



Message from the President

The appeal to address manpower shortage from the Department of Medicine in Tuen Mun Hospital initiated a series of events in the medical circle. I attended a forum for Chiefs of Services (COS) of the Hospital Authority (HA) in the Head Office on 8 March evening chaired by Dr. P.Y. Leung, the Chief Executive, and Mr. Anthony Wu, the HA Chairman. The top management appeared to be taken by surprise in regards to the magnitude of the problem which spread beyond one clinical discipline. They were sincere and eager to find immediate or short-term measures to help the frontline doctors.

During the session, many COS presented their views and ideas in helping their staff. It was recognized that the staff morale had been poor since the segregation of salary scales and contract terms a few years back. With the improvement in the private market and increase in demand and workload in the public sector, it is natural to see specialists and senior staff leaving the public service. The increased demand in certain specialties, such as Obstetrics, Radiology, Orthopaedics, and Urology, just to name a few, resulted in brain drain crippling some areas of the public service. This is aggravated by decrease in number of medical graduates for the next few years starting from 2011. Despite a proposal to increase intake of medical students, it will take at least 12 years to see the beginning of any replenishment of specialists.

Our colleagues put forward suggestions to focus on manpower such as recruiting assistants (either clerical staff or trained overseas doctors waiting to sit the licentiate examination) to help out with doctors' work, sharing the surplus salary of resigned staff among the remaining doctors since the work has to be shared, special remuneration for overnight duties, reduction of administrative duties including disease coding and hospital accreditation, offering limited registration in the Medical Council for overseas doctors to practice in the HA, etc. Dr. Leung indicated that he would consider suspending new activities in the current year so that everyone could focus on existing problems. He commented on the very low passing rate of the licentiate examination, and understood there were trained doctors from overseas who would be interested to work in Hong Kong.

Some colleagues commented the government might need to put a ceiling on workload, e.g. it was suggested to cap the number of pregnant women from China as our existing specialists are finding it difficult to cope in public service when more and more obstetricians are recruited to work in the private sector which is simply too eager to take in more clients.

Being the only pathologist in the audience, I sympathize with the problems faced by our clinical colleagues. I can also foresee the attitude taken by the administration on allocation of the next (probably next few) batch of resident trainees. The supply fell very short of the demand in all areas. With this in mind, we may need to be on guard for manpower problem in our field. We have submitted our manpower plan to the HA and the Hong Kong Academy of Medicine last year. We have indicated our need but the outcome is uncertain.

Perhaps one area we may look into is to enrich our existing medical staff in terms of exposure and experience. We need to delegate our senior colleagues to shoulder more administrative duties, and to prepare them in taking up succession roles. We may also think about rotation training for more senior doctors in different hospitals, very much like the resident trainees, since the scope of service and workflow vary. Specialists can widen their professional practice as well as administrative skill through exposure in a different environment. This may enhance their experience by learning different cultures and professional practices through reciprocal rotation. This will be a new stimulus for existing pathologists, and can widen our knowledge and skills.

Dr. Michael SUEN
The President
March 2011



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The 19th Annual General Meeting 2010 and the 19th T.B. Teoh Foundation Lecture

The 19th Annual General Meeting (AGM) was held after the 6th trainee presentation on 6th November, 2010. Three new Council Members, Dr. MA Shiu Kwan Edmond (as Vice-President), Dr. LAM Wing Yin and Dr. WONG Lap Gate Michael, were elected. We would like to take this opportunity to thank the immediate past Vice-President Dr. YUNG Wai Hung Raymond, immediate past Council Members Professor NG Heung Ling Margaret and Dr. TSANG Yick Woon William, for their contribution to the College.

In the conferment ceremony, 1 Honorary Fellow, 8 Fellows and 12 Members were admitted to the College. Prof. LO Yuk Ming Dennis was admitted as Honorary Fellow to the College. The honourable guests included Prof. LIANG Hin Suen Raymond (President of the Hong Kong Academy of Medicine) and Dr. Hon. LEUNG Ka Lau (Member of the Legislative Council of Hong Kong, Medical Functional Constituency). Our College President Dr. SUEN Wang Ming Michael shared his hosting experience in the International Liaison Committee of Presidents (ILCP) – drawing the audience to a conclusion that staying internationally connected should be a beneficial interest, not only to the Hong Kong

College of Pathologists, but also to the Hong Kong Academy of Medicine.

The 19th T.B. Teoh Foundation Lecture was delivered by Dr. CHAN Yan Wo Albert (Consultant Chemical Pathologist, Department of Pathology, Princess Margaret Hospital, Hong Kong). In the lecture titled "Road to a Toxicology Reference Laboratory in Hong Kong", Dr. CHAN talked about the sweats and smiles in establishing the metropolitan reference laboratory. The guests, senior fellows and junior members enjoyed the Chinese banquet dinner afterwards.

We would like to thank Prof. CHIU Wai Kwun Rossa for being the Mistress of Ceremonies in the AGM. We thank Dr. CHAU Kwok Fung Tony, Dr. LO Cheuk Lam Regina, Dr. CHAN Kui Fat and Dr. TANG Wai Lun Victor for taking photos of the trainee presentation, AGM, conferment ceremony, T.B. Teoh Foundation Lecture and the dinner. We would also like to express our gratitude towards our College Secretary, Ms. Adrienne YUNG, as well as Ms. Maizie CHAN and Ms. Heidi CHU, for their continuous support in organizing the AGM.

