

The 21st Hong Kong International Optometric Symposium on 9 November 2023 (Thursday) at HKCEC

Empowering Community Eye Care through Artificial Intelligence and Telemedicine in Optometry

(社區護眼新貴-人工智能及遠端治療下的視光新里程)

Event Report





















Overview:

- 6 experts from Australia, Hong Kong, Mainland China, the UK and the USA shared the latest research on 6 different topics under the theme "Empowering Community Eye Care through Artificial Intelligence and Telemedicine in Optometry"
- 944 participants attended the Symposium in the hybrid event with 861 local participants;
- 95% respondents rated the Symposium as good to excellent;

Event Report

- 1. With the collaboration with the Hong Kong Optometric Association (HKOA) and the Hong Kong Polytechnic University (PolyU), the Symposium recorded a total attendance of 944 participants with 861 professionals from Hong Kong.
- 2. Dr Simon Tang, Director of Cluster Services, Hospital Authority, was the Guest of Honour who delivered the opening remarks at the Opening Ceremony.
- 3. Under the theme "Empowering Community Eye Care through Artificial Intelligence and Telemedicine in Optometry" 社區護眼新貴- 人工智能及遠端治療下的視光新里程",the HKIOS was organised in a hybrid format to facilitate an onsite and online experience for

- attendees allowing for remote and face-to-face opportunities to take part in the Symposium.
- 4. Six experts from Australia, Hong Kong, Mainland China, the UK and the USA shared six sub-topics under the theme. Global trends, the latest research findings and case studies on tele-optometry and the use of artificial intelligence in optometric practice were discussed by the four overseas speakers and the two Hong Kong experts.

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- i. Prof. Mingguang HE, The Hong Kong Polytechnic University, Hong Kong
- ii. Dr. Patrick D. YOSHINAGA, Marshall B. Ketchum University, USA
- iii. Prof. Benny Chung-ying ZEE, The Chinese University of Hong Kong, Hong Kong
- iv. Dr. Kate TAYLOR, iCare World, Australia
- v. Mr. Elvis WANG, Beijing AirDoc Technology Co., Ltd, Mainland China
- vi. Dr. Priya MORJARIA, London School of Hygiene & Tropical Medicine, UK

[Download <u>Event Booklet</u> for Speakers' details]

- 6. To encourage interactions, the audience onsite and online were all invited to submit questions at the Q&A sessions after the presentations of each speaker. There was a total of 58 questions submitted.
- 7. Considering that quite some optometrists had to work at clinics, hospitals or retail stores during the weekdays, the hybrid model (physical and online) of the Symposium provided convenience and flexibility to optometrists who might not be able to attend the event physically for the whole day and the feedbacks collected from the questionnaire were very positive, the hybrid format is recommended to put forward.
- 8. Physical speakers are preferred to attract onsite practitioners who also want to have networking opportunities at the Symposium.

Well Recognised Event Quality by Attendees

- 9. A post-event questionnaire was conducted with a total of 983 respondents. 95% respondents rated the HKIOS as good to excellent and found the content provided was very helpful to their work and enrich their professional knowledge.
- 10. The most popular topics suggested by the participants for future editions were myopia control, vision rehabilitation, AI technologies, paediatric optometry, etc.

Key Takeaways

Prof. Mingguang HE

Harnessing Artificial Intelligence for a Brighter Future in Primary Eye Care



Primary Eye Care (PEC) acts as the initial tier of eye care, providing a gateway for patients to receive visual acuity measurements, screenings for asymptomatic eye diseases such as diabetic retinopathy and glaucoma, and diagnosis or referral to specialists. PEC is currently administered either by optometrists or general ophthalmologists. There is an immense demand for PEC, which routine eye exam for residents aged over 50 years, residents who have diabetes requiring annual DR screening, etc. Fortunately, a large portion of PEC clinical service involves straightforward and repetitive procedures, such as visual acuity testing, intraocular pressure measurement, ocular imaging, which can potentially be handled by automation and AI technology.

