care delivery is of paramount importance.

There are several options but most of them require a change in the mind-set and major departure from current procedures.

(1) Professional and certifying bodies could regulate rather than merely recommend standards of behaviour and service;

(2) A requirement to render a minimal quantum of free care might convey commitment to medical professionalism and improve the health of the poor;

(3) Professional associations could form issue-based alliances with consumer groups to accomplish goals that neither can realize separately;

(4) The medical curriculum should be revised to inculcate the skills necessary to promote professionalism and advocacy skills;

(5) Professional bodies could encourage and protect whistle-blowers, so that the profession is not dependent on 'outsiders' to identify and publicize problems;

(6) Professional associations could be expanded the agenda for their lobbying and advocacy. The society will positively respond to advocacy that is driven not by narrow self-interest but by a broader professional vision of patients' welfare;

(7) Professional societies, medical schools, and teaching hospitals could be proactive and minimize the influence of pharmaceutical companies and their representatives, and

(8) The agencies and individuals who have done worthwhile acts to promote professionalism could be appreciated and rewarded like, the awards given by the foundation of The American Board of Internal Medicine.20

The responsibilities of fostering professionalism are indeed awesome. The obvious question is, "Are the key players and professional organizations competent and willing to move ahead?"

To sum up, how can one prove one’s love to others? It can only be proven by consistently demonstrating love. Similarly, to prove their professionalism, the physicians can only act as true professionals, striving always to deserve the trust and admiration they hope to inspire.3

References


Further Reading

1. Issues in Medical Ethics 2000 Conference. The Mount Sinai journal of Medicine 2002; 69:6; 354-420
Nurses of the Community, by the Community, and for the Community in Thailand

Khanitta Nuntaboot, RN*

Introduction

The increasing population of aging and chronically-ill patients, coupled with the complex social conditions, has put a heavy strain on care of these groups, and of children. Unhealthy behaviour, toxic and polluted environment, workplace stress, social problems resulting from household debt, and other causes such as accidents, drugs, crime and violence, have an impact on the day-to-day living, and on society, economy and culture. As culture defines health and illness, each community has its own health problems and needs. Therefore, health care solutions for each community are different and embedded in the local context.

In researching preventive measures needed to decrease these major health problems, the National Health Act proposed that primary care services, which were lacking, were in great need of being increased. The challenge then became how to increase the access to primary care services for community people. The answer seemed simple; increase the number of qualified providers delivering primary care services. Evidence suggests that many major health problems can be prevented or reduced by increased attention to lifestyle and health behaviour. This is the essence of community health care. Thus, the ultimate goal of community health care providers is health promotion and illness prevention by encouraging healthy lifestyle choices, and provision of essential care and health services.

In order to provide community health care and services effectively, care providers should pursue all activities using the following principles: (i) Using community health problems and needs as the basis; (ii) Using diverse strategies in maximizing the use of local resources as capital and potential for health care management; (iii) Strengthening cooperation among all local organizations, (iv) Integrating all dimensions of community development plans and projects for health care management; (v) Encouraging community members to work out their own solutions in community health and illness care and welfare; (vi) Building and strengthening capacity of local residents to perform competent health care for relatives and neighbours, and (vii) Collaborating to utilize existing strategies from the government sector in supporting community health care management.

Nurses are ideal community health care providers in this respect. Efforts have been made in preparing nurses as one of the community health care providers. Practically, nurses have long been working in various health care settings according to socio-cultural demands, health services system management, and the potential of the community and local organizations. Examples of nurses working in community health care management include those involved in community health care in: (i) Government

---

* Faculty of Nursing, Khon Kaen University, Khon Kaen, Thailand
and private primary care units in the country; (ii) Private clinics; (iii) Home care firms providing health services in the homes of the aged, the disabled, and the chronically ill – where nurses mostly work after regular working hours while people pay from their own pocket; and (iv) Local administrative organizations (LAOs) such as municipalities and tambon (sub-district) administrative organizations (TAOs). All health care settings of nurses serve as a significant strategy, to increase up to 100%, the accessibility of quality health care for the community at the primary care level. However, the role of nurses, especially in community health care management, has been focused on and has been widely accepted since the implementation of the 30 baht scheme, Thailand’s Universal Coverage Scheme in Health Care. This system mimics primary care systems in that primary care strives to provide integrated accessible health care to diverse communities. Nurses increase access to primary care services. They are ideal at developing trust and therapeutic relationships with community people, which allows them to specialize in local health care plans that promote disease and illness-free lifestyles. The scope of nursing practice in community health care and primary care covers:

1. Continuously following up patients’ in-home health care and next-level treatment referral, especially patients with chronic diseases, the elderly, those with physical disabilities, and mothers and children, etc.;
2. Evaluating health problems based on causes and local threatening factors, and national health policy;
3. Performing surveillance programmes for community residents covering all causes and local threatening factors and illnesses;
4. Preventing diseases, illnesses and health-threatening factors affecting community residents;
5. Providing greater focus on high-risk groups in the area through team work, so as to reduce high-risk behaviour, increase healthy behaviour, and to be able to depend on self care. Members of high-risk groups are people with physical disabilities, patients with chronic diseases, teenagers, women, the elderly, and children;
6. Performing first aid, basic medical and health care, and discomfort or symptom relief;
7. Connecting and cooperating with other resources that can benefit community health care management; and
8. Others that respond sensitively to the benefits of community residents.

To achieve effective community health care, Thailand requires a large number of nurses working continuously in every type of community health care management in a particular area, pursuing all of the eight principles listed above. While there has been a continuous shortage of nurses all over the country due to both national and international demands, planning and development of nursing manpower at the national level must be carefully designed. Among many strategies to fill the community with nurses, having “nurses of the community, by the community, and for the community” is crucial for achieving a healthy community, and working as a turning point for initiatives in community health care development. These nurses would be trained in accountability to address community health care needs, develop and sustain long-term health care relationships with patients in the community, develop strategies to prevent health problems, and to maintain healthy lifestyles. Producing nurses who are local residents requires big changes in the education system. Many systems like national
policies and strategies need to come together to attract nurses to work in their own community. The educational and hiring systems for nurses of this type – who are local residents and work for their own community’s health care – must be reformed by formulating policies at both local and national levels.

Although lessons learned indicate that graduate nurses enter the workforce in various types of health care institutes, a very minimum number decide to work and live in their community and those who work there are local residents. While the direction of health manpower development should be towards producing personnel who are responsive and sensitive to local health care needs and services, the ideas in the new system pursue four crucial elements. Firstly, students learn about health and nursing care both at the university and in the community they live in, while in their school years. Students learn from, and share their knowledge with, the locals through community health and illness care. Community health care situations could be best learned in everyday life events rather than in health care institutes, because lifestyle causes local health problems. Secondly, community organizations and residents, who are relatives and neighbours of the students, learn and share with the students in health and illness care. Community health care could be designed by local residents through the experience of learning and sharing. Thirdly, the process of working together to create learning in community health care among all involved people needs strong support from academic institutes. Staff from the Faculty of Nursing at Khon Kaen University, Thailand, participate and share their knowledge of such learning experiences involving both students and communities. Finally, local authorities and local health service units, such as community hospitals, and sub-district health care centres, are also involved in community-based health and illness. Through these four strategies, benefits could be gained and learning could be shared among the involved parties. The evidence from the implementation of the new system has been critically examined and synthesized to guide policy options for implementation.

Seven principles required for community health care development, and for producing “nurses of the community, by the community, and for the community”.

The evidence from field research in community health care development indicates that to achieve the ultimate goal of community health, at least the following seven principles should be implemented.

1. Using community health problems and needs as a basis

In order to solve these health care problems effectively, the cause of the problems, the way of living, community bonding, and maximizing the community resources and capabilities must be studied first. Health care providers must integrate knowledge from at least two paradigms; professional body of knowledge, and local sociocultural wisdom and ways of living. The merging of knowledge from both systems requires that all involved people learn together and share their experiences to conceptualize about health care in the community. This leads to forming a health care service which will use community health problems and needs as a base, and will involve every sector, such as community organizations, other professions and the government.

Learning from the experts of two ways of thinking; professional and local sociocultural ways, is based heavily on the assumption that knowledge exists in a person. Knowledge from experience, practice and real-life
problem-solving leads to changes. When health problems are embedded in lifestyles and ways of living, interactive learning from person to person is crucial, to gain in-depth knowledge for solutions of health problems. An interactive learning process is, therefore, a critical tool for those who practise community health care.

Health services using community health problems and needs as a basis share the same philosophy of primary care services which focus more on building health, preventing illnesses, and on surveillance of all local illnesses. These concepts are:

1. The service is the connecting point between the public and the health care system. This is to provide necessary and accessible health care service for anybody at any health stage - from being healthy to being prone to infection, to being sick, to being terminally ill. The varieties of health care services include: health promotion, illness prevention, basic medical treatment, condition stabilization and health maintenance, physical therapy, developing and sustaining long-term care, suitable treatment referral in cooperation with other health service units. The focus is on how to develop the capability of the public and families to perform self-health care, to apply local wisdom, and to build community participation.

2. The primary care service aims at helping individuals and members of a family, group and community to be able to practise self-health care. The focus is on the capability to assess circumstances that will have an impact on an individual's health, and on his family, group and community to evaluate the chances of getting infected, and to seek more advanced treatment when needed.

3. Objectives of primary health care are to:
   - Reduce and control individual and community health-threatening causes and circumstances;
   - Promote healthy behaviour and modify lifestyles corresponding to local and social conditions, and
   - Empower individuals, family members and local organizations to participate in designing the health plan, and to be actively involved in monitoring and managing primary health care services for communities.

4. The target population groups are:
   - General public living in vulnerable areas.
     [This group will receive complete services covering disease prevention, health promotion, primary medical care and simple treatment, and secondary and tertiary health service referral. The services can cover emergency health problems, physical therapy, and continuing and long-term care.]
   - Groups of different ages and groups at risk of illnesses.
     [The services will be focused on how to strengthen their ability to reduce risk factors, and circumstances or conditions that can threaten their health.]
- Groups with specific illnesses or health problems.

[These will be involved in continuing and long-term care, and responsive secondary and tertiary health care service referrals.]

2. Using diverse strategies in maximizing the use of local resources as capital and potential for health care management

The social capital, as represented by community assets for health and welfare of its people, has been embedded in Thai communities for centuries. The characteristics of social capital include: the existence of community networks; the participation in communal activities and the use of the above networks; mutual help among members of the community; the presence of community volunteers, and strong and competent leadership. Through maximum use of such social capital, community health care management could be strengthened. However, such social capital should be built and added continuously due to its depletion upon utilization. This could be done through: encouraging interactions among community members; creating a sharing and participating atmosphere in the community, and establishing collaborative networks, trust, and norms. Coalitions of all related groups, networks and organizations in the community could cover all of the community’s solutions.

3. Strengthening cooperation among all local organizations

Every local organization is accountable for addressing community needs, towards developing and sustaining the well-being of its people. In order for community health manpower to effectively design and implement community health care services by using and strengthening cooperation among all local organizations, the following are required:

- Discussion, planning and coordination among community members, service providers and related sectors;
- Launching services through cooperation and partnership among community leaders, its members, related organizations, and service providers;
- Maintaining and operating services and projects for the community for maximum benefit of the community members themselves;
- Finding strategies and solutions for dealing with problems through discussion and collaboration among partners by mainly using community human resources as the major driving force, and
- Cooperating in the form of volunteers, and partnerships in sharing benefits, responsibilities, decision-making, consequences and resources.

4. Integrating all dimensions of community development plans and projects into health care management

In practice, all community work must be integrated to have an ultimate impact on people’s well-being. Community work covers four services namely: (i) Basic medical treatment; (ii) Community health services and long-term health care at home; (iii) Education, and (iv) Unrelated health services, such as social work, public utilities, and public welfare. These services are provided separately by different organizations and therefore, lack coordination to solve local problems
holistically. Thus, having key persons is crucial to integrating all the activities for community's well-being and development. The community health manpower therefore, requires high competency to explore more effective strategies in integrating all dimensions of the community development plan and projects into health care management and vice versa.

5. Encouraging community members to work for their own solutions in community health and illness care and welfare

The idea of using community health problems and needs as the basis will make this concept become practical. Real practices can come in diverse ways, such as identification of health problems and demands, designing solutions with health professional staff and organizations, operating and evaluating community health care activities, and becoming a community health care provider. The ultimate outcomes from this principle are competent solutions for local community health and illness care and welfare.

In order to develop health care services by using community health problems and needs as the basis, one possible strategy could be human-interactive learning among all the people involved in community health. This could be done through all the activities carried out for the well-being of the community.

6. Building and strengthening the capacity of local residents to provide competent health care for relatives and neighbours

The idea of having community members solve their own health problems has existed for some time. The examples of using the local knowledge in health care include “herb doctors” and “traditional birth attendants.” They live in the community and are very familiar with the local people and their ways of living, so they understand the problems and causes very well. Since they are community members’ friends, relatives and neighbours, they provide support to the community and gain respect and trust from the community in return. They are experts in local and cultural health care. If young community members become doctors, nurses or health care field staff, and provide care to their own community, the community itself would be capable of permanently managing and solving its health problems and needs. Moreover, those nurses, doctors, or health care field staff who are locals, would be treated as significant community assets who work towards effective community health care and welfare. This is true when community health problems require both sociocultural and professional knowledge for effective and possible solutions.

7. Collaborating to utilize the existing strategies from the government sector

In order to develop a new system of having a “nurse of the community, by the community, and for the community”, three crucial conditions must be critically examined. These are: (i) A system of training and preparing local residents to be nurses; (ii) A system of hiring those nurses to work in their own community, and (iii) A system of updating and advancing the technical knowledge and skills for more competent care. Presently, there are two strategies that could bridge these gaps, a decentralization policy and a universal coverage policy. Through a decentralization policy, local administrative organizations, such as municipalities and TAOs, are mandated to manage all community-based services including welfare, education, health care, especially for special groups of people, and other non-health-related services. Local administrative organizations should restructure so that they are able to manage all health
care and welfare services for the local residents. Hence, it is ideal to have a “nurse of the community, by the community, and for the community” to fill such a position. The local administrative organizations could provide scholarships to local residents who want to be nurses working through this concept. Sending people to study nursing is possible for the local administrative organizations since a budget could be allocated, and planned to support residents’ education. While hiring a nurse to work in the local administrative organization is very crucial, it requires more budget allocation and definite plans for continuous development in both career and academic updates. The community hospitals therefore play an important role in providing academic links to the nurses of the community for their technical knowledge advancement. The universal coverage policy, and the financial management system of health care, allow for possible solutions to have a budget for health promotion and disease prevention activities in each locality. This could be provided directly to the management of competent local administrative authorities. Case studies must be conducted to illustrate how these concepts of perfect matching would work in practice. The question of how to find competent local administrative authorities, participating local hospitals, and nursing schools should be explored, in which the system of building “the nurse of the community, by the community, and for the community” could provide some potential answers to nursing education, the hiring of nurses to work in local administrative authorities, and the advancement of technical knowledge for those nurses.

**Who are the “nurses of the community, by the community, and for the community”?**

“Nurses of the community, by the community, and for the community” are those who graduate from this area-based nursing education system. They would be local residents selected and financially supported by their own community organization to study in the Bachelor of Nursing Science Programme at a participating faculty of nursing. These nurses will be requested to return home after graduation to work with the community organization in their own community, in collaboration with local community hospital or health service units. The community could hire nurses to work for their community health care in various ways: (i) Hired by the LAO; (ii) The community fund; (iii) The local PCU, and (iv) Local participating hospital, and private clinics in the community, etc.

**Building and nurturing the “nurses of the community, by the community, and for the community” through area-based community health care management**

Producing health manpower capable of working with the community in managing health services which are problems- and area-based, requires: (i) “Human to human” learning process throughout the study programme in university, and in actual work after graduation where local experts are involved; (ii) Building and integrating a process of two main categories of knowledge including: academic and local wisdom, both tacit and experiential, and (iii) Knowledge-sharing process among experienced persons in various networks attempting to expand the ideas on community health care management and social management of the locals.

The educational system, especially in the health and nursing fields, must be reformed to put more emphasis on the human-interactive learning process, from person-to-person, more than from texts. People would interact more and be able to learn from others. The philosophy of this new system attaches value to local wisdom and
experiential knowledge, and acknowledges all local experts. In this regard, community residents could give high value to those who continue to live in the community. Commuting to big cities for better jobs and leaving parents and relatives in the community will gradually decrease.

The mainstream educational system reduces the strength and capacity of the community in many ways including: (i) Giving priority to the most educated people; (ii) Nurturing the idea of admiring people who are civil servants or at higher positions than others, and (iii) Having jobs according to the level of education. All these factors have driven people to work in high-level jobs. Many leave home to work far away, thereby cutting all bonds with the family and kin. Those who stay home have no way out. Moreover, prospects of better money exert a strong pull on highly competent human resources towards the work market. Management of health care for people in the community has therefore been limited since few health workers in the community are locals, having insufficient understanding of the ways of life of the locals, and of integrating limited knowledge. Having nurses from the community is thus one among many effective ways to strengthen community health care management.

The Faculty of Nursing, Khon Kaen University, Northeastern Thailand, in collaboration with the LAOs and community hospitals located in the nearest area, initiated a new system to prepare “nurses of the community, by the community, and for the community”. Nineteen local students, supported by their own LAO, have been recruited into the Bachelor of Nursing Science Programme at the Faculty of Nursing, Khon Kaen University, each year since 2002. This new system attracted the public eye when publicized through the mass media as evidence for the National Health Act implementation. Interestingly, during the drafting of the National Health Act, forces from the civil society put in a legal framework for locals to be prepared as health manpower in their own community.

Lessons learned from the Faculty of Nursing, Khon Kaen University’s initiatives have highlighted critical issues for further development. Many LAOs in all parts of the country have urged local nursing schools and hospitals/health service institutes to adopt the ideas. The National Health Security Office has provided pilot projects for LAOs to utilize the budget of the Universal Coverage Scheme in managing health promotion and illness prevention for local people. Perfect matching among all key actors and their readiness laid a strong foundation for development of similar programmes, which is a preliminary requirement. The essentials of such area-based community health care management include: (i) Architecture of area-based community health care management system; (ii) “Interactive learning through action” process in the area-based community health care management, and (iii) Outcomes and benefits from area-based community health care management.

Building an area-based community health care management system

The building of an area-based community health care management is best illustrated through interactive learning involving action processes in community health care management. A community health study process which focuses on in-depth studies of community people and their immediate environments is used as a case study. Interactive learning through actions could make contributions to: (i) Reflecting the world view of health of all people involved; (ii) Enhancing active participation in the learning process, and (iii) Bringing together all
involved sectors to build work methods and practice guidelines.

There are at least four important elements in “interactive learning through action” process: (i) Health care and service system – health service design and advanced and updated technical knowledge of this type of nurses; (ii) Management of community health services and welfare – LAO nurse hiring system; and (iii) Educating and developing nursing manpower – nursing education system, and (iv) Learning and knowledge building – “interactive learning through action” – using the participatory research process with all involved parties. All four systems underpin the outcomes of the “interactive learning through action” process.

All the four main sectors involved in the “interactive learning through action” process are participating in the area-based community health care management activities with the following roles and functions:

(1) LAOs, local residents, community organizations pursue roles and functions in:
- Managing local resources and effective health services to strengthen community health care;
- Collaborating with others in designing, implementing and evaluating the sustainable use of nurses as a strategy for community health care management;
- Investing in educating nurses to work at LAOs;
- Joining in recruiting locals to study in the Bachelor of Nursing Science Programme in participating schools;
- Planning for the career path of nurses from the community.

(2) Local hospital/health service units undertake roles and functions in:
- Developing health services through designing community-based health services;
- Collaborating to establish learning units to advance nursing knowledge in providing quality health services and in working effectively with the community and the LAOs, and
- Participating in teaching and coaching of students in designing community-based health services.

(3) Local nursing educational institutes pursue roles and functions in:
- Collaborating with others in designing, implementing and evaluating the community-based health care system, the community-based nursing education system and the use of nurses as a strategy for community health care management;
- Developing methods of teaching and learning in nursing education which eventually may lead to a reform of nursing education, and
- Using research and development, and research and evaluation as tools to build necessary knowledge for area-based community health care management.

(4) Students and nurses of the community are expected to:
- Participate in the “interactive learning through action” process, and
- Build knowledge and cultural competency for area-based community health care management through integration of the two mainstreams of knowledge: the academic and the sociocultural foundations.

“Interactive learning through action” process in area-based community health care management

The “interactive learning through action” process involves four key components. Firstly, strategies implemented in the process utilize: (i) Community data and information; (ii) Case studies in selected communities; (iii) Situations of health and illness care, and community welfare, and (iv) Experiences shared with experts in community health development. Secondly, learning activities and access to learning are made possible through: (i) Studies of community health and illness and their management and care; (ii) Studies of family health and care; (iii) Situational studies on LAO’s context and its management structure for health care, and (iv) Situational studies on community fund’s context and its welfare system. Thirdly, the roles and functions under the mission of LAO’s in community health care management and welfare, by coming up with methods of work and tools. Finally, outcomes from the interactive learning process could be categorized into two groups: concrete outcomes and conceptual outcomes.

The examples of concrete outcomes are: (i) Area-based community health care management activities carried out; (ii) Community data - identifying the health status of people, influencing factors of health, and management of community health care and welfare; (iii) Community members receive health services; (iv) Practical community-designed health care policy and plan; (v) Design of community-based health services and projects; (vi) Practical models of hiring nurses to work at LAO’s; (vii) Actual model of community-based teaching and learning system in nursing education; (viii) “Interactive learning through action” units for area-based community health care management; (ix) Tools for studies of community-based health services and care management and community-based nursing education; (x) Learning networks, etc.

The conceptual outcomes include: (i) Positive attitudes towards the “interactive learning through action” process in area-based community health care management; (ii) Concepts underlying work done to promote community health and solutions for community health problems among all involved people; (iii) Being knowledgeable about health problems of their own community, and the capability to manage such problems among local dwellers, LAO’s students, and nurses of the community; (iv) Developing a process to design community-based health services among LAO’s, local health care providers, students, educators and nurses of the community; (v) Capacity-building in community health care management among LAO’s’ administrators; (vi) Developing the cultural competency among students, educators, nurses of the community, and health care providers in the area, etc.

The process of “interactive learning through action” in area-based community health care management is best illustrated in diagrams 1 and 2.
Diagram 1. Roles and function of the four main sectors involved in the interactive learning through action process in area-based community health care management

**TAOs, local residents, community organizations**
1. Managing local resources and effective health services to strengthen community health care
2. Collaborating with others in designing, implementing and evaluating the use of nurses as strategy for community health care
3. Investing in educating nurse to work at TAO
4. Joining in recruiting locals to study nursing
5. Planning to hire nurse to work at LAO

**Local health services**
1. Developing health services through designing of community based health services
2. Collaborating to establish learning unit to advance nursing knowledge in providing quality health services and in working effectively with the community and the Tao
3. Participating in teaching and coaching students in designing community based health services

**Learning and knowledge building (participatory research process)**

**Management of community health services and welfare (TAO nurse hiring system)**

**Area-based community health care management and development cycle**

**Educating and developing nursing manpower (nursing education system)**

**Local nursing school**
1. Collaborating with others in designing, implementing and evaluating the community based health care system, the community based nursing education system and the use of nurses as strategy for community health care management
2. Developing methods of teaching and learning in nursing education
3. Using research and development, and research and evaluation as tools to build knowledge necessary for community health care management

**Health care and services system (health service design)**

**Students / nurses of the community**
1. Participating in the interactive learning through action process
2. Building knowledge and cultural competency for community health care management through integrating two mainstream of knowledge, the academic and the socio-cultural foundations

**Regional Health Forum - Volume 10, Number 1, 2006**
Diagram 2. An interactive “learning through action” process in area-based community health care management

**Interactive learning through action**
1. reflecting worldview of health of all involving people
2. enhancing active participation in learning process
3. collaborating all involving sectors to build work methods and practice guidelines

**Learning activities and access to learning**
1. studies of community health and illness and its management and care
2. situational studies on LAO’s context and its management structure for health care
3. situational studies on community fund’s context and its health care and welfare system

**Conceptual outcomes**
1. positive attitudes toward interactive learning through actions
2. concepts underlying work done to promote community health and solutions for community health problems among all involving people
3. being knowledgeable in own community health problems and capacity to manage such problems among local dwellers, LAO’s, students
4. development of process in designing community based health services among Taos, local health care providers, students, educators
5. capacity building in community health care management among LAO’s administrators
6. developing of cultural competency among students, educators, and health care providers in the area; and nurses of the community etc.

**Strategies used**
1. community data and information
2. case studies in the selected communities
3. situations of health and illness care and community welfare
4. experiences sharing with experts in community health management and development

**Methods**
1. identifying key actors in the involving parties of the area based community health care management system
2. working together to build relationship and shared positive attitudes through lessons learned
3. conducting forums and consensus conferences for reflecting and learning the lessons
4. learning from experiences sharing through case studies, study visits, and forums

**Concrete outcomes**
1. projects and activities carried out in the community
2. community data—identifying health status of people, influencing factors to health, and management of community health care and welfare
3. community people received health services provided through the system monitoring
4. actual community designed health care policy and plan
5. practical design of community based health services and projects
6. practical models of hiring nurses working at LAO’s
7. practical model of community-based teaching and learning system in nursing
8. interactive learning through actions units representing area based community health care management
9. tools for studies of community based health care and welfare and community based nursing education
10. learning networks, etc.

**Strategies for development of appropriate and area-based community health care management**

**Activities and plans**

**Conceptual and Methods**

**Community residents, LAO’s Leaders Students Educators Health Service providers Nurses of the community**
Community health and illness care management Community based nursing education
Roles development of LAO’s in managing health care and welfare for own people
Design of community health services and advancing and updating knowledge of nurses of the community

**Experiential Knowledge**
Professional Knowledge

**Interactive learning through actions**

**Diagram 2.** Regional Health Forum – Volume 10, Number 1, 2006
Outcomes and benefits from area-based community health care management

The outcomes and benefits of the “interactive learning through action” process in area-based community health care management are categorized into the two main groups of concrete and conceptual outcomes as listed above.

The community health development plan designed by the community consists of four areas of development, which are: (i) Health manpower (nursing) planning and development; (ii) Development of concepts underlying the community health and illness care management of LAO’s administrators, local health care providers, and community nurses; (iii) Knowledge-building and utilization in managing health care and welfare for community residents, and (iv) Building and strengthening community capacity in health care management through the learning process.

Cultural competence in health care development among nurses of the community and nursing students, academic staff, and local health services institutes is designed to equip all involved people having knowledge of both, professional and social, and cultural and contextual issues, to be sensitive to community health and illness care demands. Working together in the learning process among all involved is the strategy to encourage communication and sharing of knowledge and wisdom.

Capacity building in community health care and illness management among LAO’s and other community organizations is best learned through working together during community health care management activities, especially in developing the knowledge of community health care and illness management, the community-based health care projects, the LAO’s annual plan, and career path development of nurses of the community.

Factors contributing to the development of area-based community health care management

The lessons learned from the earlier implementation of this area-based community health care management system indicate the following factors:

(1) Learning from teamwork is very important as it develops an individual's ability and know-how;

(2) Essential elements of producing nurses from the community are:
- Thinking methods of executives, educational institutes, local government offices, hospital/health care units and local community organizations responding to the main underlying concepts of area-based community health care management;
- Participation, a perfect matching of all involved organizations, such as community residents, LAO’s, municipalities, health care staff, and professors;
- Resources and local "assets" (social capital) working together;
- Leadership in all involved organizations, and
- Research and development in area-based community health care management as a tool for working, follow-up, and evaluating for future development and symposiums.
interactive learning and sharing) as a tool for exchanging knowledge.