We look forward to seeing you all in the coming AGM on 19th November 2011 (Saturday).



The 19th AGM. From left to right: Prof. Annie Cheung, Dr. Michael Chan, Dr. Michael Suen, Dr. Cindy Tse and Dr. Raymond Yung.



Prof. Dennis Lo was admitted as Honorary Fellow to the College.



Dr. Albert Chan shared his interest and passion in the establishment of a toxicology reference laboratory in Hong Kong.

Friendship crosses disciplines.



The AGM provides a good platform for inter-hospital and inter-departmental networking.



Thanks to the support from the senior forensic pathologists.

Welcome to our youngest guest this evening!



Nice to meet good friends at the AGM.



The microbiologists took a short break from the fight against different infection outbreaks.

Let's enjoy the evening after the trainee presentation.



A leisure moment just before the lecture.



The sweet ladies behind the successful husbands.



Our councillors can also be counsellors in career and life.



Let's have some chat and food.

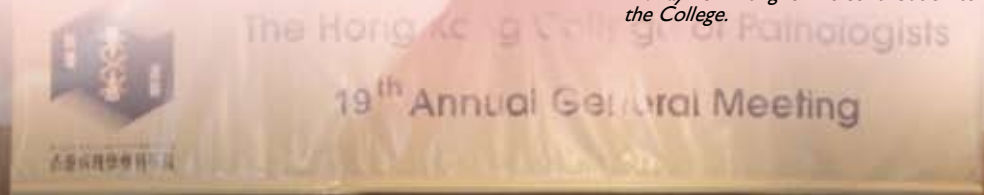
Youngsters, sooner or later it will be your turn to uphold our profession.



A snap-shot of the head-table guests.



President Dr. Michael Suen is presenting a souvenir to immediate past Vice-President Dr. Raymond Yung for his contribution to the College.



The 6th Trainee Presentation Session

The 6th Trainee Presentation Session finished as scheduled and ran smoothly on 6th November 2010. The judges for this year were:

- | | |
|---------------------|-----------------------------------|
| • Prof. Margaret IP | Clinical Microbiology & Infection |
| • Dr. Cycles POON | Anatomical Pathology |
| • Dr. POON Wai Ming | Forensic Pathology |
| • Dr. Anthony SHEK | Chemical Pathology |
| • Dr. Michael WONG | Haematology |

The winner was Dr. Sammy CHEN, trainee in Chemical Pathology of Princess Margaret Hospital, who presented the topic: "Psychosis associated with usage of herbal slimming products adulterated with sibutramine: a case series". The prize as usual comprised a plaque, a Certificate of Best Presentation and HK\$1,000.

The topics presented were interesting and it was good to know more about different disciplines of pathology as a pathologist. However participation from Fellows/Members was still on the low side. With a mandatory requirement for trainees to present in College organized meetings started in Oct 2008, more participants are expected in coming years. We hope more Fellows and Members will attend the event in the coming years. It is always on the College AGM day and please remember to mark the afternoon too when you mark your diary for the evening of AGM.

Comments from the judges:

- 1) Presenter should take note of the audience as it may not be a homogenous group as it is in your usual presentation setting. While keeping the standard and scientific content, one needs to consider there may be knowledge gap among the audience in the topic you present. It is the real life to face different kinds of staff in your daily work in the long run.
- 2) Proportionally relatively too much time was allocated to the background rather than the scientific content of the study.



Dr. WK LUK
*Vice-Chairman,
Education Committee*

▲ *Group photo of the judges and the organizers together with the participating trainees.*

Experience on Participation in the 6th Trainee Presentation Session

It is a great honour to be awarded the Best Presentation Prize at the 6th Trainee Presentation Session organized by the College. I would like to grasp this opportunity to express my sincerest gratitude towards my supervisors, in particular Dr. Tony MAK and Dr. Albert CHAN, all my seniors and colleagues at Princess Margaret Hospital for their generous guidance and support concerning the presentation.

My presentation was based on our recently accepted manuscript "Psychosis associated with usage of herbal slimming products adulterated with sibutramine: a case series" in the journal *Clinical Toxicology*. Within our laboratory, cases of consumption of 'herbal' products for weight reduction have repeatedly been encountered, in which the undeclared western drugs could be tackled and confirmed by dedicated mass spectrometry-based assays. Sibutramine is the commonest adulterant. Within the literature, psychosis is a very rare adverse drug reaction (ADR) of sibutramine, with as few as eight cases reported over its post-marketing period. We summarized a total of 16 clinical cases over the study period from 2004 to 2009. We postulated that patients' unawareness towards adulterated medications and probable unwitting consumption of excessive dosages of sibutramine might have contributed to the clinical picture. The message is significant --- slimming products claimed to be "herbal" in origin could often be adulterated with sibutramine; the public should be educated to avoid using proprietary herbal slimming products of uncertain quality. Our work has highlighted that pathologists could play a role in public health and toxicointelligence.

Finally, I would like to thank the College for the award. To trainees, the presentation session provides a platform to polish our presentation skills, and to learn from the adjudicators, fellow trainees and members of other disciplines. I strongly believe attendance and active participation in this session would prove to be a fruitful and memorable experience in the training period.



