

HONG KONG COLLEGE OF PHYSICIANS
香港內科醫學院



HONG KONG COLLEGE OF PHYSICIANS

SYNAPSE

RESTRICTED TO MEMBERS ONLY

DECEMBER 2021

HONG KONG COLLEGE OF PHYSICIANS
香港內科醫學院

35



Sapientia et Humanitas

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HONG KONG COLLEGE OF PHYSICIANS
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*Congratulatory
Messages*



香港內科醫學院三十五周年誌慶

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**The Hong Kong College of Physicians
35th Anniversary**

**Congratulatory Message
Dr Tony Ko, Chief Executive of Hospital Authority**

On behalf of the Hospital Authority, I am delighted to extend my heartiest congratulations to The Hong Kong College of Physicians (HKCP) on its 35th anniversary.

Since its establishment in 1986, the HKCP has been playing a pivotal role in the development of internal medicine in Hong Kong, including nurturing talented physicians and promoting excellence in the profession. Given the increasing complexity of medical practice, new advances in diagnostics and therapeutics, and evolving healthcare needs of the population, the HKCP has continuously enhanced the professional standards of physicians. By providing quality training, introducing the guidelines on postgraduate training, as well as fostering local and international collaboration through scientific meetings, HKCP continues to excel in its mission of upholding the standard in the science and art of medicine.

On this memorable occasion, I congratulate the HKCP on its many achievements over the years and wish the College every success in the years ahead!

Dr Tony Ko
Chief Executive
Hospital Authority



**Congratulatory Message to the Hong Kong College of Physicians
on its 35th Anniversary**

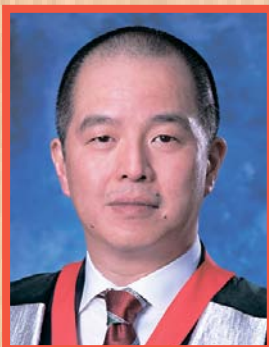
It is my great pleasure to send my warmest congratulations to the Hong Kong College of Physicians for its 35th Anniversary.

The enormous contribution of the College to the advancement of internal medicine in Hong Kong is indispensable. The continuous medical training offered by the College, through various scientific meetings and conferences, serves as an excellent platform to keep our doctors updating their professional knowledge. The clinical guidelines and training guidelines developed by various specialty boards of the College are important materials which guide our practice on clinical management and higher specialist training so as to maintain health services of the highest quality to the public.

The College is also a valued partner of the Government in enhancing public health. In particular, in the past year, the College has actively organised COVID-19 related symposiums for health care professionals, offered expert advice and conferred support to promoting COVID-19 vaccination. I am particularly thankful to the dedicated effort of the President and all your members.

Once again, on behalf of the Department of Health, I would like to congratulate the Hong Kong College of Physicians for its achievements and wish it every success in its future endeavours.

Dr Ronald LAM
Director of Health



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 Mr. Aaron Cheng

7 October 2021
Professor Philip Kam-tao Li
President
 Hong Kong College of Physicians
 Room 603, 6/F
 Hong Kong Academy of Medicine Jockey Club Building
 99 Wong Chuk Hang Road, Aberdeen, Hong Kong

Dear Professor Li,

Congratulatory Message to the 35th Anniversary of Hong Kong College of Physicians

On behalf of the Hong Kong Academy of Medicine (Academy), I wish to extend my heartiest congratulations to the Hong Kong College of Physicians on its 35th Anniversary. Celebrating this important milestone as Hong Kong emerges from the COVID-19 pandemic is particularly timely and meaningful.

I want to take this opportunity to thank all the physicians who have risked their own health to treat patients at the frontline during the outbreak. I also applaud the College for all its efforts when facing unprecedented challenges in fulfilling its pivotal role of maintaining high professional standards in Medicine, and in nurturing young specialists through the provision of structured training and examinations, organising CME / CPD activities, and hosting webinars to facilitate online learning.

The College of Physicians has always had the largest number of Academy Fellows among the 15 Colleges, making up 22% of the total Academy fellowship this year. I look forward to seeing the College, with 35 years of outstanding achievements and a wealth of globally recognised experts, takes up an influential role in leading the profession forward, for patient welfare and the advancement of public healthcare in Hong Kong.

The Academy will continue to support the College in its various works. I am confident the College will continue to thrive and scale new heights in the years to come. Happy 35th birthday!

Yours sincerely,



Professor Gilberto Ka-kit Leung
President
 Hong Kong Academy of Medicine

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**Royal College
of Physicians**

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October 2021

Message from the President of the Royal College of Physicians

I am delighted to join with many other people around the world to congratulate the Hong Kong College of Physicians, and its President, Fellows and Members, on the celebration of their 35th Anniversary.

The colleges of physicians across the globe, and our two colleges in particular, have much in common and are united by those shared ideals. The strong relationship between our two colleges has been forged by our shared heritage in medicine, in education and in practice, and in academic medicine. It is also strengthened by the many personal exchanges we have enjoyed over the years, although by necessity these have been virtual since the pandemic began. I look forward to us working even more closely in the next few years as we move forwards together in a changing world.

Andrew Goddard MD, PRCP

President

Honorary Professor, University of Nottingham, School of Medicine

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ROYAL
COLLEGE of
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EDINBURGH

October 2021

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On behalf of Fellows and Members of the Royal College of Physicians of Edinburgh, I am delighted to send congratulations to all our friends and colleagues in the Hong Kong College of Physicians on this, your 35th anniversary.

The Edinburgh College is proud of its long and strong relationship with the Hong Kong College and looks forward to continuing this important association in the coming years. We share common values and purpose in a powerful commitment to the highest possible standards of patient care. We live in an interconnected medical world and can improve care for all our patients by working in partnership and sharing our successes and challenges.

The resilience of our profession and the dedication of individual doctors have been fully demonstrated in the global pandemic and we should recognise the sacrifices of many and take pride in all that we have achieved.

In my many visits to Hong Kong, I have always been deeply, and equally, impressed by the quality of medical care and the sincerity and warmth of the welcome. Please accept our sincere best wishes on this important anniversary and our hopes to meet in person again.

With kind regards

Yours sincerely

**Professor Andrew Elder FRCP Edin
President**

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From the President

22 September 2021

35th Anniversary of the Hong Kong College of Physicians

Members of the Board, Fellows and staff of The Royal Australasian College of Physicians (RACP), join with me in congratulating the President, Council, Members, trainees and staff of the Hong Kong College of Physicians on the occasion of your 35th Anniversary.

Since its inception in 1986, the RACP has witnessed the growth and development of the Hong Kong College of Physicians as a professional body of trained specialists in internal medicine and its international reputation as the respected establishment of education and learning that it is today.

The RACP is proud of its close association and collaboration with the Hong Kong College of Physicians over many years through the exchange of ideas and practices. Maintaining this close collaboration has never been more important than in these current times as we learn from each other and share information during this global pandemic.

Congratulations to everyone at the Hong Kong College of Physicians on this 35th anniversary of achievement, collaboration and excellence.

Best wishes

Professor John Wilson AM
President
The Royal Australasian College of Physicians

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It is with great pleasure that I pen these thoughts on the 35th anniversary of the Hong Kong College of Physicians. Established in 1986, the College has achieved a tremendous lot. The College oversees structured postgraduate training in internal medicine in Hong Kong, conducting joint examinations with MRCP (UK) and exit assessment for specialty training in internal medicine. In 1996, the College established twelve specialty boards to oversee the development of internal medicine specialties in Hong Kong. The College manages continuing medical education for eighteen specialties of internal medicine. Currently the College has 1757 Fellows comprising 22% of Fellows of Academy of Medicine, Hong Kong.

It is unfortunate as a result of the pandemic that I cannot attend in person to celebrate with my fellow academicians in Hong Kong College of Physicians on their auspicious anniversary. I have always enjoyed the high quality academic presentations in our Tripartite Congress. I look forward to fruitful collaboration between the Hong Kong College of Physicians and the College of Physicians Singapore.

Happy 35th anniversary.

Professor David Lye

President, College of Physicians, Singapore



Our Ref.Gen. 96/2564



ราชวิทยาลัยอายุรแพทย์แห่งประเทศไทย
THE ROYAL COLLEGE OF PHYSICIANS OF THAILAND

September 16, 2021

Professor Li Kam Tao Philip

President

Hong Kong College of Physicians

Dear Professor Li Kam Tao Philip,

On behalf of the president of the Royal College of Physicians of Thailand (RCPT) and our colleague, I am delighted to extend my warm congratulations for the 35th glorious years of success of the Hong Kong College of Physicians. Facing the challenge of the pandemic of COVID-19, internal medicine training and services are of tremendous importance to empower the physicians and trainees to overcome this most challenging event of humanity.

I look forward to continuing our partnership with your college, and wish the Hong Kong College of Physicians every success in the years to come.

Anutra Chittinandana

A.M. Anutra Chittinandana

President,

The Royal College of Physician of Thailand

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The President's Annual Report 2021

Professor Philip Kam Tao LI
President, HKCP

This year is a special year to us. It is our 35th Anniversary. One of the highlights of our celebration was the 35th Anniversary Symposium on Genetics and Genomics in Medicine. The feedbacks were very positive and our College was in full gear in developing the Genetics and Genomics in Medicine as a new specialty. We will organize our 35th anniversary dinner on Oct 16, 2021.

Owing to COVID-19 pandemic, many activities had been organised virtually or in hybrid format. Our College had revised its CME/CPD guidelines to accredit and encourage CME/CPD activities conducted virtually locally or overseas. The CME requirements for overseas Fellows of our College have been aligned with the special arrangements implemented by the overseas Fellows' local Colleges or Academies in response to COVID-19, as applicable.

In addition, our College had successfully organised the March PACES 2021 under the COVID-19 pandemic. This was the first examination with only local examiners' participation due to travel restrictions. Thanks to the support of all the examination centres and the examiners, we have organized 8 examination days with 120 candidates, the biggest number we ever had in one diet. The passing rate was satisfactory. Online PACES lecture was organised to help candidates to prepare for the October PACES. We will continue to try our best to maximize the number of candidates that we can examine in order to catch up with the backlog as a result of no PACES examination in 2020.

Apart from this, we continue our close collaboration with the overseas sister Colleges. The London College had organised a virtual conference "Medicine 2021" on 7–8 January 2021. We had nominated two speakers to deliver the lectures.

We had published a special issue of Synapse on COVID-19 and received many positive feedbacks. We had tried to make a vivid content for Synapse by inviting doctors to share their interesting life experience.

Our Young Fellows' Committee continued to organize the career talk for medical students virtually. We hoped the participants could gain more knowledge on our specialty and join our big family.

As can be reflected by the reports of the various Committees, a lot of work have been done this year. The smooth operation and steady progress of the College owe a lot to the contributions of Chairmen and Members of the Specialty Boards, as well as Committees. I would like to thank our two Vice-Presidents for their devotion and efforts in overseeing training and international affairs. I am also grateful to our Honorary Treasurer for his very shrewd book-keeping such that the College remains in a healthy financial status. I would like to express my gratitude in particular to our Immediate Past President and Senior Advisor for their valuable advice and ceaseless support over the year. My final vote of thanks goes to our Honorary Secretary and the hardworking and dedicated secretariat staff in maintaining the smooth operation of the College.



Address to New Fellows at Conferment Ceremony 2021

Dear all New Fellows and Members,

First, I would like to congratulate all of you to become the New Fellows and Members of our College.

This year we have 67 new fellows and 62 new members being conferred.

Last October, our College held the first face-to-face conferment ceremony under COVID-19. This year, our College also hosts the first, and probably the largest, conferment ceremony together with dinner celebration in our Academy. This is obviously to celebrate our 35th Anniversary. You should feel honored to have Prof Sophia Chan, Secretary for Food and Health, Dr Tony Ko, Chief Executive of Hospital Authority, Dr Ronald Lam, Director of Health and Prof Gilberto Leung, Academy of Medicine President and all College Presidents and representatives who are here to witness your memorable day.

This must be one of the most precious moments of your life with a new milestone in your career. Your hard work and dedication has paid out and at the same time, you should appreciate all who have supported you in your path to success.

Now, may I ask all the New Fellows and Members to rise:

Wave your hands to your family, your peers and your seniors in the audience who have supported you to show your appreciation.

Thank you.

This year marks the 35th anniversary of our College. I have to pay heartfelt tribute and appreciation to Past Presidents Sir David Todd, TK Chan, Richard Yu, KN Lai and Patrick Li who had done tremendous work to build up the College. The staunch support from our seniors and colleagues including the Founding Fellows like Prof Rosie Young is instrumental to the success of the College. Currently our College has 2,047 Fellows, 292 members and 429 trainees making a total of 2,768, the biggest in the Academy.

This big number of professionals have been standing strong during the last 22 months in the fight against the COVID pandemic. I think we, together with other healthcare professionals, deserve a round of applause for the protection of Hong Kong during this challenging period.

Not only that our fellows and members have been vigorous in managing COVID patients, our College also has taken the lead in promoting COVID vaccination in the whole population, especially more vocal and active in encouraging the elderly, the most vulnerable group, to get COVID vaccination.

LIONROCK hits the headline in the last one week. It has special meaning to our College. We are all aware that in 2020, our College had to cancel all MRCP PACES examination. In order to chase the backlog of a number of our trainees who could not finish their BPT training because of this pandemic, we had held a very successful 6 day examinations in March this year, thanks to the support from the Bureau and the HA. Just last week, we planned to hold 8 days examinations, the largest number to date, to help our trainees. However, 2 examination-centre days have to be cancelled on last Saturday because of the Typhoon LIONROCK. Obviously the candidates were very upset. We are pleased to have Queen Mary Hospital and North District Hospital to hold the additional examination on Nov 6. I would like to compliment the whole Examination Committee, examiners of all the centres, the MRCP UK office and all the hospitals hosting the examination for this Oct-Nov PACES diet.

This speaks well that our College has been very committed in the role as specialist training and professional standard gate keeping. The recent Government's latest proposed changes to the Medical Registration (Amendment) Bill 2021 has created a lot of discussions in the profession. At the same time our College is in support of more medical manpower, especially in the public sector to address the patient needs, we maintain that it is crucial to uphold the standards of medical practitioners under the future Special Registration and that the local medical graduates be given priority in both employment and training.

One of the highlight of the 35th anniversary programme of the College is the Symposium on Genetics and Genomics in Medicine organized in July this year. The Symposium is very timely that our College is already in full gear preparing the curriculum for our new Subspecialty: Genetics and Genomics (Medicine), adding to the existing 19 sub-specialties. Our College Fellows, as physician-scientists in

different subspecialties, have advanced the knowledge in the field of genetics and genomics with their clinical and scientific research. We expect the development of this new subspecialty will help us further the manpower training and scientific development in this area, helping patients with monogenic and polygenic inherited diseases and at the same time in line with, and in support of, the Government's Hong Kong Genome Project.

Recently I was asked to write a congratulatory message in Chinese. I used the voice activated Chinese handwriting in my smartphone. I was initially dismayed that it recorded the undersigned as “香港內科醫學院院長「你咁土」教授”. Then I felt happy when it also struck me that artificial intelligence (AI) could never replace human, in many areas.

I am glad we see the birth of 67 new fellows and specialists in our College today. The human touch and care by us physicians is not replaceable by AI or robots. They are there only to help us. We physicians should always strive to excel on “The art of medical practice and the science of care”.

