PLENARY 1

Education Of Health Professionals For 2020 And Beyond

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The demand for healthcare continues to rise relentlessly, while the financial and human resources fail to keep up to meet the demands. Despite major advances in science and technology, with the amazing capabilities in diagnosis and therapeutics, medicine faces numerous challenges. Roy Porter in his book on the history of medicine (1), observed that few people today feel confident about their personal health, about doctors, about healthcare delivery, or about the medical profession. It is a paradox that as more is spent on healthcare, the more it is felt that we are so short of resources to meet increasing demands for healthcare. This have resulted in popular calls for reform of healthcare. The preoccupation with reform, with concerns on equity, access, with mechanisms for financing and organizing healthcare, led some to believe that we have failed to consider and properly define what we want medicine to do. This preoccupation with the means and not the ends, resulted in the Hastings Centre, NY to initiate a project called the Goals of Medicine, involving multidisciplinary groups working in 14 countries. These groups agreed on certain universal values, and articulated 4 goals of medicine: "(1) the prevention of disease and injury and the promotion and maintenance of health (2) the relief of pain and suffering caused by maladies (3) the care and cure of those with a malady, and the care of those who cannot be cured (4) the avoidance of premature death and the pursuit of a peaceful death."

These goals represent a challenge to "western" medicine, and have important practical implications for research, education and organization of health services. Initiatives in health reform occurs in countries on a global basis, including Malaysia, in response to forces that can transform medicine and healthcare delivery (2, 3), and can result in changes to medical practice and healthcare delivery. The education of doctors and health professionals will need to be relevant to the challenges of the healthcare system of the future.

In a follow-up to the Edinburgh Summit on Medical Education in 1993, the Association for Medical Education in the Western Pacific together with WHO Western Pacific Regional office identified 10 forces that can change medical practice and have implications for medical education (4). An international consultation in 1997 for the national Telehealth project in Malaysia involving 23 companies (17 foreign) lasting 3 months, drew up the Telehealth blueprint (5) an initiative to apply information and communications technology (ICT) as an enabler to realize Malaysia's vision for health. In the blueprint, 8 health services goals were identified, which were transformational in nature, the realization of which will help achieve the health vision and create the health system of the future.

Eight goals of the health system

- Wellness focus
- Person focus
- Informed persons
- Self-help
- Care provided at home/close to home
- Coordinated, continuous, seamless care
- Services tailored to individuals/groups with special need
- Effective, efficient, affordable services

Realization of 8 goals will result in achieving the vision for health.

In this new health system, the health paradigm would be more actively promoted. There would be greater emphasis on preventive and promotive aspects of healthcare and greater support for individuals and families to make lifestyle choices that best maintain health. Services would be provided during the state of wellness to support maintenance of health. The health system should "invert" the healthcare pyramid, so that secondary, tertiary care and curative services should support preventive, promotive services at primary care level, and care should be brought to the home as much as possible.

For this to occur, the role of hospitals, doctors and other health professionals will need to be reviewed. In light of these possible changes, Calman's observations and approach towards the purpose of medicine and concept of a profession in the wider context of health, values, in society and the need

to involve patients and the public is a useful and timely reminder (7). Calman's approach appears sufficiently robust to be a useful guide on the matter, as we navigate the changes of the reform process.

There have been various initiatives around the world to review medical education to ensure that the education of doctors, and other health professionals is consistent with the needs of contemporary societies, and different countries and various interest groups have responded according to their capacities (8, 9, 10, 11). In the last century, Enarson and Burg noted the contributions of 13 national commissions (12) in reviewing medical education, 3 of which were active in the last decade of the last century. Some believe that changes in medical education have been substantial (13) in response to changes in the health system, while some feel that changes have been slow (14). There have been calls for promoting evidence-based medical education (15), and for academic medicine to contribute to global health (16).

While it is difficult to predict what the future health system would be like, the training of doctors and health professionals need to respond to the needs of the nation and local communities.

The educational process needs to be flexible to respond to the constantly changing environment, and need to be aligned with the national vision, vision for health, and the value system of the community.