▲ *Dr. Sammy CHEN (left), winner of the 6th Trainee Presentation Session, receiving the prize from Dr. Janice LO (right), chairman of the Education Committee.*

Dr. Sammy PL CHEN
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Toxicology Reference Laboratory
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TOPICAL UPDATE

Volume 5, Issue 2 December 2010

Editorial note: Novel microorganisms are being discovered regularly, and among them are newly emerging pathogens. The SARS epidemic in 2003, eventually determined to be caused by a hitherto unknown coronavirus, has fuelled research in coronaviruses and interests in discovery of novel coronaviruses. In this article, Prof. Patrick WOO provided an overview on coronaviruses, and updates on recently discovered members, illustrating the complexity of the virology world, and that most probably a lot more still awaits to be discovered. We welcome any feedback or suggestions. Please direct them to Dr. Janice LO (e-mail: janicelo@dh.gov.hk) of Education Committee, the Hong Kong College of Pathologists. Opinions expressed are those of the authors or named individuals, and are not necessarily those of the Hong Kong College of Pathologists.

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Discovery of Novel Microbes: More and More Coronaviruses after the SARS Epidemic



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Coronavirus study group,
International Committee for Taxonomy of Viruses

Introduction

The *Coronaviridae* family is classified into two subfamilies, *Coronavirinae* and *Torovirinae*. Members of the *Coronavirinae* subfamily are in general referred to as coronaviruses. Phenotypically, coronaviruses are enveloped viruses of 120-160 nm in diameter. Under electron microscopy, coronaviruses have a crown-like appearance and the name "coronavirus" is derived from the Greek word *κορώνη*, which means crown. Genotypically, coronaviruses are positive-sense, single-stranded RNA viruses with genome sizes of about 30 kb, the largest genome size among all RNA viruses. Traditionally, coronaviruses were classified into three groups based on their antigenic relationships. Groups 1 and 2 are made up of mammalian coronaviruses and group 3 avian coronaviruses. Recently, the Coronavirus Study Group of the International Committee for Taxonomy of Viruses (ICTV) has proposed three genera, *Alphacoronavirus*, *Betacoronavirus* and *Gammacoronavirus*, to replace these three traditional groups of coronaviruses. Before 2003, there were less than 10 coronaviruses with complete genomes available, with only two human coronaviruses, namely human coronavirus 229E (HCoV-229E) and human coronavirus OC43 (HCoV-OC43), which were discovered in the 1960s. The SARS epidemic in 2003 has boosted interest in coronavirus research globally; and most notably, in the discovery of novel coronaviruses and their genomics.

The SARS epidemic in 2003 has boosted interest in coronavirus research globally; and most notably, in the discovery of novel coronaviruses and their genomics.

In the past six years, our group has discovered 13 novel coronaviruses, including one novel human coronavirus [human coronavirus HKU1 (HCoV-HKU1)], SARS-related *Rhinolophus* bat coronavirus (SARSr-Rh-BatCoV), eight other bat coronaviruses and three avian coronaviruses, and has sequenced the genomes of nine of them ⁽¹⁻⁵⁾. Others have also discovered additional coronaviruses, the most notable being human coronavirus NL63 (HCoV-NL63), discovered by a group in the Netherlands ⁽⁶⁾.

Human coronavirus HKU1

HCoV-HKU1 was discovered in 2005 from the nasopharyngeal aspirate of a 71-year old Chinese man with pneumonia ⁽¹⁾. Under the new classification system, HCoV-HKU1 belongs to *Betacoronavirus* subgroup A. Uniquely, its G + C content is 32%, the lowest among all known coronaviruses. Furthermore, it also shows the most extreme codon usage bias due to cytosine deamination ⁽⁷⁾. Since its discovery, HCoV-HKU1 infections have been reported

globally, with the highest incidence in the winter months⁽⁸⁻¹³⁾. It is associated with upper and lower respiratory tract infections. Most cases were self-limiting, with deaths only reported in two patients with multiple underlying diseases⁽⁸⁾. Recently, HCoV-HKU1 has been successfully cultivated using models of human ciliated airway epithelial cell culture⁽¹⁴⁾. By analyzing the genome sequences of 22 strains of HCoV-HKU1, three genotypes of HCoV-HKU1, named genotypes A, B and C, were observed⁽¹⁵⁾. These genotypes were generated as a result of multiple inter-genotypic homologous recombination events⁽¹⁵⁾. Laboratory diagnosis of HCoV-HKU1 infections was mainly achieved by amplifying the RNA-dependent RNA polymerase or nucleocapsid gene from nasopharyngeal aspirates using RT-PCR.

