

## The Hong Kong Polytechnic University Centre for Gerontological Nursing

# NEWSLETTER

SEP – DEC 2020 Issue 4

### COVER STORY

#### CGN new innovations support health care workers fight against COVID-19

Members of the CGN worked around the clock to develop the **Blended Gaming COVID-19 Training System and PolyU new N95 adjustable respirators** for enhancing infection control adherence in local elderly care homes and supporting health care workers at the forefront of the pandemic.

**Dr Angela Leung** (Director of the Centre, Deputy Director of WHO Collaborating Centre for Community Health Services and Principal Investigator of the project) **and her team\*** was awarded over HK\$1.2 million from the Health and Medical Research Fund for developing the **Blended Gaming COVID-19 Training System**. The prototype of the training system was selected as one of the COVID-19 commissioned research projects of the Food and Health Bureau, Hong Kong Government. This is the first interactive and blended learning training system, using the WHO COVID-19 guidance for long-term care facilities to enhance health care workers' adherence of infection control practice.

The system is created based on the international infection prevention and control guidelines. Users engage in 'realistic' game scenarios for decision making related to infection control, for example, choosing an appropriate personal protection equipment. Face-to-face interactive sessions will be given by infection control officers to users to ensure that they apply the knowledge and skills appropriately. A clustered randomised controlled trial will be carried out. If proved effective, the system will be used territory-wide to enhance infection control practice among health care workers against COVID-19.

\*Team members: Prof. Alex Molasiotis, Dr Simon Lam, Dr Justina Liu, Dr Eliza Wong, Dr Daphne Cheung, Dr Mimi Tse, and Dr Doris YP Leung.



◀ Different characters with different personalities were created for the training system to promote interests in engaging in the games.



◀ The system is designed considering the settings of local elderly homes to give users 'realistic' experiences for making decisions.

## PolyU new N95 respirators debuted in palliative and elderly care centre

**Dr Simon Lam and his team\*\*** has developed and validated the PolyU new N95 respirators. The uniqueness of our new respirators lies in their innovative PVC (synthetic rubber) adjustable elastic straps that allow users to fit the respirators according to their facial contour and head size to optimise fit rates.

Traditional N95 respirators have non-adjustable stripes and do not fit well on Chinese people. Currently, health care workers have to spend long hours in wearing N95 nano-fiber masks, particularly those with ear loops and clips to protect themselves against the novel coronavirus. These tight fitted masks have left many health care workers with pain, pressure sores or bruises.

PolyU new N95 respirators were debuted in the Haven of Hope Sister Annie Skau Holistic Care Centre (基督教靈實協會靈實司務道寧養院), a centre providing palliative and elderly care, and have received very positive feedback. Dr Lam and his team performed fit tests with the new respirators on over 100 centre's staff. The PolyU new respirators (two models: V8380+ and V9580+ for users with different face sizes) obtained very good fit rates at 87% and 88% (the fit rates of traditional N95 respirators are about 60% for Chinese people).

PolyU has filed a patent at the Patents Registry, Intellectual Property Department, HK Government, for the unique 'adjustable elastic straps' of our respirators (filer's ref: HK32020021992.3) and a license agreement was signed on 11 January 2021 between PolyU and our collaborator, Vannex International Limited. This sets the ground for bulk manufacturing of the respirators for commercial and clinical uses.



◀ PolyU new N95 respirators with unique adjustable elastic straps.



◀ PolyU new N95 respirators come in two face sizes for perfect fit.

**\*\*** Dr Simon Lam is the Principle Investigator and Deputy Director of the School's Squina International Centre for Infection Control. His team members include: Dr Lorna Suen, Dr Sukki Ho, Ms Ka-Yan Ko, Mr Timothy Lai, Mr Keith Fung, and Ms Wing-sum Ng.

## RESEARCH & EDUCATIONAL ACTIVITIES

### Webinars on infection control for care facilities and workplace

The Centre organised a series of free webinars from August to September 2020 to support health care workers in local residential care homes and step up their infection control practice during the pandemic.



### Music-with-Movement programme secured 5.3m

A BIG congratulations to **Dr Daphne Cheung and her team\*\*\*** who have secured a funding of over HK \$5.3 million on Music-with-Movement again.

The funding is mainly given by the Innovation and Technology Bureau, HK Government, to support the project entitled *A Stand-alone Therapeutic Music-with-Movement Programme for People with Cognitive Impairment*. The Ho Cheung Shuk Yuen Charitable Foundation has contributed HK \$500,000 and the PolyU School of Nursing also allocated some monetary resources for this project.

\*\*\*Team members: Dr Lily Ho (Deputy Coordinator), Dr Claudia Lai, Dr Harry Qin, Dr Alan Lam (Chairman, Sengital Group) and Dr Ken Ho (Assistant Professor, School of Nursing, Tung Wah College)

### Other funded research projects (Sep to Dec 2020)

Project Title	PI	Funding Organisation	Total Grant (HK \$)
Establishment of testing laboratory and investigation of the trends of quality of filtering facemask during and after the COVID-19	Dr Simon Lam	Hip Seng Quality Advancement Centre Company Limited	4,720,000
Evaluation of the filtering efficiency, fit rate and mask usability of two newly developed N95 respirators		Vannex International Ltd	543,720
Development and validation of a holistic health literacy scale for family caregivers of older people	Dr Patrick Kor	National Institute for Health and Care Excellence (NICHE) Research Grant	117,591
Evaluation of a 25-day home-based, multisensory cognitive stimulation program for the people with dementia and their family caregivers		Donation from Mr Kam-wah Ma (MH, JP), Chief Consultant, Ma Kam Wah & Co	30,000



Mr Kam-wah Ma (3rd from left)

## OUR PEOPLE



Dr Daphne Cheung

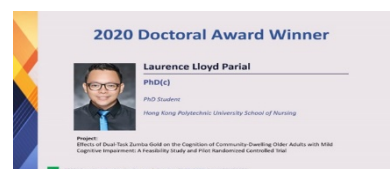
National Hartford Center of Gerontological Nursing Excellence

Distinguished Educator in Gerontological Nursing 2020

**Dr Daphne Cheung** was awarded the National Hartford Center of Gerontological Nursing Excellence (NHCNE) Recognition Programme for Distinguished Educator in Gerontological Nursing.

**Mr Laurence Parial**, our member and PhD student (CS: Dr Angela Leung; Co-S: Dr Simon Lam) received the Doctoral Award from the National Hartford Center of Gerontological Nursing Excellence, USA for his study entitled Effects of Dual-Task Zumba Gold on the Cognition of Community-Dwelling Older Adults with Mild Cognitive Impairment: A Feasibility Study and Pilot Randomized Controlled Trial.

He also received the Outstanding Paper Award (3<sup>rd</sup> prize) in the 27<sup>th</sup> Annual Congress of Gerontology organised by Hong Kong Association of Gerontology in November 2020.



### Welcome to a new member

**Dr Tyrovolas Stefanos**, Research Assistant Professor, who is specialised in ageing and nutrition epidemiology while he has extensive experience with data harmonization and management. He is a certified dietitian and nutritionist. Before joining the School, he was Principal Investigator for the Fundacion & Parc Sanitari Sant Joan de Deu, and the Institute of Carlos III in Spain (placed in Barcelona). His research interests are in the area of Healthy & Successful Ageing; Frailty, Sarcopenia and ageing related body composition changes; Public health Nutrition and Harmonization Methodologies.

**Dr Angela Leung** was appointed as a member of the Assessment Panel of the Innovation and Technology Fund for Application in Elderly and Rehabilitation Care, Social Welfare Department, HK Government.



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