While we aspire to ensure our graduates are competent as clinicians, scientists and medical educators who have the ability to function in the information age, and who will grow to become accomplished professionals, they must be ethical, respected and can work comfortably in the healthcare in the 21st century as envisioned by Frist (17). This 21st century healthcare system requires electronic health records and consumers empowered with information, choices and control, enabled by information technology. In this health system, quality is enhanced, errors reduced, paper eliminated and efficiency improved, and where there will be greater personal responsibility for health and affordable health coverage for all.

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PLENARY 2

The Changing Roles Of Pharmacists In The 21st Century

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The pharmacy profession globally has been firmly seated within drug distribution and drug development roles in Society. These traditional roles have been secured by commercial strengths within (a) the retailing role in the high street and (b) the academic and industrial research role supported by the pharmaceutical industry. The traditional roles have dominated the education of pharmacists. A clinical role in response to public health needs associated with improving the use of medicines, has developed slowly from the 1970s and 1980s, largely through initiatives in the less well-resourced hospital sector. By the turn of the century, in many countries, initiatives by hospital pharmacists had transformed the pre-graduate education of pharmacists in order to extend the clinical role. The dawn of this new century has been a dawn in the wakening of the profession at large. Some fifty years after the start of the post-war chemotherapeutic revolution, pharmacy as a worldwide profession has woken up to its own clear public health role. The expanded complexity of pharmacotherapy in daily life offers clear roles in the management of drug therapy that integrate comfortably within the healthcare team.

I shall briefly review in retrospect what I see as seven milestones in the changing roles and in the preparation of pharmacists for those roles;

1. Establishment of *clinical pharmacy* in US hospitals
2. The doctorate *(PharmD)* as the professional entry qualification in the US
3. The establishment of postgraduate clinical pharmacy education *(MSc/MPharm)* in UK, Asia, Australasia and more recently in Europe.
4. *Hospital pharmacist specialisation* to function across all medical specialties

5. The *clinical teaching of pharmacists* by adapting the medical model
6. The role of '*pharmaceutical care*' in creating a language between the profession and public health agencies
7. Structural changes in Schools of Pharmacy – *Chairs in pharmacy practice and patient-centred teaching*

I will then go on to review the prospect of those changes for the profession and for the healthcare team in the first part of the 21st century

1. The evolution of *quality management systems* to address errors in prescribing and drug administration
2. The *automation* of drug prescribing and administration
3. The improved *documentation of care* to provide 'therapeutic plans' (and widening of prescribing roles)
4. *Patient-centred research* in Schools of pharmacy
5. *Increased patient education* and leading to higher patient expectations
6. *Development* of primary care and improved accessibility to pharmaceutical advice
7. *Integration of pharmacists' public health* roles in strategies to address prevention and management of disease

The delivery of those new roles and the credibility of the profession rest on the orientation of students, practitioners and researchers around patients' day-to-day needs in the use of medicines.

PLENARY 3

Is Inter-Professional Education Possible?

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Over the last decade the University of Southampton, and within it the Faculty of Medicine, Health and Life Sciences, has been committed to developing a model of interprofessional learning and teaching for all health care professionals in partnership with key stakeholders. As a result of this long-term vision the New Generation Project was established in 1999. The Project has since expanded and evolved to become a partnership between the University of Southampton, the University of Portsmouth and the Hampshire & Isle of Wight Workforce Development Confederation. The Partnership reaches across fourteen professional programmes; four faculties; two universities and the health and social care organisations that support student learning in practice.

In January 2002 the Project was identified as one of the four Department of Health national 'leading edge sites' to take forward common learning as part of reforming pre registration education. The investment has enabled the development and delivery of integrated common learning across eleven professional pathways and commenced in October 2003 and results in students experiencing common learning in each year of their programme. This innovation has involved significant curriculum revision and culture change, enhanced delivery of innovative learning approaches and in the longer term the evolution of new programme pathways and health professional outputs.