SARS-related *Rhinolophus* bat coronavirus

Although SARS-related coronavirus (SARSr-CoV) was found in civets in live animal markets in mainland China during the SARS epidemic, multiple lines of evidence suggested that civets were not the natural reservoir, but just the amplification hosts of SARSr-CoV. Therefore, in 2005, we carried out a territory-wide animal surveillance study in Hong Kong to look for the animal reservoir of SARSr-CoV. Results showed that a SARSr-CoV, named SARSr-Rh-BatCoV, was present in 39% of Chinese horseshoe bats (*Rhinolophus sinicus*) in Hong Kong, but not in other animals⁽²⁾. Others have also reported the presence of SARSr-Rh-BatCoV in other horseshoe bat species in other provinces of mainland China⁽¹⁶⁾. SARSr-Rh-BatCoV differed from SARSr-CoVs in humans in that the genomes of SARSr-Rh-BatCoV, but not those of most human SARSr-CoV genomes, contained a 29-bp insertion in ORF 8. This suggested that SARSr-Rh-BatCoV has a common ancestor with SARSr-CoV in civets. Together with SARSr-CoV in humans and civets, SARSr-Rh-BatCoV belongs to *Betacoronavirus* subgroup B. Recently, our tagging experiments in Chinese horseshoe bats and molecular clock analysis confirmed that SARSr-CoVs were newly emerged viruses and the time of the most recent common ancestor was in 1972, and the time of divergence for the civet and bat strains was in 1995⁽¹⁷⁾.

Other novel bat coronaviruses

The discovery of SARS-CoV in bats has led to a boost of interests in looking for more novel coronaviruses in bats.

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Among the eight additional bat coronaviruses we discovered, five [*Rhinolophus* bat coronavirus HKU2, *Myotis* bat coronavirus HKU6, *Miniopterus* bat coronavirus HKU7, *Miniopterus* bat coronavirus HKU8 and *Rousettus* bat coronavirus HKU10] belonged to *Alphacoronavirus* and three [*Tylonycteris* bat coronavirus HKU4 (Ty-BatCoV HKU4), *Pipistrellus* bat coronavirus HKU5 (Pi-BatCoV HKU5) and *Rousettus* bat coronavirus HKU9 (Ro-BatCoV HKU9)] belonged to *Betacoronavirus*^(4,18). Detailed phylogenetic analysis revealed that the three which belonged to *Betacoronavirus* constituted two novel subgroups, which were named subgroup C (Ty-BatCoV HKU4 and Pi-BatCoV HKU5) and subgroup D (Ro-BatCoV HKU9) respectively⁽⁴⁾. In general, bat coronaviruses are bat genus/species specific, although one bat genus/species may be the reservoir of more than one coronavirus species. In 2009, the Coronavirus Study Group of the ICTV has unified the nomenclature of bat coronaviruses, using the format "genus of bat" (e.g. *Rhinolophus*) followed by "bat coronavirus" followed by "a unique part of the species of the virus" (e.g. HKU2), with the short form Rh-BatCoV HKU2. Recently, we have also discovered that more than one genotype of Ro-BatCoV HKU9 can co-exist in the same bat⁽¹⁹⁾.

Novel avian coronaviruses

As birds are the reservoir of major emerging viruses but the number of known coronaviruses in birds is relatively small, we carried out a territory-wide coronavirus surveillance study in dead wild birds in Hong Kong⁽⁵⁾. In this study, three novel avian coronaviruses were discovered from three different families of birds (bulbuls, thrushes and munias) commonly found in Hong Kong⁽⁵⁾. These coronaviruses were named bulbul coronavirus HKU11 (BuCoV HKU11), thrush coronavirus HKU12 (ThCoV HKU12) and munia coronavirus HKU13 (MuCoV HKU13)⁽⁵⁾. Their genomes, with size ranged from 26.4 to 26.6 kb, represent the smallest known coronavirus genomes, despite the presence of the largest number of open reading frames downstream to the nucleocapsid gene. Phylogenetically, these three coronaviruses were distinct from the other known avian coronaviruses, such as the infectious bronchitis virus and its close relatives. Detailed phylogenetic analysis revealed that these three coronaviruses probably represented a novel genus, *Deltacoronavirus*, in the *Coronavirinae* subfamily.

Concluding remarks

In the last few years, we have witnessed a tremendous boost in the number of novel coronaviruses discovered. With these, we are starting to appreciate more about coronavirus diversity and their hosts. Bat coronaviruses are believed to the gene pool of *Alphacoronavirus* and *Betacoronavirus* and bird coronaviruses the gene pool of

Gammacoronavirus and *Deltacoronavirus*. The availability of sophisticated bioinformatics tools and a comprehensive and user-friendly coronavirus database have also given us an unprecedented opportunity to learn more about coronavirus genomics and understand when and how interspecies jumping has occurred ⁽²⁰⁾.

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Pathology in Hong Kong



(The Bulletin of the Royal College of Pathologists has invited our College to contribute to their October 2010 issue, an issue dedicated to reporting the practice of pathology in different parts of the world. For those who do not have access to the bulletin, below is the article which helps to mark our College in the world map.)

Hong Kong, with an area of 1 104 square kilometres (smaller than Greater London) and a population of 7 million, is a special administrative region of the People's Republic of China. Under the "One country, two systems" arrangement, Hong Kong retains the right to formulate provisions on its own for assessing the qualifications for practice in various professions including the medical profession. The Hong Kong College of Pathologists (HKCPath), a constituent College the Hong Kong Academy of Medicine, is statutorily empowered to undertake the following activities in the discipline of Pathology: oversee training, conduct examinations, award diplomas, and run continuing medical education/continuous professional development (CME/CPD) programmes. Currently, our College has more than 250 fellows who are fully qualified pathologists in the specialties of Anatomical Pathology, Chemical Pathology, Clinical Microbiology and Infection, Forensic Pathology, Haematology and Immunology. Many of our fellows are also fellows of overseas colleges such as the Royal College of Pathologists (RCPath) and the Royal College of Pathologists of Australasia (RCPA).