(3) Utilizing existing tools for stimulating the process of producing and using nurses of the community. This also relates to job positions, roles, responsibilities, workplaces, and continuing academic development. The tools are local government systems, strong community systems (especially for those that have credit unions), and the National Health Security System (especially in budget distribution and allocation as well as management for health promotion and illness prevention).

(4) To make the concept of “the nurse of the community, by the community, and for the community” practical, communities, local government offices, such as municipalities and LAOs, local hospital/health care units, and nursing schools must help in training local residents to become nurses and to serve their communities after graduation as follows:

- Flexible Management

The management should be flexible depending on the conditions of the joint-partner organizations in each area. The management should be involved in student enrolment, teaching and curriculum management, employment and continuing nursing education.

- The four groups involved are:
  - Community members;
  - Local administration organizations such as local government offices, and strong community organizations, etc.;
  - Nursing educational institutes, and
  - Hospital/health care units in local areas.

- All involved partnership organizations should try their best to accomplish each task by continuously co-working, which would gradually lead to thinking, learning and team-work.

- All involved operators will think, plan, run and evaluate the project together continuously and simultaneously on:
  - How to screen applicants from each community, such as urban communities, local communities, communities in LAOs: Level 1, 4 or 5;
  - How to plan teaching and learning curriculums suitable to students' social backgrounds;
  - How to enhance the application of students' social background, and to strengthen health care services, using community health problems and needs as the basis;
  - How to develop different types of community health care services to respond to health care problems and needs for different communities;
  - How to have joint investment partners in producing and hiring nurses, and
Strategies to build and nurture the system of area-based community health care management

The following are the four main strategies proposed for policy development and implementation:

(1) Creating an “interactive learning through action” process in area-based community health care management among the involved groups to produce and nurture the nurses of the community.

The learning process among the involved groups – such as strong community organizations, LAO’s, community residents, local nursing schools, hospital/health care units, and health care staff, such as nurses of the community and nursing students – covers these areas:

- Continuously creating research studies and learning lessons from field-work to understand the use of nurses of the community in managing community health care, and to make this knowledge available for future use;

- Using the units implementing area-based community health care management, as shown in diagrams 1 and 2, as a learning phenomenon;

- Creating various forms of knowledge-sharing, such as discussions, field trips, and seminars for public understanding and social movement, among all organization partners, to spread the information and build the desire to expand the areas covered, and

- The process would thereby create the community of practice in community health care management which will cover all areas of the country.

(2) Reforming the student enrolment programmes and screening process

Students supported by LAO’s can enrol in either of these two programmes: special programme, or the regular programme. The special programme could be tailored for required characteristics of students. The community organizations, LAO’s in particular, could develop their own system and processes, which include essential criteria in selecting local residents to be students. The examples of this system are:

- Having a joint committee consisting of representatives from LAO, hospital/health service unit, and community people, set the criteria and frame a selection process; (ii) Justifying steps in the selection process from LAO to hospital/health service unit, and to the nursing school, and (iii) Calling for applications from local residents and providing letters of support to the nursing school. However, the selection process is area-specific and community-
defined. Criteria will vary and could range from: (i) Applicant’s family backgrounds and their contribution to community development; (ii) Applicant’s personal background showing a caring personality and trusting relationship with others in the neighbourhood and the community; (iii) Applicant’s knowledge about local health care and illness management, and (iv) Applicant’s educational record. At the end of the selection process, the nursing school will make a decision based upon: (i) Critical review of the selection process made by the community organization which illustrates a strong foundation for funding support during school years, and a hiring and career advancement system after graduation; (ii) Education record; (iii) Interview results, and (iv) Personality.

(3) Reforming teaching methods in the community-based nursing education system through: (i) Continuing research and development programmes in nursing education and (ii) Conducting experience-exchange forums in curriculum development, teaching, and learning processes. This will highlight and increase the capacity of nurses of the community in pursuing their roles and functions in community health care and illness management.

(4) Training and hiring nurses through collaboration with government sectors in utilizing existing strategies and policies in this regard. A national workforce on the development of nurses to work in community health and illness care and welfare under the management of LAOs and other local authorities should be established. Such a national workforce should be responsible for: (i) Planning, operating, evaluating, drawing conclusions from field studies, and discussions; (ii) Managing and cooperating in job positions, roles, responsibilities, duties, work-places, academic work production and development, by applying available systems, such as the Universal Coverage Scheme in Health Care System, Local Government System and Credit Union System. A team working in partnership with organizations should be developed for policy development and financial system support in the initial period. The partnership organizations include: National Health Security - managing fund for the Universal Coverage Scheme in Health Care, the Health System Research Institute - research and assessment of health system design and implementation; the Office of National Health System Reform - health care policy development; Nursing Schools; Ministry of Public Health; and the National Health Foundation - specializing in social movement and development of a healthy public policy through academic work and a public consultation process.
Diagram 3. Strategies to build and nurture the system of area-based community health care management

Bibliography


14. Nuntaboot, K. et.al. (2005). Community-based initiatives to develop and strengthen a system of capacity building for members of the community organizations and health personnel in HP/NCD surveillance at district level. (In Print).


Introduction

Since the launch of the Community Development Programme in 1951, India has gradually developed a vast public health infrastructure, which currently includes 142,655 sub-centres, 23,109 primary health centres (PHCs) and 3,222 community health centres (CHCs), providing services to 742.49 million rural people (72.2% of the country’s population). Besides, over 5,479 sub-divisional and district hospitals and other specialized hospitals are also in the public sector. The population coverage norms are 3,000/5,000 per sub-centre, 20,000/30,000 per PHC and 80,000/120,000 per CHC respectively, depending on whether the centre is in a hilly, tribal, difficult area or in the plains. The private sector plays a big role in the delivery of health care, catering to 46% of hospital inpatients and 81% of outpatients. There also are large numbers of practitioners of AYUSH (ayurveda, yoga and naturopathy, unani, siddha and homoeopathy – acronym for the Indian systems of medicine and homoeopathy) in the country.

The types of human resources for health (HRH) managing the public health system in India have been largely influenced by prevailing health situation, recommendations of the Bhore Committee (1946) and various other committees of the government. A large training infrastructure is available at national and state levels in both public and private sectors. There are 229 medical colleges (annual intake of 25,600), several nursing colleges (747 general nursing and midwifery schools, 235 auxiliary nurse midwives (ANMs) training schools, 254 nursing colleges conducting graduation courses and 40 colleges conducting postgraduate (PG) courses) and 56 multipurpose worker (MPW) training centres functioning in the country. At present, there are 358 approved institutions imparting diploma in pharmacy to 21,200 students per annum and 212 approved institutions imparting degree in pharmacy to 11,670 students per annum. The AYUSH system has about 437 colleges with annual admission capacity of nearly 87,130. About 622,576 doctors were registered with the Medical Council of India as of 31 March 2004. The state institutes of health and family welfare, district training centres and 47 health and family welfare training centres provide induction/in-service training to various categories of health personnel.

Despite the well-developed administrative system, good technical skills in many fields and an extensive network of public health institutions for training, research, diagnostics and other services, the health outcome is still behind the set goals. There has been increasing recognition of the powerful influence that health care providers have on health care provision and use of health care resources. The existence and quality of services to promote health, prevent illness or
to cure and rehabilitate depend on the knowledge, skills and motivation of human resources for health. The only route to attaining any health goal: Millennium Development Goal (MDG); National Health Policy (NHP) 2002, and 10th Plan goals) is through the worker and there is no shortcut. The health system requires getting the right number of service providers with the right skills to the right place at the right time.

Despite the vast institutional network and diverse human resource, that includes physicians, AYUSH practitioners, dentists, nurses, midwives, pharmacists, technicians, and community health workers, the public health system in India suffers from shortages, imbalances, maldistribution, poor work environments, low productivity of personnel, vacant posts, high staff turnover, loss of personnel to private sector, and migration of health personnel to urban areas or overseas. Information on health workforce is sparse, available data are fragmentary and the research is limited.

Policy Directions

The NHP-2002 suggested that, in view of the general shortage of medical personnel in the country and its disproportionate impact on the less-developed and rural areas, the possibility needs to be examined of entrusting some limited public health functions to nurses, paramedics and other personnel from the extended health sector after imparting adequate training to them. The policy addresses the possibility of using practitioners of the Indian systems of medicine and homoeopathy in the implementation of public health programmes, to increase the reach of basic health care in the country. The policy also suggests possible means for ensuring adequate availability of personnel with specialization in the ‘public health’ and ‘family medicine’ disciplines, to discharge the public health responsibilities in the country.

The policy envisages that, apart from the exclusive staff in a vertical structure for disease control programmes, all rural health staff should be available for the entire gamut of public health activities at the decentralized level, irrespective of whether these activities relate to national programmes or other public health initiatives.

National Rural Health Mission

The National Rural Health Mission (NRHM), launched by the Honourable Prime Minister of India on 12 April 2005, is an ambitious strategy of the government. It aims to restructure the delivery mechanism for health towards providing universal access to equitable, affordable and quality health care that is accountable and responsive to the people’s needs, reducing child and maternal deaths as well as stabilizing population, and ensuring gender and demographic balance. The Mission is an articulation of the government’s commitment to raise public spending on health from 0.9% of India’s gross domestic product (GDP) to 2–3% of GDP and aims to undertake architectural correction of the health system. The Mission will enable the system to effectively handle increased allocation and promote policies that strengthen public health management and service delivery in the country. Wide-ranging stakeholder consultations were held over a six-month period with state governments, the Planning Commission, the National Advisory Council, other government ministries/departments, health professionals and nongovernmental organizations (NGOs) to draw up the Mission strategy.

Towards achieving the National Health Policy goals and the health-related MDGs, the Mission seeks convergences among the sectors of health, family welfare, AYUSH, nutrition and sanitation. This will be translated at the village level through the
Village Health and Sanitation Committee of the Gram Panchayat, and, at the district level, by the District Health Mission. The strategy encompasses the principles of ‘Health for All’, such as equitable distribution, community participation, inter-sectoral coordination, and appropriate technology, etc. Decentralised planning (district plan); community ownership of health service system, and inter-sectoral collaboration are the pillars on which the superstructure of the Mission has been built. Formulation of transparent policies for deployment and career development of human resources for health, strengthening capacity for data collection, assessment and review for evidence-based planning, monitoring and supervision and technical support to national, state and district health missions for public health management are part of the core strategy of the mission. These strategies have several HRH dimensions and need to be examined as per the model given below:

**Coverage and Accessibility Strategies for meeting HRH Needs**

**Numeric adequacy**

Village level: Accredited Social Health Activist (ASHA)\(^7,8\)

The Mission aims to increase the availability and accessibility to health care by providing over 400,000 Female Accredited Social Health Activists (ASHAs), one per 1000 population (flexible for tribal, hilly and desert areas) in 18 high focus states (which include eight Empowered Action Group (EAG) states, eight north-eastern states/Union territories, and the states of Jammu and Kashmir and Himachal Pradesh) with poor health indicators/weak public health infrastructure.
ASHA - A Ray of Hope

The Accredited Social Health Activist is called by the acronym ASHA, which in Hindi means ‘hope’. She must be a primary resident of the village with formal education up to the eighth class, and preferably in the age group of 25–45 years. She would be selected by the Gram Sabha through an intense community mobilization process, and provided with training. She would also be equipped with a drugs kit. After selection, ASHA will be given induction training for 23 days spread over a period of 12 months. Training manuals have been prepared. ASHA will be given periodic training, re-training and on-the-job training. She would act as a mobilizer, facilitator and a link between ANM at sub-centre, anganwadi worker (under the Integrated Child Development Services programme) and the community, and play a major role in forging ownership of the community for the health programme. ASHA will be the first port of call for any health-related demands of deprived sections of the population, especially women and children, who find it difficult to access health services. She will ensure better access to universal immunization, safe delivery, newborn care, and prevention of water-borne and other communicable diseases, nutrition and sanitation. She will be accountable to the Panchayat, and will be entitled to receive performance-based compensation for providing health services.

Sub-health centre

The sub-centre is the first contact point between the community and public health system and manned by an ANM and a male health worker. About 7% lack an ANM (shortfall of 11 190) and 50% do not have a male health worker. The NRHM envisages the provision of an additional ANM at each sub-centre. This will require about 142 655 additional ANMs to man the existing sub-centres. About 21 983 new sub-centres need to be established as per the 2001 population norms, thereby increasing the number of an additional 43 966 ANMs, to man the new sub-centres. Thus, taking altogether, the country will need about a total of 200 000 ANMs. This entails recruitment, selection, training and placement and monitoring activities. States fund the salaries of the male health workers. The existing training capacity may be able to handle the additional manpower within the Mission period but they also need to be strengthened. There may be a need to open new training schools in the underserved areas giving priorities to the local girls for undergoing ANM training.

There is a provision of Rs10 000 (approximately US$ 220) (per year) as untied fund for the sub-centre, to be managed jointly by the ANM and Panchayat Raj Institutions (PRI) for improvement of services. Availability of and flexibility in utilizing the fund for improving the services as per local need will empower the ANM and the PRI. Nearly half of the sub-centres are in rented buildings. The evaluation of sub-centres conducted by the National Council of Applied Economic Research (NCAER), Delhi revealed that sub-centres operating in rented buildings do not have a conducive working environment due to lack of space, and furniture and equipment facilities.

Primary health centres

All the existing 23 109 Primary Health Centres are being scaled up to provide 24x7 service deliveries in a phased manner with the primary aim of improving institutional delivery. At the PHC, against the availability of one staff nurse, it is proposed to provide three staff nurses to ensure round-the-clock services. Outpatient services would be strengthened through postings/appointments of AYUSH doctors, over and above the medical officers posted at the PHCs. Nearly 700 PHCs are currently without doctors. To
enable PHCs to provide 24x7 hours service delivery, an additional 24,000 MBBS/AYUSH doctors are needed besides 46,000 staff nurses. Guidelines for 24X7 PHCs have been prepared.

The states have to establish 4436 more PHCs to meet the shortfall in the required number of PHCs as per the 2001 population norms. The states are undertaking facility surveys to come up with the needed numbers of health centres, and to fill gaps in manpower, equipment, drugs and other facilities required to provide quality services.

Community health centres

The NRHM aims at ensuring a functional 30-bedded rural hospital at the Community Health Centre (usually located at the Block headquarters) level and seeks to scale the CHCs up to the Indian Public Health Standards (IPHS) to provide round-the-clock hospital services with specialist facilities. The manpower requirements for every CHC will be met through provision of seven specialists (against four at present) and nine staff nurses (against seven at present). A separate AYUSH set-up will also be provided in every CHC. An additional 3332 CHCs will be required to meet the 2001 population norms.

Upgradation of CHCs to IPHS will have to be done in phases. To begin with, all CHCs are to be made First Referral Units (FRUs) providing emergency obstetrics and newborn care having all critical elements of FRU as per the guidelines. Thereafter, the better-functioning CHCs are to be upgraded to meet IPHS. Funds have been provided to two identified CHCs per district to be upgraded to meet IPHS.

Ensuring the availability of doctors in rural areas — a real challenge

Despite 229 medical colleges with an annual admission capacity of 25,600, nearly 700 PHCs are without a doctor. The existing CHCs have a high shortfall of specialist manpower, such as obstetricians and gynaecologists (56%), paediatricians (67%), surgeons (56%) and medical specialists (59%), with no provision of anaesthetists. The availability of services of anaesthetists, obstetricians and gynaecologists and paediatricians and supporting staff with a blood storage facility is critical to providing emergency obstetrics and newborn care.

Some alternatives being explored are

1. increasing the age of retirement for doctors to 65 years, preferably with postings near their hometowns;
2. decentralizing recruitment to the district level and holding walk-in-interviews;
3. employing doctors on contractual basis at attractive salaries;
4. enhancing the salaries of service doctors suitably to enable their postings in rural areas;
5. posting junior/senior residents at PHCs and CHCs for a fixed period;
6. providing reservation/additional points in selection for admission to PG courses;
7. financial and career prospect incentives;
8. provision of enabling working environment including provision of residential facilities or adequate house rent allowance for doctors and essential staff in PHCs and CHCs;
9. posting spouses at the same place, and
10. making reservations in educational institutions for children of doctors posted in rural areas, and facilitating continuing medical education (CME) for doctors at PHCs.

Besides these approaches, posting of specialists in CHCs can be facilitated by

1. internal mobilization of existing specialists;
2. block pooling/transfer of doctors/specialists from the PHC level with facilities of transport, mobile phones and residential facilities at the CHCs so that the OPDs are run in the PHCs and the 24-hours emergency services are ensured at CHCs. Piloting of such concept may be undertaken in some of the blocks;
3. posting junior/senior residents at CHCs (medical colleges will play an important role); and
4. provision of short-term
speciality training in anaesthesia and emergency obstetrics care to the existing MBBS doctors in CHCs, and (5) entering into public-private partnerships and hiring specialists from private sector. Other measures contemplated are revival of diploma courses in anaesthesia and obstetrics and gynaecology, starting one-year certificate course in anaesthesia and recognition to 500-bedded hospitals with training facility for conducting the above short-term speciality training courses. States have taken some initiatives in this regard. Patient welfare committees (Rogi Kalyan Samitis)/Hospital Management Committees will be taking up some of the initiatives. The impact needs to be evaluated, and the experience learnt needs to be shared among the states and other stakeholders.

Capacity building

Training of ANMs will be undertaken to improve their skills as skilled birth attendants (SBAs)\textsuperscript{14} for which guidelines have been prepared. Permission has been granted to ANMs to use certain drugs essential for maternal care. The ANMs also need to be oriented in the management of funds and their utilization, and in organizational skills. The NRHM envisages the involvement of PRIs, village health and sanitation committees, a village health plan and convergence at the village level of services, such as nutrition, water supply, and sanitation and health. All these require training and monitoring and supportive assistance of large number of ASHAs, orientation of PRI members, the Anganwadi workers and the ANMs.

Given the current problems in the availability of medical and paramedical staff in rural areas, the NRHM will implement a range of innovations and experiments to improve the position. These include involvement of medical colleges; improved career progression for medical/paramedical staff; skill upgradation and multi-skilling of existing medical officers, ANMs, lady health visitors (LHVs) and other paramedical staff; strengthening of nursing colleges/ANM training schools to produce more skilled paramedical staff; and partnership with NGOs and professional bodies, such as the Federation of Obstetrical and Gynaecological Societies of India, the Indian Medical Association, and the Indian Association of Paediatrics, and other stakeholders to widen the pool of institutions. Steps have been initiated for upgrading the skills of ANMs to enable them to function as skilled birth attendants and providing short-term training to medical officers in anaesthesia and emergency obstetrics care. Convergence of various schemes under the NRHM including various disease control programmes, such as Reproductive and Child Health – II, National AIDS Control Programme, and Integrated Diseases Surveillance Project, etc. would also provide for optimum/efficient utilization of all paramedical staff and help to bring down the operational costs.

The implementation teams, particularly at district and state levels, would require programme and financial management skills. The State Programme Management Unit and the District Management Unit personnel need orientation on NRHM. Even at the central level, the Programme Management Unit within the Ministry of Health and Family Welfare is being strengthened with technical and management support from established professionals. The National Health Systems Resource Centre (NHSRC)\textsuperscript{7} has been set up as an agency to pool the technical assistance from development partners. Mandated as a single window for consultancy support, the NHSRC will respond promptly to requests from centre/states/districts by providing technical assistance for capacity building not only for NRHM but also for improving service delivery in the health sector in general. One regional centre for the north-eastern region and state-level resource centres are being provided for EAG states on a priority to
enable innovations and new technical skills to develop in the health system. In the EAG states, 700 professionals including chartered accountants, Masters degree holders in Business Administration, and information technology (IT) experts have been inducted. A strong management information system network linking all districts of the country has been set up under the Integrated Disease Surveillance Project. The district headquarters will also be linked peripherally up to the PHC level under NRHM to make the decentralized planning process a success with IT-enabled monitoring of the mission’s progress. An electronic financing system is being established for smooth and quick transfer of funds to the districts.

A fresh look is being taken at the strengthening of training institutions at all levels by reviewing the available infrastructure and identifying the required investment to enable them to carry out training/sensitisation programmes in an effective, timely and efficient manner. A comprehensive training policy and plan is being developed to provide support for capacity building at all levels including PRIs/community.

The NRHM will particularly encourage involvement of medical colleges and hospitals to strengthen systems of capacity building in the rural health care set-up. The medical/paramedical education system would require new orientation to achieve the training/capacity building objectives. While the existing colleges will require strengthening for increased seat capacity, a conscious policy decision will be required to promote new colleges in deficient states. There is need for a fresh look at the established norms for setting up of medical colleges, and nursing and paramedical training schools/collages at district level. Three new Task Groups have been set up on Medical Education, Urban Health and Financial Management.

In medical college curriculum, the primary health care as well as preventive aspects of health are largely ignored. Ways and means have to be explored to rectify this. Skilled attendance at birth and obstetrics care training should be given importance in internship. New courses have to be organized for multi-skilling medical officers, especially in anaesthesia and maternal and child health (MCH) care. The mission would support strengthening of nursing colleges, where required, by identifying partners for capacity building in government and NGO sectors. Efforts to improve the skills of registered medical practitioners will also be attempted.

Ensuring quality and accountability of service delivery

Setting standards

Currently the standards set for 30 (or more)-bedded hospitals by the Bureau of Indian Standards (BIS) are very high, besides being very much resource intensive. Under NRHM, codification of new IPHS specifying assured services; and setting minimum norms for infrastructure, personnel, equipment, drugs and management, etc. for sub-centre, PHC, CHC (30-bedded hospitals) and other hospitals is being prepared. The Indian Public Health Standards for CHC have been prepared and shared with the states. At the same time, setting IPHS for PHC and sub-centres is under process. Standard Operating Procedures (SOPs), standard treatment guidelines and other operational guidelines have been prepared by the respective programme divisions. To start with, states have identified two CHCs in each district for upgradation to IPHS to be funded under NRHM.

Private sector hospitals will be regulated in a transparent manner and be made accountable. The process of accreditation of hospitals is being worked out.

Constitution of committees at health centres/ hospitals

A Patient Welfare Committee (Rogi Kalyan Samiti – RKS) / Hospital Management
Committee (HMC) is being constituted at each institutional level starting from PHC level onwards having Panchayati Raj Institutions (PRI) representation with authority and flexibility to generate their own resources and use them for improving the services of the centre/hospital at the local level.

Citizen’s Charter

The Citizen’s Charter informing people about the availability of services at the centre/hospital; user fees charged, and a system for complaints redressal, has been made an essential component of IPHS.

Conclusions

The task of ensuring the availability of MBBS doctors and specialists and to build capacity for rural health care in India is huge, but doable. The challenges include shortages, imbalances and low productivity, compounded by insufficient investment, inadequate pre-service training, migration, work overload, freeze in salaries and work environment issues (infrastructure, technical safety and community support). The overall shortages are aggravated by skewed distribution within the country, and even within the states, and movement of health personnel from rural to urban areas, from public sector to private sector, or to jobs outside the health sector or overseas. The gaps within the existing infrastructure and the services both within and outside the public sector need to be addressed. However, just having the requisite numbers of health personnel is not enough.

The solutions for meeting the HRH challenge include (i) creation of a sustainable health system by improving the training curriculum and enhancing the training facilities for health workers; (ii) coverage strategy should not only address the numeric adequacy but also the appropriate skills-mix and outreach to vulnerable populations; (iii) motivational issues such as a positive work environment, adequate remuneration/compensation, career development and a supportive health system, adequate compensation and working conditions to ensure retention of skilled workers in the health system; (iv) advancing competencies through education to develop appropriate attitudes and skills, and creating conditions for continuous learning; (v) linking HRH to the NRHM in addressing health workforce issues, and (vi) recognizing that solutions for HRH issues go beyond the health sector and are linked to broader fiscal and financing policies and processes.

References


12. Guidelines for Setting up Blood Storage Centres at First Referral Units (2003), Maternal Health Division, Department of Family Welfare, Government of India.


14. Guidelines for Antenatal Care and Skilled Attendance at Birth by ANMs and LHVs (2005), Maternal Health Division, Department of Family Welfare, Ministry of Health & Family Welfare, Government of India.


List of Abbreviations

ANM: Auxiliary Nurse Midwife
ASHA: Accredited Social Health Activist
AYUSH: Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
BIS: Bureau of Indian Standards
CHC: Community Health Centre
EAG: Empowered Action Group
HMC: Hospital Management Committee
HRH: Human Resource for Health
IDSP: Integrated Disease Surveillance Project
IPHS: Indian Public Health Standards
LHV: Lady Health Visitor
MCH: Maternal and Child Health
MIS: Management Information System
MPW: Multi-purpose Worker

NACO: The National AIDS Control Organization
NCAER: The National Council of Applied Economic Research
NGO: Nongovernmental Organization
NHSRC: The National Health System Resource Centre
NRHM: National Rural Health Mission
PHC: Primary Health Centre
PRI: Panchayati Raj Institution
RCH: Reproductive and Child Health
RKS: Rogi Kalyan Samiti (Patient Welfare Committee)
SBA: Skilled Birth Attendant
SC: Sub-centre
SO P: Standard Operating Procedures
STG: Standard Treatment Guidelines
Health Volunteers: Third Workforce for Health-for-All Movement

U Than Sein*

The people have the right and duty to participate individually and collectively in the planning and implementation of their health care facilities.

Primary health care requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care, making the fullest use of local, national and other available resources; and to this end, develops through appropriate education the ability of communities to participate.

(Declaration of Alma Ata 1978)\(^1\)

Introduction

International debates and experiences, during the 1960s and the 1970s, on how to scale up and enhance the health systems to reach the people who need essential health care within a set-time period culminated in a historic resolution - WHA30.43, at the Thirtieth World Health Assembly in May 1977. In terms of that resolution, the Health Assembly adopted the target of the attainment by all the citizens of the world by the year 2000 of a level of health that would permit them to lead a socially and economically productive life. This important universal milestone target was later referred as “Health for All by the year 2000” or “HFA2000 in short.”

The World Health Organization (WHO) clarified at the very outset that “Health for All” did not mean to make everyone in the world healthy or to get treatment for all ailments. It also did not mean that nobody would be sick or disabled by or after the year 2000. “HFA2000” literally meant that people after some decades of health development would use better approaches than they had used before for managing, preventing and controlling diseases, and for promoting health and alleviating unavoidable illness and preventable disability. People themselves would identify better ways of growing up, growing old and dying gracefully. HFA was originally intended to advocate appropriate political action within the set timeframe for ensuring essential health care to everyone in need, and for redistributing health resources effectively and equitably, in order to reach the un-reached.\(^2\)

The HFA Movement

The “HFA movement” started in the late 1980s with the initial aim of achieving universal health coverage within a shorter time-span, helped many countries to adopt

---

* Director, Department of Noncommunicable Diseases and Mental Health, WHO, Regional Office for South-East Asia
\(^1\) WHO/UNICEF, Alma Ata 1978: Primary Health Care, WHO Geneva 1978 (WHO HFA Series No.1)
\(^2\) WHO, Health for all by the year 2000, WHO Geneva 1979 (WHO HFA Series No.2)
new ways of reaching a higher health status, and placed a greater emphasis on adherence to setting and achieving various health goals. Since then, WHO and its Member States have been formulating national strategies, policies and programmes for Health for All, utilizing the global HFA framework and strategies. WHO and its development partners are also working closely to generate and mobilize appropriate health resources. Many governments have developed their health systems, by increasing deployment of health workers, including voluntary health workers (VHWs), and expanding health interventions, in order to protect and promote health of all the people, using the primary health care (PHC) approach.