We are celebrating our 35 years of the College of Physicians. However, our tradition and values of professionalism and best patient care extended well beyond and before this period. You as our new fellows and next generation physicians will help us to shape our profession in an even better direction, both scientifically and humanistically. Many of us here will rely on you to treat us in the next 35 years, and beyond.

Once again, congratulations to you all as new Fellows and Members joining our big family of College of Physicians!

Best wishes to all of you.

Professor Philip Li

President,
Hong Kong College of Physicians

16 October 2021



AJS McFadzean Oration Translating Scientific Discoveries in Clinical Impact

Prof YM Dennis LO

Li Ka Shing Institute of Health Sciences
The Chinese University of Hong Kong
Prince of Wales Hospital, Shatin, New Territories
Hong Kong SAR, China

I became interested in prenatal diagnosis when I was a medical student at the University of Oxford. I learnt about the process of amniocentesis, which was accurate but carried with it risks to the fetus. I dreamt about the possibility that one might be able to just take a blood sample from the pregnant mother and be able to test for fetal DNA or chromosomes. At that time, I had just learnt the then-new method of polymerase chain reaction (PCR) from Professor Sir John Bell, who had just returned from Stanford to Oxford. I thought that with the sensitivity of the PCR, one might be able to detect Y-chromosomal DNA sequences from male fetal cells that had entered into the maternal blood. I was fortunate that my hypothesis turned out to be correct and the use of a Y-chromosomal target that repeated hundreds to thousands of times on each Y chromosome was indeed able to differentiate maternal blood from male-bearing and female-bearing pregnancies.¹ This paper was published when I was a houseman in Medicine.

After my housejob, I had decided to take several years off to work on this project of non-invasive prenatal testing as a full-time postgraduate student pursuing a Doctor of Philosophy degree in Oxford. This period of full-time research demonstrated to me that the project was more difficult than I had initially imagined as fetal nucleated cells, while detectable in maternal blood, were present at extremely low fractional concentrations. Hence, despite over three years of intensive search, I was not able to develop a method for non-invasive prenatal testing that was robust enough to be of clinical use.

I then returned to clinical practice and took the examination for Membership for the Royal College of Physicians. I then became a University Lecturer in Clinical Biochemistry and Honorary Consultant Chemical Pathologist at Oxford. My wife and I decided to return to Hong Kong in January 1997 and I joined the Chinese University of Hong Kong (CUHK). As I resigned from Oxford, I had a chance to reflect on the challenges surrounding the detection of fetal cells in maternal blood. I read two papers published in *Nature Medicine* at the end of 1996 in which the authors reported the detection of cell-free tumour DNA in the plasma and serum of cancer patients.^{2,3} I thought that a fetus developing inside a pregnant mother's body was somewhat similar to a tumour growing in a cancer patient. Hence, I wondered whether cell-free fetal DNA might also be present in the plasma and serum of a pregnant woman. As I did not have much resources

at that time, I had decided to use the simplest approach that I could think about, namely, by boiling plasma or serum for a few minutes and then testing the boiled 'soup' with Y-chromosomal PCR. Exciting, this experiment was successful, resulting in the first demonstration of the presence of cell-free fetal DNA in maternal plasma and serum.⁴

I persuaded my new department head, Prof. Magnus Hjelm, at the Department of Chemical Pathology at CUHK to buy me a then-new real-time PCR machine. Using this instrument, I was able to measure, for the first time, the concentration of cell-free fetal DNA in maternal plasma and serum,⁵ demonstrating a much higher concentrations of fetal DNA plasma and serum, then when one was searching for fetal cells in maternal blood. I was also able to show that one was able to detect the fetal RhD blood group accurately from maternal plasma.⁶ This test was rapidly adopted in the UK and the Netherlands.

I then spent the next decade trying to develop a robust approach for the detection of fetal trisomy 21 from maternal plasma. This goal was challenging because fetal DNA represented only a minor fraction of DNA in maternal plasma. Furthermore, the lack of a cell membrane meant that conventional method for chromosomal analysis, such as fluorescence in-situ hybridisation could not be used. Eventually, I solved the problem by using single molecule PCR, also called digital PCR. In digital PCR, one performed a series of PCRs using suitably diluted DNA samples, such that each reaction would either contain just one or zero target molecule. One could then count the number of target molecule by counting the number of positive reactions. Digital PCR turned out to be feasible, though not perfect, approach for detection fetal trisomy 21 from maternal plasma.⁷ Interestingly, when my paper was published, a very similar paper was published from Stephen Quake's group from Stanford.⁸ In an attempt to further improve the accuracy of non-invasive prenatal testing of fetal trisomy 21, I developed the approach of random sequencing, in which millions of DNA molecules in maternal plasma were sequenced and mapped to the human genome. One could then conducted statistical tests on the relative concentrations of sequences from different chromosomes in maternal plasma. Excitingly, both the Quake's group and my group published very similar and highly accurate trisomy detection data at the end of 2008.^{9,10} My group then spent the next three years doing a large clinical trial demonstrating the high accuracy of the random sequencing approach.¹¹

The first commercial tests for non-invasive trisomy 21 screening were launched in the second half of 2011.

CUHK had licensed my intellectual properties to Sequenom. On the other hand, Stanford had licensed Quake's intellectual properties to Verinata, which was then acquired by Illumina. After a series of lawsuits between Sequenom and Illumina, the two sides decided to pool their intellectual properties together. Non-invasive prenatal testing (NIPT) is now available globally and is used by millions of pregnant women every year. For Hong Kong, I had co-founded a company, Xcelom, with my colleagues, Rossa Chiu and Allen Chan, to provide NIPT service. CUHK had also granted a free license to the Hospital Authority for conducting NIPT for high risk pregnant women in Hong Kong.

Concurrent to our development of NIPT, my group has also worked on the parallel phenomenon of circulating tumour DNA (ctDNA) in the plasma of cancer patients. In a series of papers published between 1999 and 2000, we had demonstrated that Epstein-Barr virus (EBV) DNA was released by nasopharyngeal carcinoma (NPC) cells in patients' plasma and could be used as an archetypal ctDNA.¹² We had shown that plasma EBV DNA concentrations correlated with staging, prognosis and could be used to follow NPC patients during radiotherapy, following nasopharyngectomy and for early detection of recurrence.^{13,14,15,16} More recently, we had demonstrated plasma EBV DNA could be used for screening asymptomatic individuals for NPC.¹⁷ Without such screening, some 76% of NPC in Hong Kong is typically detected in stages III and IV. With such screening, some 70% of NPC is detected in stages I and

II. We also showed that the follow-up of NPC patients identified by plasma EBV DNA screening resulted in a much improved survival.

In an effort to facilitate the clinical use of plasma EBV DNA screening, I had co-founded the Take2 group of companies to realise such screening, first in Hong Kong, and hopefully later on in other cities in the Greater Bay Area.

In an effort to expand plasma DNA screening to other cancers, my group had developed a genome-wide approach for detecting DNA methylation markers in plasma.¹⁸ Using this approach, a single test had the potential to detect many different types of cancer. Assuming that one had a positive signal of such multi-cancer testing, one would then need an approach to provide clues about the anatomical location of the cancer. As different organ tissues within our bodies carry different DNA methylation signatures, we explored the use of DNA methylation for determining the tissue of origin of a detected cancer. We called this approach 'plasma DNA tissue mapping'.¹⁹

In an effort to enable rapid translation of these developments, I co-founded a company called Cirina, with my colleagues Rossa Chiu and Allen Chan. In 2017, Cirina merged with another company called Grail, which was founded with similar goals. In 2021, Grail launched its multi-cancer, early detection (MCED) test based on DNA methylation analysis, and which has tissue localisation capability.²⁰ It is exciting to see efforts towards the development of MCED tests from many other groups.²¹

Dennis Lo and his research team at the Chinese University of Hong Kong

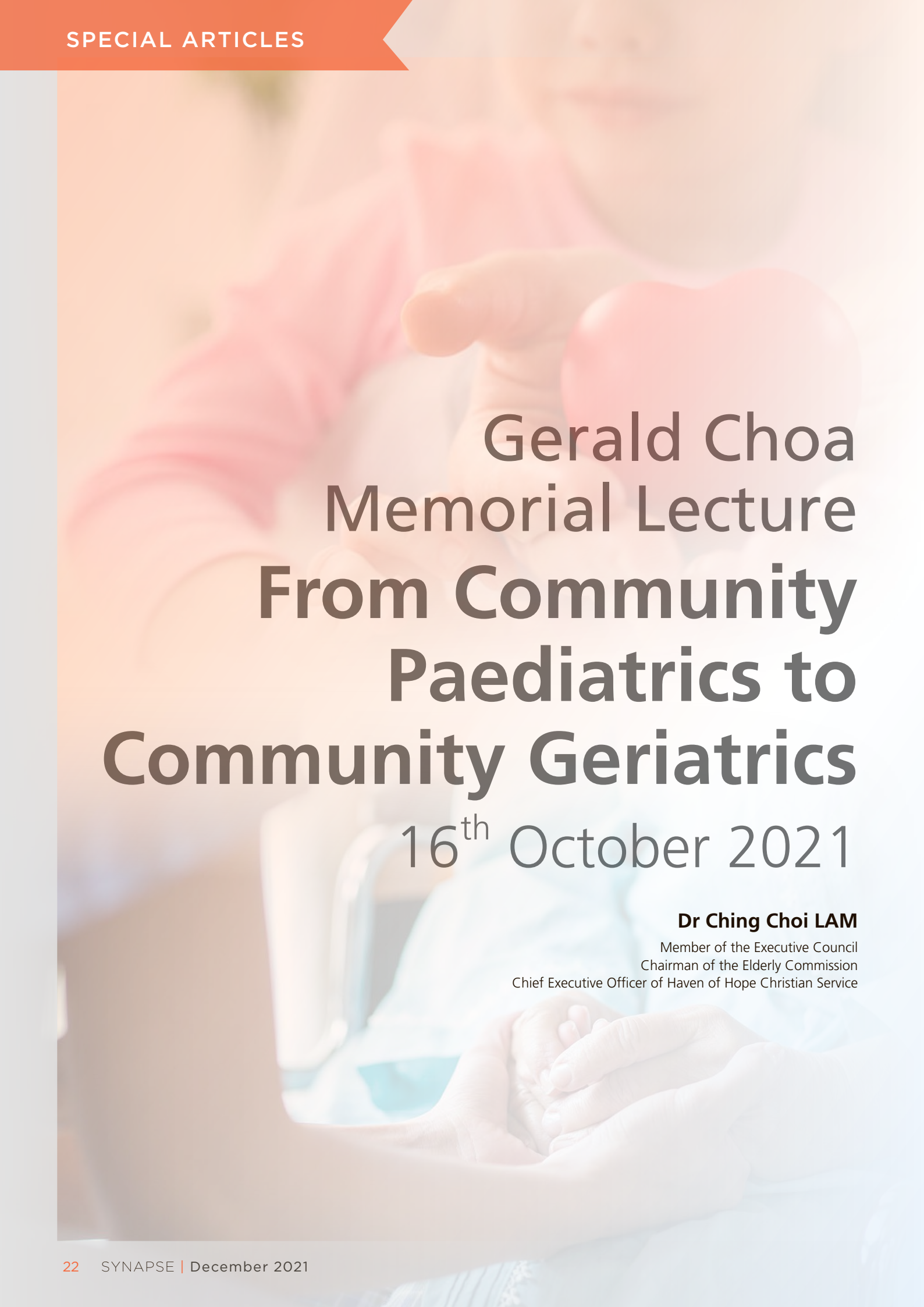


In conclusion, my last 25 years of efforts in the cell-free DNA field have been most fulfilling, allowing me and my colleagues (Fig. 1) to translate our basic scientific discoveries into clinical tests that have the potential to benefit patients. I hope that this story, and other clinician-scientists', would help to inspire the next generation to join our efforts, thus improving the health of citizens worldwide.

References

- Lo YM, Patel P, Wainscoat JS, et al. Prenatal Sex Determination by DNA Amplification from Maternal Peripheral Blood. *Lancet* 1989; 2(8676): 1363-5.
- Nawroz H, Koch W, Anker P, et al. Microsatellite Alterations in Serum DNA of Head and Neck Cancer Patients. *Nat Med* 1996; 2(9): 1035-7.
- Chen XQ, Stroun M, Magnenat JL, et al. Microsatellite Alterations in Plasma DNA of Small Cell Lung Cancer Patients. *Nat Med* 1996; 2(9): 1033-5.
- Lo YM, Corbetta N, Chamberlain PF, et al. Presence of Fetal DNA in Maternal Plasma and Serum. *Lancet* 1997; 350(9076): 485-7.
- Lo YM, Tein MS, Lau TK, et al. Quantitative Analysis of Fetal DNA in Maternal Plasma and Serum: Implications for Noninvasive Prenatal Diagnosis. *Am J Hum Genet* 1998; 62(4): 768-75.
- Lo YM, Hjelm NM, Fidler C, et al. Prenatal Diagnosis of Fetal RhD Status by Molecular Analysis of Maternal Plasma. *N Engl J Med* 1998; 339(24): 1734-8.
- Lo YMD, Lun MFF, Chan KCA, et al. Digital PCR for the Molecular Detection of Fetal Chromosomal Aneuploidy. *Proc Natl Acad Sci U S A* 2007; 104(32): 13116-21.
- Fan HC, Quake SR. Detection of Aneuploidy with Digital Polymerase Chain Reaction. *Anal Chem* 2007; 79(19): 7576-9.
- Fan HC, Blumenfeld YJ, Chitkara U, et al. Noninvasive Diagnosis of Fetal Aneuploidy by Shotgun Sequencing DNA from Maternal Blood. *Proc Natl Acad Sci U S A* 2008; 105(42): 16266-71.
- Chiu WKR, Chan KCA, Gao Y, et al. Noninvasive Prenatal Diagnosis of Fetal Chromosomal Aneuploidy by Massively Parallel Genomic Sequencing of DNA in Maternal Plasma. *Proc Natl Acad Sci U S A* 2008; 105(51): 20458-63.
- Chiu WKR, Akolekar R, Zheng YWL, et al. Non-invasive Prenatal Assessment of Trisomy 21 by Multiplexed Maternal Plasma DNA Sequencing: Large Scale Validity Study. *BMJ* 2011; 342: c7401.
- Lo YM, Chan LY, Lo KW, et al. Quantitative Analysis of Cell-free Epstein-Barr Virus DNA in Plasma of Patients with Nasopharyngeal Carcinoma. *Cancer Res* 1999; 59(6): 1188-91.
- Lo YM, Chan LY, Chan AT, et al. Quantitative and Temporal Correlation between Circulating Cell-free Epstein-Barr Virus DNA and Tumor Recurrence in Nasopharyngeal Carcinoma. *Cancer Res* 1999; 59(21): 5452-5.
- Lo YM, Chan AT, Chan LY, et al. Molecular Prognostication of Nasopharyngeal Carcinoma by Quantitative Analysis of Circulating Epstein-Barr Virus DNA. *Cancer Res* 2000; 60(24): 6878-81.
- Lo YM, Leung SF, Chan LY, et al. Kinetics of Plasma Epstein-Barr Virus DNA During Radiation Therapy for Nasopharyngeal Carcinoma. *Cancer Res* 2000; 60(9): 2351-5.
- To EWH, Chan KCA, Leung SF, et al. Rapid Clearance of Plasma Epstein-Barr Virus DNA after Surgical Treatment of Nasopharyngeal Carcinoma. *Clin Cancer Res* 2003; 9(9): 3254-9.
- Chan KCA, Woo JKS, King A, et al. Analysis of Plasma Epstein-Barr Virus DNA to Screen for Nasopharyngeal Cancer. *N Engl J Med* 2017; 377(6): 513-522.
- Chan KCA, Jiang P, Chan CWM, et al. Noninvasive Detection of Cancer-associated Genome-wide Hypomethylation and Copy Number Aberrations by Plasma DNA Bisulfite Sequencing. *Proc Natl Acad Sci U S A* 2013; 110(47): 18761-8.
- Sun K, Jiang P, Chan KCA, et al. Plasma DNA Tissue Mapping by Genome-wide Methylation Sequencing for Noninvasive Prenatal, Cancer and Transplantation Assessments. *Proc Natl Acad Sci U S A* 2015; 112(40): E5503-12.
- Liu MC, Oxnard GR, Klein EA, et al. Sensitive and Specific Multi-cancer Detection and Localization Using Methylation Signatures in Cell-free DNA. *Ann Oncol* 2020; 31(6): P745-759.
- Cohen JD, Li L, Wang Y, et al. Detection and Localization of Surgically Resectable Cancers with a Multi-analyte Blood Test. *Science* 2018; 359(6378): 926-930.