The majority of pathologists in Hong Kong work in the public sector. The government-funded Hospital Authority, which runs all public hospitals in Hong Kong, is the single largest employer for pathologists, followed by the Department of Health of the government and the two medical schools. Only a minority of pathologists work in private hospitals or privately-owned laboratories. Since the cost of laboratory tests in public hospitals is often absorbed into the overall budget, pathologists frequently face financial and manpower constraint when introducing new expensive tests with limited resources.

During the SARS crisis in 2003, the contributions of microbiologists and other pathologists in controlling the disease were widely acknowledged by the medical community and the public. In the process, we realized the importance of our active participation in multidisciplinary clinical teams in combating diseases. In response, our College has revised our Training and Examinations Regulations to include components with more clinical emphasis. In some specialties, trainees are required to have rotational attachments to clinical departments.

While increasing our participation in the clinical management process, pathologists should not surrender our leadership role in the medical laboratory. The current legislation in force in Hong Kong, however, only requires at least one registered medical technologist, but not a qualified pathologist, as the "professionally qualified director" of a private medical laboratory. This legislation was introduced in the old days when only a handful of qualified pathologists were available in the territory. In an attempt to rectify this undesirable situation, our College has, over the past years, tried repeatedly to engage the government and legislators in expressing our concerns, aiming to amend the current legislation.

Mono-specialty training has been our foundational approach since the inception day of our College. This approach, while producing competent pathologists in different specialty fields, nevertheless limits the scope of practice in pathology. Advances in molecular biology further undermine the traditional division of pathology into various specialties. Many molecular techniques are common to all pathology specialties. A chemical pathologist and an anatomical pathologist, for example, may both employ the same molecular biology techniques to investigate inherited genetic diseases. The conventional boundaries between pathology specialties are becoming blurred. The opportunity is ripe to make use of this common platform of molecular biology to re-unite the divided specialties in Pathology. It is time to review the training programme and consider the introduction of general pathology training so that the future trainees of different specialties can be fully equipped with a common broad knowledge base as well as skills and expertise of their specialty.

The medical profession in Hong Kong is generally "insulated" from mainland China. A significant recent event is the signing of a Memorandum of Understanding (MOU) between the Chinese Ministry of Health (MOH) and the Hong Kong Academy of Medicine in 2006, regarding accreditation and training of specialists, with the ultimate purpose of establishing Specialist Registration in mainland China. The Academy hopes the MOU can set a new stage of cooperation between Hong Kong and mainland China in the development of specialty, further enhancing the academic and statutory status of the local institutions. The MOU has not touched upon the recognition of qualifications or practical arrangements such as conjoint examinations between mainland China and Hong Kong. In a longer term, however, there will be considerations regarding the comparability in specialist training and reciprocal accreditation.

To respond to the challenges ahead, pathologists in Hong Kong need to be flexible, adaptive and open-minded, constantly updating our skills and knowledge. Our College will play a significant role in assisting fellows to rise above these challenges by constantly updating our training requirement and CME/CPD programme.

The Hong Kong College of Pathologists

Cross Border Pathology:

Position Paper from the International Liaison Committee of Presidents (ILCP) (September 2010)

(After the International Liaison Committee of Presidents (ILCP) Meeting in Hong Kong in 2010, a position paper on Cross Border Pathology was developed by the ILCP. Fellows may find this reference material helpful for our practice. This document has also been uploaded to our College website at: www.hkcpath.org.)

The delivery of pathology services can now transcend national borders. Recent examples of cross-border pathology applications include the outsourcing of the entire cervical cytology workload in one country to a commercial laboratory based in another and the establishment of medical laboratories that invite the international transport of blood and other samples for analysis. Comparable processes have already been seen in radiology, where digital images can be transferred electronically for professional interpretation anywhere in the world.

These developments have highlighted problems previously considered to be merely theoretical risks. These include the absence of internationally agreed quality standards or accreditation schemes, lack of access to quality assurance and audit data and concerns over legal liability and the credentialing of pathologists in the telemedicine era. If errors in work carried out in a distant location cause damage or injury to patients, those patients should not be inhibited in their ability to seek legal redress. Local healthcare providers must not be allowed to transfer their responsibilities to distant jurisdictions.

Large-scale international transfer of laboratory services can also result in deskilling of local pathologists and laboratory services, with implications for the training of pathologists and for research. For example, cytopathology services for the whole of one country were briefly delivered entirely by laboratories in another continent. If this situation had not been reversed it would have resulted in cytopathology services throughout that country being irreversibly undermined, once staff previously involved with cytopathology were redeployed and deskilled. This arrangement also limited the ability to provide a complete histopathology training programme; local trainees were placed at a severe disadvantage in achieving any internationally recognized histopathology qualification.

These concerns prompted the International Liaison Committee of Presidents (ILCP) of societies of pathology to issue this position paper on good practice in cross border pathology.

Definitions



Pathology

The terms 'pathology' and 'pathology services' are used to include all medical laboratory services used to support the delivery of medical care. These include those services known in various countries as clinical pathology, histopathology, cytopathology, cellular pathology, hematology, microbiology, virology, immunology, clinical chemistry, biochemistry, embryology, toxicology and the laboratory-based aspects of genetics services. This is not an exclusive list of terms.



