

GOOD PHARMACY EDUCATION PRACTICE *

**Statement Of Policy*

The role of the pharmacist is developing rapidly to meet the needs of modern health care systems. Ensuring accurate dispensing of prescribed medicines against prescriptions and providing sound advice on responsible self-medication remain vitally important parts of the service provided by pharmacists. Pharmacists have, however, recognised for some years that equally important roles are to advise other healthcare professionals on safe and rational use of medicines and to accept responsibility for seeking to ensure that medicines are used safely and effectively by those to whom they are supplied so that maximum therapeutic benefit is derived from treatment. This activity contributes both to the welfare of the individual and the overall improvement of public health.

These developments have established an important focus of activity for the practising pharmacist. This involves not only contributing to discussions leading to appropriate

prescribing but also advising people on how to use medicines effectively.

These developments also impose important ethical demands on the profession. They must be underpinned both by legislation and by changes in the basic and continuing education of pharmacists. The basic (first degree) course of education is designed to ensure that the newly qualified pharmacist has the necessary knowledge and skills to commence practising competently in a variety of settings including community and hospital pharmacy and the pharmaceutical industry. Continuing professional development must then be a lifelong commitment for every practising pharmacist.

The implementation of Pharmaceutical Care, while recognising the responsibility of the patient as end user of a medicine, requires the pharmacist to use a range of processes to facilitate the responsible provision of medicinal treatment until tangible results are achieved, improving the patient's quality of life.

Pharmacists provide their services in a variety of settings in response to a dynamic and evolving set of primarily local health care priorities and needs. There are also regional, national and international policies and factors, which dictate the need for developments in pharmacy practice. Within this context, pharmacists are medication experts in the treatment of disease and in health promotion. This expertise, in its broadest sense, encompasses the preparation, supply and control of medicinal products and assurance of desired outcomes of treatment by medication. It thus begins with the medicine development process and conti-

nues through to medication's ultimate benefit to the individual and to society generally. This expertise has its foundations in the pharmaceutical sciences and related research, and has its focus on the individual and populations.

Introduction

The World Health Organisation, in the report of its consultative group on "Preparing the Future Pharmacist" (Vancouver 1997) identified seven roles, (the "seven star pharmacist"), which should be considered essential, minimum common expectations of pharmacists by health care systems world-wide. The identified roles and responsibilities were:

- Care giver
- Decision maker
- Communicator
- Leader
- Manager
- Life-long learner
- Teacher

The Vancouver consultancy agreed that pharmacists must possess specific knowledge, attitudes, skills and behaviours to equip them to perform these roles effectively.

These professional characteristics should be regarded as required outcomes of basic education and training of pharmacists. Specialisation in aspects of pharmacy practice and detailed professional requirements for life-long learning are not covered by this statement.

The required educational outcomes as identified by the WHO Vancouver Consultancy are set out in detail in the Annex to this Statement. The FIP considers that the words "pharmacy graduate" in the annex should be interpreted as "pharmacist".

The Vancouver Consultancy also emphasised that there must be a greater focus on student learning, rather than faculty teaching, where the student is an active participant in the learning process. It was added that it was important to develop problem solving and critical thinking skills in students.

In addition the pharmacy graduate and pharmacist must have a sense of solidarity with, and a willingness to cooperate with, colleagues and other health professionals as well as a professional identity and character consistent with high ethical principles.

Ideally, pharmacy students should be taught in academic environments in which they are in contact with students in other healthcare professions to allow early establishment of the concept of the healthcare team and professional collaboration, particularly in pharmacotherapy.

Recommendations

1. Basic (first degree) education programmes should provide pharmacy students and graduates with a sound and balanced grounding in the natural, pharmaceutical and healthcare sciences that provide the essential foundation for pharmacy practice in a multiprofessional healthcare delivery environment.

The following are relevant areas of study:

- biological systems, the chemistry of drugs and other constituents of medicines, pathophysiology and disease states and the interaction between medicines and biological systems,
- dosage form design and development,
- the actions and uses of medicines and other relevant products,
- the laws governing the practice of pharmacy and the sale and supply of medicines,
- the principles governing ethical conduct as set out in FIP's Code of Ethics for Pharmacists (1997) and the relevant national Code,
- safety and risk management,
- pharmaco-epidemiology and pharmaco / health-economics,
- an introduction to the practice of pharmacy in community and hospital pharmacies, industrial, academic, and where appropriate, clinical biology settings including an introduction to the relevant aspects of the social and behavioural sciences, leading to competency in delivering patient care,
- an introduction to the effective management of resources (human, physical, fiscal and time),
- an introduction to guidelines governing good practices in manufacturing, distribution and laboratories.

The programme must maintain the university character of the education, while balancing scientific knowledge with practical training. This will provide the pharmacy graduate with a unique body of knowledge, equipping the pharmacist to apply the wide range of traditional and emerging technologies to help patients to achieve the desired health outcomes from use of medicines.

2. Educational programmes should ensure that patient-focused pharmaceutical care as outlined in the FIP Statement "Pharmaceutical Care" (The Hague 1998) is a mandatory part of the curriculum.