Gerald Choa Memorial Lecture From Community Paediatrics to Community Geriatrics 16th October 2021

Dr Ching Choi LAM

Member of the Executive Council
Chairman of the Elderly Commission
Chief Executive Officer of Haven of Hope Christian Service

It's my great honor to have been invited to deliver this lecture named after Professor Choa, a distinguished clinician, a gifted educator in both medical schools, and the director of medical and health services served with distinction as graded by Professor Todd. Among many other achievements, he established community and geriatric nursing and reorganized the family planning services in Hong Kong. As a community paediatrician myself, I am deeply humbled and would like to share my learning from one of the standard textbooks I spent the nights with, while I was struggling with my MRCP in the 80s. I completed my pediatric internship and MRCP training in the paediatrics B unit and later was invited to join the Evangel Hospital, a small and non-profit private hospital at To Kwa Wan. Later, I succeeded Dr. Chapman, a missionary physician and also the founder of the Hospital, as the medical director. I learnt a lot from Dr. Chapman, both on his faith and how he practiced as a doctor and an administrator. This experience helped me to acquire the fellowship in administrative medicine later. Then I was invited to the board of Haven of Hope Christian Service (HOHCS) and be the chairman of the Community Health Committee. That's the pre-Hospital Authority era and Haven of Hope was still running the hospital and also rapidly expanding to various community services including clinics, community health centers and nursing homes. Later the board can't tolerate my untimely and crazy ideas and suggestions so appointed me as the CEO and I'm still trying my best to prove my case till today.

I must categorically confess that I'm not a geriatrician and with no intention to pretend one either. However, this misconception was around since I was invited to join the Elderly Commission in 2003. I served as a member for the first chairman and then Dr. C.H. Leong as the second chair. Then I served as vice-chairman and now being the fourth chairman. Maybe I am around with Elderly Commission for too long, 18 years. Many forget my specialty and a few may even mock how a paediatrician can lead a Commission to advise the government on various policies concerning older adults. They may be correct but if they have learnt from the book "Community Paediatrics" I just shared, they should have a second thought. Those involved in the identification of a child with health problems are Parents, Play leaders, Health visitor, School Nurse, School Teacher and Doctor. The author is from the UK, so the terminology is different from ours but the concept is the same. Multiple teams caring for the child's healthy growth include- Primary health care team, District handicap team, Hospital paediatric team, Community paediatric team, Area social service team, Mental handicap team, Child guidance team, Family centre team. Multidisciplinary teamwork is essential to coordinate efforts to diagnose, treat and plan for the sick



Prof Philip Li presented the medal to Dr Lam Ching Choi

kid and the family. Though the elderly and children occupy opposite ends of the age spectrum, the principles of care are very similar. Of course, the workers and the teams are of different names, just like we have different terms from the British. While the environment shapes the child's development, elders need similar community support and care too. We doctors must see ourselves in the right perspective- which is the community perspective. Subjects may be different but principles are the same.

Being a young doctor, years ago, I learnt by practicing what I read in the books. The medical books are the foundation and lessons can only be learnt by applying those fundamentals. I would like to share three lessons I learnt or rather am learning in the journey of practicing these fundamentals.

First, we should not forget the big picture when we are taking care of our patients. Health is influenced by many factors while health care services is only one of the many, alongside with behavioral, environmental and social factors. All the social determinants impact the health of the people and the communities where they live. Poverty, unequal access to health care, lack of education, stigma and racism all contribute to health inequities. These impacts may well surpass the quality of care a physician can best to deliver. This understanding of health determinants forms part of the new public health concept. The main objective of New Public Health is the political and practical application of lessons learnt from past successes and failures in disease control and the promotion of preventive measures to

combat existing and evolving health risks. It also recognizes the interdependency and interrelationship of the health of people, communities and nations. This new concept brought in a very important initiative called Healthy Cities and the World Health Organization adopted it in the 80s.

In 1996, I learnt the concept of Health Cities and worked closely with another retired director of health, Dr. S.H. Lee, in promoting this in Hong Kong. Later on, I was appointed as a district councilor in Sai Kung. The concept of Healthy City was well accepted by the local community and a committee was set up under the district council to implement it. I was the Chairman in leading the committee and I remember one important goal of healthy cities is to bring health into other policy areas which traditionally are not under the health bureau. One example is town planning. According to the Town Planning Ordinance, *“town planning aims to promote the health, safety, convenience and general welfare of the community”* but unfortunately, our town planners had long forgotten this in the 90s. The example of the Tseung Kwan O Cross Bay Link is the best to illustrate this. The Cross Bay Link is a two-lane bridge of 1.8 km long across the Junk Bay connecting Tseung Kwan O – Lam Tin Tunnel and the new development area. While the town planners consulted the district council, I proposed it should have a cycle track and footpath and be connected with the beautiful waterfront promenade to form an exercise hotspot of 5km. Obviously this was strongly objected by the government as you can see there’s no preceding case in Hong Kong and the building cost will increase by 10%, as I was told. Fortunately, my strong belief in the new public health and healthy cities convinced the town planners and I’m looking forward to its opening next year so that I can be one of the first users, as a cyclist.

Is this big picture of building a healthy city big enough? No! For many years we have been talking about climate change and talked about how the ecosystems and rich biodiversity would be greatly affected by global warming. But the discussion is mainly among environmentalists, at least, not many doctors are involved. The question is *“Should we?”*

Extreme heat contributes directly to deaths from cardiovascular and respiratory diseases, particularly among elderly people. For example, the heatwave of summer 2003 in Europe costed more than 70,000 excess deaths. Increasingly variable rainfall patterns are likely to affect the supply of fresh water. A lack of safe water can compromise hygiene and increase the risk of diarrheal disease, which kills over half a million children aged under 5 every year. We, in the healthcare sector, are responsible for some 4–5% of global greenhouse gas emissions. And surely we have a role to play in climate change mitigation. BMJ, Lancet and

many international journals published the same editorial a month ago, titled as *“Call for emergency action to transit global temperature increases, restore biodiversity, and protect health”*. As healthcare professionals, we can introduce the climate emergency into conversations, share knowledge and inform debate; guide patients to climate-friendly behaviors by explaining the benefits to individual and population health. It is also important for us to adopt interventions like using renewable energy and adopt low-carbon procurement strategies through redesigning and changing clinical practice, to reduce overdiagnosis and over-treatment.

While we treat our patients, we should cure the sick system too. Currently, our healthcare system focuses too much on curative care. Basically, we don’t have a working preventive care system in Hong Kong all along. According to the Hong Kong Domestic Health Accounts in 2019/20, preventive care only took up 7% of the total health expenditure. To me, it’s a significant system error. This 7% hopefully will be increased after the primary care reform initiated in this term of the government.

The District Health Centre is an important part of this reform and the centres will be set up in all 18 districts. Through public-private partnership, medical-social collaboration, it provides district-based primary healthcare services. Apart from primary prevention, that is health promotion and disease prevention, DHC also offers secondary prevention services. Patients diagnosed with hypertension, diabetes mellitus or musculoskeletal disorder may join the DHC chronic disease management programmes based on reference clinical protocols. While for tertiary prevention, DHC offers community rehabilitation services to support patients with stroke, hip fracture or myocardial infarction who have already completed the retreatment at hospitals but required extended rehabilitation in the community.

The challenge ahead is to build a sustainable structural medical-social collaboration. From health promotion to palliative care, we need more medical-social collaboration to provide more coordinated and patient-centered services. As medical-social collaboration was stated twice in the Policy Address just released, I quote directly from paragraph 130: *“Among these, there is a pressing need to vigorously promote the development of primary healthcare services and foster medical social collaboration”*. Medical-social collaboration is also mentioned in paragraph 131: *“In parallel, the FHB has proceeded with a comprehensive review on the planning of primary healthcare services and governance framework to formulate a blueprint for the sustainable development of primary healthcare services in*

Hong Kong. Enhancement of medical social collaboration will be a crucial part of the review". My advocacy on this is to reform the Food and Health Bureau and Labour and Welfare Bureau to Health & Welfare Bureau to implement this collaboration. I encourage all of you to give your opinion in the coming consultation on this blueprint.

Last but not least is our doctor-patient relationship of a bigger scale. How can we communicate the science of evidence to the public? Evidence-based medicine (EBM) is the explicit and reasonable use of modern, best evidence in making decisions about the care of individual patients. EBM integrates clinical experience and patient values with the best available research information. This approach applies equally well in the public health framework, so we do community assessment or diagnosis before making health policy. The framework guides us in formulating various control measures in the COVID-19 pandemic and subsequently the vaccination programme. We, specialists in the medical field, should be proud of our profession, being trusted by the government and the general public to steer HK in this rough water for the past 20 months. As part of evidence-based medicine, we evaluate our performance and do post-mortem in unfortunate cases. There is an obvious deviation from our peers when we examine the vaccination rate. Despite we rightly putting the elderly as the priority group as many countries do, the vaccination rate remains low. There should be many factors involved in this reverse phenomenon but communication breakdown between the medical professionals and the public should be one of those. The science of evidence must be carried by the art of communication in order to be effective and beneficial.

We may have a bigger challenge than the vaccination programme coming. As technology is evolving rapidly, we could use smart devices and mobile apps to collect patient-generated health data and these applications help teach users to improve and maintain a healthy lifestyle. Meanwhile, physicians can monitor and use the health data collected and update treatment plans. Technology-supported remote care become more common and we can educate patients to better self-manage their own health with the help of technologies. The example of the Jockey Club Community eHealth Care Project showed a significant improvement in the blood pressure level that the average incidence of out-of-range readings lowered to 2.5 times after the elderly participants were taught to conduct regular measurements at elderly centres. This example is very simple but with more techniques available and AI kicks in. We, doctors, can translate all the evidence-based medicine into usable knowledge for the patients to

self-manage their more complicated diseases. The research and teaching resources should be rightly shared among the science and the art in the medical field so that our communication skills will not be surpassed by technology one day.

Lastly, I would like to share this historic photo of Sister Annie Skau, founder of HOHCS. She was a missionary nurse from Norway and the first nurse to receive the Nightingale award in HK. The photo shows the burnt chapel after the fire outbreak in 1972. Sister Annie was saddened by walking into the debris. However, when she looked up, she found that the cross of the chapel was not damaged and felt the presence of God's love. Later Sister Annie was able to renovate the chapel with donations and money raised from selling handicrafts made by patients. The chapel is still a working one on our terrace and this picture is hanging in my office. Just now I have mentioned three big challenges that we have to face. Surely we need wisdom to navigate and bring our profession to a new level where we can serve the poor and the sick better. While we journey in difficult times, I believe we can also learn from our failures and we can hope as Sister Annie did.



Sister Annie Skau, founder of HOHCS, at the Chapel

ANNUAL SCIENTIFIC MEETING

on 16–17 October 2021

The Annual Scientific Meeting was held successfully on 16–17 October 2021. Owing to the COVID-19 pandemic, it adopted a hybrid mode with both physical and virtual attendance, attracting more than 700 online registrations!

The highlights included prestigious named lectures. Prof Dennis Lo, Chairman, Department of Clinical Pathology, The Chinese University of Hong Kong, delivered an impressive lecture entitled “Translation in scientific discoveries into clinical impact”. Dr Lam Ching Choi gave the Gerald Choa Memorial Lecture on “From Community Pediatrics to Community Geriatrics”. Dr Yap Yat Hin Desmond received the Sir David Todd Lecture for his work on “Optimizing outcomes in Lupus Nephritis – current success and challenges ahead”. And Prof Wong Lai Hung Grace presented the Richard Yu Lecture on “Big data and deep learning in liver cancer prediction”.



Symposium 1



Prof Szeto Cheuk Chun



Prof Tang Chi Wai Sydney



Dr Yap Yat Hin Desmond

Symposium 2



Dr Chan Yat Sun Joseph



Dr Chan Wai Man Johnny



Dr Lui Ka Luen

Symposium 3



Dr Chan Koon Ho



Dr Chan Chun Kong Raymond



Prof Leung Wai Hong Thomas



Hong Kong College of Physicians Annual General Meeting 16 October 2021



The office bearers at AGM

34th Annual General Meeting 23rd Congregation

On 16 October 2021, the College organised a Conferment Ceremony in the hybrid format, mixing live and virtual. The 35th Anniversary Dinner was held back-to-back, after missing the annual occasion last year.

The Conferment Ceremony was honoured by the physical attendance of many distinguished guests including the Secretary for Food and Health, Director of Health, and Chief Executive of the Hospital Authority. Each guest was given Anniversary surgical masks with a mask holder as souvenirs. The College also presented souvenirs to outgoing Council Members to thank their contributions to the College over the years.



The Council with Honorary Fellows



Platform party marching in



New Fellows thanking their family, seniors and colleagues



Prof Dennis Lo, AJS McFadzean Orator, addressing the College



Sand painting performance during 35th Anniversary dinner



College Council and guests during 35th anniversary dinner



Prof Philip Li toasts to Prof Rosie Young, Founding and Honorary Fellow during 35th anniversary dinner



Best research paper awardees during the ASM



Platform party and guests in the 35th anniversary Conferment Ceremony

Named Lectures and Awards In 2021

AJS McFadzean Oration

Translating Scientific Discoveries in Clinical Impact

Professor Dennis Yuk Ming LO

Chairman, Department of Chemical Pathology
Li Ka Shing Professor of Medicine
The Chinese University of Hong Kong



Gerald Choa Memorial Lecture

From Community Pediatrics to Community Geriatrics

Dr Ching Choi LAM

Chairman
Elderly Commission
HKSAR



Sir David Todd Lecture

Optimizing Outcomes in Lupus Nephritis – Current Success and Challenges Ahead

Dr Desmond Yat Hin YAP

Department of Medicine
The University of Hong Kong



Richard Yu Lecture

Big Data and Deep Learning in Liver Cancer Prediction

Professor Lai Hung WONG

Department of Medicine & Therapeutics
Prince of Wales Hospital
The Chinese University of Hong Kong



Award for Obtaining The Highest Score in AIM Exit Assessment

Dr Shun Yin KONG



Award for Obtaining The Highest Score in PACES

Dr Chi Kin NG

Distinguished Research Paper Award for Young Investigators 2021



Dr Ka Shing CHEUNG

Department of Medicine,
Queen Mary Hospital

Gastrointestinal manifestations of SARS-CoV-2 infection and virus load in fecal samples from a Hong Kong Cohort: Systematic review and meta-analysis.