Local site

This refers to the location where the patient attends in person to obtain healthcare. It is synonymous with 'the jurisdiction in which the patient seeks medical advice or investigation.' It is recognized that patients may choose to travel, sometimes to countries distant to their normal home, to seek diagnosis and treatment. If such travel occurs at the request or instigation of the patient, we believe

that the regulatory system in the location in which the patient obtains diagnosis or treatment is the appropriate regulatory system. However, if the patient travels to another location at the instigation or request of a healthcare provider, then we believe that that healthcare provider has responsibilities for the quality of care that is recommended, and therefore the regulatory environment at the point where healthcare is first sought is the relevant one.



Referral site

This refers to the location, organization or individual responsible for providing the cross-border pathology service, from a jurisdiction that is not the one in which the patient seeks medical advice or investigation.



Cross-border pathology

Cross-border pathology is defined as the delivery of pathology, in whole or in part, by staff and/or services located outside the area of regulation of healthcare in which the patient seeks medical advice or investigation. The 'border' in question may be a national / federal border or a state border, depending on how the delivery of healthcare is regulated in the location of the patient.

Cross-border pathology can be delivered by sending the patient's sample (e.g. tissue specimen, blood or other body fluid) into the area of another jurisdiction. This is facilitated by modern international transport systems and by internet-based delivery of results.

The international transport of such samples can be initiated by a patient sending material directly to a company in another jurisdiction (i.e. 'direct to consumer' testing) or by a local health service provider sending material to a referral site. This paper refers only to the latter situation, where the use of a distant referral site is not under the direct and exclusive control of the patient.

In some circumstances (notably where the report represents the result of professional interpretation, such as anatomical pathology), cross-border pathology can be delivered by telepathology.



Telepathology

Telepathology has been defined as the electronic transmission of pathological images, usually derived from microscopes, from one location to another, for the purpose of interpretation and diagnosis.

This document considers the implications of telepathology for the regulation of the delivery of pathology services. It is therefore important to distinguish the various ways in which telepathology can be used. These include:

- obtaining the primary diagnosis
- obtaining a second opinion from a specialist pathologist
- teaching
- quality assurance
- research

The first two of these uses impact directly on patient care. For these two uses there is therefore a need for a clearly defined regulatory environment to maintain quality, to ensure patient safety and to identify unequivocal lines of responsibility.

Obtaining the primary diagnosis

This document considers only the appropriate regulation of the situation where the report delivered to the clinician is generated without any local individual or organization that accepts such direct responsibility for producing the content of the report.

Obtaining a second opinion from a specialist pathologist

A pathologist who is licensed to take primary responsibility for issuing pathology reports at the local site, in the jurisdiction in which the patient resides, may sometimes seek a second opinion using telepathology. We believe that the responsibility for the timeliness and accuracy of the report remains with that local pathologist. In that circumstance, the fact that a specialist opinion has been sought should be declared, thereby indicating that the case is a difficult one. The clinician who needs to act on the report will thus be able to bear in mind the fact that this is a difficult case when interpreting the report.

Principles for the use of Cross-Border Pathology (including Telepathology)

The overarching principle is that any proposed cross-border pathology service must ensure that the quality of care and the accuracy of interpretation are not compromised. The quality of the service must be clearly defined and must not fall below the quality of provision expected at the local site.



Ensuring quality

Healthcare providers should not rely only on contractual arrangements between pathology companies and their employees, nor on indemnity provided by such companies, to guarantee the quality of patient care.

Quality assurance processes for any cross-border pathology service must be agreed by local and referral sites. This should include participation by the referral site in an appropriate, internationally recognized and independent clinical pathology laboratory accreditation scheme. All relevant reports from such a laboratory accreditation process should be made available to the person or organization seeking cross-border pathology services. The information provided should include the published scope of the accreditation scheme and any non-compliances or suggestions for improvement identified during the most recent accreditation process.

A designated lead pathologist at the local site (normally holding an appointment at a level that justifies independent reporting rights) should be responsible for the coordination of the service (including ensuring the validity of the quality assurance process, appropriate communication between clinicians, patients, the referral site laboratory service and the referral site pathologists). Full access to quality assurance and audit data must be available to the lead pathologist and to both the originating and referral sites.

All details of the pathology practice should be documented in standard operating procedures which should be available for inspection by staff at both originating and referral sites, and by patients. Policies and procedures for ongoing monitoring and evaluation of effective management, safety and proper performance of equipment at the referral site should be open to scrutiny by the lead local pathologist.

It is the responsibility of the local site contracting telepathology services to ensure that the reporting pathologist at the referral site is appropriately registered/licensed, credentialed, indemnified and possesses the required specialist qualifications and linguistic competence in the jurisdiction of the local site.

In some circumstances it may be difficult for the local institution to detect surrogate reporting ("ghosting") at the referral site, where reporting is actually undertaken by an individual who is less well qualified than the referral site pathologist who appears to take responsibility for the report. In such circumstances, the use of cross-border pathology is not acceptable.

Communication

Whenever a cross-border pathology service is in operation, patients and local clinicians should be informed at the time the sample is taken of the location(s) where their pathology results may be generated.