The curriculum contains both 'Learning in Common' and 'Inter-professional Learning'. Learning in Common includes the topics that are common to all the programmes but which are taught and assessed within the profession specific programmes. Inter-professional Learning (IPL) is where the students come together in multi-professional learning groups to learn from and about each other; and be assessed on their achievement of inter-professional learning outcomes.

Learning in Common

The Learning in Common component of the curriculum comprises the knowledge and skills that underpin health and social care practice and are common to all the professions. Where this learning is a pre-requisite for an IPL unit, the profession specific programme is responsible for ensuring that students reach the required standards, at the right time, to be able to participate fully in the inter-professional learning. Although students will not be required to learn in multi-professional groups for Learning in Common, the curriculum development and management process for this component of the curriculum provides the opportunity to develop, where appropriate, shared learning resources and common outcomes.

Inter-professional Learning Units

There are three inter-professional learning units. These units will require students to use what they learn in their profession specific programmes to build inter-professional understanding of practice-based issues; and to support the learning of all members of the learning group. The units focus on developing the knowledge, skills and attitudes needed to support collaborative working in health and social care.

Unit 1 – Collaborative Learning: This unit introduces students to the concept and practice of collaborative learning and team working and develops their knowledge management and IT skills needed to participate in collaborative learning supported by on-line methods.

Unit 2 – Inter-professional Team Working: This unit provides students with an opportunity to apply their team working and negotiation skills in an inter-professional context by carrying out an audit.

Unit 3 – Inter-professional Development in Practice: This unit helps students examine inter-professional in the context of service development working in modern health and social care services from a personal, professional and organisational perspective.

PLENARY 4

Assessing Students-Clinical Competence Versus Performance

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The introduction of the OSCE over 25 years ago provided educators and students with the first valid and reliable assessment of a student's ability to proficiently undertake a given task and therefore demonstrate competence. Both the OSCE and the Mini-Clinical Examination have been shown to meet the critical criteria of effective assessment methods-validity, reliability, predictive validity, and practicality. However, competence- evidence that the student can "show how" does not necessarily mean that the student will actually do so in practice. Measures of actual performance ("do") provide more meaningful measures of the qualifications of students. Ward or outpatient practice-based sessions or small group learning sessions provide the most desirable environments to assess the student's performance with the potential of multiple observers and a variety of settings over a period of time. Unfortunately current methods are flawed. Their validity and reliability can be improved through the use of checklists of tasks (in place of global ratings), multiple observers in multiple settings, evaluator feedback and training and timeliness of recording observations and feedback to the student. There needs to be increased emphasis on developing and instituting performance assessments using valid and reliable methods.

PLENARY 5

How Do We Know We Are Teaching Well?

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The assessment of quality and efficacy of teaching is difficult, but essential as part of the quality assurance process. What constitutes good quality teaching will vary according to the type of teaching and the circumstances, for example large group or small group, didactic or interactive, clinical or non-clinical and so on. There are, however, a number of common themes which can be identified. These can be headed into three main categories:

(1)Facilities:

Good facilities don't make good teaching inevitable and good teaching can happen with limited facilities, but good facilities help.

(2)What you can do

- Undertake training in teaching when you are new to it and accept mentorship.
- Be well prepared for your session, but make allowances for things to go wrong and for spontaneity where relevant.
- Have a good understanding of your topic.
- Be clear what the relevant learning objectives for the session are and teach towards them.
- Specify to the students what the session will and will not cover.
- Concentrate on complex or core material or material not readily available from other sources.
- Link to other topics where possible or put your topic into a broader context.
- Produce appropriate supportive material.
- Engage students actively and check their understanding at intervals.
- Reflect on each teaching event.

(3)What you can measure

- Student feedback – to include content, style, comprehensibility, stimulation, enjoyment etc.
- Peer or mentor observation – directly or recorded.
- Student performance in assessment of learning objectives.

We cannot assume that we can just turn up and deliver good teaching. Understanding the pedagogy of the type of teaching, preparing well and acting on reflection and feedback are essential.