Gastroenterology 2020;159:81-95.



Dr Louis Ho Shing LAU

Department of Medicine & Therapeutics,
Prince of Wales Hospital

Risks of post-colonoscopy polypectomy bleeding and thromboembolism with warfarin and direct oral anticoagulants: a population-based analysis.

Gut 2021;0:1-11. doi:10.1136/gutjnl-2020-323600.



Dr David Tak Wai LUI

Department of Medicine,
Queen Mary Hospital

Carbamylated HDL and mortality outcomes in type 2 Diabetes.

Diabetes care 2021;44:804-809. <https://doi.org/10.2337/dc20-2186>.

Newly Elected FRCP (London) in 2021

- | | | | | | |
|---|---|----|---|----|--|
| 1 | Dr Au Yuen Ling Elaine
Queen Mary Hospital | 10 | Dr Jim Man Hong
Ethics Medical Centre, Kowloon | 19 | Dr Pang Yin Yu Shirley
Queen Mary Hospital |
| 2 | Dr Chan Sau Yan Thomas
Queen Mary Hospital | 11 | Dr Lam Koon Ngai Philip
North District Hospital | 20 | Dr Sha Kwok Yiu Edmund
United Christian Hospital |
| 3 | Dr Chang Shek Kwan Richard
Queen Mary Hospital | 12 | Dr Lam Wai Kei
North District Hospital | 21 | Dr So Ho
Chinese University of Hong Kong |
| 4 | Dr Cheung Fu Keung
Glorious Medical Centre | 13 | Dr Lau Sze Man June
Queen Elizabeth Hospital | 22 | Dr Tse Man Yu Mona
Queen Mary Hospital |
| 5 | Dr Ching Chi Keung
Tseung Kwan O Hospital | 14 | Dr Li Wai Ling
Queen Mary Hospital | 23 | Prof Wong Hei Sunny
Prince of Wales Hospital |
| 6 | Dr Chow Wai Hung
Yan Chai Hospital | 15 | Dr Lui Abdul Rashid Nok Shun
Prince of Wales Hospital | 24 | Dr Wong Ka Lam
Grantham Hospital |
| 7 | Dr Fu Yat Pang Michael
Tuen Mun Hospital | 16 | Dr Ng Ngai Sing
Haven of Hope Hospital | 25 | Dr Yuk Ka Lok Daniel
Shatin Hospital |
| 8 | Dr Fung Wing Shing Winston
Prince of Wales Hospital | 17 | Dr Ng Tsz Lam Lindy
Tung Wah Eastern Hospital | | |
| 9 | Dr Hui Yee Tak
Queen Elizabeth Hospital | 18 | Dr Pang Ching Wai
Caritas Medical Centre | | |

Young Investigator Research Grant 2021

The following doctors received a research grant from the HKCP to complete their respective projects as named. Selection was decided by a scientific panel headed by Prof David Hui.

The grant was established in 2012, to encourage young Fellows aged 40 or below to conduct research in Hong Kong. Up to five grants of up to HK\$50000 each are awarded annually.

Impact of fatty pancreas on the development of diabetes, changes in insulin resistance and β -cell function in the general population: A 11-year prospective follow-up study

Dr Ting Ting CHAN

Department of Medicine & Therapeutics,
Prince of Wales Hospital

Randomized study on energetics profiling with intracoronary sinus sampling for sodium-glucose Co-transporter 2 inhibitors mechanistic analyses and revelation (ENIGMA-Reveal)

Dr Will Yap Hang CHAN

Department of Medicine,
Queen Mary Hospital

Impact of gut microbiota on the treatment effect of empagliflozin on non-alcoholic fatty liver disease in non-diabetic patients in a double-blind, randomized, placebo-controlled trial

Dr Ka Yan CHIANG

Department of Medicine,
Queen Mary Hospital

Sub-phenotypes of prediabetes in Chinese and association with diet and gut microbiota profiles

Dr Elaine Yee Kwan CHOW

Department of Medicine and
Therapeutics, Prince of Wales Hospital

Colchicine Use in Intracranial Atherosclerotic Disease – a pilot randomized control trial

Dr Bonaventure Yiu Ming IP

Department of Medicine & Therapeutics,
Prince of Wales Hospital

A Chinese-specific anti-inflammatory diet in patients with mild-to-moderate Crohn's disease – a pilot, randomized controlled trial

Dr Joyce Wing Yan MAK

Department of Medicine & Therapeutics,
The Chinese University of Hong Kong

Meeting with HA Chairman and Chief Executive

Mr. Henry Fan, Chairman of Hospital Authority and Dr. Tony Ko, Chief Executive of Hospital Authority, were invited to a meeting with the President, Senior Advisor and Office Bearers of our College on 24 September 2021. Very useful and candid discussions had been carried out on the current important issues, such as Medical Registration Ordinance, measures to retain manpower in Hospital Authority, including the extension of retirement age to 65 and concerns related to workload and stresses on trainees and young fellows of the College. Valuable ideas were exchanged during the meeting.



From L-R:

Dr Johnny Chan, Dr Tony Ko, Prof Philip Li, Prof Richard Yu, Mr Henry Fan, Prof TM Chan and Dr Patrick Li

Education and Accreditation Committee 2019 – 2021



The Committee expressed deepest appreciation to Prof Kong Pik Shan, Alice, Dr Lai Moon Sing and Dr Yeung Kwok Hung, for their contributions to the Committee over the past two years. The photo was taken after our meeting in June 2021.

PACES Examiners' Dinner in October 2021



PACES Examiners' dinner was held on Oct 6, 2021 to appreciate the efforts of our hardworking examiners. Special thanks to Prof Ronald Ma (Front L-2) as Chair of the Examination Committee and Prof Eric Tse (Front L-5) as Deputy Chair.



The HKCP Council 2021 – 2022

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– Prof Anthony Chan

EDUCATION AND ACCREDITATION COMMITTEE

– Prof Daniel Chan

PROFESSIONAL AND GENERAL AFFAIRS COMMITTEE

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MEMBERSHIP COMMITTEE

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Dr Sha Kwok Yiu Edmund

Dr Wong Mo Lin

Dr Yam Ping Wa

Prof Yuen Man Fung

Dr Chan Chi Hey Heyson

Dr Kwan Hoi Yee

Prof Tang Chi Wai Sydney

Past President

Dr Li Chung Ki Patrick

Senior Advisor

Prof Yu Yue Hong Richard

Press Conference to Promote COVID-19 Vaccination for Older Adults in Hong Kong

Dr Tak Yeung CHAN

Chairman
Specialty Board in Geriatric Medicine



L-R: Dr KM Chow, Dr TY Chan, Prof Philip Li, Dr Owen Tsang

The COVID-19 vaccination program in Hong Kong was launched on 26th February 2021. As in other countries, older people and residents in care home were prioritized to receive vaccination due to their highest mortality and severe morbidity associated with COVID-19. Despite the available evidence on vaccine efficacy and its safety profile, the uptake of COVID-19 vaccination among local elderly population was very low. As of mid-June 2021, less than 5% of persons aged 80 years and above have received one dose of COVID-19 vaccines and that was in marked contrast to situations in other countries like England or Singapore, where the vaccination rates in older adults were over 90% and 70% respectively. This alarming situation has urged the HKCP to organize a press conference to raise the public awareness on this imminent issue and to promote COVID vaccination to this vulnerable group. The press conference was held on June 21, 2021 at the Hong Kong Academy of Medicine and it was attended by over 20 reporters from different media outlets. The press conference was led by Prof. Philip Li, President of HKCP and other speakers included Dr Chow Kai Ming, Council Member of HKCP, Dr Chan Tak Yeung, Secretary of Specialty Board in Geriatric Medicine and Dr Owen Tsang Tak Yin, Chairman of Specialty Board in Infectious Disease. The following points were highlighted by the speakers.

1. The mortality rates of COVID-19 among local patients aged 80 years or above and residents in nursing homes were 25% and 50% respectively.
2. Patients aged 60 years and above accounted for 94% of all COVID-19 related deaths in Hong Kong.
3. Both BioNTech and Sinovac vaccines provide high protection rates (over 90% and 80% respectively) against severe disease and death from COVID-19 in older adults.
4. There were no major adverse events or excess mortality associated with both vaccines in older adults from local and overseas data.
5. The side-effects of COVID-19 vaccines in older adults were generally mild and transient.

6. Older adults with stable chronic diseases and without contraindication should receive COVID-19 vaccination.

HKCP has made two recommendations and two appeals in this event.

Recommendations:

1. *Elderly people with chronic diseases should be vaccinated*
2. *Elderly who had flu shots are suitable for COVID vaccination*

Appeals:

1. *No booking appointment is required for over 60 years old to get COVID vaccination*
2. *Elderlies and staff of Old Age Homes should get COVID vaccination to improve both physical and mental health of elderlies.*

The press conference was widely reported by various TV and radio stations as well as digital and print media outlets. Over the following few months, plenty of health talks focusing on vaccination in elderly were held by doctors in Department of Health, Hospital Authority, academic institutions and private sector. On August 9, 2021, same-day tickets were offered to persons aged 60 or above at 24 Community Vaccination Centers where they can receive COVID-19 vaccination without prior booking. As of end of August 2021, over 90% and 70% of care home workers have received 1st and two doses of vaccination respectively. By early September, 2021, the vaccination rates among older adults aged 70-79 and 80 years and above were 37% and 12% respectively. Vaccine hesitancy in older adults is largely related to a fear of vaccine safety and its adverse effects, especially in those who have chronic illnesses. A clear explanation and reassurance by doctors during consultation or opportunistic encounter can generally relieve the anxiety of patients and their families and majority of older adults are suitable for vaccination.



From L-R: Dr Jack KC NG (Moderator), Dr Winston WS FUNG (Speaker), Prof Terry CF YIP (Speaker), Dr Yuk Lun CHENG, Prof Philip KT LI, Dr Chun Yu YUNG (Moderator), Dr Helen ZHI (Speaker), Dr Sunny SH WONG

HKCP Co-organised Event - Joint Practical Statistics Workshop with the Hong Kong Society of Nephrology

Dr Yuk Lun CHENG

Immediate Past Chairman, Hong Kong Society of Nephrology
Chairman, AIM Board, HKCP

The workshop was jointly organised by the Hong Kong Society of Nephrology (HKSAN) and HKCP. It was held on Sunday, September 5, 2021 in a hybrid format with physical venue at the Hong Kong Academy of Medicine Jockey Club Building. The objectives of the workshop were to equip the health care researchers essential elements of research from formulation of research topic, study design, data analysis to manuscript preparation. The other purpose was to strengthen the academic collaboration between HKSAN and HKCP.

The half-day workshop emphasised practical approach. A data set in a SPSS file format was also created for the participants to practise what they learnt through the workshop. Details of the talks were as follows:

- 1) "Common Mistakes in Clinical Trial Design" by Dr Helen ZHI, Director, Biostatistics and Clinical Research Methodology Unit, School of Public Health, The University of Hong Kong
- 2) "How to Conduct a Study and Issue of Bias" by Prof Terry CF YIP, Assistant Director, CUHK Medical Data Analytics Centre, The Chinese University of Hong Kong
- 3) "Research Ethics, IRB Application & Manuscript Submission?" by Prof Sydney CW TANG, Yu Professor in Nephrology, Chair Professor of Renal Medicine, The University of Hong Kong
- 4) "Choosing the Right Statistical Tests" by Prof Kelvin KF TSOI, Associate Professor, JC School of Public Health and Primary Care, The Chinese University of Hong Kong
- 5) "Step-by-step SPSS Demonstration for Advanced Statistical Methods for Clinical Trials" by Dr Shirley X LI, Department of Medicine, LKS Faculty of Medicine, The University of Hong Kong
- 6) "Critical Appraisal: Essential Skill for Physicians" by Dr Winston WS FUNG, Honorary Clinical Assistant Professor, Division of Nephrology, Prince of Wales Hospital, The Chinese University of Hong Kong
- 7) "Thesis & Manuscript Writing: Tips to Impress the Reviewers" by Prof Cheuk Chun SZETO, Professor, Department of Medicine & Therapeutics, The Chinese University of Hong Kong

The program has been very well received by the attendees. The response has been overwhelmingly positive with 249 participants, including 79 HKSAN members, 160 HKCP fellows/members and 9 non-members. A total of 157 evaluations were received and 93% participants rated 'Overall Satisfaction of the Workshop' excellent or very good.

I would like to express my sincere thanks to Prof Philip KT LI, President of HKCP, for giving us the Opening Address, and Prof Richard YH YU, Senior Advisor of HKSAN & HKCP, for delivering us the Closing Remarks. I also wish to acknowledge the College council, the Training Subcommittee and the secretariat for their generous support; all speakers for their excellent talks; the workshop chairpersons for their invaluable contributions; the HKSAN Council for its tremendous support; the HKSAN Young Nephrologist Committee for drafting theme of the workshop, and the HKSAN Education Committee and Scientific Committee for coordinating the event.



Group photo of the in-person participants



The 35th Anniversary Symposium on Genetics and Genomics in Medicine 2021

Prof Anskar Yu Hung LEUNG

Co-Chairman

Working Group in Genetic and Genomic Medicine

Recent advances in genome sequencing and bioinformatics have shed important lights to the genetic underpinnings of hereditary and acquired human diseases. The burgeoning information has led to substantial improvement in early detection and diagnosis, prognostication and clinical management of a wide spectrum of diseases, resulting in increased treatment options and better patient outcome.

Our College has always been at the forefront of genetic and genomic research and its application. Our Founding President Professor Sir David Todd made seminal discoveries in the 60-70s of the molecular genetics and epidemiology of thalassaemia, a group of hereditary haematological diseases arising from mutations of globin

genes¹. These discoveries and the subsequent works by our past President Professor T.K. Chan, together with Professor Vivian Chan and Professor Y.W. Kan, have laid the foundation of our current understanding of these diseases²⁻³. More recently, Professor Anthony Chan, the incumbent College Vice-President, incorporated quantification of plasma Epstein Barr Virus (EBV) DNA in the treatment algorithm and early detection of nasopharyngeal carcinoma, an endemic disease in this part of the world⁴. Professor Tony Mok, our College Fellow, identified high prevalence of EGFR mutation among Asian patients with lung adenocarcinoma, setting the stage for precision medicine in medical oncology⁵.

A special symposium on Genetics and Genomics in Medicine was held on 3 July 2021 to celebrate the 35th anniversary of our College and to highlight College's support and emphasis on clinical application and research in genetics and genomics. The symposium was held in the Hong Kong Academy of Medicine Building and was officiated by Professor Sophia Chan, Secretary for Food and Health, HKSAR. Despite the COVID-19 ordeal, the Symposium has attracted more than 450 local and oversea registrations, attesting to clinicians' great interests in this topic.