The provision of a diagnostic service includes pre-and post-analytical phases.

In the pre-analytical phase, advice must be available for clinical staff at the local site to ensure appropriate sampling and fixation of the material. Staff at the referral site must be able freely to seek further information from the clinicians treating the patient, to ensure correct handling of the specimen.

In the post-analytical phase, free communication between the clinician and pathologist is often essential in the formulation of diagnosis, prognosis and treatment strategies at the local site, and in ensuring that the referral site pathologist fully understands what information is important to the clinical team in each case. Urgent or significant unexpected findings should be transmitted to the local clinician without delay, in compliance with protocols in force at the local site.

Adequate understanding of the language of the local site by the referral site is essential, including idiomatic use and specialist vocabulary.

Liability in law

A Service Agreement must clearly define and document the legal arrangements and responsibilities between the referring and interpreting sites. This agreement must be available for inspection by laboratory staff at local and referral sites, and by patients.

A patient who suffers damage or loss as a result of an alleged error by a cross-border pathology service should not be required to litigate in a distant jurisdiction. It should be possible to seek any legal redress from the local site.

All those involved must comply with all data protection and privacy standards and legislation as laid down at the local site. Policies and procedures for security of patient identification and image data must be documented.

Measures to safeguard the system against intentional or unintentional corruption of specimens and data must be in place. There should be a system to document and authenticate the electronic transmission of the report so as to prevent fraud or loss of confidentiality.

Secondary uses of pathology specimens or data

Any use of specimens or data for research or any other purpose other than direct patient care must be documented and must comply with the normal requirements for practice at the local site.

Staff training and maintenance of local skills

There is a risk that large scale cross-border pathology referrals will undermine pathology services in countries or regions where a high proportion of the workload is outsourced. Consequences include the deskilling of entire regions, inability to train pathologists or laboratory scientists to meet local needs, and inability to conduct research into regionally important diseases. The presence of a well-educated and appropriately credentialed pathology workforce operating from accredited laboratories with the ability to provide internationally recognized pathology training programmes is necessary for optimal patient care and should be considered a strategic national resource.

Health Column Writing at AM 730 for Academy's Health Education Series



The Hong Kong Academy of Medicine runs a weekly health column at the **AM 730** newspaper to provide the public with concise and relevant update on health topics of common interest. The College was invited by the Academy to contribute 9 articles in this health column in February and March 2011. The articles were written in Chinese and about 400 words in length. The following topics were selected for inclusion in the health column:

Topic/Date of Publication	Author
Genetic screening for hereditary colorectal cancer / 1 st February	Prof. LEUNG Suet Yi Dr. YUEN Siu Tsan
Predictive biomarkers and personalized medicine / 8 th February	Dr. MA Shiu Kwan Edmond
The contributions of intraoperative frozen section / 15 th February	Dr. CHAN Chak Lam Alexander
Point of care testing as an emerging trend in diagnostics / 22 nd February	Dr. CHAN Ho Ming Michael
Detection of globin gene mutation in prenatal check-up / 1 st March	Dr. Jason SO
Standardisation of HbA1c / 8 th March	Dr. TAI Hok Leung Morris
<i>BRCA1</i> & <i>BRCA2</i> gene in breast and ovarian cancer / 15 th March	Prof. KHOO Ui Soon
The role of the clinical microbiologist in the care of patients with infectious disease / 22 nd March	Dr. CHENG Chi Chung Vincent
The contribution of pathologists to cervical cancer screening / 29 th March	Prof. CHEUNG Nga Yin Annie

The College would like to thank the above-named Fellows for kindly agreeing to take up authorship in the health column. Their efforts were of tremendous help in promoting the image of the College amongst the general public. These articles can be accessed at <http://www.am730.com.hk/column.php?cid=31>.

New Policy for CME/CPD Annual Update

The Hong Kong Academy of Medicine (HKAM) has launched the iCMECPD system for some years and has been able to effectively capture Fellows' CME/CPD status in the past CME/CPD cycle. Starting from the 2011-2013 cycle, our College will streamline the CME/CPD administration by adopting the individual Fellow's iCME/CPD record as his/her annual CME/CPD score, and **abolish the mandatory annual return exercises in the first and second cycle years of a 3-year CME/CPD cycle.**

We would like to remind our Fellows that they are responsible to report any discrepancy in their CME/CPD records, and we will invite our Fellows to perform **voluntary annual updating of their CME/CPD score** on the first and second cycle-years by sending them the iCMECPD records for review.

In order to work in line with the HKAM iCMECPD system schedule, Fellows are required to submit their CME/CPD annual update to College Secretary on or before 31 January of the year after the first and second cycle-years of the 3-year CME/CPD cycle (i.e. 31 Jan 2012 and 31 Jan 2013 for the current cycle). **Nil return is NOT required.** If we do not receive any update from our Fellows after the above deadlines, we will take the Fellows' iCMECPD system record as their annual CME/CPD score. Any late submission for update would incur an additional administrative fee of HKD500.

There will be **no change in the annual return policy of the third cycle year** of the 3-year CME/CPD cycle. Fellows are required to submit the annual return if they could not fulfill the minimal CME/CPD requirement of 90 points according to the iCMECPD record. Mandatory nil return is NOT required for Fellows who have already satisfied the requirement.