The four basic underlying principles embedded in the PHC approach for health development, as enshrined in the Alma Ata Declaration³ are: (i) universal access to health care in addressing health needs (equity); (ii) community involvement and self-reliance (solidarity); (iii) use of appropriate technology and cost-effective interventions (technology), and (iv) a multi-sectoral action for health. Primary health care was also advocated as "the essential health care that could be accessible by all individuals and families in an acceptable and affordable way, and with their full involvement."

With full support of United Nations agencies, bilateral and multilateral donors, and national and international civil societies, many developing countries reviewed and revised their national and sub-national health policies and strategies, in line with the HFA and PHC principles. They also developed national and local plans of action, in order to launch and sustain health development.

The HFA movement was further intensified during the 1990s by adopting different approaches for implementing relevant sets of public health interventions. In general, the trends of expanding curative care continued to be stronger than ever. More hospitals (including super speciality and sub-speciality hospitals) were established and in some countries, more beds were made available. However, these expansions were made at the expense of investing in the prevention and control of diseases or in health promotion. It was therefore a capital-intensive approach.

Some countries emphasized PHC as the major public health approach in their national health development plans, while others concentrated on specific health care interventions for specific disease prevention and control, including disease elimination and eradication. At the same time, there were some countries which tried to encompass as many preventive and promotive health measures as possible into their public health development plans.

During the years of HFA movement, the efforts at integrating selective or vertical health care services into basic health services had varying degrees of success.³ Constraints exist even today. For example, despite widespread acceptance by national health authorities of the idea of "integration", there are many practical and operational issues which need to be resolved before undertaking transformation from the semi-autonomous, "vertical" or "selective" health development programmes, into an integrated health infrastructure co-existing with general health services.

In many countries, the disease control programmes sought apparently selective vertical programmes, rather than systematic and integrated programmes. This approach was usually driven by resource constraints

---

³ WHO/UNICEF, Alma Ata 1978: Primary Health Care, WHO Geneva 1978 (WHO HFA Series No.1) op cit

¹ Tarimo, E & Webster, EG, Primary health care concepts and challenges in a changing world: Alma-Ata revisited, Current Concerns SHS Paper #7, WHO Geneva 1994 (WHO/SHS/CC/94.2)
and conditional commitment to external donors. As a result, general health systems became rather inadequate.⁵ ⁶

Despite these constraints, around 80% of the people were able to access the major elements of PHC. However, the progress in public health interventions like provision of essential health care to mothers and children, provision of safe water and adequate sanitation, or immunization to under-five children remained too slow, particularly in the least-developed countries. Many national health development programmes were promoted to increase community awareness and to create active and effective mechanisms for community involvement. It was clear that the conventional approach of merely extending basic health services through the deployment of basic health staff alone was not adequate. It was proving economically impossible for many developing countries to bear the costs of extension and expansion of basic health services to the entire population.

Deployment of Health Volunteers

Health Volunteers are people who are always willing to provide their services to others voluntarily as part of their socio-cultural behaviours. This form of volunteerism⁷ has been expanding rapidly in recent decades, as seen by the proliferation of millions of individuals and groups of volunteers and philanthropists, and innumerable local, national and international nongovernmental organizations (NGOs) working in the area of health development in many countries. Many individuals come forward to serve as volunteers without expecting any remuneration, incentive or reward. Of course, such volunteers may not always be able to work forever.

Volunteerism is entrenched in the social and cultural roots of people everywhere, as an inherent tradition of mutual or self-help and trust, not expecting substantial benefit or not necessarily getting any monetary gains. It is more of a social, mental and spiritual satisfaction and self-esteem. The elders preach their younger generations urging them to provide necessary help and assistance to others, especially those with physical, social and/or financial burden. This practice forms a part of the community’s social cohesiveness. Some people argue that volunteerism is influenced by religions and entrenched cultures, and thus, it is hard to replicate and expand.

In almost all parts of the world, many people volunteer their services without expecting any reward, especially to take care of the young, the old and the sick and their families. Many women and men in the rural and peri-urban areas help the expecting and nursing mothers, by assisting them in their household chores or by providing additional child-care. Community volunteers urge the children and mothers to join in health check-ups, immunization sessions. They also gather people for mass exercises or educational sessions. The Alma-Ata Report also advocated the use of such Community Health Volunteers (CHVs)⁸ as a realistic solution for attaining total population coverage with essential health care. Governments in many developing countries have promoted and optimally used such volunteering work as part of national development programmes.

⁵ WHO, Alma-Ata Reaffirmed at Riga, A midpoint perspective from Alma-Ata to the year 2000, Report of a meeting held at Riga, USSR, 22-25 March 1988 (WHO/SHS/88.2)
⁶ WHO, Primary health care towards the year 2000, Report of the consultative committee on PHC development, Geneva, 9-12 April 1990 (WHO/SHS/90.1)
⁷ Volunteerism or voluntary action is any action of free will by an individual, a group or an organization, which is not prompted by any external pressure or self-interest, and has usually a purpose, a cause or a vision.

⁸ Community Health Volunteers are individuals (majority being female) who willingly provide their services on their free will, who are members of the community where they live or work, who are being selected and rewarded by the community and answerable to them, and who are not to be considered as part of public health organizations, but closely linked to them. They have been assigned with the different names and tasks. Some countries call them “Community Health Workers” as defined in many WHO documents, while other countries simply term them as “Health Volunteers.”
Experiences during the 1990s indicated that many countries around the world could achieve higher level of health by deploying thousands of community health volunteers, as part of the national health workforce. CHVs or Volunteer Health Workers (VHWs) are those villagers who have been trained and assigned with the responsibility of establishing information links between health workers and communities, for enhancing people’s awareness to maintain, promote and protect their own health. In many communities, such human resources are easily available within the local political and organizational frameworks. Volunteers are selected from the local communities where they live and serve. Usually, they are the catalysts for timely health action at the community level, and could also bring in the important promotive, preventive, curative and rehabilitative health interventions nearer to people’s homes.9

The utilization of a large number of CHVs, following minimal training programmes, has been effective and successful in many countries. These volunteers have been called by different names, and different sets of training and tasks have been assigned to them. Table 1 below illustrates the details of various types of community health volunteers in countries of the South-East Asia (SEA) Region as of December 2005.

### Table 1. Community Health Volunteers (CHVs) in countries of the SEA Region, December 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Category of CHV</th>
<th>Abbr.</th>
<th>Year initiated</th>
<th>Number trained</th>
<th>Per household</th>
<th>Duration</th>
<th>% of females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Village Health Volunteer</td>
<td>VHV</td>
<td>1988</td>
<td>136 500</td>
<td>30 HH</td>
<td>4 days</td>
<td>85%</td>
</tr>
<tr>
<td>Bhutan</td>
<td>Village Health Volunteer</td>
<td>VHV</td>
<td>1979</td>
<td>1400</td>
<td>20–30 HH</td>
<td>12 days</td>
<td>10%</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>Sanitation Monitor</td>
<td>SM</td>
<td>1955</td>
<td>–</td>
<td>20–30 HH</td>
<td>5 days</td>
<td>100%</td>
</tr>
<tr>
<td>India</td>
<td>Village Health Guide</td>
<td>VHG</td>
<td>1977</td>
<td>416 724</td>
<td>100–200 HH</td>
<td>3 months</td>
<td>25%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Community Health Cadre</td>
<td>CHC</td>
<td>1978</td>
<td>1.8 million</td>
<td>10–20 HH</td>
<td>3 days</td>
<td>100%</td>
</tr>
<tr>
<td>Maldives</td>
<td>Village Volunteer</td>
<td>VV</td>
<td>2005</td>
<td>1000</td>
<td>50 HH</td>
<td>5 days</td>
<td>Majority</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Community Health Worker</td>
<td>CHW</td>
<td>1976</td>
<td>42 700</td>
<td>200 HH</td>
<td>4 weeks</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Auxiliary Midwife</td>
<td>AMW</td>
<td>1976</td>
<td>30 100</td>
<td>500 HH</td>
<td>6 months</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Ten-Household Health Worker</td>
<td>THHW</td>
<td>1985</td>
<td>42 000</td>
<td>10 HH</td>
<td>7 days</td>
<td>90%</td>
</tr>
<tr>
<td>Nepal</td>
<td>Female Village Health Volunteer</td>
<td>FVHV</td>
<td>1988</td>
<td>48 300</td>
<td>50–100 HH</td>
<td>12 days</td>
<td>100%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Volunteer Health Worker</td>
<td>VHW</td>
<td>1975</td>
<td>46 000</td>
<td>20–50 HH</td>
<td>3–7 days</td>
<td>68%</td>
</tr>
<tr>
<td>Thailand</td>
<td>Village Health Volunteer</td>
<td>VHV</td>
<td>1979</td>
<td>773 000</td>
<td>10–15 HH</td>
<td>15 days</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>Family Health Leaders</td>
<td>VHL</td>
<td>1996</td>
<td>1200 000</td>
<td>1 HH</td>
<td>1 day</td>
<td>–</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>Community Health Cadre</td>
<td>CHC</td>
<td>1978</td>
<td>10 000??</td>
<td>10–20 HH</td>
<td>3 days</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Updated from latest Country Data based on information in WHO Documents - SEA/HSD/198 and Public Health in Action 4

---


health development by using them effectively and appropriately. With their full involvement in undertaking various health actions at the community level, many public health programmes have been successfully implemented. There are numerous success stories in this regard, especially in disease elimination and eradication campaigns, provision of essential care for mothers and children including nutrition promotion, health promotion and community health education, treatment of minor ailments and provision of water and sanitation, and lately in the prompt and rapid response to emergencies. During the recent tsunami and Asian earthquakes, many volunteers provided health care and other support services voluntarily. Large number of community health volunteers in Thailand provided a quick and effective health response, including psychosocial support, relief and rehabilitation, in the aftermath of the Tsunami. Similarly, a large number of community health volunteers were recruited, trained and deployed in Sri Lanka, Indonesia (Aceh) and Maldives, to provide psychosocial relief and rehabilitation support to the displaced and affected people.\textsuperscript{12,13}

Such public health initiatives received great national and international attention, with many outstanding ones appropriately receiving coveted prizes and recognitions. WHO and its partners have also been promoting such initiatives instituting various international prizes, plaques and recognitions, such as the Sasakawa Health Prize, the Health-for-All Medals, Tobacco Medals, the Joint Nutrition Support Programme (JNSP) prize, and many others. Senior public health experts, high government health officials, individual citizens, group(s) of expertise, local and national institutions and international associations have been among the recipients of such recognition. It is therefore no longer a question of whether health volunteers can be the key agents in improving health, but rather how their potential can further be enhanced and tapped.\textsuperscript{14,15}

The Alma-Ata Report had highlighted the importance of the major contribution made by health volunteers, since they were crucial in carrying out health action at the community level with minimal training and supervision inputs. It was also argued that the people themselves were important resources in any country and these potential resources should be properly exploited in health development.\textsuperscript{16}

Individuals and families always play a greater role by taking self-responsibility for their own health development. Active participation and interest in solving their own health problems are not just clear awareness of self-reliance, but an important factor for success in the overall health development of a community, a village, a district and a country, and ultimately of the whole world.

The establishment of a link by deploying a health volunteer at the front-end of the health system as the first contact, is a key PHC strategy. Such CHVs may vary in type and quality in each country, since their requirement depends on the health care needs and the resources available for satisfying them. In most cases, these volunteers are selected from among the community members, and trained in a short period to perform the specific task of serving their own communities. Since these

\begin{itemize}
\item \textsuperscript{12}WHO, Moving Beyond the Tsunami: the WHO Story, WHO SEARO, 2005
\item \textsuperscript{13}WHO, Mental Health and Psychosocial Relief Efforts after the Tsunami in South-EastAsia, WHO SEARO, 2005 (SEA-MENT-142)
\item \textsuperscript{14}WHO, Primary health care and health sector reform: 15 years after Alma Ata, Report of a meeting held at Almaty, Kazakhstan, 13-14 December 1993 (WHO/ARA/97.4)
\item \textsuperscript{15}WHO, Primary health care 21: everybody’s business, Report of an international meeting to celebrate 20 years after Alma Ata, Almaty, Kazakhstan, 27-28 November 1998 (WHO/HEP/O SD/00.7)
\item \textsuperscript{16}WHO/UNICEF, Alma Ata 1978: Primary Health Care (WHO HFA Series No.1) 1978, p61-62
\end{itemize}
volunteers are from the locality in which they live and earn their livelihood and are chosen by the local people themselves, they are always attuned to the way of life of the people they serve. Their dual roles, one as health care providers and another as community development agents, are complementary.

The relative importance of these two functions varies according to the socioeconomic situation and availability of public services. The service function is more important in countries where universal access to care is inadequate like in most least-developed countries. The developmental and promotional function is more crucial in countries where universal health care coverage is already in place and full-scale community development programmes are required.

Challenges

The rapid expansion and use of CHVs as the third workforce of human resources for health in enhancing the coverage and access to health care in the last two decades were seen as the phase of optimism that was driven by the HFA movement and the adoption of strategic framework of PHC as part and parcel of national health development.

In recent years, such development got stalled or stopped in many developing countries, especially the least-developed ones. Various forms of health sector reforms and a large-scale investment of selective health care programmes in these countries have either neglected or hindered further development of health volunteers. In other cases, some countries have now adopted new strategies or are improving their old strategies by expanding the large-scale deployment of CHVs.

While the development of CHVs is part of national health systems, it is not meant to be an alternative or a replacement of formal public health systems. There are certain issues and constraints that emerge as challenges for further development of health volunteers as the third workforce for health development.

High Expectation

The experience from many countries indicates that most health problems could easily be solved through appropriate health actions at community level with extensive use of health volunteers. Many policy-and decision-makers in health and social development have strong and high expectations that training and deployment of health volunteers could solve priority health problems since they could be “change agents” for reducing many health risks. To some extent, this assumption and expectation is true.

With a short period of training for two to four weeks, health volunteers are able to carry out a broad range of functions, such as service providers; health communicators; local organizers; health educators; and agents of change. All of these functions are essential to improving the health of communities. Moreover, these functions can easily be transferred from health care professionals to volunteers, as they usually comprise basic skills and knowledge on health and health-risk behaviours, and can be learnt by any member of the community.

17 Kahsay et al, Community health workers: the way forward, WHO Geneva 1998 (Public Health in Action 4)

18 Large numbers of CHVs, being deployed extensively for national health development in many countries of the Region, have really helped in accelerating health coverage. India adopted a nationwide scheme for health volunteers in 1977 and introduced it in a few years in many states. It re-launched its nationwide health volunteers’ scheme again under a new initiative called “National Rural Health Mission, 2005-2012”. (See details about the National Rural Health Mission at http://mohfw.nic.in/national_rural_health_mission.htm)
provided he/she has the basic level of general education, and some knowledge of health prevention and promotion. Hence, it is realistic to assign a member of the community, with a wide range of functions which are basic, essential and appropriate at the community level.

At the same time, however it is considered unreasonable and unrealistic to expect health volunteers to first learn and then to teach others about the standard health practices and procedures that are supposed to be provided by fully-trained health professionals and auxiliary personnel, who have to undergo longer duration of training from accredited institutions. One vivid example is the training and deployment of “traditional birth attendants or TBAs” in the Maternal and Child Health programmes in many developing countries during the last two-three decades. Many empirical studies around the world have shown that the TBAs, even after some period of training, are not competent enough to carry out the functions of professionally-trained midwives.\(^1^9\)

Similarly, there are many different types of CHVs who have been trained and deployed on various tasks of providing essential care for simple ailments, including supervised treatment for TB, leprosy or malaria. Since their basic education, training and skills are limited they cannot be assigned as replacements for fully-trained basic health workers (BHWs). The BHWs are actually at the front end of the health systems, and their functions are interlinked with those of health volunteers as part of the continuum of care. The health policy-makers and managers at various levels, and the communities themselves, have to be aware of such limitations, and also of the need for health teams to perform different functional roles.

Again, health volunteers are not to be trained over a longer period to become specialists, who should know everything on health or who can do everything. Many of them are actually trained for carrying out very specific tasks like providing health education and health promotion messages, organizing community action for health, providing essential health care or working as local organizers. That is why different categories of community volunteers have been assigned to undertake different sets of functions, such as sanitation workers, nutrition surveillance, health communicators, posyandu workers, community midwives, etc.

Here are a few experiences shared by CHWs in Myanmar\(^2^0\):

“I am happy to be a CHW in my village for 23 years. I am well respected and villagers listen to my suggestions because they know that they benefit from my advice.”

“In the initial years of my work, villagers thought that they would have a doctor trained in a month and even demanded why injections and other instruments were not provided like those for basic health staff. Now they understand our role as health educator, health promoter, and communicator. They also appreciate that we act as a buffer between people and health facilities, and that through us, the villagers could get more help for any things concerned with health care.”

“Previously villagers relied on traditional practitioners and spiritual healers, some of whom were fake and even responsible for a few families losing the lives of some of their members. Beliefs and myths are difficult to overcome. During the last 20 years, I have fought against these disbeliefs. Nowadays, people accept the importance of using

---


\(^{2^0}\) Nilar Tin, Assessment of Performance of Community Health Workers in Four Townships in 2003-2004, Department of Health, Yangon, Myanmar, 2004 (Unpublished Report)
health centres and hospitals for their health, and have faith in health workers including ourselves. At the same time, the health status of villagers has improved. There are no more major outbreaks of diarrhoea, smallpox, measles, diphtheria or poliomyelitis. A few lives of mothers have been saved through the intervention of auxiliary midwives.

Management Issues
The training and deployment of community health volunteers within national health systems have to be considered a major strategic direction for health development. These health volunteers are regarded as community representatives, health leaders, health organizers, health promoters, and/or health facilitators. The jobs to be performed by these health volunteers are part of the empowering process of transferring appropriate means and methods to the communities to enable them to deal with their own health and health-related needs. Once the people acquire the knowledge and skill for health actions, those actions themselves would make them understand their own health situation, and further strengthen their capability to plan and manage things at their own level. Successful campaigns on the elimination and eradication of communicable diseases like small-pox, poliomyelitis, measles, tetanus and leprosy have demonstrated the important roles these volunteers played.

The interactions between health volunteers and basic health workers vary according to the political and socioeconomic systems, and also to some degree on the extent to which public health systems can be covered. Health volunteers are seen as poorly-trained people, who simply assist the BHWs, who are already serving at the public health facilities (clinics and hospitals). Many BHWs also feel that volunteers must be closely supervised. Under this notion, BHWs regard volunteers as being under them in the hierarchical system, and therefore tend to wrongfully direct and assign the volunteers with those tasks that are to be explicitly performed by themselves. The vertical relationship of health volunteers and BHWs is an outcome of such hierarchical environment of the health systems. This linkage has to be transformed into a horizontal relationship with the BHWs realizing that health volunteers are their partners. Such horizontal relationship and the positive attitude of BHWs are important factors that would enable the volunteers to carry out their tasks effectively in the spirit of true partnership.

Sometimes, the hierarchical attitude is accentuated by health volunteers themselves who tend to think along medical care perspectives, and prefer to carry out curative health care functions rather than devoting their time on promotive, preventive and rehabilitative work. While some work for essential medical care may be necessary, especially in remote areas, the major proportion of volunteers’ work is promotive and preventive in nature. Close supervision and continuum of support are required where both clinical and curative care are needed. There are many examples of such tasks being performed under supervision for treatment of priority communicable diseases, such as TB, leprosy, malaria, filariasis, and soil-transmitted helminthic infections, etc.

Motivation and Sustainability
Training and deployment of CHVs are usually a part of national health development, within the larger framework of national socioeconomic development. The adoption of a viable policy on the selection, training and deployment mechanisms is an important factor in sustaining the volunteers’ programmes.
If health volunteers are to be assigned for simple preventive and promotive health measures as part-time tasks with a brief training, the selection could emphasize on qualities such as acceptability and motivation rather than attainment of education. If volunteers are to perform a wide range of specific tasks like those of auxiliary midwives, they need to be trained correspondingly for a longer duration; selection guidelines also need to refer to their learning ability.

Since the early 1980s when national programmes started using health volunteers, many volunteers are still serving their own communities; and some have already been working for more than two decades. However, the majority of them dropped out after serving for a few years (usually around four years of service). The length of a volunteer’s service depends upon his/her social standing and long-term commitment to the community they serve. It also usually depends on the way the health volunteers influence their own communities by word or action.

While the cost involved to select, train and deploy health volunteers at the local level is low, enormous funds (for training, logistics, management and supervision) are needed to expand their network into a large-scale national programme. Another question is whether any remuneration is necessary for compensation of time spent by volunteers, since it involves a significant proportion of their working day in some cases. Since the volunteers are accountable to the community and render services that the community needs, they could be provided with some form of remuneration, either in cash or in kind, depending upon the local culture.

In some national programmes, governments pay monetary incentives to compensate volunteers for certain types of expenditure, such as travel and other out-of-pocket expenses, two work-days off per month, or access to free health care, etc.

The social recognition of health volunteers by their own communities and appreciation of their contribution to health development by national health authorities help in sustaining the health programmes. The provision of certificates, badges and uniforms, arrangement of group study tours, rewarding best serving volunteers through national awards, etc., enhances the self-esteem and social status of volunteers. For example, the Minister of Health, Myanmar presents awards for best performing volunteers on national occasions, while Thailand celebrates 20 March every year as the “National Village Health Volunteer Day.”

Future Expansion

Health development in Member States of the Region has become complex due to rapid changes in the global, regional and local political and socioeconomic conditions, compounded by demographic and epidemiological factors in recent years. Heavy investments have been made in many vertical disease control campaigns starting with elimination of leprosy and poliomyelitis to the prevention and control of HIV/AIDS, tuberculosis and malaria. It is now required more than ever to review how the role of volunteers will be helpful in facilitating and supporting the expansion of health care coverage.

When Thailand introduced its universal coverage programme in 2000, there was a transition for a few years during which the role of volunteer health care workers changed from preventive and curative care work to that of promotion and rehabilitation. Volunteers are now actively involved in national health promotion campaigns, and, most recently, were also involved in psychosocial support and recovery work in response to the Tsunami.
In Indonesia, with decentralization of health systems and introduction of nationwide universal coverage by health insurance in recent years, there has been a change in the role and responsibility of health volunteers. The Ministry of Health is trying to reorient the function of posyandu (health post) in collaboration with local social groups. It is obvious that the links between volunteer health workers and district health systems need to be strengthened further by establishing local community bodies like the village health committees, which would take care of effectively coordinating and representing the interests of different social groups in the community.

Conclusion

While developed countries have gone through epidemiological and demographic transitions over the last two centuries, developing countries have been experiencing the same transitions during the past few decades. People in developing countries are healthier now as compared to a century ago, in spite of the slow pace of transition.

Addressing the rapid demographic and epidemiological transitions was the biggest challenge for public health at the start of the present century. There were added problems, like implementing international treaties and conventions on health-related issues. The total spending on health as a proportion to gross domestic product in developing countries was still below 5%. The main issue was not only the low percentage of health investment, but also the lack of efficiency in utilization of limited resources, both in human and financial terms.

Two decades after the Alma-Ata Conference, sustained progress was seen in the HFA Movement. Utilization of large numbers of community health volunteers in providing essential primary health care and expanding health knowledge is part of the success achieved in health development. The challenge during this century is how to ensure access to essential health care for all citizens of the world irrespective of their race, religion, citizenship or residence (universal access to health care). Such universalism must ensure compulsory essential health care for all, although it does not imply coverage of everything.21

Studies have indicated that high out-of-pocket expenditure for health care penalizes the poor and the underprivileged. Pre-payment or the system of risk-pooling allows for a wide range of incentives for efficient purchase of services. Essential public health interventions can be efficient and effective in quality, and not be dependent on who is providing health care, whether private or public sources, or whether through paid workers or volunteers, if they are properly trained and deployed. These essential interventions may need to be defined, based upon health financing mechanisms, health systems infrastructures, and social determinants and other aspects of socio-economic development of each country.

The efforts of national and international communities should aim at promoting healthy living, reducing the burden of disease and making essential health care accessible to all. The social values and principles of solidarity, social justice and ethics for PHC and HFA are relevant even now and will remain so in future too. All public health professionals, as well as the international community need to sustain that vision. They need to commit and rededicate themselves to meeting the opportunities and challenges of health development in the 21st century.

Utilization of CHVs as the third workforce of human resources for health is a reality today in countries of the WHO SEA

---

Region. Over the last 25 years since the concept was developed, it has progressed well from the stage of a pilot project to a nation-wide programme, and from the trial phase to that of application and replication. The extensive deployment of volunteers in health development now forms part of the essential strategy in achieving the universal goal of Health for All.

Member States would require developing their capacities for providing effective and efficient support to health volunteers within the broader framework of community action for health, and enhancing partnerships targeted particularly towards improving the health and well-being of the people, especially the disadvantaged communities. It is a renewed call for policy action towards helping health volunteers continue to play a major role in health development.

Acknowledgement: The author wishes to express his heartfelt thanks and high appreciation to all volunteer health workers who are contributing their valuable time and services for health development. The author also deeply appreciates the initial work undertaken for the development of health volunteers in Myanmar, by Dr U Ko Ko (WHO Regional Director Emeritus), Dr U Shwe Tin, Dr U Kyaw Maung, Dr U Tin Oo, Dr U Pe Thein and Dr U Kyaw (former Directors-General of Health, Myanmar), Dr U Lun Wai, Dr U Ba Tun and Dr U Kyaw Sein (Directors, Public Health (retired), Myanmar), and all other health professionals. This paper commemorates the 30th anniversary of introduction and development of CHVs in Myanmar.

Further Reading

Migration of Health Workers: Perspectives from Bangladesh, India, Nepal, Pakistan and Sri Lanka

B V Adkoli*

Abstract
The international mobility of health workers is not a recent phenomenon. This paper highlights the various facets of migration of doctors in the five South Asian countries – Bangladesh, India, Nepal, Pakistan and Sri Lanka. Migration is attributed to “push” from within the countries, as well as “pull” from Western countries in the background of globalization and free market economy. Though migration has produced some positive effect in terms of rate of remittances made by migrant populations and their vertical mobility, its overall effect on health systems has been disastrous. Moreover efforts to rationalize the movement of health workers have begun. The article reviews some initiatives in this direction and offers some suggestions to grapple with this issue.

Introduction
The migration of health professionals from developing countries to the developed world has been debated for more than three decades, but the magnitude of the problem and its implications have changed due to the rapid pace of globalization. The movement of doctors began in the 1950s, 1960s, and 1970s as a post-colonial phenomenon common to India, Sri Lanka and Pakistan and later extended to Bangladesh and Nepal. Nursing professionals began their journey mostly to the Middle East, but have currently shifted attention to the United Kingdom of Great Britain, United States of America and Australia. Most Member States of WHO report a shortage, maldistribution and malutilization of nurses. The problem is quite complex and multifaceted. Though the freedom of movement is considered a fundamental right of every citizen, its practice in the health field poses a potential threat of jeopardizing the basic standards of health care to the population. Nevertheless, the remittances made to the exchequer, and various strategies for compensating the loss appear to have beneficial effect on the economy. The phenomenon therefore, deserves ‘rationalizing’ rather than ‘restricting’ the movement of health professionals across the globe.

Genesis of Migration
Countries of South Asia are victims of both internal migration (from rural, backward areas to the cities) as well as external migration (from country of origin to the Western countries in search of opportunities).

The migration of doctors can be attributed to both external ‘pull’ and internal ‘push’. The external ‘pull’ comes from globalization, free market economy and international flow of doctors from relatively deprived nations to greener pastures. This has been described as a “global conveyor belt of health personnel moving from bottom to the top”. This also explains the

* Educationist, K.L. Wig Centre for Medical Education and Technology, All India Institute of Medical Sciences, New Delhi. E-mail: bvadkoli@hotmail.com, adkoli@aiims.ac.in
international movement of doctors from the United Kingdom and Canada to the United States of America, and from Bangladesh, India and Pakistan to the Gulf countries, the United Kingdom and the United States.