Professor Caroline Wright, Professor in Genome Medicine, University of Exeter set the stage for the symposium and gave a comprehensive review of the advances in sequencing technologies and described their applications in the practice of medicine. She particularly highlighted the application of genomic sequencing in the diagnosis of rare diseases in paediatric patients and introduced various initiatives in personalized cancer diagnostics, population genomic screening and development of novel therapeutics that are in the horizon. The talk by Professor Tony Mok focused on the impact of somatic gene mutation with particular reference to EGFR on personalized treatment of lung cancers and the impact of circulating tumour DNA on treatment stratification. The symposium turned its focus on monogenic hereditary diseases when Professor Albert Ong from the University of Sheffield described the genetics and pathogenesis of a diverse spectrum of adult polycystic kidney diseases and on polygenic metabolic diseases when Professor Ronald Ma highlighted the genetic and clinical heterogeneity of diabetes mellitus and how genetic information has been integrated into precision medicine for diagnosis, treatment and prognostication of diabetes. The symposium was nicely wrapped up as Dr. Kin-Ying Mok from University College of London presented data about research and management of neurodegenerative

diseases by a genetic and genomic approach and Professor Anskar Leung showed how next generation sequencing has been integrated into the diagnosis, prognostication and treatment of acute myeloid leukaemia.

Prof Philip Li, our President, has emphasized and highlighted that the College is proposing a new specialty in Genetics and Genomics for fellows who have obtained their specialist qualification. A working group, chaired by Dr. Maureen Wong and co-chaired by Professor Anskar Leung, has been brainstorming and gathering feedback from its members with a view to define the core curriculum and scope of training for this new specialty. The Symposium has showcased the relevance of genetics and genomics to the daily practice of clinical medicine. The new "G&G" specialty will have far-reaching impact on the training of our next generation physicians and on the standard of clinical practice in the future.

References:

1. Taylor JM, Dozy A, Kan YW, Varmus HE, Lie-Injo LE, Ganesan J, Todd D. Genetic lesion in homozygous alpha thalassaemia (hydrops fetalis). *Nature*. 1974;251(5474):392-3.
2. Kan YW, Dozy AM, Trecartin R, Todd D. Identification of a nondeletion defect in alpha-thalassemia. *N Engl J Med*. 1977;297(20):1081-4.
3. Chen FE, Ooi C, Ha SY, Cheung BM, Todd D, Liang R, Chan TK, Chan V. Genetic and clinical features of hemoglobin H disease in Chinese patients. *N Engl J Med*. 2000; 343(8): 544-50.
4. Chan ATC, Hui EP, Ngan RKC, Tung SY, Cheng ACK, Ng WT, Lee VHF, Ma BBY, Cheng HC, Wong FCS, Loong HHF, Tong M, Poon DMC, Ahuja AT, King AD, Wang K, Mo F, Zee BCY, Chan KCA, Lo YMD. Analysis of Plasma Epstein-Barr Virus DNA in Nasopharyngeal Cancer After Chemoradiation to Identify High-Risk Patients for Adjuvant Chemotherapy: A Randomized Controlled Trial. *J Clin Oncol*. 2018; JCO2018777847.
5. Mok TS, Wu YL, Thongprasert S, Yang CH, Chu DT, Saijo N, Sunpaweravong P, Han B, Margono B, Ichinose Y, Nishiwaki Y, Ohe Y, Yang JJ, Chewaskulyong B, Jiang H, Duffield EL, Watkins CL, Armour AA, Fukuoka M. Gefitinib or carboplatin-paclitaxel in pulmonary adenocarcinoma. *N Engl J Med*. 2009; 361(10): 947-57.



Professor Sophia Chan together with moderators and speakers and some council members and specialty board members

Interview with Professor Rosie Young on the Occasion for her 90th Birthday

Dr Chariene WOO & Dr Paul LEE
Department of Medicine, Queen Mary Hospital

The interview was conducted on the day the Endocrinologists of the University Medical Unit, Queen Mary Hospital celebrated Professor Young's 90th birthday with a dinner held in her honour at the Chariot Club, Central on 5th October 2020.

As a world-renowned medical educationist, leading researcher, well-respected authority in endocrinology and long-serving University of Hong Kong administrator, Professor Rosie T. T. Young is also a dedicated mentor to many medical students and professionals. On her 90th birthday celebrations, we had the honour of interviewing this legendary professor and learning little-known facts about her life including her childhood, role models, life lessons, and even her skeletons in the closet.

Q: Could you tell us about your early life?

RY: I was very fortunate to be born into a family with great role models that I could look up to for guidance and inspiration. Coming

from a humble background, my father studied Political Science at the University of Hong Kong while working part-time to earn his tuition fees. Unfortunately, he failed one subject during that time

and due to financial constraints, he had no choice but to give up on his degree. This made him, and subsequently myself, dedicated to help struggling students, especially those in financial hardship.



Prof Young with her beloved father

When my father passed away in 1981, I decided to donate all the condolence money we received to the Dean's Loan Fund of the University of Hong Kong to help students in need (which to this day still provides interest-free loans to medical students in need and has enabled many students to complete their medical degrees). I believe this is what we need to do, which is to help those in need whenever and however we can.

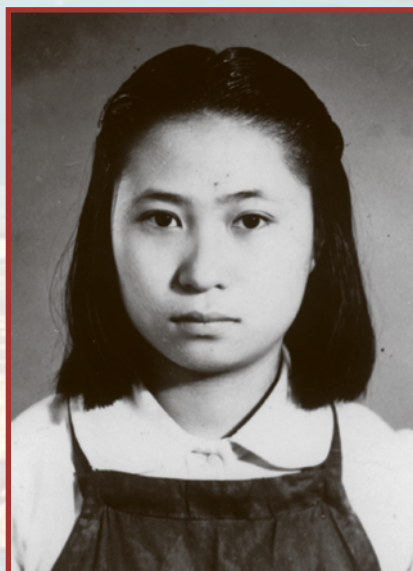
While I had a happy childhood with a loving family, it was not without tragedy. I have an older sister and three older brothers, two of whom studied medicine, my eldest brother was even awarded multiple prizes during his medical student years. Unfortunately, both brothers died relatively young, one from carcinoma of the colon and the other from a road traffic accident. My brothers and their deaths had a profound impact on my life, including my decision to pursue medicine as a career.

Q: How did you begin your medical career?

RY: Just half a year after graduating from a local primary school, the Japanese Imperial Army's occupation of Hong Kong began. During the "3 years and 8 months", I was lucky enough to be home-schooled by my father. My strongest subject had always been mathematics. I always encouraged young people to dream big and be bold in pursuing their dreams. I used to dream of becoming an astute politician or a ground-breaking scientist, but these required a strong foundation in arts and science, both of which I was not exceptionally strong at, with all the disruptions to schooling during the Occupation Period. I also felt in my heart that the career paths of arts or science major were not for me.

This is when I thought of my two brothers and my special "friend", whom I spent hours playing with while growing up – my brothers' skeleton in the closet which he kept for his medical studies. I thought to myself at the time, that medicine does not require being top in the fields of arts nor science and the choice seemed fitting for my situation. In addition, by being a good doctor I could help others and contribute to society. This was how I decided to enrol into medical school at the age of sixteen.

Back in our times, getting into university might not be the most difficult part, it was graduation that was the challenge. We had 120 students enrolled at the beginning, with only 30 of us from the same year managing to graduate. We also had a relatively high proportion of girls in my year, up to twenty percent, as well as students coming from Malaysia and Singapore to pursue their studies, since these countries did not have any medical schools back then.



Taken in 1947; Prof Young as a first-year medical student in the University of Hong Kong

Q: Why did you choose to become an endocrinologist?

RY: This might come as a surprise, but I actually started my training in haematology with Professor McFadzean, who remains my most respected teacher to-date. Back then he had two trainees before me, including Sir David Todd, which might have meant a slower career progression for me, which is why I decided to pursue a different speciality.

Leaning towards non-interventional specialties, I came across and was subsequently inspired by Professor Gerald Choa's work on thyrotoxicosis and diabetes. He was the founding Dean of the Chinese University of Hong Kong's Medical Faculty. But ultimately, what intrigued me the most about endocrinology was the systematic and analytical nature of endocrinology, just like playing the role of a detective. At that time, it was also the "golden era" of endocrinology which saw the emergence of many new drugs such as insulin, along with the development of new technologies such as biological assays and radioimmunoassays. I saw the opportunity and potential in this field, which excited me and drove me to become an endocrinologist.

One little known fact about me is that I am actually a Board-certified haematologist. For my Edinburgh membership specialty examination, I actually took the subject of haematology rather than endocrinology. I have even trained a few current established haematologists to perform and interpret bone marrow examinations and gave them tips on how to prepare for examination! I never had a board exam on endocrinology. The moment I got my qualification for my membership in haematology, I immediately switched to the endocrinology unit to pursue further studies.

Q: What was the topic of your thesis back then?

RY: My thesis was on hypoglycaemia in hepatocellular carcinoma. Back in the days, everything from blood taking to tedious laboratory preparation had to be done by me. I still remember encountering a grumpy patient with hypoglycaemia who struggled and hit my forehead when I was trying to draw blood from her in the middle of the night – now that I think about it, that was certainly not the best time to mess with a patient!

Q: Throughout your six years in the medical school, which teacher(s) had the most profound impact on your life?

RY: While there is so much more to see and learn from the internet and webcasts today, the importance of teachers as students’ role models is simply irreplaceable. I was very fortunate to have many great teachers in my life, such as Professor McFadzean, Dr. Stephen Chang, Professor Gerald Choa and Dr. CP Fong (I was the first recipient of his Gold Medal in Medicine).

Professor McFadzean was well-known to be a strict teacher, and everyone was terrified to be in his class. But he was also a kind teacher, especially during examinations, and he would go above and beyond to help his students whenever they’re in need. I still remember this vividly: a junior doctor working in the A&E unit had misdiagnosed a peritonitis with pneumoperitoneum as ectopic pregnancy, leading to the patient’s death. The junior doctor was arrested for alleged medical negligence and was taken away to the police station in handcuffs. Professor McFadzean was outraged when he heard this news, and he

immediately filed a complaint to the government, expressing his discontent over the doctor being treated in such an undignified way (as if he were a murderer). Professor McFadzean also empathized with the doctor in his lack of experience that contributed to the unfortunate death. The doctor has now moved overseas and this act of kindness by Professor McFadzean was constantly reminisced fondly by both him and me.

Dr. Stephen Chang was another inspirational teacher. His lectures had the ability to mesmerize students: I was once so deeply immersed during one of his lectures that I even blindly wrote down “do not write” in my notes just as he said those words! Professor Gerald Choa was my spiritual support on top of being my great teacher. He shared the same religion as me (Catholicism) and ensured I attended church every Sundays.



Prof Young and Prof McFadzean

Lastly, Dr. CP Fong shared fond memories with me of my brother as he knew him from medical school days. He had a quick wit and a talent for lecturing, being able to deliver a lecture within short notice while standing in for Professor McFadzean. He was also empathetic and genuinely cared for his patients, which might be a rare attribute nowadays. I once saw him spending hours with a patient at bedside convincing him to undergo surgery, which he believed was in the best interest of the patient. Unfortunately, he died from drowning during my fourth year of medical school, and when Professor McFadzean broke the news to us, he cried and choked saying, "it was just like the death of my own son". That was the first funeral I attended in my entire life.

Q: You have held different positions such as Dean of the Medical Faculty and HKU's Pro-Vice Chancellor, and have also joined a lot of committees. Which role was the most unforgettable for you?

RY: I have always been a clinical researcher and it is where my passion lies. The process of discovering something new, writing it up and presenting overseas is very stimulating. My first administrative role was joining the university's Development and General Purposes Committee (now known as Senior Management Committee) in 1974, as the vice-chancellor at the time wished to have a female, non-professorial representative amongst a committee of predominantly male professors. I have subsequently taken up the roles of the Associate Dean and Dean of the faculty, and later the Pro-Vice-Chancellor. Looking back on this journey,

I feel like the beginning of the administrative role marked also the beginning of my downfall - I no longer could spare as much time on research as I would have loved to.

During a visitation by a foreign fellow, I was asked why I chose to give up my research in my peak for an administrative role. I wasn't sure what to say at the time. Perhaps it was because there's a time for everything, and I just felt it was the right time for it.

Q: You didn't stop working after your retirement, e.g. you were part of the SARS Expert Committee. Can you share a bit more about your involvement there?

RY: It has always been a learning curve for me to be in each role at different stages. To be honest, sometimes I felt like I've learned more from the roles than making actual contributions. Out of all the committees I sat in, the SARS Expert Committee was the most successful. We were surprised to see the government fully accepting and implementing our working party report. As a result of the government adopting the report, the Centre for Health Protection was established, groundworks for legislations regarding quarantine and isolation had been laid out, and most importantly, importance of public education including universal masking and social distancing was reemphasized. This proved to be handy in this Coronavirus pandemic, and this is why when the coronavirus hit us, Hong Kong was already in a state of preparedness.

Q: Having lived a wonderful 90 years, can you share any advice with us for living a fruitful life?

RY: Losing my two older brothers at such a young age was absolutely

devastating, but it also taught me to be a positive and forward-looking person. It is important to have a positive mindset and believe that there's always a better tomorrow.

Secondly, always work from your heart. Don't worry too much about personal gains or losses. If you believe you're doing the right thing, go for it and always persevere.

Thirdly, always cultivate the next generation, as succession is vitally important. The new generation must surpass the old one to make advancements and create a better future.

Q: What is your most rewarding achievement throughout your extraordinary career?

RY: My most rewarding achievement is made possible by the University Medical Unit for allowing me to bring together many of my old friends, colleagues and juniors here today to celebrate my birthday. It is also my honour to be here with you today, and this is certainly my greatest professional achievement to-date.

- An Excerpt from an Interview with Professor Rosie TT Young with Dr. Paul Lee, October, 2020

Acknowledgment

We would like to acknowledge Dr YC Woo for his help in setting up the recordings of the interview, which is now available on YouTube at <https://www.youtube.com/watch?v=y1WSsWnb6g0>

Report on Scientific Symposium on COVID-19 Vaccine

Prof Greg Poland with
Dr KM Chow and
Prof Philip Li in virtual platform

Dr Kai Ming CHOW

Department of Medicine & Therapeutics,
Prince of Wales Hospital

The novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused an unprecedented social upheaval. In severely affected countries like the United States, fewer than 1 in 4 adults overall had evidence of SARS-CoV-2 antibodies in early 2021. In other words, the seroprevalence is far below the level required to have community-level protection. That means vaccine is the most promising strategy for human protection. Data from phase 3 and 4 clinical trials and real-world data about vaccination, during the past six months, have been emerging in an exceptionally fast manner. So much so that healthcare providers, not to mention the lay public, have great difficulty to catch up.

In order to provide the most updated and scientific information on vaccine protection strategies, the Hong Kong College of Physicians have co-organized a scientific symposium with the Hong Kong Society of Transplantation in a timely manner. On 6 June 2021, a hybrid conference was held to line up key speakers around the globe.

