



Research & Innovation

Shaping the Future of Eye Care with Collaborative Research

Establishing the “PolyU-Rohto Centre of Research Excellence for Eye Care” (the Centre) marked a milestone in driving forward innovation in eye health. PolyU and Rohto, a leading eye care brand under Mentholatum, also jointly released the advocacy paper entitled “Promoting Healthy Vision and Prioritising Standardised Diagnosis of Eye Fatigue” at the launch ceremony of the Centre.

The Centre seeks to tackle the growing issue of eye fatigue, an increasingly prevalent condition in modern digital societies that already affects a large proportion of both adults and children. Current diagnostic methods often rely on subjective measures and lack unified evaluation standards, leading to limited public and clinical awareness. Consequently,

by gathering teams of ophthalmic experts and building global collaborative networks, the Centre will pioneer objective diagnostic systems and innovative solutions to address this pressing issue.

In addition to advancing diagnosis and treatment, the Centre aims to enhance public awareness of eye fatigue, establish preventive strategies, and develop new technologies for eye care. Through these initiatives, the partnership contributes to safeguarding eye health, improving quality of life, and shaping future research in vision science.

3 GOOD HEALTH AND WELL-BEING



Redefining Kidney Care with Smart Technology

Chronic kidney disease (CKD) affects about 10% of the global population, with renal fibrosis being a progressive condition that can lead to end-stage renal failure. Early diagnosis and active monitoring are therefore crucial in preventing disease exacerbation. To address this need, the Department of Health Technology and Informatics teamed up with The Fifth Affiliated Hospital of Sun Yat-sen University to develop Smart-CKD, an innovative non-invasive diagnostic device that advances clinical management of CKD through informatics technology.

Recognised with a **Gold Medal at the 49th International Exhibition of Inventions Geneva**, the device integrates ultrasound imaging and selected clinical variables, such as age, renal length, and interlobar renal artery flow velocity, to assess the risk of renal fibrosis. By leveraging machine learning, Smart-CKD provides clinical insights that guide treatment decisions and enable timely preventive measures. Unlike renal biopsy, which remains the gold standard but is invasive and carries potential complications, Smart-CKD offers a cost-effective and safer alternative for disease staging and follow-up monitoring.

Designed to be practical and accessible, Smart-CKD can be used through a web-based platform or offline formats, ensuring flexibility in different clinical settings. Importantly, it has demonstrated promising diagnostic efficiency of 80%, empowering healthcare professionals to make informed decisions and improving patient prognosis.



Teaching & Learning

Caring for Elderly's Physical and Mental Health through Social Innovation Developed by Students

Offered by the Department of Management and Marketing, the subject "Social Innovation" empowers students to develop impactful solutions for pressing societal issues. Students collaborated closely with **over 30 elderly volunteers through partnerships with three elderly centres and the NGO Eldpathy.**



By engaging in months of dialogue and joint activities, students gained first-hand insight into the daily challenges faced by Hong Kong's ageing population. Together with the elderly volunteers, they visited underprivileged senior residents who live alone, aiming to alleviate social isolation and better understand their needs. These interactions inspired innovative business proposals, including assistive walking sticks for stair navigation, social games and events to combat loneliness and enhance mental health, and fitness gadgets designed to promote physical well-being among the elderly.

Beyond innovation, the experience nurtured mutual understanding and respect between generations. Students not only developed practical, human-centred solutions but also recognised the elderly population as valuable contributors to society; meanwhile, the retirees involved found renewed purpose and improved mental well-being through their participation. Such a meaningful exchange has proven to be a powerful exercise in empathy, collaboration, and social responsibility.

Advancing Rehabilitation Sciences through Belt and Road Collaboration

PolyU and the Mongolian National University of Medical Sciences (MNUMS) signed a landmark Memorandum of Understanding, marking the University's first academic partnership with a Mongolian tertiary institution. The collaboration, led by the Department of Rehabilitation Sciences, will see the establishment of Mongolia's first Assistive Technology Rehabilitation and Education Centre at MNUMS.

Drawing on PolyU's experience of nearly half a century in rehabilitation sciences, this initiative will support the training of local rehabilitation professionals by introducing advanced technologies such as 3D scanning and printing for rehabilitation as well as eye-tracking systems for augmentative and alternative communication. Importantly, it will also

offer faculty members and students from the Department of Rehabilitation Sciences a platform to expand their perspectives and gain wider international exposure. Ultimately, the centre aims to empower individuals with disabilities with greater independence and a more sustained quality of life.

Such collaboration expands PolyU's academic and research footprint in the Belt and Road region, while also benefitting the Mongolian healthcare sector by enhancing professional capacity and fostering cross-border research and innovation, as well as knowledge exchange between the two universities.

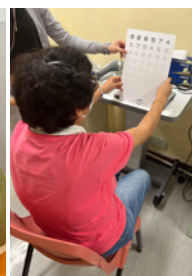




The 21st Hong Kong International Optometric Symposium



"From Eye Health to Dementia" programme



External Engagement

Advocating Eye Health in Global, Technological, and Elderly Care Settings

PolyU actively promotes lifelong eye health through global collaboration and knowledge exchange. As part of this effort, the University joined the World Health Organisation (WHO) Global SPECS Network to support the 2030 goal of increasing global effective coverage of refractive error by 40%.