As a parallel trend, the advanced countries are facing acute shortage of nursing staff owing to ageing population, shortage of nursing schools, and competing professions becoming more lucrative in terms of salaries, perks and status.\(^4\) Thanks to the revolution in information technology, international jobs are becoming more accessible in every nook and corner of the world.

While opportunities for professional training, higher salaries and perks and better living conditions act as “pull” factors, surplus production of health personnel, resultant unemployment, less attractive salary, stagnation or underemployment coupled with lack of infrastructure act as “push” factors for the youth to migrate. Ironically, both medical and nursing schools face shortage of qualified teachers, besides lack of good infrastructure. The term “brain waste” is used to describe potential migrants. These factors are often aggravated by political instability, bureaucratic hurdles and insecurity in the home country.

Soon after independence, each of the countries in South Asia witnessed phenomenal increase in the number of medical colleges. Bangladesh, India, Pakistan and Nepal, established medical schools mostly in the government sector, at highly subsidized fees, but gradually witnessed the growth of the private sector also. The annual output from the 229 odd medical colleges in India alone exceeds 25 000 doctors.\(^5\) Sri Lanka kept medical education State-controlled and fully subsidized. While production of doctors was unabated, the Governments found it difficult to absorb them and utilize their services for improving the rural health care, which resulted in migration.

The first phase of migration started from the colonial era and continued up to the 1960s when doctors generally migrated to the United Kingdom in quest of higher education. The second phase of migration started in the 1960s when large-scale immigration of doctors from the United Kingdom to the United States came into focus. The resultant vacancies were filled up partially by Asian doctors, especially from India.\(^6\) The impact of colonial rule, similarity in the pattern of education and administrative machinery, besides fluency in English, acted as added advantages. This generation of migrant workers were attracted by economic gains and moved to the United Kingdom and the United States. After 1985 the migration and settling down of doctors diminished on account of the requirement of ECFMG and other restrictions on work permits and visas. Besides, the migrants had to compete with the FMGs who returned from developed countries.\(^3\) However, short-term migration of “fellows” from developing countries is still continuing.

Currently, due to the sudden expansion of medical services and a slew of retirements, the National Health Service (NHS) of United Kingdom is experiencing an acute shortage of doctors. About 4700 doctors are likely to retire in the next eight years. Since the native doctors prefer more rewarding surgical specialities, specialities such as anaesthesiology, radiology and psychiatry are facing acute shortage. Under the NHS International fellowship launched by the United Kingdom, doctors will be paid a consultant salary plus an allowance of up to 46 000 pounds to assist in relocation and housing.\(^7\) United Kingdom has also adopted the European working hours of 48 hours per week instead of the global norm of 56 hours per week.\(^8\) The NHS move also provides an opportunity for doctors to experience one of the world’s best health care systems.

The United States and Canada too face a shortage of doctors in certain specialities and in certain regions of their continent
where the native doctors are reluctant to practice. Such deficiencies are met by fresh recruits from developing countries who are more than willing to take up such assignments.

Sri Lanka is also affected by migration for similar reasons. Up to 1972, the Sri Lankan medical graduates enjoyed automatic registration with the GMC, United Kingdom. Subsequently, PLAB was introduced, but PLAB 1 being held within the region itself was a motivator for fresh graduates to take flight to United Kingdom. A one year gap between obtaining the MBBS degree and internship appointments attracts young graduates to migrate. Trainees at the Specialist Registrar level at a Sri Lankan institute must complete a year of training in an approved centre in the United Kingdom, Australia, New Zealand or Singapore. During this period they are given limited registration with the GMC. This invariably leads to permanent registration and subsequent drop-out. A study has reported that 185 out of 826 trainees (22%) have been lost after qualifying for the Masters Degrees in Medicine and Surgery between 1993 and 2000. About 9.7% have been lost after obtaining the Board Certification between 1999 and 2004. Many postgraduate training programmes conducted by PGIM have reciprocal recognition from Royal Colleges of the United Kingdom.⁵

In Pakistan, the Fellowship of the Pakistan College of Physicians and Surgeons has been recognized as equal to the Royal Colleges’ Membership and the American Boards’ Diploma in many countries. This facilitates migration of Pakistani doctors.⁶ The cost of training medical graduates in Western countries is significantly higher than their counterparts in the developing countries, where medical education is highly subsidized. This is the main attraction for Western countries to hire doctors South Asia rather than investing on the training of fresh candidates. The salaries and perks offered by Western countries, besides the working conditions and the educational prospects for children are beyond comparison with what the developing countries offer to their counterparts. For example, a specialist in Sri Lanka is paid Sri Lankan rupees 45,000 and his counterpart in Australia is paid rupees 150,000.¹⁰

Internal Migration

Excessive migration of doctors from rural areas to urban pockets is another disturbing trend noticed in South Asian countries. This is because tertiary care hospitals are situated in cities which have better facilities and living conditions. Even the talented youth coming from remote areas are reluctant to go back and settle down in the cities, thus falling in the trap of rich getting richer and poor getting poorer. Internal migration is propelled by factors such as difficult geographical terrain (e.g., north-eastern region in India), ethnic problems (e.g. Sri Lanka), political instability and insecurity (e.g. Pakistan), economic prosperity in the cities (e.g. Nepal, Bangladesh).

Migration Data

Migration data are difficult to obtain as information pertaining to production and requirements of personnel from both the sources and destination countries is required. Sometimes the movement from rural to urban areas also affects the data.

Migration of Doctors

India

- The greatest exporter of doctors from the region has been India. For Indian migrants, the United States, United Kingdom, Canada, Australia and Gulf countries are the preferred destinations.
Indian doctors in the United States exceed 50,000, the largest group of physicians after native-born American doctors. There is one Indian doctor available in the United States for every 1,325 Americans in contrast with one Indian doctor in India for over 2,400 Indians.

About 30% of doctors in the National Health Services, United Kingdom are Indians. Specialists in anaesthesia, radiology and psychiatry are most sought after; From Bangalore Medical College’s batch of 1996 alone, 40 doctors joined United Kingdom. Nearly 25 postgraduates in anaesthesiology have migrated during the last five years.

About 25% of practising physicians in Canada are foreign-trained. The major source countries are United Kingdom followed by South Africa and India.

Gulf States employ 20,000 doctors, mostly hailing from the Indian subcontinent.

From the All India Institute of Medical Sciences (AIIMS), New Delhi, 56% of the doctors went abroad from 1956 to 1980. About 75% of graduates from AIIMS are continuing their studies in the West.¹¹

Pakistan

Pakistan produces over 4,000 medical graduates annually. While half of them leave the country for the United States and United Kingdom, mainly to acquire higher qualifications, many of them never return.

According to the Immigration Bureau of Pakistan, 6,424 doctors have left the country during the last five years. This official figure is believed to be a gross underestimation because a vast majority leaves the country after writing PLAB and USMLE.

Sri Lanka

A large number of postgraduate trainees who qualified for MD/MS left the country before the Board Certification. Between 1993 and 1996, 39 candidates out of 302 (13%) left the country while 146 out of 524 (28%) left the country between 1997 and 2000.

The highest losses due to migration were found in the specialty of psychiatry (56%); followed by dental surgery (50%), and anaesthesiology (37%) during the period: 1997-2000.

Bangladesh

Statistics show that 65% of the newly graduated doctors attempt to get jobs abroad. On an average 200 doctors from the government sector go abroad every year. At present around 1,000 Bangladeshi doctors are working in different countries of the world.¹²

Nepal

There are no systematically collected data regarding the extent of migration and its possible impact on health care. But many Nepalese go abroad for higher education and seldom return. Rapid expansion in medical education
during the past few years has resulted in excess production of doctors whom the Ministry of Health is able to absorb. 13

Migration of Nurses

- The United States, United Kingdom and Ireland recruit significant proportion of nurses from lower-income countries.
- About 11% of nurses practicing in the United States are foreign-born, out of which 80% are from developing countries. Similarly, in 2000, the United Kingdom hired more than 8000 nurses and midwives from outside the European Union.
- China, India and Pakistan have 99, 45, and 34 nurses per 100 000 population but they supply nurses to the United States.

Negative and Positive Aspects of Migration

The effects of migration of physicians are difficult to assess in view of several factors operating for and against this phenomenon. While the amount of remittances made by the migrant population is the main driving force, other considerations are whether the home country has adequate quantity and quality of health professionals to take care of its own health systems. The consequences also depend on whether the migration is short term or permanent. Short-term migration is thought to be helpful to the country by way of transfer of technology. In the country of origin, the Ministry of Health is concerned with the loss of health personnel, hence disruption of health services, whereas the Ministry of Finance is interested in remittances. In the receiving countries, the Ministry of Health might welcome migration as it caters to its immediate health needs, whereas the Ministry of Foreign Aid might feel uncomfortable. 14

As far as the South Asia Region is concerned, though the production of doctors is in excess, the health scenario is not encouraging, as the rural and the weaker sections of the society are deprived of access to health care. India for instance has an unacceptable rate of infant mortality, maternal deaths, besides deaths due to diarrhoeal diseases, vaccine-preventable diseases, tuberculosis and malaria. There is gross inequity in health indices based on socioeconomic status, gender and the urban-rural bias. 15 The scarcity of qualified health personnel including nurses has been cited as the biggest obstacle to achieving the Millennium Development Goals (MDGs).

As far as remittances are concerned, India receives more remittances from migrant workers than any other country. It received $10-23 billion in 2001 and 2004 respectively. However, it is difficult to judge whether the return flow of resources can replace and replenish what is being drained away in the form of cost of training incurred by the government and its negative effect on the health system. According to a study, assuming that it costs about $60 000 to train a general practitioner, the developing countries are subsidizing North America, Western Europe and Australia at the rate of about $500 million a year. It is, therefore, claimed that people in developing countries are paying for the health care of developed countries thus leading to huge inequities in global health. 16

A study on the migration of knowledge workers titled "Second-generation effects of India’s Brain Drain concludes that, “The payments made by developing countries to the developed countries would be in the vicinity of US$ 10 billion per annum, cancelling in one stroke a major part of the aid flow from the latter to the former." 17
Another major problem is that the remittances made by the migrant workers are not directly utilized by the governments for the welfare of the population as they are received by the kith and kin.

With the revolution in the information technology sector, boost in economic growth and incentive provided by the Government of India to nonresident Indians (NRIs) in the recent years, a reverse flow of doctors has also started. The privatization of medical care has resulted in the establishment of corporate hospitals, especially in the metropolitan cities which attract specialists and NRIs. These hospitals have opened “medical tourism” by attracting foreigners to receive treatment in India at a relatively lower cost, thus resulting in a back-flow of money. Attracted by high salaries and perks, some Indian doctors have started the return journey. Some come back during their sabbaticals to teach, interact with local research scholars and promote collaborative ventures. The Medical Council of India has started a scheme of Continuing Medical Education (CME), with support from NRI doctors which gives them an opportunity to share information. Thus, although the reverse flow has started it has not taken off. Some of the potential obstacles are stiff competition from the local hospitals and specialists, red tape, and corruption.

Other implications of migration include health hazard to the population as the migrant health workers invariably bring with them the genetic material, and their socioeconomic, environmental backgrounds that shape their health. Thus they carry with them higher risks of infectious and other diseases, which can impact the host public health system. The status of migrant health workers is at stake as they are non-nationals. Many of them are vulnerable to exploitation, fraudulent contracts, racism, gender bias, xenophobia, discrimination and social exclusion. Instances have come to notice in which migrant doctors in the United Kingdom remain unemployed, or pick up some sundry jobs lest they become destitute in the foreign land.

Strategies for Tackling Migration

There are no ready-made solutions to this complex issue of migration as long as the distinction between first world and third world remains strong. All the stakeholders, viz., the governments of the source country, the host country, professional unions, and international Bodies should work together to address this issue in a holistic approach. At least three types of strategies appear to be necessary to tackle this issue, viz., scientific strategy to plan and design collaborative programs between sending and recipient nations, policy strategies to regulate the stay and return of migrant professionals, and economic strategies to ensure proper utilization of the remittances in the capacity building of the developing nations. A systematic approach to the planning, production and movement of doctors within each country coupled with comprehensive information system is the need of the hour. Each country should establish national live register of health personnel required, vis-à-vis, trained. Once a comprehensive database is made available, informed decisions can be taken to meet the internal needs as well as external demand after entering into bilateral agreements with other countries. Short term projects can be designed in such a way that it helps to augment the immediate needs of the developed country, leads to optimum utilization of the talents available with the developing country. At the same time this should give some economic benefit to the migrant worker, and once such a person returns, his or her experience leads to sustained benefits to the community and the country, creating a win-win situation for all. This will also mean that the selection and
recruitment process is fair and transparent, the terms of employment and tenure of stay are well defined, and a continued interaction takes place even after the return of the migrant, for which purpose networking is essential.

A suggestion has been made that the host country should compensate the developing country for the loss incurred on account of cost of training and value of health care service that is being deprived. Though quantifying such loss is a difficult task, gross measures can be taken to workout modalities that strengthen the health systems of the source countries. Establishing long-term partnerships including funding and training to strengthen research, clinical training and teaching infrastructure of institutions in the developing countries could be a good step forward.

Some Initiatives

A Global Commission on International Migration (GCIM) was launched by the United Nations (UN) in 2003 with the aim of placing international migration on the global agenda, and to analyse gaps in current policy approaches, examine inter-linkages with other areas, and to make recommendations to the UN, governments and other stakeholders.21

The World Medical Association at its General Assembly meeting held in Helsinki, Finland in September 2003 adopted a statement declaring that every country should do its utmost to educate adequate number of physicians taking into account its needs and resources. No country should rely on immigration from other countries to meet its needs. Countries wishing to recruit physicians from another country should only do so through a Memorandum of Understanding between the concerned countries.2

WHO has taken a keen initiative in addressing the issue. At its Fifty-seventh World Health Assembly, a resolution (WHA 57.19) was passed on International Migration of Health Personnel. WHO is against active and targeted recruitment of doctors from those countries that are themselves experiencing shortage of health care staff. At the same time, it recognizes the beneficial aspects of migration in terms of capacity building, transfer of knowledge and skills, and enhancing health services through a shared vision. A WHO Code of Practice for international recruitment of health workers is in the process of being developed. This is likely to provide guidance for ethical policies and practices in international migration.

The International Organization for Migration is another body which has launched an international dialogue on migration since 2001. It organized a seminar on health and migration in collaboration with WHO in Geneva (2004) with a focus on public health implications of migration. This was the first attempt to bring together migration officials and health authorities on a common platform. The seminar stressed the need for partnership approach in managing migration and advocated the use of bilateral agreements to promote short-term exchange, capacity building in developing countries, and incentives for returning migrants.22

Public Services United Nurses Union (PSUNU) is a global federation of Unions representing 20 million workers involved in the delivery of public services in 150 countries. Their priorities include promotion of quality of public services, trade union capacity building, and defending workers’ rights. It is running a project on migration of women health workers from of 16 major countries that send or receive workers. It calls for unified international action to address the negative impact of public services and pleads for the implementation of WHO code of practice.23
Fogarty International Centre has launched the Global Health Research Initiative Program (GRIP) to combat brain drain by setting aside $1m per year for five years to pay partial salaries for researchers from developing countries who return home. One such program is AIDS International Training and Research Program (AITRP) in the form of research grants to the scientist from developing country to support HIV/AIDS control program. This involves grant of visa for a fixed tenure and in the event of overstay, a penalty clause is evoked. With the re-entry grants, researchers can continue projects begun in the US while working in their home country institutions so that they can maintain strong academic ties. Success of this project depends upon encouragement from US and support from collaborators from India.

Another illustration of capacity building with cooperation from migrant professionals can be found in Shanghai Institute of Biological Sciences, which offers courses in molecular and cell biology with joint faculty from China and US based Chinese scientists.

The Organization for Economic Cooperation and Development countries have adopted specific policies to stimulate immigration of foreign physicians, while minimizing its negative impact on the home country. These measures include international recruitment campaigns, less strict immigration requirements, and arrangements that foster shared learning between health care systems. A second type of policy to promote short-term migration from developing countries includes the International Fellowships Programme offering grants to foreign medical students with a work permit for fixed stay (e.g. five years). The United States have introduced granting of a temporary work permit (two-five years) and a cultural exchange visa to encourage short term stay.

Strategies to Tackle Internal Migration

Internal migration can be controlled through policy interventions that address strengthening of infrastructure and facilities in the villages and remote areas; generation of employment; accent on public health, and overall socioeconomic development through multisectoral and multi-level tasks. Each country in the region is sensitive to developmental needs, which can be addressed separately as well as from a common platform such as the SAARC.

The new vision of “Providing Urban Facility to Rural Areas” (PURA) propagated by Dr APJ Abdul Kalam, Hon’ble President of India aims to propel economic development without migration, develop villages through comprehensive community development, facilitate green revolution and create a social and economic infrastructure with accent on connectivity through road, and information and market access. Policy initiatives like National Health Policy and National Health Programmes covering several health problems, National Literacy Mission, and National Rural Health Missions have been supportive of the Millennium Development Goals. While resource constraint is coming in the way of reaching health objectives, initiatives such as the Bill and Melinda Gates Foundation investing US$ 100 million on health, especially for controlling HIV/AIDS, and the corporate world in India willing to support infrastructure development including health, have set good examples.

Within the ambit of medical and nursing education, steps are needed to regulate the output, and consolidate the standards. The postgraduate and speciality training should be planned carefully considering the need and cost effectiveness. Public health and preventive aspects should be the mainstream of medical education. It should be mandatory to undergo three years’ rural service before postgraduation. Rural services should be made more attractive in terms of salary, perks and living conditions. Various systems of medicine should work in synergy.

Conclusion

Migration is an inevitable reality of tomorrow. The solution lies in its better management.
The South Asian partners have to work among themselves in partnership for mutual benefit. The initiative to start SAARC, way back in 1985 has led to close ties among countries of South Africa in all spheres, especially in the area of poverty alleviation. Strengthening of health systems requires a multipronged approach. Each country has its own strengths which can be pooled together. India’s experiment with a new economic policy, private-public partnership, investment in human resources, and accent on IT and advanced technologies has resulted in a new dynamism. Sri Lanka has shown that investment on education, primary care and public health could provide cost-effective health care to a large section of the society. Furthermore, institutes of excellence in the region can help each other in meeting the requirements of postgraduates training and speciality development. Lastly, one has to safeguard against the ill-effects of privatization and free market economy. Health belongs to the service sector hence it should underline the “social contract”, rather than the “business contract”. The doctors are bound by the Hippocratic Oath to provide medical care, irrespective of the paying capacity of the client. At the same time, the States have the responsibility to fulfill the fundamental right of the citizens to access health care. Even in a rich country like the United States, the business model has failed to provide health coverage to more than 45 million people. Thus developing countries should look for alternative strategies to gear up their public health rather than leaving it to privatization to meet the health budget. The movement towards a healthy world based on solidarity and ethical values is a long haul and calls for a larger debate involving all UN agencies, funding agencies, and experts in international law.

Acknowledgment: The author wishes to thank Dr Sanjay Wadhwa, Additional Professor, AIIMS, New Delhi, and Ms Malavika Adkoli for previewing this article.

References


Privatization in Technical Education: 
The Case of Education of Health Professionals in Nepal

Ramesh Kant Adhikari*

Abstract
Nepal has seen major changes in the field of training of health professionals over the last 15 years. This field has attracted significant private investment and a number of training institutions with hospitals, have come into existence. However, the trend of opening new institutions is continuing. Not only is it likely to be detrimental to the existing facilities but it is also raising doubts about the quality and standards of some of the institutions in the private sector. This article is an attempt to briefly look into the different issues of the subject and also suggest a comprehensive review of the situation, which will guide the future course of action.

Introduction
Nepal is teeming with evidence of citizens, for over 60 years now, taking the initiative to start education institutions without much state involvement. In fact, ever since the political change took place in Nepal in 1951 brought about by democracy, a large number of schools and colleges were established either by an individual or the community. Most of these initiatives were motivated purely by a sense of social service. Such educational institutions were low-cost and affordable.

When the National Education System Plan was implemented in 1972, most of the educational institutions established by private groups, were taken over by the government and all the teachers and staff working there became government employees. In the 1980s there was a move to establish English-medium schools in the private sector. This was partially motivated by the need to provide quality education at a slightly higher cost than the government schools and colleges. Apparently, the rise in the number of people who could afford to pay higher fees for better educational facilities was also partly responsible for this development.

Though there was an unsuccessful attempt to start a private medical college around 1986 with affiliation to a religious group in India, technical education was outside the realm of this development till 1990. The situation changed rapidly with the political changes of 1990. Now there are more medical colleges, technical health training institutions and schools in the private sector than in the government sector (Table 1). These institutions were started to meet the needs of the country as well as to cater to the growing number of students wanting to pursue training in the technical field. Since private sector funds run these institutions, cost recovery and profit from investment are important considerations. And when there is more than one player wooing the students, there is bound to be a keen sense of competition and a need to advertise etc. In other words, such institutions have to function as viable commercial enterprises rather than as institutions with a purely social mission.

* Dean, Institute of Medicine, Tribhuvan University, Maharajgunj, Kathmandu, Nepal
Table 1. Institutions for training health professionals\(^1\), \(^2\), \(^3\)

<table>
<thead>
<tr>
<th>Type</th>
<th>1990</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Medical colleges</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nursing schools</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Paramedical schools and colleges</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

With the increase in the number of training institutions, there has been an increase in the number of doctors, nurses and paramedical health workers also.

Current Trend

The recent growth in the number of educational institutions for health training has resulted in increased number of seats and a larger number of trained health professionals, albeit at a higher cost. On the flip side, since there is no commensurate increase in the number of jobs in this sector, there is unemployment and consequent loss of interest among students for these subjects. Also, though not formally evaluated, the quality of these professionals and the standard of training provided are questionable, in view of the resources available in the country.

Increased capacity

Over the last one and a half decades, there has been a rapid increase in the number of schools, institutions, colleges and universities for technical education in Nepal. Consequently there has been an increase in the number of seats available for students wanting to pursue education in this field. Training of health professionals has also been a very attractive area for government and private parties for investing their resources.

Cost

The private sector institutions conduct their programmes with the motive to recover costs and get a reasonable return on their investments, which is why there has been a rise in the fees to be paid by the students. Even the government institutions believe that a large number of students are willing to pay for education, so they too have been increasing the seats for those who can pay as well as study (based on the entrance examination system). Public institutions’ fees too, are influenced by the fee structure of private institutions.

Teaching-learning environment

Due to the shortage of trained teachers and hospital beds or community field areas for training, the opportunities for practical learning seems to be decreasing. Similarly, the teachers’ commitment to one institution and one programme is also diminishing. As a result, government/public institutions find it difficult to retain their teachers as they are attracted to private salaries and incentives.

Limited job opportunities

Since there has been no commensurate increase in the number of jobs, a large number of health professionals are unemployed. Some of these health workers may be offering services outside the formal health sector for which they are not trained.

Pressure on academic institutions

The increase in the number of unemployed health professionals is consequently increasing enrolment in higher-degree courses. Most of the unemployed health professionals trained to provide technical services as health assistants are trying to get into MBBS courses. This trend has, to some extent, nullified the purpose of establishing a number of schools for training health assistants.
Quality of training

Though there have been no studies to evaluate the performance of graduates of different private training institutions, there is a general concern about the quality of health workers passing out of them. The training opportunities and also the faculty in these institutions do not instil the confidence that they would be able to provide training of a high quality.

Escalation of cost even in public sector training institutions

Since private institutions are willing to pay more for the utilization of government health institutions, the low-cost public sector institutions also face the demand for higher payment to use the facilities. The result is that because private institutions charge more from the students, the public institutions too are motivated to increase their fees.

Relevance of Privatization

There is a general assumption that Nepal is in need of a large number of educational institutions, which will train health professionals. There is, however, no study to prove this need. In general terms, a large number of students are desirous of pursuing a career in health profession and want to enrol into such health training institutions. This fact is evident from the number of applicants to limited number of seats available in public universities and colleges. Therefore, from the students' perspective, it is desirable that private investors show interest in establishing such training institutions. However, in the absence of a job market for these trained human resources, there may be a decrease in the number of applicants in the near future. If that happens, the survival of such institutions will be at stake.

Effect of privatization

Positive effects

1. A significant increase in the number of training institutions. Therefore, the number of health professionals being trained inside the country has increased tremendously.
2. A decrease in the number of students leaving the country for higher education in health sciences due to increased availability of seats within the country itself.
3. The creation of health institutions such as tertiary care hospitals in different parts of the country, thereby making advanced health services available in different parts of the country.
4. The establishment of health institutions has created jobs for different categories of professional and non-professional people thus contributing to the general economic activity in their areas of work.
5. The strengthening of regulatory mechanisms: establishment and capacity-strengthening of different professional councils and academic bodies.
6. It has contributed financially to the affiliating institutions and universities.

Negative effects

1. Escalation in the cost of training: The private promoters work with a higher amount of money, so they can afford to pay more or pay differentially. They take away the faculty members and other trained personnel from the public-funded training institutes. Similarly, they
compete with public institutions for
the utilization of government
hospitals as field training sites. The
private agencies offer more money,
thus jeopardizing the training of
students from public institutions.

(2) Quality of trained human
resources: There is a general
impression that the privately
established institutes operate with a
profit motive. So they give “quality
of training” a lower priority as
compared to “profit”. This
impression needs to be
corroborated with a scientific study.
However, the general hurry to get
approval from different government
agencies and the professional
council, and to admit students even
when the basic infrastructure is not
in place, is a feature very
commonly associated with private
institutions.

(3) Skewed development of human
resources for health: Health services
depend on team effort, but private
institutions seem to focus more on
disciplines and courses that are
more popular with students. Most
medical colleges are keen to start
an MBBS programme as it attracts
more applicants who can pay, as
opposed to the nursing and
paraprofessional courses.

(4) Possible dissatisfaction in future
and pressure on academic institutions
at higher level: Starting a large
number of health-training
institutions without any study of the
expansion of health facilities that
determine their requirements could
be frustrating and a waste of
trained professionals. Already a
large number of health workers
who should have been manning the
health system are devoid of jobs.
They are trying to join higher-level
academic programmes, thereby
creating pressure on these
institutions.

(5) Adverse effect on the academic
programmes of affiliated
institutions: Academic supervision
and conducting examinations are
responsibilities of the affiliated
institutes of the university. These
institutes were established to look
after their own programmes and
have very limited resources. Adding
a large number of affiliated
colleges has created problems for
these institutes: teachers are busy
moving from one college to
another either for inspection or for
conducting examinations, thus
taking them away from their
primary responsibilities of teaching
and providing service at their own
institutes.

(6) Lack of uniformity in the value of
certificates: There is no uniformity in
the admission criteria between
different colleges under one
university. This has caused
problems in certifying a student with
borderline ability as compared to
another with higher ability. In the
long run, with private institutions
being more in number than the
public institutions, degrees granted
by the same university will have
different values and meanings.

Regulatory Mechanisms

Despite numerous hurdles, privatization has
helped in strengthening the professional
bodies that regulate the educational
institutions. These professional bodies have a
long way to go but the progress so far seems
satisfactory. The Nepal Medical Council,
Nepal Health Professional Council, Nepal
Nursing Council and Nepal Pharmaceutical
Councils are all trying to build their capacities
and strengthen their regulatory mechanisms. The Nepal Medical Council with its licensing examination system is ahead of others. The others are expected to follow. However, ministries of health and education as well as the universities have a responsibility to recognize the role of such bodies, work closely with them and support their efforts.

