Education and training in occupational and environmental health

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Compared with the situation in 1985, when the first edition of our survey of eight countries in Asia was published, much progress has been made. It would be of interest to review some of the progress in those eight countries or territories.

In Hong Kong, which is now part of China, training in the basic course for physicians now occupies 10-30 hours. There are now specialist Diplomas in Occupational Medicine, Nursing and Hygiene which did not exist in 1985.

In Indonesia, many more informal courses than before have been conducted for doctors, hygienists and nurses. Some such courses were conducted in collaboration with the Department of Occupational Health, Ministry of Labour, Singapore, and the National Institute of Occupational Health and Safety, Australia. A special course in Occupational Medicine for Indonesian doctors has been planned for late 1997 in Sydney.

In Korea, hours of training for medical students in occupational health have increased tremendously to nearly 100 hours or more from the six to ten hours a decade earlier. Special certificates for doctors, nurses and environmental monitoring and safety now exist.

In Malaysia, a new course leading to the Master of Public Health (in Occupational Health) has been established. There are also short courses for doctors, nurses and safety officers.

In the Philippines, a Master in Occupational Health Course has been established and also courses leading to special certificates in that subject for doctors, nurses and safety officers.

In Singapore, yearly Designated Factory Doctors’ Courses have been held since 1985 for general practitioners who conduct statutory medical examinations for workers exposed to specific hazards under the Factories (Medical Examinations) Regulations, 1985, which have been amended with effect from February 1997. The objectives of the regulations are to ensure that workers employed in certain hazardous occupations are fit to remain at such work and to detect signs and symptoms of overexposure early. This is done through specific pre-employment and periodic medical examinations conducted by Designated Factory Doctors (DFDs).[1] Currently, there are about 67,000 workers from approximately 1,500 establishments undergoing such examinations every year. The Master of Science (Occupational Medicine) Course, established in 1973, has changed its name to Master of Medicine (Occupational Medicine), and continues to attract many students from other parts of Asia and Africa as hitherto.

In Sri Lanka, 45 hours of instruction in Occupational Health are now given in the Master of Community Medicine Course.

In Thailand, there is now a Master of Science Course in Occupational Health and Safety as well as Certificate Courses in Occupational Medicine, Occupational Health Nursing, and Safety.

As can be seen from Table I, the other countries in the Asia-Pacific region have also progressed rapidly in education and training in occupational health.

Australia could perhaps serve as an example to illustrate some of the progress made. There were approximately 30 postgraduate Diploma and Masters’ programmes in 1994 in that subject. To ensure that there is similarity of curricula the National Institute of Occupational Health and Safety, Worksafe Australia, a Federal Government agency, prepared and published a document entitled Guidelines for Tertiary Education Courses in Occupational Health and Safety in Australia in 1994[2]. This document was prepared in conjunction with a broad section of educators in the subject and many views were canvassed. However, the amount of training in occupational health for medical students and basic nurses remains inadequate. The University of Sydney is fairly typical of Australia as a whole with regard to medical students’ training. In its traditional six-year curriculum, there are only two lectures in the second year in Toxic Hazards, followed by five lectures in the fourth year:

• Lecture 1. Introduction and history taking
• Lecture 2. Chemical hazards: biological monitoring
• Lecture 3. Biological and physical hazards and cancer
<table>
<thead>
<tr>
<th>Country</th>
<th>Basic physicians</th>
<th>Other basic personnel</th>
<th>PG courses</th>
<th>Part of other PG courses</th>
<th>CME</th>
<th>Training manager/jured workers</th>
<th>Others</th>
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<tbody>
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<td>Australia</td>
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<tr>
<td>S. Australia</td>
<td>20 hours</td>
<td>PH/ Nurses “minor”</td>
<td>Grad Diploma/ M PH</td>
<td>Doctors/ Nurses/ Hygienists</td>
<td>Available</td>
<td>Physicians’ training</td>
<td></td>
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<tr>
<td>Victoria</td>
<td></td>
<td></td>
<td>Dip/ Masters</td>
<td>Doctors</td>
<td>Available</td>
<td>Safety Institute</td>
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<tr>
<td>W. Australia</td>
<td></td>
<td></td>
<td>Grad Dip</td>
<td>Available</td>
<td>Employers and</td>
<td>“Very limited”</td>
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<td>OHS/ MSc</td>
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<td>Trade Unions</td>
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<tr>
<td>Burma</td>
<td>3 hours</td>
<td>PH/ Nurses/ Minor for engineers</td>
<td>Available</td>
<td>M Med Sc (PH and Trop Med)</td>
<td>Available</td>
<td>Doctors/ Nurses/</td>
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<td></td>
<td></td>
<td>PH</td>
<td>Master/ Dr</td>
<td>Available</td>
<td>Available</td>
<td>Health Asst</td>
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<td>China</td>
<td>80-90 hours PH schools</td>
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<td>Managers/</td>
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<td></td>
<td>8 hours</td>
<td>Med school</td>
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<td>management students</td>
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<td>Hong Kong</td>
<td>1030 hours</td>
<td>Nurses/ PH</td>
<td>Dip OH</td>
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<td>Annual Conference of HK College of Comm Med, etc.</td>
<td>For Manual Handling/ Chemicals</td>
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<td>India</td>
<td>“Minor”</td>
<td>PH minor</td>
<td>DH 9 months-2 years</td>
<td>Ind Med Assoc</td>
<td>30 hours/ Nurses</td>
<td>Dip OM 1/2 day x 9 months</td>
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<td></td>
<td>Dip Ind Safety</td>
<td>2 weeks Nat Safety</td>
<td>Council</td>
<td>Dip Occ Hyg 1/2 day x 9 months</td>
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<td>2 years</td>
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<td>Cert Indus Health</td>
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<td>3 months</td>
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<tr>
<td>Indonesia</td>
<td>“Minor”</td>
<td>PH minor</td>
<td>Masters</td>
<td>Master/ Dr med Sc</td>
<td>Undergrad and Short Courses</td>
<td>Drs/ nurses/ safety officers</td>
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<tr>
<td>Japan</td>
<td>10-20 hours</td>
<td>Nurses/ PH minor</td>
<td>Dr Med Sc</td>
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<td>Japan Industrial Health</td>
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<tr>
<td>Korea</td>
<td>96256 hours</td>
<td>Nurses/ PH minor</td>
<td>Dr and Masters OH</td>
<td>Physicians/ Nurses 24 hours every other year, etc.</td>
<td>Available</td>
<td>Cert for Drs/ Nurses/</td>
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<td>Environ Safety Courses - 34 hours</td>
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<table>
<thead>
<tr>
<th>Country</th>
<th>Basic physicians</th>
<th>Other basic personnel</th>
<th>PG courses</th>
<th>Part of other PG courses</th>
<th>CME</th>
<th>Training manager/ workers</th>
<th>Others</th>
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<tbody>
<tr>
<td>Malaysia</td>
<td>20 hours</td>
<td>MPH</td>
<td>MPH</td>
<td></td>
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<td>Drs 72 hours/ Nurses/ Safety Personnel</td>
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<tr>
<td>New Zealand</td>
<td>10 hours</td>
<td>DOH</td>
<td>MPH</td>
<td>No</td>
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<td>No</td>
<td>Dip OHS for Safety</td>
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<tr>
<td>Philippines</td>
<td>10-20 hours</td>
<td>Master OH</td>
<td>MPH</td>
<td>Nat Conference Seminars</td>
<td>No</td>
<td>Cert for Drs 60-72 hours Training for Safety</td>
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<tr>
<td>Singapore</td>
<td>22 hours</td>
<td>Nurses/ minor eng</td>
<td>M Med OM/ Cert OHS</td>
<td>Drs/ Nurses/ Safety Comm Members/ Hygienists</td>
<td>Available</td>
<td></td>
<td>Designated Factory Drs 4 months part-time Safety Officers 1 year Engineers/ Architects/ Management Courses</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>6-8 hours</td>
<td>PH personnel</td>
<td>45 hours in MSc Community Med</td>
<td>5-6 days Drs/ PHIs</td>
<td>Available</td>
<td></td>
<td>Cert Oc Med for Drs 6 weeks Nurses 1 year/ Cert Safety for Safety Officers 180 hours</td>
</tr>
<tr>
<td>Thailand</td>
<td>“Minor”</td>
<td>PH/ Nurses “minor”</td>
<td>M Sc OHS</td>
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<td></td>
<td>Drs/ Nurses/ Safety Officers/ Engineers</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>600 hours</td>
<td>Nurses/ PH/ Engineers “minor”</td>
<td>Masters/ Dr</td>
<td>For Drs/ Nurses/ other health personnel</td>
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</table>
There are no laboratory demonstrations, worksite visits or clinical sessions where patients are seen.

Continuing and informal education activities for the general public have also proliferated in Australia. Since 1987 NIOHS has run short one- to three-day courses in different parts of Australia. These courses address a wide range of subjects, such as asbestos-related diseases, HIV and hepatitis in health care workers, manual lifting, office ergonomics, management of chemical hazards, problems of shift work, and indoor air quality.

Training courses for employers, managers and workers have also increased significantly. Every year NIOHS provides grants to the peak employer and trade union bodies for this purpose. Among the many such courses are three-day courses for supervisors and worker representatives to worksite occupational health and safety (OHS) committees. In Australia, any enterprise with 20 or more workers is required to set up such a committee.

Continued medical education (CME) is probably going to be obligatory for all doctors sooner or later. At present, CME programmes are optional, but a substantial proportion of occupational physicians do participate. Several bodies, including the Faculty of Occupational Medicine, the Society of Occupational Medicine, and universities all deliver CME programmes.

Doctoral programmes, such as for the Doctor of Philosophy Degree, are also available for research into occupational health subjects in most of the 30 or so universities in Australia.

Most of the other countries surveyed have also made good progress in occupational health education and training. In Japan, the leading economic power in the Asia-Pacific, has recently established professional education for occupational medicine for physicians. Hitherto, only research training, such as for the Doctor of Medical Science Degree, was available.

With some exceptions, however, education and training for nurses and safety personnel leave much to be desired. There is, in general, a paucity of courses for such personnel.

However, at the XIII World Congress on Occupational Safety and Health, held in New Delhi in 1993, a number of presentations described new developments in safety training. For example, a three-semester postgraduate degree course is offered by the Regional Engineering College, Tiruchirapalli. It is the only course at university level in India. However, diploma level courses for science graduates are offered by the regional labour institute in each state.

However, the tremendous advances in occupational health education in this region are exemplified by the holding of the 3rd International Conference on Education and Training at the University of Occupational and Environmental Health in Japan in 1991. Approximately 250 participants came from over 30 countries to discuss all aspects of education and training in occupational health.

In environmental health, a landmark workshop was held for the Asia-Pacific region in 1995 in Melbourne, Australia, The United Nations Environment Programme – NETTLAP – held a training and resources development workshop in basic chemicals and hazardous waste management. A striking feature of the workshop was the multi-disciplinary composition of the key speakers. They came from environmental engineering, social sciences, occupational hygiene, toxicology, environmental management, educational sciences, and occupational health. If it achieved nothing else, at least the workshop brought many key educators in different aspects of environmental health from many Asia-Pacific countries together for the sharing of problems and possible solutions.

References