Dr. Patrick D. YOSHINAGA

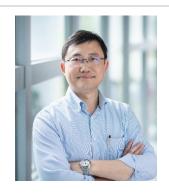
Digital Horizons in Vision Rehabilitation: Al and Technological



Advancements in technology and artificial intelligence are impacting our everyday lives and this is also true for patients who are blind or visually impaired. This session reviewed the concept of artificial intelligence and discussed its use in eyecare and specifically for the blind and visually impaired population. Applications available for personal devices, as well as head-borne devices, autonomous vehicle technology, and robotics were also discussed specifically related to assisting individuals with visual impairment.

Prof. Benny Chungying ZEE

Impact of Telemedicine in Optometry and the Future of Healthcare



Due to rapid scientific and technological advancement in the last decades, we now possess high-speed computing power, increased data mobility due to the internet, and an efficient cloud computing environment that gives us unlimited resources to store and process information. Therefore, artificial intelligence (AI), machine learning, and data analytic approaches to solving real-world problems are natural consequences.

The view of effective telemedicine that integrates with an artificial intelligence-based approach in the future development of optometry were presented. The potential of community optometry and how it may provide value-added

services to the public was discussed, where future healthcare may be enhanced with AI technologies. Automatic Retinal Image Analysis (ARIA), an AI-based retinal image analysis technique for detecting the risks of chronic diseases, was presented as an example. It illustrated how these new technologies can be applied in the community to improve the health and wellness of the population.

Dr. Kate TAYLOR

Benefits of Digitalising Clinical Communications to Enhance Collaborative Eye Care in the Community



Globally, eye care is challenged by growing patient need and static workforces. Eye care is benefiting from an increasing range of digital diagnostic tools and innovative therapies as well as enhanced models of collaborative care, however there are many inefficiencies that remain while communication between clinicians continues to rely on fax and mail. Digitising clinical care communication can create benefits in terms of enhanced continuity of care, triage and referral refinement, and collaborative care. This can be particularly important to increase access to care for rural and remote communities and patients who are less mobile or well. It also can create cost savings and improve patient outcomes. This presentation discussed the key success factors to digitise eye care pathways, potential challenges, and benefits for clinicians, patients, and health systems.

Mr. Elvis WANG

Application of Al Technology in Optometry: A Practical Case Study



This presentation discussed about the eye health management in optometry stores and the applications of AI technology in the optometry stores. The case studies on retinal imaging analysis, the combination of AI and optometry: Prediction of myopia in adolescents and how to improve business performance by using AI were presented.

Dr. Priya MORJARIA

Bridging the Gap: Community Eye Care, Telemedicine, and Expanding Access to Optometric Services



Access to quality eye care is essential for overall health and well-being, yet many communities face significant barriers to primary eye care services including optometric services. In this session, the innovative approaches to bridge the gap in eye care delivery, emphasising the integration of technology were discussed.

Peek powered programmes for both community and school eye health have proven instrumental in addressing vision-related disparities in populations that are hard to reach and making those invisible visible. This session described how evidence-based programmes have been developed to provide eye care to individuals who would otherwise lack access. The importance of early detection, prevention, and education will be highlighted as key components of these efforts.

In recent years, technology, has made it possible to implement evidence-based interventions more rapidly and this has emerged as a powerful tool in expanding access to healthcare services, and the field of optometry is no exception. The session shared examples of this and its benefits, challenges, and best practices, with a focus on leveraging evidence-based approaches.

A comprehensive understanding of the vital role that community eye care, technology was presented, and evidenced-based programmes can play in ensuring that everyone has the opportunity to maintain good vision and eye health.

Event Replay

The replay of the Symposium is available on the event website: REPLAY

Acknowledgement

The Symposium has been one of the most important annual events for optometric and ophthalmological professionals to gather, interact and knowledge exchange. With its pivotal position in Asia and Hong Kong, the Symposium was proudly supported by the Professional Services Advancement Support Scheme (PASS) with 3 commercial sponsors: Essilor Hong Kong Ltd., Hoya Lens HK Limited and Daylite Vision Care Ltd.

Enquiry:

For more information or any inquiries about the Symposium, please contact:

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