Dr. Tony Ko Pat-sing, Chief Executive of the Hospital Authority, was the guest of honor who highlighted the absolute need of promoting vaccination. Following Chief Executive's introduction, three distinguished speakers gave informative lectures on the COVID-19 vaccines. Prof. Gregory Poland from Mayo Clinic discussed

immunological consideration and choices of vaccine platforms. Most importantly, he described the knowns, unknowns, and unknown unknowns in the vaccine protection against infection. Prof. Paul Harden from Oxford University talked on the role of vaccination in susceptible groups, including but not limited to dialysis patients and transplant recipients. Lessons gleaned from the experience in the United Kingdom include epidemiologic data confirming the vaccine effectiveness. Prof. David Hui from Chinese University of Hong Kong and the College further discussed the local scenario, including practical challenges such as vaccination hesitancy.

One of the key features of this hybrid conference is the chance to have cross-country information exchange through a virtual platform. Three speakers joined to have live and interactive discussion during the Q&A session. This happened on a Sunday morning locally, midnight in the United Kingdom, and late evening in another continent.

We are glad to have engaged 240 participants in this precious learning platform. We might not (yet) know exactly how to define the most efficacious vaccine, but we know very well that the encouraging response for this symposium speaks well for the dire need of knowledge for COVID-19 vaccine.



Dr Tony Ko with the Organising team of the Symposium

BEST THESIS AWARD Gold Award Winner

Vaccination in Patients with Chronic Kidney Disease – Focusing on the Prevention of Influenza

Dr Ming Yao MA

Department of Medicine, Queen Mary Hospital

Background

Infection is a leading cause of morbidity and mortality in patients with kidney failure. Due to impaired immune-responsiveness, the efficacy of vaccination decreases with progressive impairment of kidney function. Intradermal vaccination with topical imiquimod pre-treatment, a Toll-like receptor 7 agonist, and high dose vaccination demonstrated enhanced immunogenicity in healthy subjects.

Methods

We conducted a prospective double-blind randomized controlled trial, comparing immunogenicity and safety of high dose influenza vaccine (HDV) and intradermal administration with topical imiquimod (IQ) versus standard dose vaccine (SDV) in patients with chronic kidney disease. Hemagglutination inhibition antibody titers were measured. The primary outcomes were seroprotection rate, seroconversion rate and geometric mean titer (GMT) at 21-day and 6-month post-vaccination. Secondary outcomes were rate of hospitalization for influenza or pneumonia, all-cause mortality within 1-year post-vaccination.

Results

From October 2019 to February 2021, 232 patients completed study, with 92, 90 and 50 randomized to SDV, IQ and HDV groups respectively. 95.5% and 40.9% patients with HDV achieved seroprotection and seroconversion respectively against A/H3N2 by 21-day, with GMT-fold increase of 1.97 (95% CI 1.55–2.39). The 21-day seroprotection, seroconversion and GMT-fold increase for A/H3N2 were higher in HDV than SDV group ($p=0.001$, $p=0.039$, $p=0.001$ respectively). GMT-fold increase for A/H3N2 at 6-month was higher in HDV than SDV group ($p=0.044$). Subgroup analysis of vaccine response among various RRT modality demonstrated that among dialysis population, compared to SDV, HDV group had significantly better seroconversion against A/H1N1 strain at 6-month (OR 3.40, $p=0.034$) and seroprotection against B/Victoria lineage at 6-month (OR 3.96, $p=0.047$). No statistically significant difference in immunogenicity was noted between IQ and SDV groups. The rate of hospitalization for influenza or pneumonia and all-cause mortality within 1-year post-vaccination were comparable among the 3 groups.



Conclusion

High dose vaccination significantly improved immunogenicity against certain influenza strains in patients on dialysis and this strategy should be considered. Intradermal vaccination with topical imiquimod was not superior than conventional vaccination.

BEST THESIS AWARD Silver Award Winner

Retrospective Observational Study Comparing Two Different Reperfusion Strategies in Patients with Acute STEMI Presenting Outside Office Hours

Dr Pok Him LEE

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Introduction

Acute ST-elevation myocardial infarction (STEMI) represents a unique patient population carrying high morbidity and mortality. Timely and effective coronary reperfusion is the major determinant of patient outcome. In Hong Kong, thrombolytic therapy remains the mainstay of reperfusion strategy in STEMI patients presenting outside office hours. A pilot cluster-based 24-hour primary percutaneous coronary intervention (PCI) program was launched in October 2018 with Kowloon Central Cluster being the leading cluster in this phased expansion program.

Objective

To compare the 30-day mortality and major bleeding event in patients receiving historical thrombolytic therapy and primary PCI as the reperfusion strategy for patients with acute STEMI presenting outside office hours.

Methods

A single center retrospective observational study was conducted in Queen Elizabeth Hospital (Hong Kong) on consecutive patients presenting outside office hours with a diagnosis of acute STEMI, who received urgent thrombolytic therapy as the reperfusion strategy between January 2016 and September 2018 and primary PCI between October 2018 and December 2019. The primary outcomes were 30-day mortality and major bleeding event. Major bleeding event was defined as Bleeding Academic Research Consortium (BARC) type 3 or above. The secondary outcomes were thrombolytic failure rate, unplanned revascularization and hospital length of stay. A subgroup analysis on primary outcomes was also performed in 2 subsets of population: early presentation ≤ 3 hours and age ≥ 75 .

Results

188 patients in thrombolytic group and 143 patients in primary PCI group were analyzed. 30-day mortality occurred in 11.7% and 4.2% of patients in thrombolytic therapy and primary PCI groups respectively ($P = .02$). Major bleeding events occurred in 8% and 2.1% in thrombolytic and primary PCI groups respectively ($P = .02$). For the patients who presented early (≤ 3 hours from symptoms onset), there was a trend towards a lower mortality rate (4.9% vs 6.8%) and fewer major bleeding events (3.7% vs 6%) in primary PCI group, though the differences were not statistically significant. Among the subset of elderly population (age ≥ 75), primary PCI group had a significantly lower composite outcome (17.6% vs 41.9%, $P = .03$) and fewer major bleeding events (8.8% vs 29%, $P = .04$). Regarding mortality in this elderly subgroup, primary PCI resulted in a lower 30-day mortality rate (17.6% vs 38.7%, $P = .06$), though it did not reach statistical significance. All primary outcome events (30-day mortality and major bleeding event) in primary PCI group occurred in elderly population (age ≥ 75). Thrombolytic failure occurred in 31.4% of patients and unplanned revascularization in 25.5% of patients receiving thrombolytic therapy. The median lengths of stay were not different between the two groups (5 [IQR 4-7] days vs 4 [IQR 3-7] days, $P = .29$).



Conclusion

Compared with thrombolytic therapy, primary PCI in patients with acute STEMI presenting outside office hours is associated with lower risk of 30-day mortality and major bleeding event. Age was an independent risk factor associated with mortality and bleeding outcome. The superiority of mechanical reperfusion strategy was consistent across different age categories.

BEST THESIS AWARD Bronze Award Winner

A Prospective Study on Serum Citrate Levels and Clinical Correlations in Patients Receiving Regional Citrate Anticoagulation

Dr Harmony Hau Man TO

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Background

Regional citrate anticoagulation (RCA) is commonly used in continuous renal replacement therapy (CRRT). Citrate accumulation (CA) is a serious potential complication of RCA, but conventional ways to diagnose CA such as increased total to ionized calcium ratio (T: I Ca ratio) are confounded by various clinical conditions and thus remains suboptimal. Serum citrate measurement emerges as a more direct way to determine CA but its clinical utility and optimal cut-off values for predicting CA remains undefined. Moreover, risk factors to identify patients at risk of CA remain to be elucidated.

Objectives

To evaluate serum citrate kinetics of patients undergoing RCA CRRT and its association with clinical events and outcomes.

Methods

This was a prospective multi-center observational study of adult critically ill patients admitted to two tertiary-referral ICUs at Queen Mary Hospital and Tuen Mun Hospital from July 2018 to September 2020. We recruited patients who received RCA-CRRT and measured serial serum citrate levels at baseline, 2-, 6-, 12-, 24-, 36-, 48- and 72-hours after initiation. Serial serum lactate levels were also measured every 6 hours. The relationship between serum citrate levels and the development of citrate accumulation (CA) [defined as a combination of concomitant elevated T: I Ca ratio >2.5 , high anion gap metabolic acidosis with $\text{pH} < 7.2$ or base excess ≤ -5 and systemic hypocalcaemia $< 1.1 \text{ mmol/L}$], patient outcomes and clinical parameters were investigated.

Results

133 patients were recruited. CA occurred in 18 patients (13.5%). Serum citrate levels in the CA group at baseline, 2-, 6- and 12-hours after initiation of RCA CRRT were significantly higher than the non-CA group ($p < 0.001$, for all). Peak serum citrate level was significantly higher in the CA group than the non-CA group [Median (IQR); 0.928 (0.811-1.164) mmol/L vs. 0.366 (0.260-0.567) mmol/L, $p < 0.001$]. Using a cut-off of 0.85 mmol/L, the peak serum citrate level showed sensitivity /specificity of 0.77/0.96 in identifying patients with CA (ROC AUC 0.902, $p < 0.001$). 6-hr and 2-hr serum citrate levels showed good sensitivity/specificity for predicting development of CA (ROC AUC 0.86 and 0.83 for 2-hr and 6-hr citrate levels using cut-offs of 0.34 and 0.63 mmol/L respectively; $p < 0.001$ for both). Patients with CA had higher Acute Physiology and Chronic Health Evaluation (APACHE) IV score of [Median(IQR); 138 (112.5-164.8) vs 99 (82.0-117.0)], higher peak lactate level [Median(IQR); 14.5(9.7-18.7) mmol/L vs 2.5(1.7-4.3) mmol/L] as well as more negative lactate clearance at 6th hour at [Median(IQR); -0.39 (-1.05-0.04)] vs 0.00 (-0.20-0.20); $p < 0.001$ for all]. Serum lactate level correlated with serum citrate level at baseline, 6-, 12-, 24-, 36-, 48- and 72-hr ($r=0.409$, 0.436, 0.390, 0.369, 0.351, 0.433 respectively, $p < 0.05$ for all). The peak lactate level (cut-off at 9.0 mmol/L) showed sensitivity/specificity of 0.92/0.89 in identifying CA development (ROC AUC 0.94, $p < 0.001$), while the 12-hr lactate level showed good predictive value for subsequent development of CA (ROC AUC 0.93, $p < 0.001$).



Conclusion

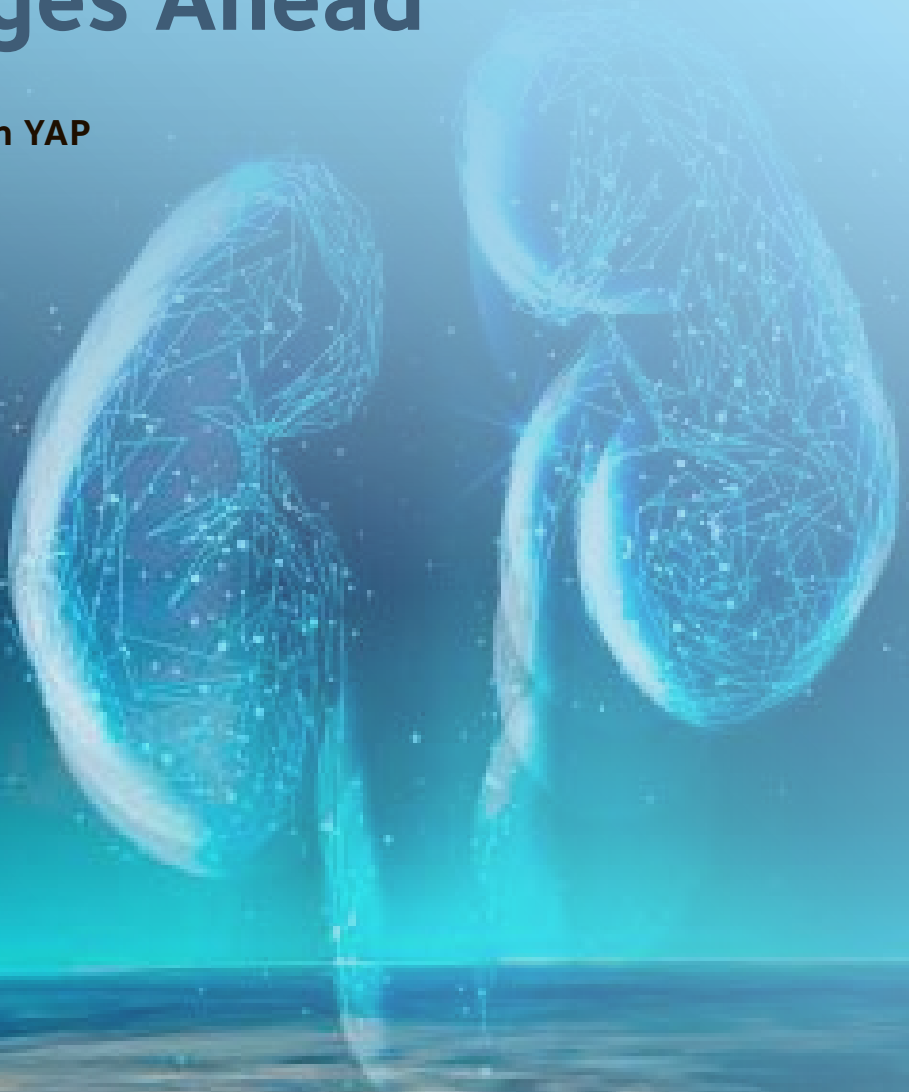
Serum citrate levels showed good performance in diagnosing and predicting CA. Higher APACHE IV Score, hyperlactatemia and more negative lactate clearance were independently associated with CA development.

SIR DAVID TODD LECTURE

Optimizing Outcomes in Lupus Nephritis – Current Success and Challenges Ahead

Dr Desmond Yat Hin YAP

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Lupus nephritis (LN) is an important cause of renal failure and mortality in patients with systemic lupus erythematosus. The appropriate use of immunosuppressive therapies and prevention of disease flares can preserve kidney function and improve long-term clinical outcomes in LN patients. The long-term clinical outcomes of Asian LN patients have improved significantly in the current era of effective immunosuppressive therapies, and yet renal failure remains a robust contributor of mortality. MMF induction is associated with favorable long-term patient and renal survival rates; and the continuous MMF induction-maintenance regimen shows excellent long-term efficacy and drug tolerability in Chinese LN patients. Tacrolimus could serve as a promising alternative in LN patients with proliferative or membranous changes on biopsy. Tacrolimus, as rescue treatment for patients who did not respond to standard therapies, can effectively suppress proteinuria and does not cause excessive chronic nephrotoxicity. There is also preliminary data to support the efficacy and safety of mTOR inhibitors LN patients who cannot tolerate standard therapies or with a history of malignancy.