Privatization and Quality of Health Professionals’ Education

In the absence of a systematic, scientific study it is difficult to comment on the quality of health professionals coming out of private institutions. However, certain issues relating to training are the cause of worry. These are:

1. Entry criteria: All the public, government-funded institutions insist on a basic minimum standard of academic qualification and entrance examination for admission into their programmes. There is no uniformity regarding this issue among private providers.

2. Availability of trained teachers: There is keen competition among private providers to attract trained teachers. Most of these institutions are manned by retired teachers who are unlikely to have enough energy and enthusiasm for new things. These teachers also tend to move from one institute to another at short intervals. This can definitely affect the quality of educational programmes.

3. Competition for field training: There is a tendency to use the same hospital or health facility by a large number of training institutions, thereby limiting the learning resources available to individual students.

4. Experience of administrators and leaders: Quite a few private institutions are run by people who are retired bureaucrats and businessmen with limited or no experience of running an academic institution. This is reflected in their priority-setting for the development of an institution and their commitment to the quality of the programme.

Dilemma: How many more and what next?

Despite the expansion, there still are groups interested in starting new medical colleges, nursing schools and paramedical training institutions. How many more can the system absorb? Are these institutions being seen only as lucrative investments by businessmen who see no other opportunity to invest their money? How many of the promoters are experienced in running educational programmes related to peoples’ health? These are some of the concerns of the stakeholders in the field.

A comprehensive and critical review of the current development has become absolutely essential. Such a review should be carried out by the National Planning Commission in collaboration with ministries of health and education, the University Grants Commission, Council for Technical Education and Vocational Training, and universities and their relevant institutions. The review should look into all the issues raised here and try to find relevant answers. Such an exercise will help the government agencies take informed decisions regarding the number and type of private or public health training institutions in the future. Till such a review takes place, no further schools should be allowed to come up.

A continuous dialogue between and among the different stakeholders in order to take necessary steps to strengthen the training
institutions is essential. Instead of all institutions doing everything, a division of responsibilities seems necessary. Instead of everyone trying for only economically viable and profitable programmes, there should be a consensus among the institutions about the courses – which course should be run by which institute.

Another important step would be to strengthen professional councils. These councils can further implement a system of accreditation of training institutions and also of conducting licensing examination of a person wanting to take up the profession. A general consensus is essential in this regard.

Conclusions and Recommendations

The progress achieved by the country in the field of training of health professionals is impressive. This development has helped retain a large number of students who used to seek expensive training opportunities in foreign countries, in the country. However, training quality, competence of the graduates from new institutions, and ability of the health care system (both private and public), have not been studied systematically. Rampant establishment of new schools is likely to harm the existing institutions when the number of teachers and training sites are limited. Attrition of faculty from public institutions is seen as a distinct possibility. It is necessary to make a coordinated effort to assess the impact of private initiatives and investment on the training of health professionals. Such an exercise should involve the universities, the Council for Technical Education and Vocational Training under the Ministry of Education, the Health Ministry and the National Planning Commission. This will help policy-makers to make informed decisions regarding the future course of action.

References


2. School of Medical Sciences, Kathmandu University: Report on Present Status of Medical Education in Nepal: Need for the Twenty-first Century, January 2006, Kathmandu University, Kathmandu, Nepal.

Human Resources for Primary Health Care in the South-East Asia Region: Categories and Job Descriptions

Pak Tong Chol*

Introduction

In 1978, the Alma-Ata Conference formulated the primary health care (PHC) strategy to achieve “Health for All by the year 2000” on a global basis. The Alma-Ata Declaration defined PHC as: “Essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation; and at a cost that the community and country can afford to maintain at every stage of their development, in the spirit of self-reliance and self-determination”.

In its broadest sense, essential health care may refer to all aspects of interventions or concerns that are necessary or indispensable in the process of ensuring people’s well-being (health) and development. PHC, the first contact between individual and the health care system, can also be referred to as basic or fundamental care. It includes at least eight elements, namely: (1) Food and nutrition; (2) Safe water and sanitation; (3) Immunization; (4) Health education; (5) Maternal and child health including family planning; (6) Prevention and control of local endemic diseases; (7) appropriate medical care and injuries, and (8) Provision of essential drugs. Besides the eight elements, functional aspects such as promotion of mental health, integrated surveillance of incidence and risk and effective referral process are becoming important areas to be considered in PHC. PHC has been incorporated into the national health policy and strategy in all countries of the South-East Asia (SEA) Region.

Health services are essentially labour-intensive. Therefore, human resources constitute their most critical component utilizing 60%-70% of the total budget. It is generally agreed that appropriately-trained human resources in the right quantity in both the public and private sectors, and their optimal use are the key to the development, improvement and efficient functioning of comprehensive health systems. Therefore, for effective primary health care, human resources should be of adequate quantity, appropriate in category and be given clear scope of work.

The category of health workers will vary by country and by community, according to the needs and available resources. They may include people with limited education who have been given elementary training in health care like “barefoot doctors and traditional practitioners, and trained personnel, such as medical assistants, practical and professional nurses, midwives, feldschers as well as general medical practitioners.

Despite some improvement in the development of human resources for health in the Region, both imbalance as well as the lack of relevance of health personnel continue to exist in Member States. The three main issues regarding human resources for health are: (i) the numerical and distributional imbalance of human resources that are not only wasteful but contribute to poor coverage of health services in Member countries; (ii) inadequate training and technical skills of

* Short-term Professional (Education and Training Support), WHO, Regional Office for South-East Asia
health personnel that impede the effective delivery of health care, and (iii) the inefficient skills-mix of health personnel, often coupled with poor personnel management, nonexistent career structures, inadequate staff supervision, lack of support, poor working environment and lack of opportunities for personal development, all of which lead to inefficient delivery of health care.

The problem of human resources for PHC in the SEA Region is critical due to: the shortage and lack of qualified health workers; the need for health care service reform, and the high demands on health services from all groups of the population. This has led to an inadequate coverage of health care services. Therefore in order to improve the situation of human resources for PHC, it is important to find out what category of health workers are working in PHC, what are their numbers and what do they do.

This study attempts to identify the available categories and the number of PHC workers in Member countries of the SEA Region, and to analyse the job descriptions of health workers based on PHC’s core elements. It is expected that this study will enable health administrators to have a better understanding of the position of PHC workers in terms of category and job descriptions so that they may take further action to improve their situation.

**Methodology**

This is a descriptive study. Data on PHC were obtained from literature search via PUBMED, MEDLINE and related documents. Data on human resources for PHC were collected from country offices of WHO, followed by telephonic interviews and e-mail communication with country focal points for follow-up and clarification. Data were analysed by categories, numbers and contents of job descriptions.

---

Health Problems in the SEA Region

Notwithstanding the improvement made recently made in most countries in the Region, many people are still dying or are being rendered disabled due to communicable and non-communicable diseases, including emerging and reemerging health problems. Of which some can be prevented if the health workers carry out the functions of PHC properly. The situation with regard to health problems can be described as follows:

**Communicable diseases** cause a large number of deaths and disability in the Region. Each year 750 000 adults die of TB and 250 000 children die of measles. More than six million people are living with HIV/AIDS and 250 million are at risk of severe form of malaria. DHF, Nipah virus and the new strain of cholera are spreading to new areas, while the age-old diseases like leprosy, kala-azar and lymphatic filariasis continue to cause considerable suffering and psychosocial disruption. In addition, SARS and avian influenza have recently emerged as a threat to health security across countries.

**Noncommunicable diseases (NCDs)** account for 44% of the disease burden and 51% of deaths in the Region. Four major NCDs, namely cardiovascular diseases, diabetes, chronic pulmonary diseases and cancer are among the dominant causes of mortality and morbidity. Tobacco kills an estimated one million people every year in the Region. More than a quarter of deaths occurring worldwide due to injuries and violence are from the SEA Region. Mental health activities in most countries of the Region are still concentrated on hospital-based psychiatry and neurology. The challenge is to guard against the tendency to adopt a disease-based psychiatric model for mental health services in the community, rather than a broad-based view of mental well-being.

**Maternal and child health:** It is estimated that a third of all maternal and
under-five deaths in the world still occur within the Region.

The rate of under-nutrition in children (30%–50%), adolescents and women is high in the Region, while over-nutrition resulting in obesity and chronic diseases is also increasing gradually. Micronutrient deficiencies such as iodine deficiency disorders (IDD), iron-deficiency anaemia and vitamin A deficiency, although decreasing, are still public health problems.

**Environment and sanitation:** Of the Region’s population, 16% lack access to safe drinking water which is a basic necessity of life. Millions of people living in Bangladesh, India, and Nepal are still exposed to drinking water contaminated by excessive arsenic.

**Emergency preparedness and response** is a cross-cutting issue for countries in the Region. Natural hazards, human-generated emergencies, and complex crises continue to affect countries and people. The status of emergency preparedness and the capacity to respond to crises vary from country to country.

**Access to essential medicines:** Forty-eight per cent population throughout the SEA Region are estimated to have regular access to essential medicines, as compared to 70% of the world’s population.

In addition, rapid population growth, increasing elderly population, unplanned urbanization, numerical shortfall and poor qualifications of health workers are posing additional problems for effective delivery of PHC services.

### Category and Number of Health Workers for PHC

The category of health workers for PHC in the Region varies from country to country. Table 1 shows the categories of PHC workers currently being used in countries of the Region.

The range of available numbers of categories for PHC workers varies from 18 categories in Bangladesh to three-four categories in Bhutan, DPR Korea and Thailand. In the case of some countries that have stationed many categories of PHC workers the health indicators such as under-five mortality, maternal mortality rate, and infant mortality rate, etc. are higher than in countries with smaller number of categories of PHC workers.

Numerically around 1 295 500 health workers across the Region are involved in implementation of PHC activities and programmes. The number of health workers for PHC varies from 500 in Timor-Leste to 264 368 persons in India. (See Table 1). The ratio of health workers for PHC services to population varies from 0.3 (India and Myanmar) to 2.5 per 1000 populations (Maldives).

**Analysis of Job Descriptions:**

**Based on PHC Core Activities**

In reviewing the category of health workers under 11 PHC core activities, it is shown that most of these activities (defined in the Alma-Ata Declaration, 1978) have been covered by PHC workers, except the promotion of mental health as shown in Table 2.

As shown in Table 2 the coverage of core activities by PHC workers is different from activity to activity and from country to country. Most countries have concentrated on some activities such as immunization, health education, maternal and child health including family planning, prevention and control of endemic diseases, and appropriate medical care. Other activities like food and nutrition, safe water and sanitation, provision of essential drugs and surveillance of incidence and risk, and promotion of mental health have comparatively been allotted fewer categories of staff. Furthermore, promotion of mental health is not stated as a duty under PHC in most countries of the Region.
The work, based on job description, can be fairly distributed so that there is no ‘overwork’ or ‘underwork’, but all team members carry equal workload. All Member States of the SEA Region have developed job descriptions or summary of duties for PHC workers for organizing the workload in a country setting. The current job descriptions and summary of duties stated to PHC workers are analysed based on the PHC needs.

1. A job description should be given to each category of health workers, in order that job holders can have a clear understanding of what they must do what they are expected to achieve. Most senior-level PHC workers such as the Medical Officer, Health Assistant and Health Inspector were provided with formal job descriptions, while junior-level PHC workers in most countries were given a summary of duties which provided a broad outline of work.

2. People and roles change, and job descriptions should be reviewed and revised regularly. Job descriptions for PHC workers have not been updated regularly in most countries of the SEA Region. The current job descriptions for PHC workers in India were developed in 1991, in Bangladesh around 1993.

---

**Table 1. Categories of PHC workers and their numbers**

<table>
<thead>
<tr>
<th></th>
<th>BAN</th>
<th>BHU</th>
<th>DPRK</th>
<th>IND</th>
<th>INO</th>
<th>MAV</th>
<th>MMR</th>
<th>NEP</th>
<th>SRL</th>
<th>THA</th>
<th>TL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>UH/FPO</td>
<td>AH</td>
<td>HD</td>
<td>MO</td>
<td>HPO</td>
<td>SMO</td>
<td>THA</td>
<td>MO</td>
<td>DDHS</td>
<td>TN</td>
<td>NS</td>
</tr>
<tr>
<td>2</td>
<td>RMO</td>
<td>ANM</td>
<td>NS</td>
<td>BEE</td>
<td>MO</td>
<td>MO</td>
<td>THN</td>
<td>MCHW</td>
<td>SPHI</td>
<td>RN</td>
<td>MW</td>
</tr>
<tr>
<td>3</td>
<td>CT</td>
<td>BHW</td>
<td>MW</td>
<td>LHV</td>
<td>NS</td>
<td>SN</td>
<td>HA-1</td>
<td>VHW</td>
<td>PHI</td>
<td>PHO</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>DS</td>
<td>HAM</td>
<td>MW</td>
<td>CHS</td>
<td>HA-2</td>
<td>AHW</td>
<td>HNS</td>
<td>VHV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>MO</td>
<td>HWM</td>
<td>ST</td>
<td>CHW</td>
<td>PHS-1</td>
<td>HA</td>
<td>SPHM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>SI</td>
<td>HWF</td>
<td>HECDO</td>
<td>NA</td>
<td>PHS-2</td>
<td>SN</td>
<td>PHM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>HI</td>
<td>NT</td>
<td>LT</td>
<td>LHV</td>
<td>ANM</td>
<td>HE0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>AHI</td>
<td>DT</td>
<td>LAT</td>
<td>MW</td>
<td>FCHV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>HA</td>
<td>DN</td>
<td>FHW</td>
<td>TBA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>UFPO</td>
<td>CDCO</td>
<td>TBA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>SFWV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>FWV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>FPI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>FWA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>NS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>SSN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHC worker*</td>
<td>0.5</td>
<td>0.7</td>
<td>1.9</td>
<td>0.3</td>
<td>0.5</td>
<td>2.5a</td>
<td>3.7a</td>
<td>0.3</td>
<td>0.8a</td>
<td>3.4a</td>
<td>0.4</td>
</tr>
<tr>
<td>Available number</td>
<td>72045</td>
<td>513</td>
<td>38396</td>
<td>264368</td>
<td>105570</td>
<td>1185</td>
<td>14960</td>
<td>83835</td>
<td>6842</td>
<td>707838</td>
<td>500</td>
</tr>
</tbody>
</table>

*: The estimated PHC workers per 1000 population  
*: estimated at inclusion of health volunteers or TBA  
*: estimated at exclusion of health volunteers or TBA  
Source: Country reports

3. The duties for PHC workers in some countries were not specific enough to achieve the target of particular activities. For instance, seven out of 18 categories of health workers in Bangladesh were given responsibility for health education. The job description, however, defined health education activities within the hospital only - inpatient and outpatient - none of the health workers were expected to perform health education activities in the community.

4. Job descriptions should be given independently given to each category of PHC workers in order to avoid any duplication, as well as any misunderstanding among staff. Yet, some countries have developed job descriptions on the basis of groups. In Maldives, for instance, three job descriptions were given to 10 categories of PHC workers – one job description for medical officers and senior medical officers, second job description for health workers, nurses and paramedics, and third job description for Nurse Aid, Family Health Workers and TBA. In some cases, job descriptions created confusion among health workers regarding role and responsibility because of a general description of duties such as “participate in PHC activities in the community” concerning all PHC workers, rather than clearly-defined statements delineating specific functions.

5. The current job descriptions expect health workers to perform mainly activities involving clinical functions. PHC workers are not directed, through the given job descriptions, to carry out their duties based on PHC approaches such as community participation. Health educational activities in most job descriptions, for instance, have not been designed to achieve the objectives of PHC. The activities are limited to transmitting the knowledge about a specific disease and/or a message regarding a particular health programme. The lack of a suitable job description has resulted in many PHC workers being inappropriately placed in the front line of the workforce. For instance, there were 10 categories of PHC workers under the Health Division of Bangladesh. Among those 10, only one health assistant was assigned to perform practical activities in the community, while most of the duties for the other nine categories of PHC workers were limited mainly to hospital work.

6. In addition, further training need, modality for performance, performance appraisal and evaluation of job holders are required to be included in the job descriptions. These are important components of a job description, and are needed to maintain improvement in service qualification. Unfortunately, this is not the case in many countries.

7. Besides communicable and non-communicable diseases, all countries of the WHO SEA Region are facing problems from poor environment and sanitation, unplanned urbanization, socioeconomic transition, re-emerging and emerging diseases such as SARS, avian flu, and natural disasters like earthquake, tsunami and floods. The health situation is in a flux and new challenges are arising. On the contrary, the job descriptions for PHC workers have not been updated for three – 15 years to respond to those needs and challenges in health. Surprisingly, the job descriptions in some countries do
not mention even HIV/AIDS control. Injuries and violence are increasing in most countries because of urbanization and socio-economic change but the PHC workers are still being assigned to work according to outdated job descriptions developed three-15 years ago. Infact, some workers are working even without a job description.

Table 2. Coverage of PHC core activities

<table>
<thead>
<tr>
<th>Core activities</th>
<th>BAN</th>
<th>BHU</th>
<th>DPRK</th>
<th>IND</th>
<th>INO</th>
<th>MAV</th>
<th>MMR</th>
<th>NEP</th>
<th>SRL</th>
<th>THA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food/nutrition</td>
<td>SI</td>
<td>AHI</td>
<td>BHW</td>
<td>HD</td>
<td>LHV</td>
<td>ANM</td>
<td>HAM</td>
<td>SN</td>
<td>TDH</td>
<td>PHO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe water/sanitation</td>
<td>SI</td>
<td>ANM</td>
<td>HD, NS</td>
<td>HAM</td>
<td>HAM</td>
<td>WWM</td>
<td>ST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunization</td>
<td>HA</td>
<td>FWA</td>
<td>ANM</td>
<td>BHW</td>
<td>HD</td>
<td>NS</td>
<td>MW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health education</td>
<td>MO</td>
<td>SI, HI</td>
<td>AHI</td>
<td>HA</td>
<td>ANM</td>
<td>BHW</td>
<td>HD</td>
<td>NS</td>
<td>MW</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCH/FP</td>
<td>AHI</td>
<td>HA</td>
<td>ANM</td>
<td>BHW</td>
<td>MW</td>
<td>NS</td>
<td>MO</td>
<td>LHV</td>
<td>ANM</td>
<td>HAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention/control of endemic diseases</td>
<td>MO</td>
<td>TB</td>
<td>HA</td>
<td>BHW</td>
<td>HD</td>
<td>NS</td>
<td>MO</td>
<td>LHV</td>
<td>ANM</td>
<td>HAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

70  Regional Health Forum – Volume 10, Number 1, 2006
### Core activities

<table>
<thead>
<tr>
<th>BAN</th>
<th>BHU</th>
<th>DPRK</th>
<th>IND</th>
<th>INO</th>
<th>MAV</th>
<th>MMR</th>
<th>NEP</th>
<th>SRL</th>
<th>THA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHFPO</td>
<td>RMO, CT, MO, Mch.-5yrs FWV-5yrs</td>
<td>HA ANM BHW</td>
<td>HD NS</td>
<td>MO LHV HAM ANM HWM</td>
<td>MO NS DT DN</td>
<td>SMO MO SN CHW LT</td>
<td>THA</td>
<td>THN HA-2 HA-1 PHS-1 PHS-2 LHV MW</td>
<td>DDHS</td>
</tr>
<tr>
<td>BHW</td>
<td>THN</td>
<td>MO</td>
<td>SRL</td>
<td>DDHS</td>
<td>TN</td>
<td>PHO</td>
<td>VHV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Appropriate medical care of common diseases/injuries
- UHFPO, RMO, CT, MO, Mch.-5yrs FWV-5yrs
- HA ANM BHW
- HD NS
- MO LHV HAM ANM HWM
- MO NS DT DN
- SMO MO SN CHW LT
- THA
- THN HA-2 HA-1 PHS-1 PHS-2 LHV MW
- DDHS
- TN
- PHO
- VHV

#### Provision of essential drugs
- AHI
- NS
- MO LHV HAM
- HECDO (DHF)
- SMO MO
- THA THN HA-2 HA-1 PHS-1 PHS-2 LHV MW
- AHW
- TN
- PHO
- VHV

#### Promotion of mental health
- THA THN HA-2 HA-1 PHS-1 PHS-2 LHV MW
- DDHS
- TN
- PHO
- VHV

#### Surveillance of incidence/risk
- SI
- HA ANM BHW
- HD NS
- MO HAM LHV
- SMO MO
- THA THN HA-2 HA-1 PHS-1 PHS-2 LHV MW
- DDHS SPHI PHI
- TN
- PHO
- VHV

**Note:** See list of acronyms in Annex

Source: Country reports

---

### Limitations of the study

This study was based on the readily available information collected from country focal points, and was limited to only a documentary analysis of job descriptions for PHC workers. Provision of PHC services by health workers in the private sector was not considered. The other limitations were: the actual work carried out could have been different from the activities mentioned in the outdated job descriptions; the study methods did not allow for a detailed observation of the workload in terms of its extent and quality; no assessment of private work done by public servants was possible; there was no indication of in-service training or continuing professional development, etc. It was also unfortunate that the study did not attempt to look at the maldistribution of the PHC workforce and the inappropriate focus of delivery of most PHC services i.e. the hospital.

### Recommendations

It often happens that certain tasks are not done because nobody wants to accept responsibility. Such shortcomings can be prevented by having a clear job description with specific tasks being assigned to each team member. All categories of PHC workers have to be given a formal job description that
states clearly their duties, in order to avoid confusion between health workers, and prevent the possible gaps in responsibility.

The health situation is changeable. The role of health workers should be adjusted in accordance with the changing situation in health and health systems. However, most countries have provided PHC workers with job descriptions developed several years ago. The countries therefore need to establish a mechanism to systematically review and revise the job descriptions in accordance with the changing health status and health needs.

Increasing the number of health workers or categories of PHC workers are not the only solution to improve the health care service at the community level. It is important to consider proper distribution of PHC workers and rational organization of workload by providing a sound job description, as well as improvement of PHC worker’s competence through appropriate in-service training. It is desirable to limit the number of categories of PHC workers in countries that have too many such categories, and possibly redistribute them, if surplus health workers are available, to the areas in need. This is particularly important in terms of cost-effective and efficient management, with consideration of the fact that 60%–70% of the total budget is utilized for human resources. Community-based activities should be increased in the job descriptions for PHC workers in order to move some workers to the field, communities and homes, so that more staff can be placed in the front line, and people can receive good PHC services.

Further training need and performance appraisal or evaluation for job holders should be indicated in the job descriptions. This would essentially ensure continuation of improvement in health service quality. PHC workers should be trained on community-based approaches including health promotion, community empowerment and communication skills, either through pre-service education or in-service training.

The curricula and training period for PHC workers should be reviewed. There should be a national standard of education for each category of health workers in terms of theoretical courses, practice experience, and length of study. PHC principles; PHC core activities; community approaches; emergency and disaster preparedness; health promotion; and mental health promotion, are some of the courses that should be included in all programmes. The duration of education required for each category would depend on the objectives of a particular programme.

Conclusion

In the SEA Region, the categories of health workers for PHC activities vary by country. In some countries a few categories do the same work. There are job descriptions or summary of duties for all categories. However, there are some problems in the job descriptions including lack of clarity of work, and overlapping duties or outdated functions. A comprehensive review of the category of health workers, regular revision of job descriptions and reform in education and training programmes can improve the situation of human resources for health for primary health care in the Region.

References

Annex

List of Acronyms

Bangladesh

UH/FPO: Upazila Health & Family Planning Officer, RMO: Resident Medical Officer,
DS: Dental Surgeon,
MO: Medical Officer, SI: Sanitary Inspector, HI: Health Inspector,
AHI: Assistant Health Inspector,
HA: Health Assistant, UFP: Upazila Family Planning Officer, SFVV: Senior Family Welfare Visitor,
FWV: Family Welfare Visitor, MO: Medical Officer, FPI: Family Planning Inspector,
FPA: Family Welfare Assistant, NS: Nursing Supervisor, SSN: Senior Staff Nurse,
MA: Medical Assistant

Bhutan

HA: Health Assistant, ANM: Auxiliary Nurse and Midwife, BHW: Basic Health Worker

DPR Korea

HD: Household Doctor, NS: Nurse, MW: Midwives

India

MO: Medical Officer, BEE: Block Extension Educator, HA/LHV: Health Assistant/Lady Health
Visitor, HA/Male: Health Assistant Male, HWF/ANM: Health Worker Female/ Auxiliary Nurse
Midwives, HWM: Health Worker Male

Indonesia

HPO: Health Promotion Officer, MO: Medical Officer, NS: Nurse, MW: Midwife, ST: Sanitarian,
HECDO: Health Environment And Communicable Disease Control, NT: Nutritionist, DT: Dentist,
DN: Dental Nurse, CDCO: Communicable Disease Control Officer

Maldives

SMO: Senior Medical Officer, SN: Staff Nurse, CHS: Community Health Supervisor,
CHW: Community Health Worker, NA: Nurse Aid, LT: Laboratory Technician,
LAT: Lab. Assistant Trainee, FHW: Family Health Worker, TBA: Traditional Birth Attendant

Myanmar

THA: Township Health Assistant, THN: Township Health Nurse, HA-1: Health Assistant-1,
HA-2: Health Assistant-2, PHS-1: Public Health Supervisor-1,
PHS-2: Public Health Supervisor-2, LHV: Lady Health Visitor MW: Midwives
Nepal
MCHW: Maternal Child Health Worker, VHW: Village Health Worker,
AHW: Assistant Health Worker, HA: Assistant Health Worker, SN: Senior Nurse,
FCHV: Female Community Health Visitor. TBA: Traditional Birth Attendant.

Sri Lanka
DDHS: Divisional Director of Health Services, SPHI: Supervising Public Health Inspector,
PHI: Public Health Inspector, PHNS: Public Health Nursing Sister,
SPHM: Supervising Public Health Midwives, PHM: Public Health Midwives,
HEO: Health Education Officer.

Thailand
TN: Technical Nurse, RN: Registered Nurse, PHO: Public Health Officer,
VHV: Village Health Volunteer.
Regional Health Forum – Volume 10, Number 1, 2006

Hasbullah Thabrany*

Human Resources in Decentralized Health Systems in Indonesia: Challenges for Equity

Introduction

The beginning of the New Millennium has been marked by massive plans, discussions, and reforms of many aspects of human life. Undoubtedly, the New Millennium will pave the way for a globalized world, with virtually no borders across countries. Governments, politicians, businessmen, and health policy makers alike, are looking for the consequences of the new paradigm of the global world. Commercial activities across countries are being rapidly liberalized. The democratization process has penetrated countries that were previously under authoritarian regimes. Privatization of public services by reducing the government role in trade and services is being widely and rapidly implemented. While some are concerned at fairness in trade and services, others are concerned at equity and impoverishment of people, especially in the least developed, poor and less competitive countries. There is a notion that centralized governments tend not to address people’s needs, and decentralization, which would result in smaller government units is seen as a better solution for the welfare and prosperity of the people.

The Asian economic crisis in the late 1990s that hit Indonesia hard forced the country to undertake many radical reforms in almost all aspects of governance. The demand for decentralized government was inevitable. In 2001, despite recommendations being made to devolve the governance gradually, the decentralization of government functions, from central to local government was started. The health sector is one of the service sectors, that has devolved its functions to the city, municipalities and district governments. Bossert et al. (2003)\(^1\) reported that decentralization in Colombia and Chile improved equity and utilization of health services through better and more equitable resource allocation to local governments. The decentralization effort in Indonesia was aimed at improving the decision-making process to ensure more appropriate decisions and better policies to tackle local health problems. Many policymakers in Indonesia had expressed concern over the worsening of the health situation under the centralized health sector due to high discrepancies of financial and human resources for health (HRH) across cities or districts. Whether this expectation is supported by evidence will need to be proved in the coming years. This paper addresses some concerns and provides policy options in an attempt to address problems arising from inexorable decentralized health services in Indonesia.

