

# Academic ophthalmology at a crossroads in Hong Kong

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## Introduction

In this information age, eye care has become a prominent concern of the community and is rapidly changing in this period of global transition. Indeed, in this pivotal time for Hong Kong, we are witnessing an historical moment and planning a new path for eye care.

The first academic Department of Ophthalmology and Visual Sciences was established at the Chinese University of Hong Kong last year. The department has been mandated to teach medical students in both the Chinese University of Hong Kong and the University of Hong Kong, to establish a modern ophthalmic research centre and to provide clinical services in three of the eight teams of ophthalmic care units of the Hospital Authority. On the first birthday of this new department, we pause and ponder the direction of the development of academic ophthalmology in Hong Kong.

## Global transition

In this global transitional period, the end of the cold war has brought an end to the reckless arms race between East and West, and has opened the door for unprecedented, competitive, economic expansion in many countries. Some of the developing countries are striving to become developed countries and some of the developed countries are in stagnation or recession. In this global economic climate, the information age marches on and knowledge will become the primary building blocks of societies. As vision is the primary channel to gain information and knowledge, the increasing demand for eye care percolates through societies, schools and homes. A farmer in a backward society in Southeast Asia once confessed that he preferred hunger to blindness. Hence, eye care is propelled to the front line of social concern for a better quality of life.

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## A pivotal time in eye care development

The 1990s are a pivotal time for health care development in Hong Kong. In a span of only 60 years, Hong Kong has evolved from a fishing port in Southeast Asia into a major world financial centre. With economic prosperity, the population is now demanding better health care.

In spite of awareness of the need for better eye care, misconceptions about ophthalmology in the medical community run deep. Many physicians and laymen still perceive ophthalmologists as doctors with a flashlight and a direct ophthalmoscope. However, in the past 20 years, riding on the development of high technology, ophthalmology has evolved into a medical specialty of unusual complexity. With the development of lasers, ultrasonography, microsurgery, new bio-materials such as visco-elastics, intraocular lenses, computerised perimetry and others, ophthalmologists are now able to make an accurate diagnosis and provide effective treatments for many previously blinding diseases.

The Hospital Authority has supported the development of ophthalmology over the past four years. In 1991, there were approximately 30 ophthalmologists in the public sector, whereas in 1995, there are approximately 80 ophthalmologists and trainees. In 1993, the government's ophthalmic service was decentralised into eight teams, two serving Hong Kong Island, three Kowloon and three in the New Territories. The under-staffed specialty of ophthalmology is trying to catch up.

## An historical moment

For academic ophthalmologists, 1994 was an historical moment. The foresight of Professor Arthur Li and various members of the University Grant Committee led to the establishment of the first academic department of Ophthalmology and Visual Sciences. The department was uniquely commissioned to serve the two medical schools in Hong Kong. Seven academic staff were recruited and a University Eye Centre was built on the roof of the Hong Kong Eye Hospital. A new

teaching curriculum was developed for medical students of the two universities, and six research laboratories were built: the Ophthalmic Pathology Laboratory, Ophthalmic Biochemistry Laboratory, Ophthalmic Pharmacology Laboratory, Ophthalmic Molecular Biology Laboratory, Ophthalmic Laser Laboratory and Ophthalmic Clinical Investigative Laboratory. The department was further entrusted with the administration of the Eye Services of a number of hospitals, including the Prince of Wales Hospital, Queen Mary Hospital, Tung Wah Hospital, Hong Kong Eye Hospital and many others.

In this rapid growth period, academic ophthalmology is at a crossroads in Hong Kong. We are on a new path to develop education, research and clinical services. We are young, vigorous and progressive and do not carry a burdensome tradition or historical baggage. As we move to the 21st century, we are charting a new course to become a leader in eye care in this part of the world.

### **Ophthalmic education**

As we are formulating a new curriculum for medical students, we are keenly aware of the competition for their time from other medical specialties. While we would like to teach our medical students primary eye care, within the limit of two weeks of rotation in ophthalmology, is it possible for medical students to gain sufficient training in how to provide primary eye care for our population? Furthermore, how may we share with our students the excitement of using advanced medical technology for the treatment of eye diseases, or how may we attract the most brilliant students into our specialty in a very short period of ophthalmology rotation?

As we are developing graduate programmes in visual sciences, we are aware that only with a multidisciplinary approach may we advance the development of ophthalmology. So how may we attract the most brilliant basic scientists into the fascinating world of vision research? How can we provide a broad education of visual sciences for our graduate students and yet at the same time focus on the area of ophthalmic research?

What are the opportunities for integrating the need for ophthalmic instruments and pharmaceutical companies with the development of our graduate programmes? How do we nurture science students to en-

joy educational experiences in ophthalmic pathology, immunology, physiology, pharmacology and molecular biology—which are so unique in eye diseases?

The academic department has also been given the responsibility of assisting in formulating specialist education for ophthalmologists. The current apprentice system for learning ophthalmology is unstructured, cumbersome, and frustrating—even though the end result of providing ophthalmologists with good clinical skills is achieved. As our trainees and medical officers are supported by public funds and are expected to perform clinical services, training and education are relegated to a secondary role. How should we provide an efficient, systematic, structured and graded education for our medical officers?

The academic department has also commenced programmes to provide continuing medical education for busy clinical practitioners in the community. As there are many high-technology developments in ophthalmology, what are the best ways of providing practising ophthalmologists with up-to-date clinical skills and basic information?

### **Ophthalmic research**

It is vital for our clinicians to learn basic sciences as well for our basic scientists to collaborate with ophthalmologists on ophthalmic research. How may busy practising clinicians be given enough time and depth of knowledge to do basic research? How do we attract basic scientists into the fascinating world of the visual system? Can we afford basic ophthalmic research which has good potential, but is frequently expensive and time-consuming? Are the developing countries limited to performing clinical trials of programmes already developed by First World countries?

### **Clinical service**

The development and provision of clinical service is even more fascinating. The demand for clinical service is increasing. Academic ophthalmologists are frequently asked to provide consultation on the most difficult cases which require time and effort by experienced eye specialists and surgeons. How may the high quality of ophthalmic service be balanced against the increasing demands of service quotas? How do we develop clinical services in the academic sector without developing a town-and-gown conflict in the community?

## **Conclusion**

We hosted an International Symposium Challenge of Ophthalmology and Visual Sciences in June 1995. We were grateful that more than 100 experienced academics from more than 30 countries participated. They repre-

sented the state-of-the-art in education, research and clinical service. Their inspiratory message encouraged us. We are vigorously developing eye care in this corner of the world into the 21st century. As regards the many questions outlined above, we welcome the input of the readers of the Hong Kong Medical Journal.