While the currently available treatments can effectively abrogate active nephritis, disease relapse remains a challenging issue in the management of LN. In this context, MMF maintenance is associated with significantly lower long-term risk of relapse compared with azathioprine, which is corroborated by the significant reduction in LN relapse in the era of MMF

treatment. Therapeutic drug monitoring of mycophenolic acid (MPA) levels can further optimize MMF dosing to prevent disease flares and drug-related side effects. In LN patients with asymptomatic serological reactivation, pre-emptive increase of immunosuppression can effectively prevent “full-blown” nephritic flares and confer benefits on long-term renal function. Translational studies have also identified novel biomarkers and potential therapeutic targets for LN. Mesangial cell-binding and renal tubular cell-binding immunoglobulins shows correlation with disease activity of LN, and can complement conventional serological parameters to better predict LN flares. Perturbations in distinct B lymphocyte subsets and relevant B cell signatures (miR-148a, BACH1, BACH2 and PAX5) are related to disease flares, and hence may serve as potential biomarkers for LN relapse. *In vitro* data also demonstrates that inhibition of miR-148a can suppress cell proliferation of B cells isolated from active LN patients via upregulation of BACH1, BACH2 and PAX5, and thus may become a potential therapeutic approach for LN. Based on these findings, studies are also underway to investigate the effect of different immunosuppressive medications on these molecular pathways and B cell activation in LN. Taken together, the availability of effective and well-tolerated immunosuppressive therapies have improved the clinical management and outcomes of LN patients. A better understanding on the disease pathogenesis may further refine our disease monitoring and therapeutic strategies in LN.



From L- R : Prof Daniel CHAN, Prof Philip LI, Dr Desmond YAP, Prof Richard YU

RICHARD YU LECTURE

Big Data and Deep Learning in Liver Cancer Prediction

Prof Lai Hung WONG

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Liver cancer is one of the most important causes of morbidity and mortality worldwide. While most clinical risk prediction methods were developed using traditional regression analysis techniques, deep learning models proposed in recent years outperform traditional methods in general. Deep models directly learn predicting parameters from all available parameters from data while minimise bias. We will first adopt explainable uncertainty-aware convolutional recurrent neural network for irregular medical time series to predict liver cancer in patients with chronic viral hepatitis. In view of different disease stages of patients, they receive monitoring at variable intervals so that large volume of irregular medical time-series data is produced in real-life settings. Liver cancer prediction from such irregular medical time series is challenging because the intervals between consecutive records significantly vary along time. To address this issue, we have recently developed a novel Uncertainty-Aware Convolutional Recurrent Neural Network (UA-CRNN) by introducing the uncertainty information in the generated data, which is superior to the stage-of-the-art methods for liver cancer

prediction. To deal with the complex medical data with sub-series of different frequencies, the uncertainty information is further incorporated into the sub-series level rather than the whole sequence to seamlessly adjust different time intervals. Specifically, a hierarchical uncertainty-aware decomposition layer is designed to adaptively decompose time series into different subseries and assign them proper weights according to their reliabilities. Meanwhile, frequency-aware filters are incorporated into different channels of the decomposition layer to ensure that each decomposed subseries contain similar frequencies and properties, while different subseries contain components of different frequencies. Furthermore, an adaptable attention module is introduced to identify key factors from different input variables by incorporating with the uncertainty information, which provides the explainable clinical risk prediction results and improves the prediction performance. We will further investigate how to design a novel structure and incorporate it into the UA-CRNN. In this way, we could directly model the irregular medical data and apply for liver cancer prediction.



From L-R: Dr Patrick LI, Prof Richard YU, Prof Grace WONG, Prof Philip LI and Prof MF YUEN

Passing rate for the Joint HKCPIE/MRCP(UK) Part I in the past years

	Sitting	Pass
September 2002	100	33 (33%)
January 2003	124	55 (44%)
May 2003 (SARS Special)	21	7 (33%)
September 2003	54	29 (54%)
January 2004	93	39 (42%)
September 2004	29	16 (55%)
January 2005	96	68 (70.8%)
September 2005	24	15 (62.5%)
January 2006	95	74 (80%)
September 2006	21	13 (62%)
January 2007	87	67 (77%)
September 2007	23	12 (52%)
January 2008	56	38 (68%)
September 2008	47	32 (68%)
January 2009	59	47 (80%)
September 2009	47	28 (60%)
January 2010	45	28 (62%)
September 2010	62	39 (63%)
January 2011	44	23 (52%)
September 2011	64	49 (77%)
January 2012	45	28 (62%)
September 2012	80	59 (74%)
January 2013	41	22 (54%)
September 2013	76	60 (79%)
January 2014	30	20 (67%)
September 2014	84	64 (76%)
January 2015	29	20 (69%)
September 2015	100	71 (71%)
January 2016	33	18 (55%)
September 2016	84	63 (75%)
January 2017	36	19 (53%)
September 2017	69	56 (81%)
January 2018	25	12 (48%)
September 2018	108	74 (69%)
January 2019	43	19 (44%)
September 2019	96	64 (67%)
January 2020	41	20 (49%)
September 2020	109	101 (93%)
January 2021	33	20 (61%)
August 2021	106	63 (59%)

Passing rate for the Joint HKCPIE/MRCP(UK) Part II (written) in the past years

	Sitting	Pass
2 July 2002	53	27 (51%)
13 November 2002	50	24 (48%)
13 August 2003	110	62 (56%)
10 December 2003	54	31 (57%)
28 July 2004	65	42 (65%)
8 December 2004	46	32 (70%)
13 April 2005	32	15 (47%)
27 July 2005	76	56 (74%)
7 & 8 December 2005	26	16 (62%)
12 & 13 April 2006	29	13 (45%)
26 & 27 July 2006	91	68 (75%)
6 & 7 December 2006	33	18 (55%)
11 & 12 April 2007	34	22 (65%)
25 & 26 July 2007	80	70 (88%)
5 & 6 December 2007	19	13 (68%)
9 & 10 April 2008	21	13 (62%)
30 & 31 July 2008	47	36 (77%)
3 & 4 December 2008	17	10 (59%)
8 & 9 April 2009	32	25 (78%)
29 & 30 July 2009	50	43 (86%)
25 & 26 November 2009	12	7 (58%)
7 & 8 April 2010	41	34 (83%)
28 & 29 July 2010	25	19 (76%)
24 & 25 November 2010	8	2 (25%)
6 & 7 April 2011	45	35 (78%)
23 & 24 November 2011	32	25 (78%)
28 & 29 March 2012	55	43 (78%)
12 & 13 December 2012	57	44 (77%)
10 & 11 April 2013	60	52 (87%)
11 & 12 December 2013	48	34 (71%)
9 & 10 April 2014	54	46 (85%)
10 & 11 December 2014	26	25 (96%)
25 & 26 March 2015	53	45 (85%)
9 & 10 December 2015	68	65 (96%)
6 & 7 April 2016	29	28 (97%)
7 & 8 December 2016	62	50 (81%)
29 & 30 March 2017	25	21 (84%)
28 & 29 November 2017	58	54 (93%)
27 March 2018	21	14 (67%)
24 October 2018	20	15 (75%)
26 March 2019	79	71 (90%)
22 October 2019	17	12 (71%)
27 October 2020	87	77 (89%)
23 March 2021	107	84 (79%)

Passing Rates: PACES – 2001 - 2021

October 2001	36/72 = 50%
February 2002	34/74 = 46%
October 2002	29/72 = 40%
February 2003	30/69 = 43%
October 2003	27/59 = 46%
March 2004	39/64 = 61%
October 2004	26/69 = 38%
March 2005	35/75 = 47%
October 2005	28/75 = 37%
March 2006	36/75 = 48%
October 2006	16/73 = 22%
March 2007	44/74 = 59%
June 2007	44/74 = 59%
October 2007	36/55 = 65%
March 2008	36/74 = 49%
October 2008	29/65 = 45%
February 2009	39/75 = 52%
October 2009	24/72 = 33%
March 2010	33/75 = 44%
October 2010	40/74 = 54%
February 2011	23/66 = 35%
October 2011	34/70 = 49%
February 2012	32/74 = 43%
October 2012	32/74 = 43%
March 2013	28/75 = 37% (for HK local candidates)
October 2013	28/74 = 38%
February 2014	29/74 = 39% (for HK local candidates)
October 2014	21/74 = 28%
March 2015	36/75 = 48%
October 2015	35/75 = 47%
March 2016	40/75 = 53%
October 2016	36/75 = 49%
March 2017	26/74 = 35%
October 2017	26/75 = 35%
March 2018	32/75 = 43%
October 2018	38/75 = 51%
March 2019	46/85 = 54%
October 2019	47/86 = 55%
No examination had been conducted in 2020	
March 2021	81/119 = 68%

Pass list (2021): Joint HKCPIE/MRCP(UK) Part II PACES Examination March

AU YANG Wai David	LAU Ming Leo
CHAN Chak Hei	LAU Valerie Wing-Yee
CHAN Cheuk Ming	LEE Lok Yee Andrea
CHAN Christopher	LEE Min Yao Cynthia
CHAN Chun Yin	LEUNG Chung Yin
CHAN Kelly Tin Long	LEUNG Jackson Ka Chun
CHAN Lok Hei	LEUNG Wang Hei Ricky
CHAN Yun Yee Kathy	LEUNG Wing Him
CHAO Chun	LEUNG Wing Tung
CHENG Chi Na	LI Victor
CHENG Hiu Lai	LIU Chi Shing
CHEUNG Chung Yin	LIU Yijun
CHEUNG Rebekah Pui-Hin	LO Wai Yan Jenny
CHIU Chun Jakky	LO Wing Ho Vincent
CHOI Yan Wing	LO Yuet Sum Teresa
CHOI Yeuk Chi	LU Edwin Tongzhou
CHU Tsz Fung	LUI Hoi Sze
CHU Wing Ming	LUI Tin Long
FENG Ye	MOK Ho Fung Corbin
FONG Lai	MOK Wan Sze Lesley
FU Tung Yi	NG Chi Kin
FUNG Tai Shing	NG Ching Man Germaine
HAN Cheuk Fung	NGAI Sai Fai
HO Karen Kar-Wan	PANG Tien Chi
HO Pui Hung	SO Ching Hei
HUI Chun Him	TAM Fung Kuen
HUI Samuel Chi-Hou	TAM Ho Sing Bosco
HUI Wan Hin Rex	TAM Tin Po
IP Edric Chi-Ching	TANG Ching Man
KAM Ho Him Timothy	TAO Wing Lam
KAO Lam	WONG Chun Yin
KO Hon Yeung	WONG G Kei
KWAN Chung Ming	WONG Ling Na
KWAN Hoi Lam	WONG Man Long
KWOK Chun Yeung	WONG Suet Wing
KWOK Wan Ying	WONG Yick Hoi Justin
LAI Pak Yan	YAU Chun Lok
LAI Wing Ki Winky	YEUNG Ching Lam
LAM Bryce Ka Yau	YEUNG MUK Lam
LAM Long Yi	YIP Kin Wai
LAM Sze Man Cindy	



Pandemic, the board game

Pandemic in Pandemic

Dr Pierre CHAN

Department of Medicine & Geriatrics, Ruttonjee Hospital

Dr Terence YIP

Department of Medicine, Tung Wah Hospital

COVID-19 pandemic

An outbreak of a new strain of coronavirus COVID-19 started in February 2020. In March that year, the World Health Organization declared it a pandemic. By September 2021, more than 220 million people have been infected worldwide.

During the lockdown periods of the COVID-19 pandemic, people resorted to different indoor activities, like the home workout, writing, zoom meeting, and cooking. In our case, we like playing board games with our children for several reasons:

- Build Relationships – it gives us the freedom to talk with each other and experience something fun together.
- Avoid technology addiction – it helps us stay off electronic gadgets, computers, the internet, television, and mobile devices.
- Experiential learning – it enables players to understand what a pandemic is by involving them in the process of cooperation and evaluation.

Pandemic, the board game

Unlike other competitive board games, *Pandemic* is a cooperative board game that requires all the players to work together in preventing disease outbreaks and developing cures. It is a family strategy game for 2 to 4 players, 8 years of age or above, lasting for about an hour for each game. In the game, four different disease strains are threatening to destroy life. Players will move around the board and use their actions to cure these disease hotspots. In each turn, diseases will start developing in other cities or possibly get worse in those already infected. Each player assumes a role with different abilities, for example, medic, quarantine specialist, researcher, scientist, operations expert, dispatcher etc. Players need to balance keeping the illnesses under control, and at the same time, finding the cures. If they can find the cures for four diseases in time and keep the outbreaks under control, they become the winners. If not, they lose the game.

Board games

Board games are specific tabletop games that often include tokens or avatars representing the players that



Dr. Pierre Chan and Dr. Terence Yip discussing the lessons they learned after playing a game of *Pandemic*



Playing *Pandemic* with Dr. Pierre Chan's and Dr. Terence Yip's daughters

are moved on a board according to a particular set of rules. We deploy strategies or simply play by chance, or do both in a mix. Rules can range from the very simple, as in Tic-tac-toe, to those describing a game universe in detail, as in Dungeons and Dragons. The amount of time required to learn to play or master a game varies greatly from game to game. Learning time does not necessarily correlate with the number or complexity of rules. Some games such as Chinese Chess or Go have simple rulesets while possessing profound strategies. We started playing board games together when we were basic physician trainees. We own more than two hundred board games. Each one is unique.

There are many varieties and genres of board games. Some have no theme and rely more on the gameplay while others have a specific theme and narrative. There are usually two players: one versus the other, more reliant on skill than luck, with no certain theme. Examples include Chess, Chinese Chess, and Reversi. In role-playing games, they are usually very thematic, often including fantasy elements. Players rely on levelling mechanics so that their characters can become more potent over time. Take Gloomhaven, Mage Knight

and Lord of the Rings as examples. Race games involve several players competing to reach a goal or destination. Monopoly, Scrabble, and Mahjong are all race games. In cooperative board games, players work together to achieve an objective. Players all win or lose as a team.

Apart from enjoyment and excitement, players can acquire important skills such as teamwork, sportsmanship, problem-solving and social skills through the game. A dedicated field of research into gaming exists, known as game studies or ludology. Ludological research demonstrated that chess skills significantly correlate with four broad cognitive abilities: fluid reasoning, comprehension-knowledge, short-term memory, and processing speed. It has shown that playing Go can improve clinical symptoms associated with depression, anxiety, and Alzheimer's disease, while playing mahjong can improve the executive function of older people with mild cognitive impairment and traumatic brain injury.

In addition, giant board game intervention for nursing home residents can significantly increase ambulatory physical activity, daily energy output, quality of life, balance and gait, and ankle strength.

In recent years, attempts have been made to complement more classical concepts of medical teaching by introducing card and board games on different medical topics. Medical board games are valuable tools for medical teaching and health education, and traditional lectures do not reflect the levels of complexity of practical applications in real-life situations. In contrast, board games are simplified models of complex systems that can clarify difficult issues by presenting them as simple game processes. Also, they have the potential to motivate students and include an element of competition and fun. Indeed, several ludological studies have shown that board games are effective resources to improve medical learning and exam performance by increasing knowledge and building long-term knowledge retention.

Using board games for medical education is widely accepted and preferred by both students and instructors. Most experimentally validated medical board games are quiz-based, but different gaming mechanics will likely promote similar results, such as simulations and strategic games. Students warmly welcome board games. They think that medical board games can facilitate clinical thinking and peer communication.

There are several medical board games on the theme of infection and the spread of diseases in humans. For example, *Plague Inc*, *Infection: Humanity's Last Gasp*, *Viral*, and *Herbalism*. The game that we have played recently is called *Pandemic*.

After playing the *Pandemic*, we had a chance to rethink the challenges and impacts arising from the game. How should we respond better? Any clues for us to tackle this global crisis? We had learned some lessons about how to deal with the pandemic in the real world.