Essential Public Health Services

The commitment to decentralization of health systems in Indonesia had started long before the economic crisis in 1997. The Ministry of Health (MoH) in its national policy on "Healthy Indonesia 2010" developed in the mid-1990s had already envisaged decentralization as a way for better management of the paradigm shift for health development.\(^2\) When the Indonesian Government enacted a legislation on

* Faculty of Public Health, University of Indonesia
Regional autonomy in 2002 (Act no 22/2002), many policy makers were concerned with inequity in access to essential public health services, such as maternal and child health, immunization, health promotion, disease surveillance, disease prevention and control including response to epidemics. In addition, there were concerns that the existing huge gaps in the distribution of human and financial resources could widen further across provinces and across cities and districts within a province.

While the decentralized health sector in many developed countries shows relatively small disparities across regions, the prevalence of disparities in Indonesia before and at the beginning of the decentralization process was very extensive. In Ende, a small district in East Nusa Tenggara, the bupati (chief of district administration) reported that only six out of 28 health centres in the district had a doctor each.

Till the late 1990s, the Ministry of Health, as part of its central responsibility, used to deploy newly appointed doctors under contract to remote districts as a mandatory service. Under the new decentralized arrangement, it is the policy and authority of local governments to employ a medical officer. The differences in fiscal capacity of local governments to finance public health services and to hire public health professionals had resulted in an unbalanced distribution of human resources.

A study by Ascobat Gani (2005) indicated that in selected underdeveloped cities/districts, the distribution of human resources varied with the differences among them from one- to five-fold as shown in Table 1. The ratio of nurses and midwives, who are essential to ensure personal health care for reduction of maternal and child morbidity and mortality, also differed by one- to four-folds. Accordingly, the ratio of public health professionals such as health analysts and sanitarians differed significantly.

<table>
<thead>
<tr>
<th>Category of human resources</th>
<th>City/Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kotacane</td>
</tr>
<tr>
<td>M.D. General practitioners</td>
<td>7.2</td>
</tr>
<tr>
<td>Dentists</td>
<td>1.2</td>
</tr>
<tr>
<td>Midwives</td>
<td>112.7</td>
</tr>
<tr>
<td>Nurses</td>
<td>54.3</td>
</tr>
<tr>
<td>Assistant pharmacists</td>
<td>4.2</td>
</tr>
<tr>
<td>Health analysts</td>
<td>–</td>
</tr>
<tr>
<td>Sanitarians</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Data from the Ministry of Health confirm that the number and distribution of public health professionals (MoH, 2006) remains much below what is needed for 220 million people. Overall, for about 220 million people there are only 13 583 health
promoters and sanitarians and there are only 7,059 public health administrators. It was estimated that one health promoter must work for more than 16,000 people and one public health worker must handle 28,000 people. Maldistribution of specialists was even worse compared across regions.5

The threats to health especially in poor cities or districts are even higher due to the lack of understanding and awareness of new leadership of local governments, on the benefits of and funding for public health services. To ensure that local governments undertake certain public health measures, the Ministry of Health issued a decree pertaining to 26 types of minimum/essential public health services that the local governments must perform, including 54 indicators to be achieved.6 The complete list and indicators of the minimum services is given in Annex 2. Of the 26 services, 18 are related to public health such as maternal and child health, promotion and prevention of prevalent diseases, school health and disease surveillance.

Devolving authority and obligation of health functions to the local governments poses threats to public health. Since the local government, including the local parliament, is an elected body, the chances of elected officials not having an understanding nor commitment to public health are greater than in the previous ‘less democratic’ government. Not only the health sector, but also other sectors responsible for basic services such as education may also be at risk of lack of local government funding, jeopardizing the future development of the local areas. In order to ensure that public programmes implemented under decentralized governments are equitable, accessible and affordable, the central (federal) government has set standards for guiding the local administration with minimum obligatory functions. There was no guarantee that local governments would meet them. The new law on regional autonomy (the Act 32/2004) has rectified some problems which existed under the previous law.

In principle, the Decree of MoH will ensure that the future generations will face fewer health hazards. Many experts, however, felt that the number and types of minimum services were too large and unclear which could lead to different sets of interpretation and thus, local governments may implement them differently. Some local governments may have difficulties in focusing certain essential functions with limited resources (more in financial than human resources).

Challenges for Decentralization

While the Ministry of Health has provided guidelines to local administrations to meet the 26 minimum obligatory services, which are more of public health services in nature, many local governments in reality are more interested in curative health care, such as constructing new or refurbishing existing hospitals, rather than strengthening the public health infrastructure. In addition, local governments are concerned over the shortage of medical officers (general practitioners and specialists) instead of closing the gaps for deployment of public health professionals. Many local governments are willing to pay a contracted amount for medical education at the University of Indonesia or even with private medical faculties, by paying large sums, in order to ensure that the respective local areas will have a medical doctor in the future.

Many policy-makers believe that the preference to medical rather than public health is temporary in nature. A strong commitment at the level of the Minister of Health above is needed to ensure the availability and accessibility to at least 26 minimum public health services. Without such strong leadership, the renewed vision of ‘Healthy Indonesia by 2025’, recently set as a long-term vision of public health by the Ministry of Health, would only be on paper. The policy-makers and decision-makers from the Ministry of Health have to be aware of the risks of skewing health development to more
personal health care rather than public health services.

Public health professionals from within and outside the Ministry of Health must also be aware that, in general, people (including elected officials) at all levels in Indonesia have a somewhat fixed perception that health is a medical matter. It is plausible that other professionals often complain on the appointment of medical doctors, more often specialists, as ministers of health. It is simply a common image embedded among politicians that health is analogous to medical discipline. Changing this perception would require massive efforts, funds and energy. It is the duty of public health advocates to convince politicians, and the public at large, that essential public health services as promotive and preventive measures are more beneficial, or at least have equivalent importance, to medical services.

If the minimum essential health services are provided to all 220 million citizens of Indonesia, one big question is how to mobilize the resources required for such enormous tasks. The Ministry of Health, while adopting the minimum mandatory service policy, also developed a human resources plan as listed in Annex 1. There seem to be many gaps in fulfilling the production and deployment of relevant human resources. It would take decades to fill in the gaps for public health professionals. It is no wonder then, how institutions of Public Health Education (PHE) have mushroomed: more than 45 PHE institutions across Indonesia have been established within the last five years. Similarly, establishment of new medical and nursing schools is accelerating at the same pace. It is very likely that some institution planners simply looked at the MOH prediction on the needs for human resources for health (HRH). The prediction seemed to be simplified by setting a goal of ratio of one HRH for 100,000 population without considering other aspects such as overall resource requirement, local government fiscal capacity and the need/demand for services. Taking a so-called standard ratio from other developed countries or an average of ratios in the Region may be not appropriate for Indonesia due to incomparability of resources and service demand. For example, a ratio of one family physician for 2500 people or 40 family physicians for 100,000 people in countries like UK and the Netherlands will not be applicable to Indonesia. The demand for family physician services in those countries is high due to the availability of health insurance through a formal health insurance mechanism in the Netherlands or the state’s role as an insurer under the National Health Service system in UK.

The risk of inappropriate prediction could lead to the over-production of human resources and limited absorption or limited demand due to low economic status or lack of insurance. Although, under present conditions, the shortage is very obvious, any prediction of the needs for human resources for the coming years should take into account the absorption capacity of the central and local governments, the economic growth, the private sector demand for such human resources, and the employment opportunities in general. Over-production of human resources may result in a high unemployment rate. In the medical field, over-supply of physicians could increase the risk of unnecessary medical costs due to supplier-induced demand or the demand-creation phenomena. The risk of an increased moral hazard in terms of over-utilization due to over-supply of medical, nurse personnel, and health facilities will mean a heavy economic burden. Experience from the developed countries, such as the United States and Germany, where there is an over-supply of medical and health facilities and professionals, besides other factors such as ageing, medical technology, and inefficient health systems, shows that this clearly increases health care costs.
Capacity of Local Governments

Decentralized health services in Indonesia seem to have reached a point of no return. In line with the global trend of democratization and privatization, the role of the central government could be limited to regulatory, supervisory, and partial financing. The capacity of local governments to ensure absorption and creation of private sector environments to cater to appropriate human resources should be thoroughly examined. Creating a market for medical and nursing professionals is far easier than creating a market for public health professionals. The collective nature of public health services and the externality of public health services will not attract the private sector to step in for investment. No direct and immediate financial benefits will be produced for them by the work of public health workforce. Therefore, at least for a few decades, the market for public health workforce will be dependent heavily on the public sector. The public sector in Indonesia will be dominated by more than 450 cities and municipalities.

To date, it is very difficult to draw a map of the capacity of local governments. One general observation is the lack of fiscal capacity generated by the regions and the low priority given to public health. More than three quarters of local governments in Indonesia are fiscally dependent on the general allocation budget (Dana Alokasi Umum), allocated by the central government. As a residual effect of centralized government of the past, when good people in the municipalities and provinces were shifted to serve in the central offices, the capacity of human resources at the local governments is very limited. In such a situation, even if the central government might channel quite a large sum of funds, there is little chance that these funds will be given to the health sector. Even if the health sector receives an adequate budget, it is very likely that the funds will be used for capital items such as purchasing fancy medical equipment, constructing new or extending the existing facilities, rather than improving the human resource capacity. The present political environment seems promising for a higher priority being given to health. Health professionals need to work hard to put the health sector in the mainstream of overall development in Indonesia.

For governments and individuals alike, economic incentives resulting from an activity remain the main driving force. In the developed countries, the separation between the public and private sectors is clear. In Indonesia, it is often very difficult to do so. Historically, the low-paid civil servants were the driving force for public agencies prioritizing in capital investment, such as construction or acquisition of equipment, rather than investing in human resources. Apportioning of commissions or under-the-table payments are prevalent, but difficult to prove. Under the circumstances, it is very difficult to expect that public health functions like routine disease surveillance, monitoring environment risk factors or malnutrition cases might be conducted regularly as expected unless there is some degree of moral obligation or motivation. Therefore, it is not surprising that communicable diseases that were supposed to be eliminated are reemerging. Polio and leprosy cases are often reported on national television or in newspapers. Indonesia accounts for the highest number of deaths due to avian influenza. This is partly attributable to the weak public health measures.

There is a shortage of health professionals including physicians and nurses in many less developed municipalities. There is simply no economic interest to work in these regions where there is no moral obligation or any economic incentive or gain. In the past, when compulsory service by new medical graduates, dentists, pharmacists and other health professionals was enforced by the central government, there was no problem in equitable deployment of health personnel to the poor and remote districts.
Under the new decentralized arrangement, the local governments have to find a way to recruit their own health professionals and it is sometimes difficult for them to do so for obvious reasons. The salary of medical doctors in the public sector, whether in big cities or remote rural areas, has remained the same, and thus, health professionals are more interested to work in big cities. There are more opportunities in urban areas to have more income, either through private practice, engaging in additional jobs, or getting commissions from projects funded by local governments. Unless salary levels in the public sector are reasonable, attracting health professionals to work in poor districts will be difficult. Reforms in public health will depend heavily on the overall reform in the public sector. Such reforms require long debates, a long process, and may take decades. New initiatives and approaches to deploy health professionals in all districts are required.

The Indonesian government, international donors and external agencies are actually aware of the above. Several projects and programmes to improve the capacity of human resources have been initiated through loans or grants from external bilateral agencies and multilateral financial agencies such as the World Bank or the Asian Development Bank. The Indonesian Health Project V implemented in four provinces, using a loan from the World Bank, the District Health System Strengthening Project implemented in nine provinces using a loan/grant from the Asian Development Bank, and the Social Health Insurance project in Central Java funded by GTZ (German Technical Assistance) are among the various health development projects aimed at improving capacity building in a decentralized health system. Under these projects, hundreds and even thousands of civil servants have been recruited and trained for graduate and post-graduate education in public health, nursing or other medical disciplines at various public and private education institutions. For example, at the School of Public Health, University of Indonesia, there are more than 600 students among the total of 3000 pursuing Bachelor, Masters, or Doctoral degrees funded by these projects.

One issue is the quality and the sustainability of professionalism by those who are pursuing higher degrees. Since the career of public servants is linked with acquiring a higher educational qualification, (a Bachelor or Masters degree), many health professionals are pursuing a higher level of education for career development, rather than enhancing professionalism. Another issue is that once they graduate and return to their offices, there is no guarantee that they will be placed in appropriate positions. For example, someone trained in epidemiology may be assigned as a director of a public hospital, and vice versa.

As part of the public system in Indonesia, each position in the health sector has a certain level or rank – whoever has the most appropriate rank will be appointed to chair a division or an office. Thus, educational background or specialty contributes little to the advancement and to the achievement of health of the people. Health professionals are more concerned about their career or income rather than avoiding or reducing health hazards in the community. It is simply a lack of economic incentives generated by the public policy and by the market. The outcome of increasing capacity of human resources may not necessarily improve health outcomes of the people. Other systems or sub-systems must also be in place to ensure that increasing the capacity of HRH will eventually improve the health of the people.

Public Health Law

Except regulations/decrees/rules, Indonesia did not have a public health law as such for many decades. The epidemic and health law
was enacted in 1992. Even where regulations existed, only a few were properly regulated. Only six of 32 government regulations, required by the Health Act of 1992, are adequately regulated. Regulation for human resources for health is one of them. It is not necessary that each article should be further regulated by a government regulation. But, there is lack of adequate regulation to ensure that everyone acquires a healthy life, like the legal basis for government action to respond to a health crisis. The general public and some public service people had questioned the role of the central or local government, who would be responsible for paying compensation for killing birds with possible infection by H5N1 virus. The slow legal development in the health sector is an indication of how little attention is paid by the government. In another case, people perceived that the impact of the Ministry of Health Decree, issued for setting standards for essential public services to be delivered by local governments is very minimal. Some local administrators felt that the health sector is the domain of local governments, and, therefore, the Ministry of Health (central government) has nothing much to do except channeling funds. It is up to the local governments' discretion to use funds to deliver health programmes. Such misunderstanding and misinterpretation of roles and functions of the local and central governments jeopardize the health of the general public. Yet, human resources for health under the decentralized health care systems are not adequately equipped to handle misunderstanding of the roles of the central and local governments in ensuring health services for everybody.

Efforts to develop the legal infrastructure are being made. A new government regulation, authorizing a Minister to regulate and to set minimum service standards was issued in January 2006. The local government must ensure delivery of services and to share – whenever and whatever possible – with other local governments in providing certain public and personal health services. This new regulation is an attempt to provide a more solid basic infrastructure of public services. However, the economic incentives for local governments to undertake certain public health measures or to provide essential health services to the community remain undefined. Accordingly, incentives for HRH to ensure that the new regulation will be effective to deliver essential public health services in Indonesia have yet to be formulated.

Without a clear definition of the role, function, and financing responsibility of the central and local governments to ensure horizontal equity across various fiscal capacities of local governments, the policy on human resources and public health measures will heavily depend on the leadership and inclination of elected officials at local levels. There are a few successful cases where elected officials have strong commitments to public health. Such examples include: the municipal government of Musi Banyu Asin in South Sumatra, municipality of Lebak in Banten, and the municipality of Jembrana in Bali who have good public health and human resource policies to ensure better health for the people. Efforts to educate elected officials and to facilitate their understanding and commitment, such as intercity study tours to share experience with excellent public health infrastructure in and out of the country should be strengthened. International organizations such as WHO and others should play a greater role in educating government officials to motivate them and to get their commitments on public health.

Production Capacity

With the Ministry of Health predicting the large number of HRH needs and with an open education policy for establishment of
undergraduate, graduate and post-graduate educational institutions, many health professionals and even the business community see these as big opportunities for them to exploit. Within the last five years, Indonesia has experienced a massive growth in the education programmes offering undergraduate, graduate and post-graduate programmes in medicine, nursing, and public health and other health-related subjects like health economics, pharmacy, environmental and occupational health. The number of institutions offering bachelor’s degree in public health, nursing and allied health tripled, compared to the previous three decades. The growing number of education institutions in health and allied health sciences is partly attributable to decentralized governments where local governments, especially at the provincial level, see that they too should have medical, nursing, or public health schools. In addition, some public officials contribute to easing licensing of new educational institutions, both public and private. The private sector in Indonesia is increasingly seeing education as a profitable sector. Legally only not-for-profit organizations are allowed to establish educational institutions. In practice, the private sector is willing to invest millions of dollars to capture the high demand for education, including nursing and public health.

This rapid proliferation of health education institutions helps in filling the gaps for the required number of health professionals. The Ministry of Health has estimated that by 2010, the country would need annually about 500 new medical specialists, 7000 family physicians, over 10,000 public health professionals and sanitarians each. The prediction was simply based on the desired population ratios rather than on actual demand by the public and private sectors. Even with conservative estimates, if each public health education programme could produce, on average, 200 bachelors in public health or sanitarians, the required needs of HRH would not be fulfilled by 2010. In addition, even if the institutions could produce adequate numbers, their absorption across regions would not be proportionate to the population. Based on the previous experiences and current data, it was observed that the distribution of health professionals was always skewed to the big and rich urban areas. With weakness or absence of national public health law, through which public service could be enforced, the problem of imbalance of HRH remains unsolved. If the distribution of HRH is left to wide-open market economy systems, there will always be inequity across regions. The market mechanism is simply dominated by economic incentives, and therefore, it would attract HRH from more prosperous regions. While the utility function of individual health personnel may not be merely on economic incentives, evidence shows that economic incentives predominantly drive individuals to urban settings and to move from one area to another or from one office to another. So, the biggest challenge for Indonesia is how to formulate morale and material incentives for HRH in order to deploy them in the remote and in the less-prosperous regions.

Another potential problem is competition among the educational institutions by lowering tuition fees in order to get more students at the expense of quality. If this occurs within the next 5–10 years, Indonesia will have an over-supply of low-quality HRH. With the high prevalence of the degree-conscious culture in Indonesia, especially among parents and youth, this unhealthy competition could jeopardize the professions in the future. There is also the possibility that, in the short run, these institutions will not have enough economic incentives, and that could lead to a slowdown in production. Based on basic economic theory, over-supply of human resources may produce a more efficient
market and lower labour costs. Again, in the health sector – especially in medicine, the more efficient and lower costs will not happen due to asymmetric information of medical services. The market can produce more efficient and higher quality products or services if there is no asymmetric information. Thus, production should be controlled by rigid accreditation to ensure quality of graduates. Presently, in Indonesia the culture of accredited quality education in the medical field is low. In addition, there are some doubts in the centralized accreditation process that could ensure real quality of education. Regional accreditation may be more effective to control quality.

How to move forward and adapt appropriate curricula to cover new public health hazards, risk factors, social determinants, and new technologies, is another concern, keeping in mind the growing number of educational institutions producing health professionals. The education system in Indonesia is moving towards modernization over time to adapt with changing needs and demand for specialization. There is criticism that appropriate curricula for health professionals are not keeping pace with the paradigm shift in health conditions of Indonesia and the world at large. The market for health services is growing faster and thus, is pushing educational institutions to rapidly adapt to the market, often affecting the quality of personal or public health services.

Bringing foreign health professionals to Indonesia is another viable option to meet the shortage of human resources. This option actually faces two difficult issues. Firstly, Indonesia needs to satisfy and accept the quality of competencies of foreign graduates. Since the National Accreditation System or setting Competency Standard has not been implemented yet, there are some doubts that foreign graduates could fulfill the expected quality of services. Therefore, the door for foreign health professionals in medical and nursing services remains closed. Secondly, since the salary level in the public sector in Indonesia is very low, most foreign graduates might be attracted to work in the private sector that provides them with adequate economic incentives. If this room is open, foreign graduates will only add to the increasing health care costs rather than ensuring equity across regions. However, Indonesia needs to look into this matter seriously since the trade liberalization efforts have to be made under WTO/GATS Agreement.

"Vigilant Village for Health" as a Public Health Initiative

To overcome potential problems in ensuring adequate and equitable health services, including public health services, the Ministry of Health in 2005 introduced a new initiative known as "Desa Siaga (Vigilant Village for Health)". Every village is supposed to be deployed with appropriate human resources for health (HRH) to deal with health problems of the community. Simple medical ailments would be handled by local HRH. More serious health problems should be referred to a higher level of health care providers. In addition, potential health hazards will be regularly monitored and tackled. In order to ensure that villages are fully prepared to deal with health hazards and to provide appropriate health care, the MOH is planning to deploy 70,000 appropriate health professionals, mostly consisting of a nurse or a midwife, a sanitarian, and a nutritionist for each village.

Despite weak evidence directly linking the current increase in the reported malnutrition cases after implementing the decentralized health systems, it is understood that there has been a lack of continuous surveillance and promotion of nutrition. The former successful programme like Posyandu (integrated maternal and child care at village
level) is no more implemented. Therefore, sending a nutritionist to every village is expected to ensure early detection and management of malnutrition cases. In addition, a sanitarian trained to assess environmental hazards, along with a simple surveillance skill, will be able to report potential health risks and to take simple actions to prevent an outbreak of communicable disease(s). A nurse or a midwife is expected to professionally handle the improvement of maternal and child health, and to ensure Indonesia meeting the MDGs by reducing maternal and child mortality. In the last three decades, Indonesia has been deploying a young medical doctor on mandatory service to each sub-district comprising 15–30 villages. By deploying the above three key health professionals, the Ministry of Health believes that in the future, infant, child, and maternal mortality could be reduced substantially. In addition, communicable diseases could be controlled more efficiently and effectively. In case medical care is needed, the Ministry of Health, within the framework of the National Social Security Law, could pay the contribution to insure 60 million people (about 30% of the poorest population) via the National Health Insurance Corporation (PT Askes). This national scheme could cover the medical expenses, which, in Indonesia, are not free at point of delivery, and cover even expensive medical procedures such as haemodialysis and cancer treatment.

Conclusions

Indonesia is encountering massive changes in public functions, including the health sector, from centralized to decentralized systems. Since perception and understanding on the nature and the benefits of decentralized health systems, especially personal and public health, policies and programmes, vary widely across regions, competition to get a bigger pie of the government budget has left the health sector relatively under-funded in most regions. This lack of priority has increased the risk of poorer health status of the already chronically under-funded health sector in Indonesia. The Ministry of Health has anticipated such a danger of neglected public health services, undertaking regulation measures such as issuing minimum health care/service functions to be delivered by local governments. In practice, most local governments have difficulties in fulfilling the minimum functions due to lack of financial and human resources. High disparity in fiscal capacity across regions and a severe shortage of good health personnel who have moved to the central government offices, have made the risks of worsening health status inevitable.

In the mean time, the severe shortage and huge gaps between the present and estimated supply of human resources (as measured by conservative population ratios) have been coupled with the sprouting of multiple education institutions throughout the country. The sudden increase in the number of education institutions trying to meet the expected demand poses other threats related to quality and equity of health care across the regions. It is argued that increasing supply of health personnel produced by the rapid increase of educational institutions, coupled with the restricted market option that is dominant in Indonesia, will deepen inequity across regions. In addition, non-existence of comprehensive national public health law may add uncertainties in improving the health status of the people of Indonesia. To address the urgent public health problems, the Ministry of Health has introduced “Vigilant Village”, aimed at expanding health promotion, ensuring disease prevention and providing simple medical care for villagers. Serious policy debates with evidence-based information on the future scenario of human resources for health in decentralized health systems in Indonesia are the needs of the hour.
References


Annex 1

Current and Estimated Number of Health Workers needed in Indonesia,
Ministry of Health, 2004

<table>
<thead>
<tr>
<th>Types of human resources</th>
<th>Number of HHR needed by 2010</th>
<th>Expected ratio/ 100 000 pop in 2010</th>
<th>Supply HHR by 2003</th>
<th>Additional HHR needed by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Year 2004</td>
</tr>
<tr>
<td>Medical specialists</td>
<td>14 156</td>
<td>6</td>
<td>11 000</td>
<td>422</td>
</tr>
<tr>
<td>Family physicians</td>
<td>94 376</td>
<td>40</td>
<td>37 531</td>
<td>7513</td>
</tr>
<tr>
<td>Dentists</td>
<td>25 953</td>
<td>11</td>
<td>9 177</td>
<td>2216</td>
</tr>
<tr>
<td>Nurses</td>
<td>276 049</td>
<td>117</td>
<td>233 116</td>
<td>5781</td>
</tr>
<tr>
<td>Midwives</td>
<td>235 939</td>
<td>100</td>
<td>61 000</td>
<td>23 091</td>
</tr>
<tr>
<td>Dental nurses</td>
<td>70 782</td>
<td>30</td>
<td>5 869</td>
<td>8 559</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>23 594</td>
<td>10</td>
<td>7 646</td>
<td>2 106</td>
</tr>
<tr>
<td>Assistant pharmacists</td>
<td>70 782</td>
<td>30</td>
<td>26 703</td>
<td>5 824</td>
</tr>
<tr>
<td>Public health professionals</td>
<td>94 376</td>
<td>40</td>
<td>3 912</td>
<td>11 926</td>
</tr>
<tr>
<td>Sanitary workers</td>
<td>94 376</td>
<td>40</td>
<td>12 461</td>
<td>10 804</td>
</tr>
<tr>
<td>Nutritionists</td>
<td>51 907</td>
<td>22</td>
<td>10 685</td>
<td>5 439</td>
</tr>
<tr>
<td>Physiotherapists</td>
<td>9438</td>
<td>4</td>
<td>3 072</td>
<td>8 41</td>
</tr>
<tr>
<td>Medical technicians</td>
<td>35 391</td>
<td>15</td>
<td>28 255</td>
<td>955</td>
</tr>
<tr>
<td>Total</td>
<td>1 097 119</td>
<td>465</td>
<td>450 427</td>
<td>85 477</td>
</tr>
</tbody>
</table>
Annex 2

The Minimum Obligatory Functions for the Health Sector and the Related Target to be achieved by 2010, in Indonesia

(1) Maternal and Child Health:
   - Ninety five per cent pregnant mothers have antenatal care four times;
   - Ninety per cent births are attended by trained health professionals;
   - One hundred per cent high-risk pregnancies are referred;
   - Ninety per cent of neonates are examined by health professionals;
   - Ninety per cent babies are examined by health professionals;
   - One hundred per cent low-birth-weight babies are taken care of.

(2) School and pre-school health programme:
   - Ninety per cent of pre-school and school-age children are monitored for health care;
   - One hundred per cent elementary school students are examined, and
   - Eighty per cent teenagers have access to health services.

(3) Seventy per cent couples actively practise family planning.

(4) One hundred per cent villages achieve Universal Child Immunization.

(5) Health care:
   - Fifteen per cent people undertake outpatient care, and
   - One-and-a-half per cent people undergo inpatient care.

(6) Fifteen per cent of services are mental health services.

(7) Monitoring under-five children:
   - Eighty per cent under-five children show improvement in weight, and
   - Less than 15 per cent children are underweight.

(8) Nutritional services:
   - Ninety per cent of children under five receive Vitamin A twice;
   - Ninety per cent pregnant mothers receive iron supplement tablets;
   - One hundred per cent poor families who have underweight babies, receive supplementary milk, and
   - One hundred per cent under-five children who suffer from severe malnutrition receive care.
(9) Basic Obstetric and Neonatal Emergency Care
- Eighty per cent mothers and neonates have access to blood transfusion in referral care;
- Eighty per cent high-risk pregnant mothers receive care, and
- Eighty per cent high-risk neonates receive care.

(10) Ninety per cent of health facilities with adequate emergency care are accessible.

(11) Surveillance of outbreaks and severe malnutrition:
- One hundred per cent of villages having outbreaks are handled within 24 hours, and
- Eighty per cent of sub-districts are free from nutritional risks.

(12) Polio prevention:
- Prevalence of acute flaccid paralysis (AFP) rate per 100,000 children under 15 years of age less than 1.