We sincerely hope the new arrangement will facilitate our Fellows in the administration of their CME/CPD programme.

Education Committee

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Vice-President: Prof. CHEUNG Nga Yin, Annie

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Update of College CME/CPD Scheme for 2011-2013 CME/CPD Cycle

In order to keep up with the regulations and requirement of the Hong Kong Academy of Medicine CME/CPD programme of the 2011-2013 cycle, the CME/CPD scheme of the Hong Kong College of Pathologists has been updated accordingly. The major modifications are summarized on the right:

Revisions involving changes in the award of CME/CPD points

Category 5.4 Clause 5.4.4	Under the Category of "Publications and development of CME/CPD or knowledge-translation materials", development of "Approved CME/CPD materials for self study" will attract 3 instead of 5 points.
Category 5.7 Clauses 5.7.5 & 5.7.6	The previous Categories of "Mortality/Morbidity meetings and Clinicopathological Conferences", "Activities for improvement of patient care" and "Quality assurance activities", each with a ceiling of 30 points, are now included under "Quality assurance, audits and activities for improvement of patient/medical care (QA)", with a ceiling of 75 points.
Category 5.8	The previous Category of "Editor of medical journal" was changed to "Reviewer of journal (JO)", with 5 points being awarded for reviewing each article, up to 15 points per cycle. Previously, being the editor of each journal attracted 5 points, up to 15 points per cycle.
Category 5.9	A new Category is added: "Other non-medical professional development activities (OT)", attracting up to 1 point per activity, up to 5 points per cycle.

Revisions not involving any change in the award of CME/CPD points

Category 5.2	The previous Category of "Passive participation" was renamed as "Participation as an attendee (PP)".
Category 5.4	The previous Category of "Publications and research" was renamed as "Publications and development of CME/CPD or knowledge-translation materials (PB)".
Category 5.5	The previous Category of "Development of new technologies or services" was renamed as "Research and development of new technologies or services (RD)".
Category 5.7 Clause 5.7.1	The term "quality assurance programme" was expanded to "quality assurance/proficiency testing programme".
Item 7	A recommendation is now included as follows: "It is strongly recommended that Fellows should maintain a balanced CME/CPD profile with a mix of different activities, including at least 5 points in a cycle from activities in category QA under category 5.7 in order to capture the full benefit of different types of CME/CPD activities."

Education Committee

Training Logbooks and Annual Supervisor Report for Trainees

The training logbooks for all subspecialties have recently been updated. In the last section of each logbook, you will find an “appendix I” which serves as the Trainee Annual Supervisor Report. This replaces the version from previous years, and has a similar format for all subspecialties. It is an important document for the Training and Examinations Committee (TEC) to assess your eligibility for examination and admission as Member / Fellow, and should be completed and submitted to the TEC Secretary by 31st March of each year. You are advised to download and use the updated version of the logbook from the College website if possible. However, if you have downloaded the earlier version and have already been using that, you may continue to use it.

Training and Examinations Committee

Addendum on “Regulations on Postgraduate Training and Examinations” for Anatomical Pathology

To better reflect the emphasis on molecular pathology training in Anatomical Pathology, amendments have been made on the “Regulations on Postgraduate Training and Examinations 2007”. Specialized techniques including cytogenetics and molecular analysis are more specifically addressed in the training programme, examination coverage, and criteria for recognition as a training unit. Such changes have been endorsed by the Hong Kong Academy of Medicine, and will be applied to trainees registered on/after 16 December 2010.

The addendum has been uploaded to the College website (www.hkcpath.org). Please refer to the addendum for details.

Training and Examinations Committee

Call for Application: Chan Woon Cheung Education and Research Fund in Pathology

In 1991, friends, colleagues and former students of the late Dr. CHAN Woon Cheung endowed a fund in his memory to promote education, training and research in Pathology. This fund shall only be applied towards the promotion of education, training and research in Pathology, such as research grants for studies in Pathology, or grants to support training in Pathology, including passage fees and subsistence, where the training is conducted in Hong Kong or the applicant is currently working in Hong Kong. Local and overseas workers in Pathology, both members and non-members of the Hong Kong College of Pathologists, may apply for the grants for the purposes set out above.

For those who are interested, please download the application form from our College website (www.hkcpath.org) and return the completed application form to the Registrar. If the fund application is aimed for conducting medical research, please also complete the last 2 pages of the application form with submission of the requested information.

The deadline for application submission is 31 May 2011.

International Board of Cytopathology Examination for the International Academy of Cytology Scheduled to be Conducted in Hong Kong in 2012

On behalf of Prof. Fernando SCHMITT, Secretary-Treasurer, the International Academy of Cytology (IAC), I am glad to announce that the International Board of Cytopathology Examination for IAC will be conducted in Hong Kong on February 28, 2012 (Tuesday). Members of the Academy are eligible to sit for the examination. The Fellowship of IAC will be conferred to Members who have successfully passed the examination and who have acquired two years' experience after admission as Member of IAC.

For Fellows of the Hong Kong College of Pathologists who are interested in applying to become a Member of IAC, please visit the following website for details: <http://www.cytology-iac.org/>

**Prof. Annie NY CHEUNG
MBBS, MD, FRCPath, FHKAM(Path), FIAC
Medical Consultant,
Cytotechnology Registry and Renewal Committee
The International Academy of Cytology**