Lesson 1 - Planning a strategy

The first thing that happened in this game was the virus infecting regions on the world map. We planned and decided where we had to tackle the problem first. We needed to get ahead of issues before they got out of control. It was not only about the immediate need to stop the spread but also the long-term plans to come up with a cure. We assigned roles to each player and let the specialists handle various facets of the game. The goal was not only about individual territories but also the thinking and planning for the whole map. In the real world, planning for the well-being of the entire planet is extremely difficult when each country has its perceptions, beliefs, and ways of dealing with the virus. However, this global vision is what we need.

Lesson 2 - Cooperation

The mechanic that serves as the foundation of this game is cooperation. This game fosters collaborative behaviours and assists the development of constructive solutions. Performing different roles, we have to work together as experts on the map by sharing crucial information and exploiting resources to prevail in a dangerous and dynamic world. Finger-pointing is not productive in a team; therefore, it should not happen in the real world.

Lesson 3 - Trust in Specialists

Each player will assume a unique role within the team. A dispatcher coordinates team members' efforts while a medic targets problem cities. A scientist accelerates the process of finding a cure, the researcher shares knowledge between players, and the operations expert will build research stations, rather like the various pharmaceutical firms producing vaccines. We need to rely on specialists who have special abilities and concerted efforts to keep the virus contained. In this game, we learn to trust our specialists.

Lesson 4 - Helping each other

We will reach out to players in need. If the medic is overwhelmed in the game, two or even three players will rush to help. When countries need medical resources like oxygen and ventilators, partners around the world will offer help. This is what makes us human.

Conclusion

Playing *Pandemic* can broaden our horizons. We know which areas we need to address in our world and where we need to exert our collective efforts. This game has been a significant source of entertainment and decompression for us during this COVID-19 pandemic. We appreciate that this game models and simulates real-world events and teaches us about the pandemic response. If you have played the game, you know it ends when the virus gets out of control or is cured. We learned that collective effort is of utmost importance throughout the game. Whether we all win or lose, we shall use our unique abilities and stand shoulder-to-shoulder to fight against the pandemic.

P.S. The authors declare no conflict of interests in the board games mentioned in the article

Life as a Physician - 35 Years Apart

Dr Jacqueline SO

Secretary, Young Fellows' Committee

Dr Heyson CHAN

Chairman, Young Fellows' Committee



Front row L-R: Dr Christina Cheung (CC), Dr Siu Ka Mak (Mak), Dr Au Yeung Tung Wai (AY), Dr Ingrid Mak (IM)
Back row: L-R: Dr Jacqueline So, Dr Heyson Chan

To celebrate the 35th anniversary of the Hong Kong College of Physicians, we invited Dr Au Yeung Tung Wai (AY) and Dr Siu Ka Mak (Mak), who have been physicians for 35 years, and Dr Christina Cheung (CC) and Dr Ingrid Mak (IM), our 35-year-old fellows, to share with us anecdotes about their medical journey.

Can you share with us an overview of your medical career?

AY : *Medicine is a highly respected and popular specialty and I have aspired to specialize in Medicine since I was in medical school. But back in the days, we were first assigned to another specialty before we could pick our path (the so-called "out-posting"). Thus, I first started in Psychiatry, which looking back, was a great learning experience as it was probably the only time in my career when I had an immersive training in mental illness. After a year, when the opportunity arose, I was transferred to Queen Elizabeth Hospital to begin my medical training, and later on, to Princess Margaret Hospital (PMH) to focus on Geriatric Medicine. As demand and resources for our specialty grew, we expanded our services across multiple hospitals in Hong Kong and I was among the early teams who started the geriatric medicine*

unit at Tuen Mun Hospital and Pok Oi Hospital (POH).

Mak : *I worked with Dr Au Yeung in the psychiatry unit for half a year after graduation. Then I worked in the Department of Medicine in Queen Mary Hospital for 8 years and went for overseas training. Upon returning from my training, I started to work in Kwong Wah Hospital (KWH) and it has now been 27 years. It has been a rewarding experience to witness the changes and improvements in our department over the decades.*

How was the training program 35 years ago different from now?

AY : *There was no subspecialties nor structured training 35 years ago. After passing MRCP, we were eligible to apply for promotion to senior medical officers and immediately began learning and conducting procedures such as echocardiogram, cardiac pacing, electromyogram, nerve conduction test etc independently. I still remembered doing few pericardiocentesis and colonoscopy single handedly very early on as a senior medical officer.*



Dr TW Au Yeung with his first car at PMH in 1990

Mak : *Yes, I echoed the independence and confidence required of us and remembered the first bronchoscopy I did on my own. When I first worked in KWH, there were limited subspecialties. There was no Respiratory Medicine, Infectious Disease Medicine, Rheumatology, Endocrinology nor Oncology in our hospital. It's encouraging to see the progress of more and more subspecialties being established throughout the years, which is coupled by very well-structured and comprehensive subspecialty training and examinations.*

HK public hospitals are one of the best in the world in terms of infrastructure and medical services quality. Surely, we have come a long way - can you describe to us the hospital setting 35 years ago?

AY : *In the 1980s, we had camp beds in the medical wards and we knelt down to assess patients. There was no air conditioning and the wards did get uncomfortably hot during summer. All admission notes, laboratory requests and results were hand-written. There were no serial laboratory results for comparison. To battle with the heat in the ward, I might clerk the patient in the wards and headed back to the office, where air-conditioner was available, for writing management plan in the case notes.*

CC : *We are fortunate that the ward conditions have improved substantially throughout the years. All of our wards are air-conditioned nowadays and we don't need to cramp through the camp beds to see our patients.*

Mak: *We did not have any digital filing of patients' medical records. During admission, we mostly relied on patient's GOPD card, which indicated patients' chronic illnesses such as hypertension and diabetes. We then needed to trace patients' hand-written medical records from the hospital record department. We also had to see X-ray films in front of view box.*

IM : *With the help of the computer system, we may start reviewing patient's past medical history and investigation results done at the emergency department before the patient arrives to the medical ward. These speed up the clerking process in emergency cases.*

Can you share with us your respective training experience as we compare the past and present?

AY : *Back in the days, all medical doctors would undergo the MRCP examination including part 1 (MCQ), part 2 (written) and clinical examination (short and long cases). I remembered there were spot diagnosis questions for part 2 written in which the photos were displayed on a screen by slide projector. I also vividly remembered the patients I encountered in my MRCP clinical examination including patients with mitral stenosis, apical fibrosis, retinal problem and Nelson's syndrome.*

Mak: *I recalled that I had a challenging case with McCune Albright syndrome in my MRCP clinical examination. I was thankful that I had weekly bedside tutorials before the clinical examination. In the early days, we did not have subspecialty training and examinations. Therefore, passing the clinical part of the MRCP examination was our last examination in medical training.*

IM : *The major difference, or probably advantage, of going through training in current times, is the availability of abundant online resources for our MRCP preparation. We can access past examination questions via phone apps and therefore we can do the past paper anywhere and anytime.*

CC : *Although the clinical part of the MRCP examination has refined into the structured PACES examination, it remained the biggest challenge to physician trainees. Trainees are still anxious in preparing for the examination, and at the same time, feeling enormously joyous after passing it.*

What are the challenging moments?

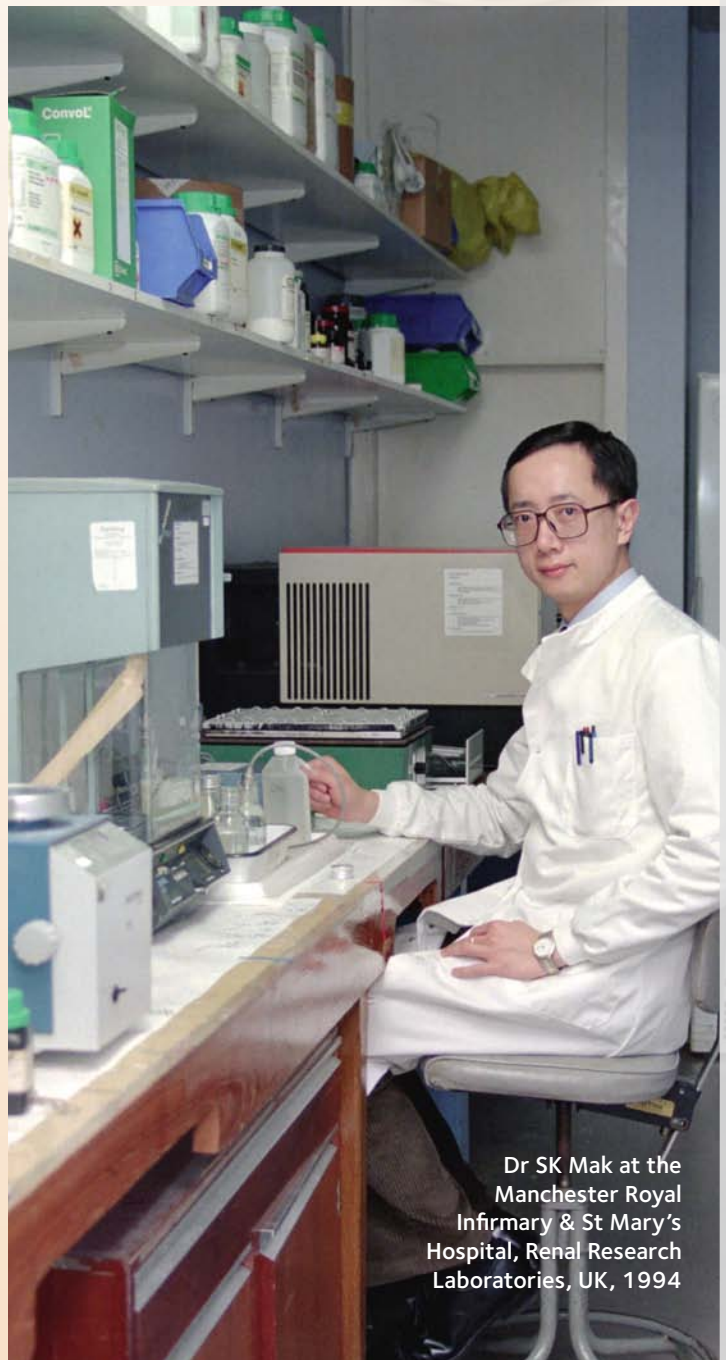
- AY :** *The road to success is never smooth. When we started our team in POH, there were many obstacles to overcome but, in the end, perseverance and hard work did pay off.*
- Mak:** *When I first started working in KWH, there were very few subspecialties which sometimes limited our ability to enhance our quality of care for patients. Yet with commitment and experience, we have built a strong team and we are glad to see the fruits of our hard work.*
- IM :** *There are some major stressors. Firstly, there is a tendency for protective medicine nowadays which may lead to over investigations. Secondly, the workload and complexity of cases increase dramatically. Thirdly, communication breakdown with patients and their families may have a negative impact on patient and healthcare provider satisfaction.*

What are the best moments of being a medical doctor?

- AY :** *My job satisfaction comes from the relationship we develop with our patients, and being able to be part of our patients and their families' lives. As we battle the illness together, we build trust and friendship along the way. The bonding created is what I cherish the most.*
- Mak:** *I treasure the camaraderie of different departments coming together and working as a team in the hospital. Every recovery is an exemplification of team work and the selfless effort of doctors, nurses and allied health professionals.*
- IM :** *Making the right diagnosis and therefore able to apply targeted treatment brings me the biggest satisfaction.*
- CC :** *The humanity element of being able to develop a personal relationship with our patients is also a unique experience in medicine.*

Observations from the writers

JS/HC : Through this interview, we were taken on a voyage of the development of our College. We witness the improvement in the hardware of patient care and the more structured training we provide to our trainees. Although we may face different challenges at different stages, we overcome these by perseverance and diligence. We earn spiritual satisfaction through direct patient care and comradeship with our fellows. We, regardless of our stages of career, are proud to be physicians.



Dr SK Mak at the Manchester Royal Infirmary & St Mary's Hospital, Renal Research Laboratories, UK, 1994

President with representatives from Young Fellows' Committee and speakers

Medico-Legal Workshop

Dr Helen Shuk Ying CHAN
Member
Young Fellows' Committee

With the success of our first medico-legal workshop in 2019, Young Fellows' Committee has launched the second medico-legal workshop this year, focusing on medico-legal issues related to internal medicine, COVID-19, telemedicine and social media.

Mr. Ricky Wu (Senior Associate, Kennedys) first analyzed the recent Medical Council judgments from 1 January 2017 to 4 June 2021. Among the 11 internal medicine-related judgments during this period, 6 were due to unauthorized practice promotion. Practice promotion means publicity for promoting the professional services of a doctor, his practice or his group and will be interpreted by the Medical Council in its 'broadest sense', and includes any means by which a doctor or his practice is publicized, in Hong Kong or elsewhere, by himself or anybody acting on his behalf or with his forbearance, to people who are not their patients¹. The audience was reminded to ensure that the promotion materials (e.g. the size and the information displayed on) were in compliance with the requirements of the Code. Ms. Sandy Cho (Partner, Kennedys) then discussed a complaint case against a resident doctor of the Department of Medicine at a public hospital in detail, highlighting the importance of seeking expert legal advice at the earliest opportunity when facing an investigation.

Mr. William Chan (Partner, Mayer Brown) provided some social networking safety tips for healthcare professionals in his talk on the use of telemedicine and social media. Information provided to the public and patients must be accurate, factual, objectively verifiable and presented in a balanced manner¹. Since same legal and ethical duties of patient confidentiality apply to social media as anywhere else, healthcare professionals should not use publicly accessible social media to discuss individual patients, especially when the information is published online, it can be difficult to remove as other users may distribute or comment on it. Concerning published or broadcasted

materials used in health education activities, doctors must take reasonable steps to ensure that the materials are not used directly or indirectly for commercial promotion of any medical and health related products or services, and should not give the impression that the audience is encouraged to seek consultation or treatment from him. Last but not least, same standards of care that protect patients during face-to-face medical consultations apply to telemedicine. Healthcare professionals should obtain specific consent for use of telemedicine, ensure patients are properly evaluated and treated, keep good records and maintain data integrity and security through encryption.

Adapting to a new normal during COVID-19, a dramatic change in education was observed from traditional in-person classroom lectures to predominantly distance teaching which were conducted virtually. Our medico-legal workshop also moved online this time, in order to comply with the social distancing measures. Besides higher education, COVID-19 also creates extraordinary challenges in medical practice. Mr. David Kan (Partner and Solicitor Advocate, Howse Williams) described the medico-legal issues during the COVID-19 pandemic, including the delays in medico-legal proceedings, maintenance of safety within the medical facilities to prevent patients, healthcare workers and visitors from contracting COVID-19, allocation of scarce healthcare resources, e.g. ICU beds, ventilators, as well as potential deviation from the pre-COVID-19 standard of care due to exigent circumstances.

The feedback of the last and current medico-legal workshops was positive and constructive, suggestions for topics for next workshop are welcome. We look forward to meeting you all in the next medico-legal workshop!

References

1. Medical Council of Hong Kong. Code of Professional Conduct (Revised in January 2016). https://www.mchk.org.hk/english/code/files/Code_of_Professional_Conduct_2016.pdf