(13) More than 85 per cent sputum-positive tuberculosis patients are cured, and

(14) One hundred per cent under-five children who suffer from pneumonia get treatment.

(15) Prevention of HIV/AIDS:
- One hundred per cent cases of persons with HIV/AIDS are treated, and
- One hundred per cent cases of sexually-transmitted diseases are treated.

(16) Prevention of dengue haemorrhagic fever; 80 per cent cases are treated.

(17) Prevention of diarrhoea; 100 per cent under-five children suffering from diarrhoea are treated.

(18) Seventy per cent institutions have an environmental health programme.

(19) Ninety five per cent houses and premises are free from Aedes aegypti.

(20) Eighty per cent of public facilities meet the minimum standards.

(21) Promotion of healthy lifestyles:
- Sixty five per cent houses meet the health requirements;
- Eighty per cent babies are on exclusive breast-milk feeding;
- Ninety per cent villages have access to iodized salt, and
- Forty per cent of Posyandu achieve Level one.

(22) Fifteen per cent communities promote and prevent substance abuse and use of psychotropic substances.
(23) Provision of drugs and medical supplies:
- Ninety per cent health facilities have adequate drugs;
- One hundred per cent health facilities provide essential drugs, and
- 100 per cent facilities provide generic drugs.

(24) Ninety per cent prescriptions are for generic drugs.

(25) Health care financing: 80 per cent of people are insured.

(26) One hundred per cent of poor and vulnerable families are insured.
Abstract

When young medical graduates take up responsible positions in government hospitals, private hospitals, health centres and in national health programmes, they are given a lot of managerial responsibilities in addition to their technical role. Due to lack of training and exposure in health management they feel incompetent and insecure in their jobs, leading to frustration and low productivity. Management skills become more crucial at the peripheral health care institutions where a doctor is the team leader and has to implement a number of health programmes with the help of other health staff. So, skills like planning, leadership, supervision, monitoring and communication are a must for any doctor in order to make an impact on the health scenario of the country. It was against this background that the Department of Community Medicine at the BP Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal started a two-week residential programme on managerial skills development for the Eighth Semester MBBS students in March 2004. This article discusses the students’ feedback about the programme and their own achievements during various postings.

Introduction

The weakest link in the health care delivery system in most developing countries like Nepal is the poor planning and management at different levels of health care services. This is mainly due to the lack of manpower trained in hospital and health management and also due to outdated policies and procedures. Hospital services are becoming more and more complex and sophisticated on the one hand, and health programmes on the other hand need to be more community- and result-oriented. A well-trained workforce in health and hospital management is required for optimum utilization of scarce health care resources in the country, for improving public health.

When the young medical graduates take up responsible positions in government hospitals, private hospitals, health centres and in national health programmes, they are given a lot of managerial responsibilities in addition to their technical role. Due to lack of training and exposure in health management they feel incompetent and insecure in their jobs, leading to frustration and low productivity. Management skills become more crucial at the peripheral health care institutions where a doctor is the team leader and has to implement a number of health programmes with the help of other health staff. So, skills like planning, leadership, supervision, monitoring and communication are a must for any doctor in order to make an impact on the health scenario of the country.
country. It was against this background that the Department of Community Medicine at the BP Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal started a two-week residential programme on managerial skills development for the Eighth Semester MBBS students in March 2004.

The BPKIHS is an autonomous health science university with a tertiary care hospital situated in eastern Nepal\(^1\). The MBBS curriculum of BPKIHS is thoroughly integrated and community-oriented. It is partially problem-based, and incorporates the organ system and a need-based approach\(^2\). Teaching of community medicine throughout the MBBS course is the unique feature of this programme. The emphasis on early clinical and community exposure and self-directed learning is another innovative feature\(^3\). The MBBS students have to undertake six weeks of residential field posting in the community organized by the Department of Community Medicine. This posting is conducted in three blocks of two weeks each. This article discusses one of the residential field postings, to teach managerial skills under the health service programme (Health-Man) in zonal hospitals and district public health offices (DPHOs). The objectives of the programme are as follows:

At the end of the posting, the student will be able to:

- Recognize the importance of managerial skills in health care delivery services at different levels;
- Observe all activities of the Zonal Hospital and the district public health system;
- Familiarize oneself with activities at all levels of the health care system in Nepal, including national health programmes;
- Familiarize oneself with the mechanism of monitoring and supervision;
- Describe the Health Management Information System (HMIS) in Nepal and
- Develop the skill to work as a group leader.

The health care delivery system in Nepal has a three-tier system starting from sub-health post (SHP) as a basic unit in each village development committee. One health post is situated among five to six village development committees and primary health centre in each Parliamentary constituency. These are the primary levels of health care delivery institutions. The District Health Office (DHO) is the secondary level of health care delivery system, present in the district. It provides promotive, curative and preventative services. The DHO is also responsible for implementation of all national health programmes.

The Zonal Hospital in Nepal provides tertiary care and is generally a 200-300-bedded hospital with specialist services like medicine, surgery, obstetrics and gynecology, paediatrics, ophthalmology, dermatology, psychiatry and orthopaedics, etc. The District Public Health Office is present as a separate office in the district headquarters, and looks after all national health programmes and public health activities in that district. For this posting, students are not posted at district hospitals because the students from the Fifth semester of MBBS start visiting the district hospital once in a week till the ninth semester with their supervisors from all clinical and community medicine departments under a separate programme called “Learning in Field” (LIF). It is felt that this exposure is not adequate to impart the skills of health management to students. Hence a two-weeks intensive exposure is planned every year in March.

**Materials and Methods**

The eighth semester MBBS students were divided into three groups on a random basis
(52 in 2004 and 59 in 2005) and each group had 18 to 20 students. Each group of students, along with the faculty supervisors were posted at the Zonal Hospital and the District Public Health Office (DPHO) at one of the following three zones in the eastern development region of Nepal, such as Mechi, Koshi and Sagarmatha. The first two days were allotted for theoretical orientation on health and hospital management topics, including the need for management training for medical students and for briefing them on the learning objectives of the posting. This was followed by the field posting at zonal hospitals and DPHOs at Bhadrapur, Biratnagar and Rajbiraj. From the DPHO they were posted for a day each to the primary health Centre, health post and sub-health post in that area. In addition, one day was allotted to study the functioning of a key non-governmental organization (NGO) working in the health care field in the region.

The process of learning involved observations during health facility visits, interaction with key service providers at the facility, study of the records and interviews with the patients and other beneficiaries in the community. Every evening, the students discussed their observations and management issues identified during the visit, with their resource persons to complete their learning experience. After the field posting, each group prepared a comprehensive report on its observations and comments. On the last day each group made a powerpoint presentation to the whole class and the institute’s faculty.

Prior to the posting, a series of departmental meetings were held to finalize the schedule. The Programme Coordinator and the faculty from the Department of Community Medicine visited each place of posting. They briefed the Medical Superintendents of zonal hospitals and district public health officers about the objectives of the posting and sought their support and cooperation in organizing the various learning activities during the posting. The schedule of the programme is presented in the Annex.

On the first day of the posting, students were briefed about their role and responsibility. They were told that the purpose of the posting was to make them good health managers for the future with the possibility of their being posted to such places and to work with these limited resources and in such environments after obtaining their degrees. The total duration of the posting was two weeks. The students participated in all activities of the Zonal Hospital and the DPHO. Student evaluation and feedback were recorded at the end of the posting.

Results

These two residential field postings in health management were conducted in March 2004 and March 2005, respectively. Students received good support and cooperation from the local health authorities in zonal hospitals and DPHOs.

Students were posted for two days in the Zonal Hospital during which they visited the various patient care facilities such as the Outpatient Department (OPD), laboratory services, wards and the Operation Theatre. During the visit they studied the staffing, functions, organization, services, patient flow, work load, facility layout, and policies and procedures, as well as management problems. They also looked at resources utilization like bed occupancy rate, and average OPD load, etc. Following this, they studied supportive services such as housekeeping, sterilization, hospital waste management and laundry. They were also briefed on the administrative aspects, such as
personnel management, and budgeting and expenditure pattern. The interaction of students with the Medical Superintendent and Nursing In-charge helped them to get an overview of the hospital administration and managerial problems like shortage of medical and nursing staff, limited resources, and delay in receiving funds, etc.

During posting at the DPHO, students got to know its various functions, especially its role in implementing various national health programmes and in managing the peripheral health institutions. Students interacted with the staff responsible for various public health programmes in the district to get an understanding of how programmes were implemented at the field level. They also learned how training programmes were organized by the DPHO to update the knowledge and skills of health workers.

Following this, they spent a day each at a primary health centre, health post and sub-health post. Here they got an opportunity to directly observe the functions, facilities and staff availability. In some places students were able to appreciate the gross underutilization of available facilities. They also studied the information flow from the periphery to the district level as part of the Health Management Information System (HMIS) by going through the monthly and quarterly reports. At the PHC and Health Post, students got an opportunity to directly observe the implementation of DOTS, as well as Leprosy and diarrhoea control programmes, etc.

Visits to NGOs working in health and development sector and NGO-supported hospitals enabled the students to understand the functioning and role of NGOs in supplementing the health care services provided by the government. They could appreciate the efficiency and dedication of NGOs compared to the government sector.

All students (both batches 111) felt the objectives of the programme were clear to them. Table 1 shows the visits of students to different levels of the health care system of Nepal. Many students felt that the visits had been useful for them to learn the problems and possible solutions in the field of management. They also learnt supervisory skills during these visits. The students prioritized the managerial skills learnt during these visits (Table 2).

### Table 1. Student visits to the different levels of the health care delivery system and their responses (N = 111)

<table>
<thead>
<tr>
<th>Name of the health institution</th>
<th>Very useful</th>
<th>Useful</th>
<th>Somewhat useful</th>
<th>Less useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zonal Hospital</td>
<td>56 (50.5%)</td>
<td>49 (44.1%)</td>
<td>5 (4.5%)</td>
<td>1 (0.9%)</td>
<td>0</td>
</tr>
<tr>
<td>District Public Health Office</td>
<td>72 (64.8%)</td>
<td>37 (33.4%)</td>
<td>2 (1.8%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Primary Health Centre</td>
<td>69 (62.2%)</td>
<td>40 (36.0%)</td>
<td>1 (0.9%)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Health post</td>
<td>46 (41.4%)</td>
<td>58 (52.3%)</td>
<td>6 (5.4%)</td>
<td>1 (0.9%)</td>
<td>0</td>
</tr>
<tr>
<td>Sub-health post</td>
<td>38 (34.3%)</td>
<td>61 (54.9%)</td>
<td>7 (6.3%)</td>
<td>5 (4.5%)</td>
<td>0</td>
</tr>
<tr>
<td>INGO / NGO</td>
<td>64 (57.6%)</td>
<td>47 (42.4%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2. Top ten managerial skills learnt by students


The majority of students (95.5%) felt that the posting period was adequate in duration. Overall posting was rated by the students as very useful (81.9%) and useful (18.1%). They suggested increased interactions with medical superintendents of zonal hospitals, greater participation of health workers and roundtable discussions between the DPHO staff and students for improvement in future postings.

Discussion

Primary health care is a complex concept requiring the most efficient use of resources, which are almost always scarce, and implying choice and the setting up of priorities. It involves communities in making decisions about their own health care and in accepting responsibility for protecting their own health. Generally, it requires the best use to be made of various categories of health workers, many of whom may be inadequately trained for the work they are expected to do, unused to working in teams, or dissatisfied with their working conditions. Health care is often a matter of persuading or educating people to change certain kinds of behaviour that affects their health\(^4\).

In the students’ opinion, visits to international nongovernmental organizations (INGOs)/NGOs working in the field of health were the most useful (100%), followed by DPHO (98.2%), Health Post (93.2%) and Sub-health Post (89.2%). The reasons could be that they visited INGO/NGOs for the first time, and also because these offices work efficiently and effectively as compared to government offices.

The DPHO visit was ranked second in terms of usefulness to students. The reason for this may be that students learnt hands-on about national health programmes and their implementation in the community. Another reason could be that there was maximum possibility for them to work at the district-level health care system after completion of their course.

During posting, students learnt various managerial skills from the team concept to multiple approaches to solving a problem (Table 2).

Motivation and mobilization, however, depend not only on management, but also on leadership: hence the need to develop leadership skills among personnel with supervisory responsibilities. Supervision is one of the functions of both management and leadership and has been defined as the overall range of measures to ensure that personnel carry out their activities effectively and become more competent at their work. A supervisor thus appears as the interface between management techniques and the qualities of leadership, which all primary health workers in positions of responsibility should, in theory, possess and in practice display at all levels of the health system\(^5\). Another benefit of this posting is that it improves the supervisory skills. Health care services are a human resource intensive field. A good human relation is a must for any manager to get maximum productivity from the health team. During this field posting, students got the opportunity to interact with peripheral-level health workers, and to study their job responsibilities, working conditions, resource constraints, and field logistic problems etc. This experience will be very useful for them to become good supervisors who can support and guide other team members. A study from the East Caroline University School of Medicine, USA\(^6\) has reported on the training of medical students about leadership skills with community leaders through seminars. These leadership
skills are useful for students to participate in community activities. A study conducted after the introduction of training in primary health care programme management into the curriculum in Gezira Medical School showed positive results for students' achievement and acceptance. The experience proved the feasibility of integrating health care programme management into the undergraduate curriculum. A similar training of medical students in primary health care in Nigeria showed favourable response from students and the faculty. These skills are really important to make a good health manager. These managerial and leadership skills are also the components of a "Five Star Doctor". Other components are being a good communicator, team leader and care-giver.

Management is a systematic way of eliciting cooperation from all possible sectors. Its principles and methods are the same whether resources are plentiful or scarce, or whether conditions are favourable or unfavourable. When resources are scarce and conditions difficult the necessary management effort can also be difficult. Good managers persevere, however, and never loses sight of basic principles. Management principles are applied at all levels of a health care system at the central or national level, in zonal, district and primary level. It is a common mistake to regard management as a function of those at the top of the pyramid only, and to give little attention to intermediate and district levels. The effect is that well conceived programmes fail because of confusion at the lower levels of the pyramid. Through this posting, students were able to understand the need for managerial skills at the primary level also.

Good management is to organization what health is to the body - for the smooth functioning of all its parts. It highlights priorities, adapts services to needs and changing situations, makes the most of limited resources, improves the standard and quality of services, and maintains high staff morale. Early exposure to management process and problems in health care field helps in not only sensitizing oneself to management issues but also in making them better equipped to take up managerial responsibility in future. Therefore, as a result of the positive feedback received from students of the Health-Man programme, there is hope that they will become good managers of their respective organizations.

Acknowledgement

The authors are grateful to the faculty and staff of the Department of Community Medicine, as well as to the students involved in the programme.

References

2. BPKIHS, Dharan, Nepal. The first version of MBBS curriculum 1996.
## Annex

### Schedule of the Programme

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning session</th>
<th>Afternoon session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Orientation</td>
<td>Orientation</td>
</tr>
<tr>
<td>Day 2</td>
<td>Structured interactive session</td>
<td>Start for respective places</td>
</tr>
<tr>
<td>Day 3</td>
<td>Meeting with authorities in Zonal Hospital</td>
<td>Posting in medical record section</td>
</tr>
<tr>
<td>Day 4</td>
<td>Outpatient Department and Inpatient Department</td>
<td>Administration section</td>
</tr>
<tr>
<td>Day 5</td>
<td>Laboratory, X-ray department and house keeping etc.</td>
<td>Finance section and waste management</td>
</tr>
<tr>
<td>Day 6</td>
<td>Meeting in DPHO's</td>
<td>National programmes on TB, Leprosy and HIV/AIDS</td>
</tr>
<tr>
<td>Day 7</td>
<td>Visit to Primary Health Center</td>
<td>National programmes like EPI, CO D and ARI</td>
</tr>
<tr>
<td>Day 8</td>
<td>Visit to Health Post</td>
<td>National programmes like Safe Motherhood, Family Planning and Nutrition</td>
</tr>
<tr>
<td>Day 9</td>
<td>Visit to Sub-health Post</td>
<td>National programmes like Malaria, Kala-azar and Japanese Encephalitis</td>
</tr>
<tr>
<td>Day 10</td>
<td>Visit to NGO/INGO</td>
<td>Supervision and report preparation</td>
</tr>
<tr>
<td>Day 11</td>
<td>Return to the Institute</td>
<td>Report preparation</td>
</tr>
<tr>
<td>Day 12</td>
<td>Report preparation</td>
<td>Report presentation, feedback and student evaluation</td>
</tr>
<tr>
<td>Day 13</td>
<td>Weekly holiday</td>
<td>Weekly holiday</td>
</tr>
<tr>
<td>Day 14</td>
<td>Weekly holiday</td>
<td>Weekly holiday</td>
</tr>
</tbody>
</table>
District-level Variations in Infant Mortality in Sri Lanka:  
A Challenge to Achieving the Millennium Development 
Goal on Child Survival

Rafiqul Huda Chaudhury*, Prasanna Gunasekera**, Dulani Gunasekera#

Abstract

Sri Lanka faces a considerable challenge in achieving the Millennium Development Goal (MDG) on child survival (i.e. under-five mortality). Despite considerable progress in reducing infant mortality over the last five decades, infant mortality accounts for 93% of under-five mortality. One way to achieve this goal is to reduce inter-district variation in infant mortality, which varies widely between districts.

The purpose of this paper was to study the inter-district variation in infant mortality in relation to certain aspects of economic (access to safe drinking water) and nutrition (birth weight) status; access to health (public health midwife-population ratio), and use of health care (registration status of pregnant women). The results of the regression analysis confirm the hypothesized relationship between infant mortality rate and birth weight, access to safe drinking water, public health midwife and pregnant women’s registration status. The availability of public health midwife emerges as the single most important variable affecting infant mortality, followed by access to safe drinking water, status of birth weight and registration status of pregnant women.

The major limitation of the study is that it attempts only to account for inter-district variations in infant mortality at the macro level, and therefore, does not take into consideration large intra-district, i.e. sub-district, rural and urban, and micro or inter-individual variations in infant mortality.

Keywords: Infant mortality, under-five mortality, infant, low birth weight, health services utilization, maternal health services, socioeconomic factors.

Introduction

The Millennium Development Goal (MDG) on child survival is to reduce the 1990 level of under-five mortality by two-thirds by 2015. In Sri Lanka the reduction in infant mortality constitutes a major challenge in achieving the MDG on child survival (i.e. under-five mortality) as it accounts for 93% of the latter. The country has made spectacular progress in reducing the infant mortality rate (IMR) during the last five decades. The IMR declined by over 88% from 140 in 1945 to 16.3 per 1000 live births in 1997. However, Sri Lanka still needs to reduce its IMR by at least two-thirds: from 19.5% in 1990 to 6.6% in 2015, in order to meet the MDG on child survival by 2015. One way to achieve this goal is to reduce the inter-district variation in infant mortality, which varies...
widely between districts. For example, in 1997 the IMR varied from as high as 27.5, 25.2, 21.6, 21.5, 21.0, 20.9, 20.2 and 19.0% in the districts of Badulla, Killinochchi, Kandy, Mallaitivu, Anuradhapura, Ratnapura, Nuwara Eliya and Pollonnaruwa respectively, to as low as 1.6% and 2.7% in Trincomalee and Ampara respectively. The national average IMR was 16.3%, while the IMR for the remaining 15 districts varied between as low as 4.9% in Moneragala to a high of 18.8% in the district of Colombo (see Figure 1). The paper will examine the inter-district variation in IMR (i.e. number of deaths per 1 000 live births) in Sri Lanka and factors affecting these variations.

![Figure 1. Infant Mortality Rate (per 1000 live births) by district, Sri Lanka, 1997](image)

These inter-district variations in IMR may be related to a combination of differences in the districts economic and nutritional conditions, access and utilization of health services and social conditions. The present paper is an attempt to identify some proximate determinants of IMR, since identification of such factors may lead to a selection of interventions amenable to policy prescriptions for narrowing inter-district
variations in IMR and contributing significantly to achieving the MDG on child survival.

Factors Affecting Inter-district Variations in Infant Mortality

The inter-district variations in infant mortality rate are examined in relation to certain aspects of economic conditions, nutritional status, access and use of health services. Economic condition is measured through a proxy – the proportion of population lacking access to safe drinking water (SDW), in the absence of a direct measure, which is available for all districts included in the study. Nutritional status is measured by the proportion of babies with low birth weight (LBW), i.e. <2.5 kg at birth, use of health care is measured by the proportion of pregnant women registered on or before four months after pregnancy (PWR). Access to health care is measured by the number of public health midwives per 1,000 population (PHM). The data on inter-district variations in access to safe drinking water, birth weight, registration status of pregnant women, number of public health midwives per 1,000 population and infant mortality rate are presented in Annex 1.

Method

Data and data quality

All of the data used in the present analysis were collected by the Registrar’s General Department, Family Health Bureau and the Medical Statistics Unit of the Ministry of Health. The data refer to the year 1997\(^3\), except for data on safe drinking water which were obtained from the National Human Development Report 1998\(^4\). The registration of births and deaths has been made compulsory since 1985, and is reported to be nearly 100% complete. In 1981, when the completeness of registration was last evaluated, the degree of registration of deaths reached as high as 95%\(^5\). However, data collection on births and deaths, particularly from conflict-affected districts, has suffered since the outbreak of the civil war in 1983; this could result in underreporting. For example, in the Trincomalee and Ampara districts, which are located in the conflict areas, the IMR was reported to be as low as 1.7% and 2.7% respectively, compared to the national rate of 16.3% in 1997. A 70%–80% lower infant mortality rate in these two conflict-affected districts, compared to the national level, may be attributed, among other factors, to underreporting.

Reporting errors regarding births and deaths may also arise due to the de jure system of reporting in which births and deaths are registered by the place of occurrence, and not by the place of residence. This may also lead to overreporting of births and deaths for districts which have more health facilities such as Colombo and Kandy. Contrary to expectation, infant mortality rates in Colombo and Kandy were reported to be 15.3% and 32.5% higher than the national average in 1997, which could be attributed, among other factors, to overreporting. In order to minimize the effect of inter-district differences in the enumeration of infant deaths on the explanation about the inter-district variation in IMR, it was decided to exclude these four districts (Trincomalee, Ampara, Colombo and Kandy) which were suspected of underreporting and overreporting of deaths, from the purview of analysis.

The major limitation of the study is that it attempts only to account for inter-district variations in infant mortality at the macro-level, and therefore, does not take into consideration the large intra-district, i.e. sub-district, rural and urban, and micro or inter-individual variations in infant mortality. An analysis of intra-district and inter-individual variations in infant mortality would be very interesting and possibly more revealing than a district-level analysis. However, the data
required to undertake this kind of analysis are not available. Given this constraint, the scope of the present study is confined to the analysis of inter-district variations in infant mortality.

Hypotheses

Four hypotheses are posited for verification in the study:

1. The higher the proportion of babies with low birth weight in a district, the higher the infant mortality in that district;
2. The higher the number of PHM per 1,000 population in a district, the lower the infant mortality in that district;
3. The higher the proportion of population in a district lacking access to safe drinking water, the higher the infant mortality in that district;
4. The higher the proportion of pregnant women registered on or before four months of pregnancy in a district, the lower the infant mortality in that district.

The justification for postulating each of these hypotheses are elaborated as follows:

Low Birth Weight and Infant Mortality
Contrary to general expectations in view of the overall achievements in maternal and child health, the prevalence of low birth weight (LBW) is rather high in Sri Lanka. It accounted for 22% of all live births during 1998–2002. In 1995, the LBW-associated deaths accounted for 32% of infant deaths in Sri Lanka. The LBW babies, who are malnourished, premature and small for dates (intra-uterine growth retardation) have a higher-than-average risk of deaths due to underdeveloped body organs, hypothermia and respiratory problems, among other complications. Tertiary health care facilities in developing countries also lack life-saving devices such as incubators for low-birth-weight babies. It is therefore hypothesized that LBW will be positively associated with infant mortality (i.e. the higher the proportion of newborns with low birth weight in a district, the higher the infant mortality in that district).

Public Health Midwife and Infant Mortality

A Public Health Midwife (PHM) plays an important role in maternal and child care in Sri Lanka. She serves a population of 3,000–4,000 in a specific geographic area. Through house visits the PHM provides care to pregnant and postpartum women, infants and pre-school children. This system implies continuous antenatal care, and also enables early detection of pregnancy complications and early childhood problems, thereby increasing the chances of survival of infants and children. It is therefore expected that increased number of PHM per 1,000 population in a district will lead to a reduction in childhood mortality in that district. In other words, the higher the number of PHM per 1,000 population in a district, the lower the IMR in that district.

Safe Drinking Water and Infant Mortality
The lack of access to safe drinking water decreases the chances of survival of infants and children by exposing them to waterborne diseases. Waterborne diseases such as diarrhoea, cholera and typhoid take a heavy toll on the lives of infants and children in a developing country. It is therefore hypothesized that the higher the proportion of population of a district lacking access to safe drinking water, the higher the infant mortality in that district.
Registration of Pregnant Women and Infant Mortality

Antenatal care is an important determinant in reducing infant and maternal mortality. In Sri Lanka a pregnant woman could receive antenatal care by paying regular visits to a clinic or through home visits by the PHM. In both cases, the mother needs to be registered. Since registration of pregnant women is a prerequisite to early commencement of antenatal care, one would therefore expect that increased early (<four months after pregnancy) registration of pregnant women would lead to a reduction in infant mortality.

Statistical Analysis

Multiple regression technique was employed to examine the effects of the level of birth weight, access to safe drinking water, adequacy of public health midwives and registration status of pregnant women on infant mortality. The full multi-variate model can be summarized as:

\[ IMR_j = b_0 + b_1 \text{LBW}_j + b_2 \text{PHM}_j + b_3 \text{PWR}_j + b_4 \text{SDW}_j + e \]

Where,

\[ IMR = \text{Infant mortality rate} ; \]
\[ j = \text{Infant mortality rate of district } j \text{ where } j \text{ ranges between 1 and } 25 \text{ districts}; \]
\[ b_0 \text{ to } b_4 = \text{Coefficients}; \]
\[ \text{LBW} = \text{Low-birth-weight status} \text{ (i.e. the proportion of babies with low birth weight);} \]
\[ \text{PHM} = \text{Public Health Midwives} \text{ (number of public health midwives per 1 000 population);} \]
\[ \text{PWR} = \text{Pregnant women registration status} \text{ (proportion of pregnant women registered);} \]
\[ \text{SDW} = \text{Safe Drinking Water status} \text{ (proportion of population without access to safe drinking water), and} \]
\[ e = \text{error term}. \]

The specification is admittedly incomplete because of non-inclusion of some relevant factors, particularly social factors such as education of mother and father, affecting infant mortality due to unavailability of relevant data on these indicators for all the districts under the study.

The regression results assessing the independent effect of the status of birth weight, safe drinking water, registration of pregnant women and public health midwives on the infant mortality rate are presented in Table.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>Standard error of B</th>
<th>T. Value</th>
<th>Significance of T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health midwife-population ratio (Number of public health midwife (per 1,000 population)</td>
<td>(-.635)</td>
<td>.164</td>
<td>(-3.871)</td>
<td>.001</td>
</tr>
<tr>
<td>Access to safe drinking water (proportion of population lacking access to safe drinking water)</td>
<td>(.188)</td>
<td>.069</td>
<td>2.719</td>
<td>.015</td>
</tr>
<tr>
<td>Low birth weight (proportion of new born with low birth weight)</td>
<td>(.526)</td>
<td>.219</td>
<td>2.404</td>
<td>.029</td>
</tr>
<tr>
<td>Pregnancy registration status (proportion of pregnant women registered on or before 4th months)</td>
<td>(-1.047)</td>
<td>.545</td>
<td>(-1.920)</td>
<td>.073</td>
</tr>
<tr>
<td>(R^2 = .647)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

The results of the regression analysis confirm the hypothesized relationship between infant mortality rate and birth weight, access to safe drinking water, PHM and pregnant women’s registration status. The status of availability of PHM emerges as the single most important variable affecting infant mortality, followed by access to safe drinking water, status of birth weight and registration status of pregnant women.