3. Future developments in pharmacy and medicine should lead to continuous evolution of the educational programme as has been seen to be necessary with the introduction of new subjects such as molecular biology, biotechnology and gene-therapy and developments in information technology in recent years. This is essential if pharmacists are to be equipped properly by their course of education, to practise in various fields.

4. Educational programmes should reflect the fact that current and future pharmacists must have sufficient knowledge and professional, social and communication skills, and exhibit specific attitudes and behaviour, to enable them effectively to discharge their professional roles, within the requirements governing Good Pharmacy Practice including assisting an individual to evaluate and interpret information they have obtained from other sources.

5. Educational programmes should be based in a research active environment at a university or institute of equal standing and thus derive the benefit of multidisciplinary support for teaching, research, patient care and service to the public.

6. A final examination should lead to the granting of a diploma or degree signifying either achievement of the academic requirement for recognition as a pharmacist or, if in-service training has also been successfully completed and competency established, the right to commence practising as a pharmacist.

7. Educational outcomes should reflect the needs of society and the contemporary and developing practice of pharmacy in the nation and region concerned.

8. Educational programmes and curricula should be designed to be consistent with and reflective of their respective required educational outcomes. Assessment and quality assurance should be employed to guarantee that intended educational outcomes have been achieved and the required competencies gained.

9. Teaching and learning should be student-centred. Educational philosophy, structures, outcomes, methods and context should be considered of equal importance to content of syllabus, and should be subject to evaluation.

10. Practising pharmacists should recognise their responsibility to contribute to the training of future pharmacists.

11. National pharmaceutical associations should share responsibility for the education of pharmacy students by :

- being involved in the design, implementation and evaluation of the educational programmes of the schools and faculties of pharmacy in their countries,
- establishing a co-operative working relationship with the schools and faculties of pharmacy,
- promoting the appointment of practitioners as teachers in schools and faculties of pharmacy,
- seeking to ensure that practising pharmacists and pharmacy students are involved in discussions on changes to curricula,
- ensuring that pharmacist tutors of pre-registration graduates have adequate training for that responsibility,
- organising practical training possibilities and promoting post-graduate residencies and training programmes.

12. Schools and faculties of pharmacy should share knowledge and educational resources with their colleagues world-wide.

13. Schools and faculties of pharmacy should develop close alliances with educators of other health professionals involved with any aspect of human or animal health.

Conclusion

There is no single, best model for the education and training of pharmacists on a world-wide basis but there are common concepts, principles and practices that should be employed by pharmacy education policy-makers to meet the needs of society locally, regionally and worldwide.

The recommendations in this document on Good Pharmacy Education Practice provide a conceptual framework for the design, implementation and assessment of contemporary educational programmes for pharmacists throughout the world.

It is anticipated that pharmaceutical education policy-makers, working together, will jointly explore strategies and methods to ensure the successful implementation of good pharmacy education practice.

Annex:

WHO Consultative Group on

"Preparing the Future Pharmacist" (Vancouver 1997)

Caregiver: the pharmacy graduate calls upon his/her expertise as a medication expert to provide high quality caring services in primarily two areas. First, pharmacy graduates, in partnership with patients and other health care providers, use their knowledge and skills to directly (e.g. clinical, dispensing) or indirectly (e.g. analytical, technological, logistical, regulatory) meet patient's drug-related needs, with the objective of achieving optimal patient outcomes and maintaining or improving the patient's quality of life. Second, pharmacy graduates provide education, information and recommendations to the individual and populations concerning medications and medication use to ensure optimum and cost-effective patient care and to promote health.

Knowledge, Decision Making and Thinking Abilities: the pharmacy graduate shall possess knowledge and understanding of the core information associated with the profession of pharmacy, including the biomedical sciences; pharmaceutical sciences; social, behavioural and administrative pharmacy sciences; clinical pharmacy science and pharmacy practice. Pharmacy graduates will be able to utilise the principles of scientific inquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice and while conducting practice-related research. Graduates will also be able to systematically find, analyse, evaluate and apply information and shall make informed, defensible decisions.

Communication Abilities: the pharmacy graduate will be able to effectively use and respond to written, verbal and non-verbal com-

munications from diverse audiences and for varied purposes. To do so, pharmacy graduates must be able to use information, media and technology.

Leadership Abilities: the pharmacy graduate is obligated to assume a leadership position in the overall welfare of the community.

Manager/Entrepreneur: the pharmacy graduate effectively and creatively manages resources (human, physical, fiscal, time) and information with the goal of assuring access and availability of pharmaceuticals and pharmaceutical care services, thus optimising patient care. Pharmacy graduates must also be comfortable with delegating duties and being managed by others, whether employers or the manager/leader of the health care team.

Lifelong Learning Abilities: the pharmacy graduate must possess the concepts and principles of and a commitment to lifelong learning as a means of fulfilling and advancing their practice and professional role in society.

Teacher: the pharmacy graduate has a responsibility to assist with the education and training of future generations of pharmacists. Participating as a teacher not only imparts knowledge to others, it offers an opportunity for the pharmacist to gain new knowledge and to fine-tune existing skills.

Additionally, the pharmacy graduate will possess a sense of unity with his/her colleagues, and a professional identity and pride consistent with high values and ethical principles.