Recognising the growing influence of AI tools like ChatGPT and the rise of telemedicine, the School of

Optometry co-organised the 21st Hong Kong International Optometric Symposium with the Hong Kong Trade Development Council and The Hong Kong Optometric Association. Themed "Empowering Community Eye Care through Artificial Intelligence and Telemedicine in Optometry", the event attracted **over 850 in-person and 1,500 online participants**. Experts discussed how technology could enhance quality of life for the visually impaired, reduce burdens on healthcare staff, and shape future career paths in optometry.

Additionally, via the PolyU Jockey Club Operation Solnno, the Jockey Club Design Institute for Social Innovation launched the "From Eye Health to Dementia" programme to raise awareness of the link between eye health and dementia among elderly people, caregivers, and social workers. The programme aimed to foster dementia-friendly communities. Public seminars and co-creation workshops explored early detection of visual symptoms linked to cognitive decline. **Around 60 elderly participants** also received comprehensive eye examinations at PolyU's Optometry Clinic as part of this initiative.



JCSAH Project Achievement Sharing Day



Day Experience Centre on PolyU campus

Leveraging Technology to Promote Autonomous and Person-Centred Eldercare

PolyU launched the Jockey Club Smart Ageing Hub (JCSAH), a cross-disciplinary project funded by The Hong Kong Jockey Club Charities Trust, to tackle emerging challenges faced by Hong Kong's ageing population. By introducing innovative gerontechnology, the project aims to improve the quality of residential elderly care. Over the first six years, PolyU partnered with six NGOs to establish Real-Life Hostels that integrate solutions like eNightLog bed-leaving monitoring and smart toilet sensing systems, benefitting **3,500 elderly and disabled individuals**, while easing the burden on frontline healthcare workers. To raise public awareness, a Day Experience Centre was set up on campus, showcasing over 2,000 gerontechnology tools both physically and online. More than 1,200 public education activities have also reached **over 40,000**

people, promoting gerontechnology's benefits across the community. Moving into the next phase, PolyU plans to continue supporting elderly care by collaborating with over 10 residential homes to encourage broader gerontechnology adoption, thereby reshaping the elderly care industry.

Additionally, as the only WHO partner in Asia-Pacific focused on healthy ageing and committed to developing evidence-based, community-driven, and technology-supported strategic WHO initiatives in Western Pacific regions, the "PolyU WHO Collaborating Centre for Community Health Services" hosted bi-monthly webinars on "Embracing Ageing in the Western Pacific". Topics included but not limited to supported decision-making, home-based robotic care, real-time trackers for cancer patients, and patient-managed and nurse-led programmes to improve older adults' functional and cognitive health as well as independence.



PolyU Positivity Week



Resilient Students Training (ReST) Hub

Governance & Operations

Boosting Positive Mental Health and Resilience on Campus

PolyU offers a variety of initiatives dedicated to supporting student mental health and well-being. The PolyU WellMind GO mobile application engages **around 800 students** through interactive activities that promote mental health awareness and relaxation exercises. Similarly, workshops on supporting emotionally unstable students equip PolyU staff with skills to recognise emotional needs and provide effective support. Besides, the PolyU Positivity Week reached **over 1,000 students**, fostering gratitude and gentleness on campus through creative therapy sessions and peer-led activities, encouraging a positive and supportive environment.

Central to these efforts is the Resilient Students Training (ReST) Hub and its flagship Mission ReST programme. Supported by **the "Seal of Love Charitable Foundation Health and Service Impact**

Fund" of over HK\$40 million, this trauma-informed, strengths-based initiative empowers students through self-discovery assessments, game-based challenges, and peer collaboration to build resilience. The ReST Hub also offers an online training module which was designed to equip staff with the knowledge and skills to support students affected by stress and trauma, fostering a campus culture of compassion and understanding.

Importantly, mental health promotion extends across the entire PolyU community. While the University Health Service (UHS) Mental Health Week provides wellness workshops, emotional sharing sessions, and creative activities to raise awareness and promote well-being; PolyU staff partook in the "Be My Own Chief Happiness Officer" programme aiming at cultivating workplace happiness and resilience, encouraging strategies that support both personal fulfilment and organisational success.

Embracing a Holistic Approach to Physical Health and Wellness

PolyU continues to promote physical well-being through a series of engaging and informative initiatives for students and the wider university community, key of which is the Sports Festival, jointly organised by the Student Affairs Office and the University Health Service. The event featured a range of taster sessions such as yoga, mobility stick, and massage ball exercises, offering participants a hands-on introduction to accessible fitness routines. Alongside these sessions, a sports nutrition talk offered participants practical insights into the relationship between diet, performance, and recovery, supporting them in building healthier lifestyles.

Adding to this campus-wide celebration of fitness were other health initiatives that encouraged greater awareness of key physical health concerns. For

instance, the Cardiovascular Health Awareness Campaign featured blood screening, health talks, and massage workshops, promoting early detection and prevention while encouraging healthier everyday habits.

To support overall well-being amongst students, education on sexual and reproductive healthcare topics was also prioritised. Through vaccination campaigns, sexual health talks, and a dedicated sexual health service hotline, students received accurate information and professional guidance on topics such as sexually transmitted infection prevention, contraception, and healthy relationships. All in all, these programmes reflect the University's holistic approach to student wellness, promoting long-term physical health through education, empowerment, and accessible support.