Easy access to health care, measured by the number of PHM per 1,000 population in a district explained at least 33% of inter-district variation in infant mortality over and above what can be explained by all other variables. The PHM-population ratio of a district has a pronounced effect on the infant survival status of that district. The higher the level of PHM-population ratio of a district, the lower is the infant mortality in that district, and this relationship is statistically significant at the 0.001 level. For infant mortality rate, the implied PHM elasticity at the point of sample mean is -0.6699. The estimation implies that, at the sample mean, the increased PHM-population ratio of a district by one unit is associated with a 4.3% decrease in infant mortality of a district, and this decrease is significantly different from zero.

The economic condition of a district, measured by the proportion of population having access to safe drinking water also exhibited a strong effect on infant survival. The level of access to safe drinking water significantly affects the infant mortality rate of a district. The lower the access to safe drinking water of a district, the higher is the infant mortality in that district and this relationship is statistically significant at .015 level. For the infant mortality rate, the implied safe drinking water status elasticity at the point of sample mean is 0.3407. The point estimate implies that, at the sample mean, decreased access to safe drinking water by 1% is associated with a 1.3% increase in infant mortality in a district, and this increase is significantly different from zero. Access to safe drinking water, i.e. the proportion of population lacking access to safe drinking water explains at least 16% of the inter-district variation in infant mortality.

The nutritional status, measured by the proportion of newborns with LBW, also shows a strong positive association with infant mortality. The higher the proportion of babies in a district with LBW, the higher is the infant mortality in the district, and this relationship is statistically significant at .015 level. The implied birth weight elasticity at the point of sample mean is 0.3407. The point estimate implies that, at the sample mean, a 1% increase in the proportion of babies with LBW in a district is associated with a 1.3% increase in infant mortality, and this is significantly different from zero. The nutritional status, i.e. the proportion of newborns with LBW, explains at least 13% of inter-district variation in infant mortality.

The use of preventive health care, measured by the proportion of pregnant women registered on or before four months after pregnancy, also shows a negative relationship with infant mortality, and this relationship is found to be statistically significant at .07 level. The higher the proportion of pregnant women of a district registered on or before four months after pregnancy, the lower is the infant mortality in that district. For the infant mortality rate, the implied pregnancy registration status elasticity at the point of sample mean is -0.1543. The point estimate implies that, at the sample mean, 1% increase in registration of pregnant women on or before four months after pregnancy is associated with a 7.1% decline in infant mortality, and this reduction is significantly different from zero. The pregnancy registration status of women explains at least 8% of inter-district variation in infant mortality over and above what can be explained by all other variables.
Discussion and Conclusion

The purpose of this paper was to study the inter-district variation in infant mortality in relation to certain aspects of economic (access to safe drinking water) and nutrition (birth weight status), access to health (PHM-population ratio) and use of health care (registration status of pregnant women). Of these status variables, access to health care i.e. number of PHM per 1,000 population emerges as the single most important factor explaining inter-district variation in infant mortality. The chance of survival of a child improves significantly with increase in the PHM-population ratio. The higher the PHM-population ratio, the lower is the infant mortality rate.

Access to safe drinking water was the second most important variable affecting infant mortality. Lack of access to safe drinking water reduces the chance of infant survival significantly. The lower the access to safe drinking water, the higher is the infant mortality rate. Conversely, the higher the access to safe drinking water, the lower is the infant mortality rate.

LBW was the third most important variable explaining inter-district variations in infant mortality. The chance of survival of a child decreases significantly with low birth weight. The higher the proportion of babies in a district born with LBW, the higher is the IMR. Thus reducing the proportion of LBW will significantly contribute to improvement of neonatal and infant mortality.

The registration status, at less than or equal to four months, of pregnant women was the fourth most important variable affecting infant mortality. The chance of infant death decreases significantly with registration of pregnant women on or before four months after pregnancy. The higher the proportion of pregnant women in a district registered on or before four months after pregnancy, the lower is the infant mortality in that district.

Policy Implications

The study, although limited in scope, clearly points to the need for improving the PHM-population ratio, access to safe drinking water, birth weight of newborns and early registration of pregnant women, all of which will result in reduction of infant mortality.

To increase the PHM-population ratio, a number of measures are urgently required: (i) Fill in the vacant positions of PHM, particularly in the remote rural areas and conflict-affected districts; (ii) Increase the home visit coverage by PHMs from one PHM per 3,000 population to 2,000 population. Postnatal visits help in early identification and referral to hospitals of post-partum complications and early neonatal problems.

Improvement in safe drinking water over the last two decades has contributed significantly to reduction in infant mortality. Currently, about 70% of the population have access to safe drinking water. The population coverage of safe drinking water needs to be further improved considerably, in order to bring about a significant decline in infant mortality from its present level. This can be achieved, to a great extent, by meeting the greater unmet need for safe drinking water of the rural population, particularly those living in remote villages and conflict-afflicted areas of the northern and eastern provinces on a priority basis.

As nearly one-third of all infant deaths in Sri Lanka are among LBW babies, there is an urgent need to improve the birth weight to reduce neonatal mortality and the IMR. As the etiologies of LBW are multi-dimensional, this would require both sectoral and intra-sectoral approaches to address the issue. In the short term, emphasis should be given to those maternal factors that are believed to be of greatest importance in Sri Lanka and that might be amenable to change in the short term. These include improving maternal nutrition, prevention and treatment of
anaemia, prevention of malaria in endemic areas, antihelminth treatment, early detection of pre-eclampsia, avoiding arduous work after mid-pregnancy and avoiding short birth intervals. The existing nutrition supplementation programmes aimed at providing iron tablets to anaemic pregnant women and fortified weaning foods for infants and pre-school children need to be extended to the far-flung rural areas, particularly in conflict-affected areas, with a transparent procedure of targeting the vulnerable groups and plugging the gaps in existing programmes. The Participatory Nutrition Improvement Project (PNIP), which aims to improve the nutrition status by involving the community at the grassroots, and which has been under way since 1997, should be continued with required modifications. Consideration should be given to fortification of commonly-consumed food as a means of improving the micronutrient intake of iron and foliates among pregnant and lactating women.

In the long term, it is necessary to improve the nutrition of the girl child, as LBW is also an intergenerational problem. The LBW infants grow up to be stunted adults, who in turn are more likely to give birth to LBW babies.

Registration of pregnant women is a prerequisite for commencement of antenatal care, therefore all-out efforts should be made to meet the Government goal of registering at least 85% of pregnant women before the fourth month to reduce neonatal and infant mortality rates. This would require, among other things, peripheral-level programme managers taking appropriate measures to improve the early identification and registration of pregnant women within their areas.

Even though a limited set of factors have been studied, one of the conclusions is that a focused attention to neonatal survival will be an important policy imperative. Three of the factors (birth weight, access to safe drinking water and registration status of pregnant women) examined here directly impact neonatal mortality, which accounts for almost three-fourths of the deaths during infancy in Sri Lanka.

References

Notes and News

WHO Collaborating Centres in the Area of Human Resources for Health

(1) The “WHO Collaborating Centre for Community-based Health Professions Education”, Community Health Department, Christian Medical College, Vellore, India

The Community Health Training Centre (CHTC) of Christian Medical College, Vellore became the “WHO Collaborating Centre for Community-based Health Professions Education” in 2002. The Community Health Department has always tried to fulfil its mandate in a manner which has been quite satisfying for the faculty, as well as for other health professionals who have come into contact with it through several training and research initiatives. This Centre continues to provide integrated health and development services for a population of 200,000. The detailed database pertaining to the population has been brought under the satellite-based GIS system. This is possibly the only programme which has been able to generate longitudinally, population-based data on the incidence of HIV in India. Indeed, it is now also possible to demonstrate how the HIV epidemic and other reproductive tract infections can be contained through a community-based approach.

The Centre has provided community-based training to several national and international groups. Some of the training programmes being offered are:

- Hospital Management Information System (WHO incountry fellowships);
- Global Medicine Training Programme for Lund University, Sweden;
- International Health and Medicine – Clerkship – Bengurion University;
- Primary Health Care programme for social work students from Ohio State University, USA;
- Block Placement for social work students from Stella Maris College, Chennai, India;
- Basic Epidemiology Training Programme;
- Basic Health Economics Course;
- Integrated Disease Surveillance Programme for Medical Officers (India);
- Advanced Epidemiology Training Programme on Clinical Trials and Case Control Studies;
- Global Medical Trainees Programme for Linkoping University, Sweden, and
- Masters in International Health for Field Programmes.

Last year alone, a total of 163 Indian and 97 international health professionals attended the training programmes. The centre works in partnership with Copenhagen University, Denmark to train students pursuing the Masters in International Health
and Public Health, and Masters in Anthropology courses. Similar collaboration exists with Lund and Linkoping Universities, Sweden and Ohio State University, USA respectively.

Community-based education for undergraduate and postgraduate students continues to receive excellent evaluation from students.

Several new research programmes have been initiated by the Centre in the recent past. In fact, the centre is increasingly being recognized as an ideal set-up for vaccine-based research.

The Centre should be starting the Masters in Public Health programme very soon as the Medical University has agreed, in principle, for the course.

(2) The "WHO Collaborating Centre on Medical Education", Medical Education Unit, Office of Academic Affairs, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

The Medical Education Unit, Faculty of Medicine, Chulalongkorn University was designated as the WHO Collaborating Centre for Medical Education in 1988. During the last few years, the Centre has engaged in several activities towards strengthening medical education in Thailand, as well as in other countries in the South-East Asian Region. The examples of such activities are:

1. Serving as a reference institute for educational benchmarking – the Centre is engaged in educational benchmarking activities in respect of three medical schools in three countries, namely Indonesia, Malaysia and Thailand, with the focus on developing quality accreditation systems for academic institutions.

2. Strengthening the human resource base for medical teachers from neighbouring countries – the Centre has provided several courses for faculty members from neighbouring countries. Last year, the Centre organized a three-month course for six medical teachers from Laos. It also offers the Masters Degree Programme in Health Professional Education. Graduates from this Programme include medical teachers from Bhutan and Bangladesh, etc.

3. The Centre is presently serving as the interim office of the Secretariat of the South-East Asian Medical Education (SEARME). It is helping SEARME with its process of bylaws’ approval, as well as in election of its Board members.

4. Hosting the WHO South-East Asia Region/Western Pacific Region Bi-Regional Meeting on Psychosocial Issues and Ethics in Medical Education. The meeting was held in Bangkok from 6-8 June 2005. This event brought together experts and policy-makers of the two WHO regions to discuss and formulate strategies to strengthen the psychosocial component, as well as ethics in medical education in line with the changing societal needs.

5. Organizing a series of workshops on “Gender Mainstreaming in Medical Education” – the Centre and the Faculty play an active role in strengthening the gender issue in medical education. A series of workshops were organized to disseminate and emphasize this important issue among medical teachers and other health personnel. Participants included staff, e.g. medical doctors, nurses and social workers, etc. of the Faculty and medical personnel from other...
Annual Meeting of the Nippon Foundation/Sasakawa Memorial Health Foundation Advisory Board

Speaking at the Annual Meeting of the Nippon Foundation/Sasakawa Memorial Health Foundation Advisory Board which opened in the Regional Office on 17 October 2005, the Regional Director, Dr Samlee Plianbangchang said, “Let me start by thanking wholeheartedly the Nippon Foundation and the Sasakawa Memorial Health Foundation. Also, we gratefully thank Mr Yohei Sasakawa, WHO Goodwill Ambassador for Leprosy Elimination. We deeply appreciate the sustained support extended by the Foundations to WHO in pursuing the global leprosy elimination programme over the last thirty years. It is a great honour and privilege to have the opportunity of hosting this board meeting for the fourth successive year. This occasion is particularly significant since the Global Leprosy Programme is now located in this Regional Office, which handles support to the geographical area with the highest burden of leprosy cases,” said Dr Samlee.

In conclusion, the Regional Director said, “The partnership between the Nippon Foundation/the Sasakawa Memorial Health Foundation and WHO has indeed grown in intensity and strength. We hope it would continue until we could reach, not just the target of leprosy elimination, but also the ultimate goal of a leprosy-free world. WHO has developed global as well as regional strategic plans for the period 2006-2010; this is to further tackle the remaining challenges in leprosy elimination. We very much expect the full consideration by the Advisory Board of these plans. “This two-day meeting is intended specifically to review and finalize the strategic as well as action plans for 2006, for which further support of the Foundations is indispensable for their implementation,” said Dr Samlee.

Global Influenza Meeting

A global meeting has identified key components of a global action plan to control avian influenza in animals and simultaneously limit the threat of a human influenza pandemic.

More than 600 delegates from over 100 countries met in Geneva from 7 to 9 November 2005, and agreed that there is an urgent need for financial and other resources for countries which have already been affected by avian influenza, as well as for those which are most at risk, and to identify and respond to a human pandemic the moment it emerges.

In his concluding remarks to this historic meeting, Dr LEE Jong-wook, WHO Director-General, said, “The world recognizes that this is a major public health challenge. WHO is ready to focus its resources to reduce the risk of a human pandemic. We have plans on paper, but we must now test them. Once a pandemic virus appears, it will be too late.”

Experts and officials set out key steps that must be taken in response to the threat of the H5N1 influenza virus which is currently circulating in animals in Asia and has been identified in parts of Europe.

The Regional Director, Dr Samlee Plianbangchang, welcomed the plan developed in Geneva. He however voiced his concern about the likely lack of access to antiviral drugs and pandemic flu vaccines for countries in the South-East Asia Region during a pandemic outbreak.

Dr Samlee also reminded that the public too can take measures to protect themselves from being infected by adopting cost-effective measures like maintaining proper hygiene and sanitation.
The meeting discussed key financing needs for countries in the short-, medium- and long-term. According to an analysis presented by the World Bank, the needs of affected countries will potentially reach US$ 1 billion over the next three years. This does not include financing for human or animal vaccine development, for antiviral medicines or for compensating farmers for loss of income due to animals which have been culled.

First COP Session
The first session of the Conference of the Parties (COP) to the WHO Framework Convention on Tobacco Control opened in Geneva on 6 February 2006. Since its entry into force on 27 February 2005, the Convention has attracted a high number of Parties and has become one of the most widely embraced treaties in the history of the United Nations. All Contracting States for whom the Convention will have entered into force by the period of the session are participating in the COP with voting rights. Other States, including signatories to the treaty, will participate as observers. Nongovernmental organizations in official relations with WHO and international intergovernmental organizations will also participate as observers at the first session.

The Conference of the Parties will consider and discuss the recommendations of the Open-ended Intergovernmental Working Group on the WHO Framework Convention on Tobacco Control. In this regard, during the first session of the COP, Parties will take decisions on technical, procedural and financial matters relating to the implementation of the Treaty such as the establishment of the permanent secretariat, funding and financial support and monitoring and reporting on implementation progress, and the possible elaboration of protocols, among others.

Malaria Conference
The Annual Conference of the Indian Society for Malaria and other Communicable Diseases, was held on 13 February 2006 in Agra. Delivering the keynote address, the Regional Director, Dr Samlee Plianbangchang said, “Over the past many decades, we have come a long way in the area of health and development. People are living longer, and the literacy rate has increased with improved quality of education. Work opportunities and incomes have amplified. The discovery of vaccines and effective drugs over the past 50 years have heralded a hope to conquer communicable diseases in the near future. We must particularly note that there has been considerable success in this area in India.”

“Smallpox has been eradicated from the country for decades. The rate of infant mortality which had been intractable to interventions has been halved in the last fifty years. Guineaworm disease has been eradicated. Poliomyelitis and yaws are on their way out. And according to the monitoring and reporting system, the national average prevalence rate of leprosy in India is now less than one per 10,000 population. This is the target for leprosy elimination,” added Dr Samlee.

Referring to avian influenza, the Regional Director said that it had complex epidemiological features, with several aspects still not fully understood. Given the existing environmental and socioeconomic situation, Asia was considered the most likely epicentre of this pandemic.

The Regional Director further added, “Communicable diseases deserve utmost priority in our scheme of things. WHO has been working very closely with the governments of Member States in the battle against communicable diseases since its inception. I wish to reiterate our commitment to providing all possible support in this fight.”
The vulnerability of human race against emerging infections has never been greater; the weapons available with us remain inadequate. The challenge before us is enormous, the options rather limited. The need of the day is continuous vigil and continued preparedness with enhanced capacity at the local, national and international levels. I am sure that with our unwavering and enhanced determination and commitment we will conquer the communicable diseases in the South-East Asia Region within a reasonable timeframe,” concluded Dr Samlee.
Publications Corner

The World Health Report 2004 - Changing History
[ISBN 92 4 156265 X; Sw.fr 30.-/US$ 27.00.-; in developing countries Sw.fr.10.-]

The World Health Report 2004 - Changing History argues that a comprehensive HIV/AIDS strategy linking prevention, treatment, care and support for people living with the virus could save the lives of millions of people in poor and middle-income countries.

Tackling HIV/AIDS effectively is the world’s most urgent public health challenge. Unknown a quarter of a century ago, the disease is now the world’s leading cause of death. Today, an estimated 34–46 million people are living with HIV/AIDS. In 2003, three million people died and five million others became infected.

At present, almost six million people in developing countries need treatment, but only about 400 000 of them received it in 2003. The World Health Report 2004 argues that a treatment gap of such dimension is indefensible and that narrowing it is both an ethical obligation and a public health necessity.

Today, the global community is mobilized and more resources than ever are being channelled into an emergency response. World Health Report shows how a partnership linking international organizations, national governments, the private sector and communities is working simultaneously to expand access to HIV/AIDS treatment, reinforce HIV prevention and strengthen health systems in some of the countries where they are currently weakest.

Preventing Chronic Diseases: A Vital Investment
Nonserial Publication
[ISBN 92 4 156300 1; Sw.fr 20 30.00 / US$ 27.00; in developing countries: Sw.fr. 21.00]

Chronic diseases – the major causes of premature adult deaths in all regions of the world – have been generally neglected on the international health and development agenda. WHO is launching a global report on chronic diseases, which will present the latest scientific information and make the case for increased and urgent action for chronic disease prevention and control. The report will review the burden of chronic diseases, major risk factors and associated trends. It will be an authoritative and state-of-the-art guide to effective and feasible interventions.

The primary audience of the report will be health planners and decision-makers as well as stakeholders who can influence multisectoral government action.

Tobacco Free Sports

A Manual Designed to Expand Tobacco Free Sports at National, Regional and International Levels
WPRO Nonserial Publication
[ISBN 92 9061 179 0 Price Sw.Fr.10.00 / US$ 9.00. In developing countries: Sw.Fr 7.00]

This manual was developed with the overall aim of promoting a healthy tobacco-free lifestyle through sports. The strategy aims to ensure that sports will promote best practice tobacco-free sporting events at all opportunities by removing tobacco marketing and advertising from any association with sports and also banning the sale and consumption of tobacco. This has
been produced to encourage support from health, education, sports and other organizations representing the government and non-government sectors.

Monitoring the Declaration of Commitment on HIV/AIDS
Guidelines on Construction of Core Indicators
UNAIDS Publication
[ISBN 92 9173 433 0 Order Number 18800031 Price Sw.Fr 30.00 / US$ 27.00, in developing countries: Sw.Fr 15.00]

Accurate information is a vital requirement to enable the most effective international response to AIDS. These guidelines provide National AIDS Councils (or equivalents) with technical guidance on how to measure the core indicators for the implementation of the Declaration of Commitment on HIV/AIDS, adopted by Member States of the United Nations during the General Assembly Special session on HIV/AIDS in June 2001.

Included are the detailed specifications of the core indicators, the information required and the basis of their construction, and their interpretation.

International Statistical Classification of Diseases and Health Related Problems (The) ICD-10 2nd Edition
[ISBN 92 4 154649 2 Price CHF 300.00 / US$ 270.00 Developing countries: CHF 150.00]

This new edition of WHO’s International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) has been fully updated. Originally published in the early 1990s, ICD-10 now incorporates all updates and other changes to this core health classification since 1996.

The three-volume second edition of ICD-10 follows the same structure as the first edition, with the addition of a chapter XXII (Codes for special purposes) made necessary by the emergence of severe acute respiratory syndrome (SARS) and the need for an interim solution for the coding of this major health problem.

In 2000, WHO formed an international panel to review and collate all adjustments to the ICD-10 proposed by many institutions around the world. Panel members consult several times a year and this definitive second edition of ICD-10 is the result of their work. The new edition has hundreds of updates, and includes new diseases such as SARS, to ensure that the classification is entirely suited to today’s needs.

ICD-10 e-book on CD-ROM
This is an electronic version of the three printed volumes of ICD-10.

The Selection and Use of Essential Medicines

This report presents the recommendations of the WHO Expert Committee responsible for updating the WHO Model List of Essential Medicines. The first part contains an update on the revised procedures for updating the Model List and the development of the WHO Essential Medicines Library. It continues to present a summary of the Committee’s considerations and justifications for additions and changes to the 12th Model List, including its recommendation to add ten antiretroviral medicines. The annexes include the 12th WHO Model List of Essential Medicines in its usual presentation and, for the first time, in the five-level Anatomical Therapeutic Chemical (ATC) classification system.

The Injury Chartbook
ISBN 92 4 156220 X; SW.fr.30.-/ US $ 27] and
Injury: A Leading Cause of the Global Burden of Disease, 2000
ISBN 92 4 156232 3; Sw.fr.25.- / US 22.50}

Both of these publications highlight that injuries kill more than 5 million people worldwide each year, accounting for nearly 1 of every 10 deaths globally. In addition, tens of millions of people visit emergency departments annually due to injury. Whether
they are unintentional – resulting from incidents such as road traffic collisions, drowning or falls – or intentional – following an assault, suicide or war – related violence – injuries affect people of all ages and economic groups.

Both publications reveal some striking findings on the nature and extent of death and illness as a result of injury. In addition to the considerable number of deaths, millions more are wounded or suffer other non-fatal health consequences due to injuries. The magnitude of the problem varies considerably by age, sex, religion and income group.

Policy Tools for Allocative Efficiency of Health Services
[ISBN 92 4 156252 8; Sw.fr.20.- / US $ 18.-]

Health care should be provided efficiently, given the potential gains for patients and the population, and the high cost of some kinds of care. Emphasizing the most cost-effective services can in principle attain the greatest health gains. Policies are implemented through tools available to policymakers, particularly those in government who can influence not only public expenditure and service delivery but also how private insurers and providers allocate resources among diseases and individuals.

Policy Tools reviews an enormous research literature and aims not only at what policies to recommend but at what it takes to make them effective.

"Three Ones" in action (The): where we are and where we go from here
[ISBN/Document No. 9290213892 , Ind. Rs. 300]

In April 2004, the Consultation on Harmonization of International AIDS
Guidelines for Contributors

THE Regional Health Forum seeks to inform and to act as a platform for debate by health personnel including policy-makers, health administrators, health educators and health communicators.

Contributions on current events, issues, theories and activities in all aspects of health development are welcome. Contributions should be original and contain something of interest to those engaged in health policy and practice, some lesson to be learned, some idea, something that worked, something that didn't work, in fact anything that needs to be communicated and discussed on a broader scale. Articles, essays, notes, news and views across the spectrum of health development will be published.

Every year, the April issue of the Forum is dedicated to the World Health Day theme of the year. Readers may send contributions relating to the theme for inclusion in the special issue.

Papers for submission should be forwarded to the Editor, Regional Health Forum, World Health Organization, Regional Office for South-East Asia, World Health House, Indraprastha Estate, Mahatma Gandhi Road, New Delhi 110002, India (E-mail address: editor@searo.who.int).

Contributions should:

- be in English;
- be written in an anecdotal, informal, lively and readable style (so that sophisticated technologies, for example, may be easily understood);
- be in MS Word and sent with a diskette and a printout in double space, and
- not normally exceed 3 000 words with an abstract (approx. 250 words) and a maximum of 30 references.

Letters to the editor should normally be between 500-1000 words with a maximum of six references.

Responsibility of the Authors

Authors are responsible for:

- ensuring that their contributions contain accurate data and references (and are requested to check the accuracy of both before submission);
- obtaining permission to use copyrighted material (if used). The letter granting such permission should be attached to the manuscript when submitted;
- obtaining permission from appropriate governmental authorities if the contribution pertains to a government programme/project and contains material/statistics/data derived from government sources;
- ensuring that all abbreviations (if used) are explained;
• giving their full names, the name and address of their institutions, and an exact description of their posts;
• declaring sources of funding for the work undertaken, and
• disclosing at the time of submission, information on financial conflict of interest that may influence the manuscript. They may also choose to declare other interests that could influence the results of the study or the conclusions of the manuscript. Such information will be held in confidence while the paper is under review, and if the article is accepted for publication the editors will usually discuss with the authors the manner in which such information is to be communicated to the reader.

Tables and Illustrations
• The use of tables and illustrations should be restricted to those that clarify points in the text.
• All illustrations and tables should be numbered consecutively and should be lightly marked on the back with the figure number, and the author's name indicated.
• Graphs and figures should be clearly drawn and all data identified.
• Photographs should be on glossy paper, preferably in black and white.
• Each table should be submitted on a separate sheet of paper.

References
• References should be numbered consecutively as they occur in the text.
• Journal titles should be written out in full (i.e. not abbreviated).
• A reference to a contribution in a book should include the chapter title and page range.

Reprints
Reprints of contributions are not produced but five printed copies of the issue will be supplied to the respective authors. An electronic version of the article in PDF format may also be made available to authors if they provide their e-mail addresses.
How to order WHO Publications

New WHO publications are issued frequently. Requests for information about WHO publications and orders should be addressed to the nearest sales agent (listed below) or to WHO, New Delhi. Orders sent to New Delhi must be accompanied by payment in the form of a demand draft/Indian postal order/money order (prices include handling and postage charges). Orders from countries other than India can be addressed to the Sales agent or WHO Representative in that country and are payable in local currency:

INDIA

Southern India
M/s New Century Book House (P) Ltd.
136 Anna Salai
Chennai 600 002, TAMIL NADU

Western India
M/s Consumer Communications
52, Shafi Estate, Amar Mahal
Chembur
Mumbai 400 089, MAHARASHTRA

M/s K.M. Varghese & Company
Medical Book Distributors & Publishers
104 Hind Rajasthan Building
Dadasaheb Phalke Road, Dadar
Mumbai 400 014, MAHARASHTRA

Eastern India
M/s Insales India (P) Ltd.
1C/162, Camac Court
25-B, Camac Street
Calcutta 700 016, WEST BENGAL

BANGLADESH
Ahsania Mission Book Distribution House
House No. 1/A, Road No. 13,
Dhanmondi R.A. (Mirpur Road) 1st Floor,
Dhaka - 1209
Email: dam@drik.bgdbdtoolnet.org

INDONESIA
M/s C.V. Sagung Seto
Jalan Pramuka No. 27
P.O. Box 4661
Jakarta 10001

NEPAL
Everest Media International Services (P) Ltd.
Shanti Nagar-34
Block No. Kha-1-248
New Baneswar, Kathmandu

THAILAND
Suksit Siam Co. Ltd
113, 115 Fung Nakhon Road
Opp. Wat Rajbopith
Bangkok 10200

World Health Organization
Regional Office for South-East Asia
Indraprastha Estate
New Delhi 110 002, India
Attn: Publications (Sales)
Telephone: 2337-0804
Telefax: 2337-9395 / 2337-9507
Email: publications@searo.who.int