

AME Medical Journals

Founded in 2009, AME has been rapidly entering into the international market by embracing the highest editorial standards and cutting-edge publishing technologies. Till now, AME has published more than 60 peer-reviewed journals (13 indexed in SCIE and 20 indexed in PubMed), predominantly in English (some are translated into Chinese), covering various fields of medicine including oncology, pulmonology, cardiothoracic disease, andrology, urology and so forth (updated on Dec. 2021).



Academic Made Easy, Excellent and Enthusiastic
 破窗千里目、快乐搞学术

Journal of Public Health and Emergency

JPHE Abstract Book December 2021

ISSN 2520-0054

JPHE JOURNAL OF PUBLIC HEALTH AND EMERGENCY

AN OPEN ACCESS JOURNAL FOR HIGH-QUALITY RESEARCH IN PUBLIC HEALTH AND EMERGENCY MEDICINE

Abstract Book for the APRU Global Health Conference 2021-Global Urban Health

16–18 November 2021
 The University of Hong Kong, Pokfulam, Hong Kong



jphe.amegroups.com

Xu zhiyi
 2015.11

Editors-in-Chief

Baoli Zhu

Jiangsu Provincial Center for Disease Control and Prevention, Nanjing, China

Linwei Tian, PhD

School of Public Health, The University of Hong Kong, China

Deputy Editor-in-Chief

Feng-Cai Zhu

Jiangsu Provincial Center for Disease Control and Prevention, Nanjing, China

Editorial Board

Mohamed H. Ahmed

Buckinghamshire, UK

Lao-Tzu Allan-Blitz, BA, MD
Boston, USA

Adam R. Aluisio, MD, MSc,
DTM&H
Providence, USA

Leonelo E. Bautista, MD, MPH,
DrPH
Madison, USA

Lucio Boglione, MD, PhD
Novara, Italy

Banu Cakir, MD, MPH, PhD
Ankara, Turkey

Michael Chaiton, PhD
Toronto, Canada

Rui Chen
Nanjing, China

Wen-Sen Chen, MD
Nanjing, China

Xianwen Chen
Jiangyin, China

Yan Chen

Nanjing, China

Ying Cheng, MD, PhD

Beijing, China

Sung-Hyuk Choi, MD, PhD
Seoul, Korea

Sudip Datta Banik, PhD
Merida, Mexico

Alexandre Delamou
Conakry, Guinea

Kuldeep Dhama, MVSc, PhD
Bareilly, India

Xiao-Ye Fan
Suzhou, China

Antoine Flahault, MD

Geneva, Switzerland

Rosemary (Rosie) Frasso, PhD,
CPH

Philadelphia, USA

Anna Rosa Garbuglia

Rome, Italy

Daniele Giansanti, PhD

Rome, Italy

Iolanda Grappasonni, MD

Camerino, Italy

Fabio Grizzi

Milan, Italy

Bing Gu, MD

Xuzhou, China

Chenghua Gu

Nanjing, China

Adamos Hadjipanayis, MD,
PhD

Larnaca, Cyprus

Brian J. Hall, PhD

Macau, China

Ubydul Haque, PhD

Ohio, USA

Luis Huicho

Lima, Peru

Toru Ishikawa, MD, PhD

Niigata, Japan

Jun-Min Ji

Jiangsu, China

Andre Pascal Kengne, MD,
PhD

Cape Town, South Africa

Tahir Mehmood Khan

Labore, Pakistan

Anand Krishnan, MD, PhD

New Delhi, India

Patrizio Lancelotti, MD, PhD

Liège, Belgium

Tom Lang, MA, Principal
Washington, USA

Jari Antero Laukkanen, MD,
PhD, FESC

Finland, Finland

Carl (Chip) Lavie, JR, MD,

FACC, FACP, FCCP

New Orleans, USA

Lei Ma

Beijing, China

Konstantinos C. Makris, PhD

Limassol, Cyprus

Lois Mulligan, PhD

Kingston, Canada

Kenneth A. Mundt, PhD, FACE

Boston, USA

Nicola Nante, MD

Siena, Italy

John A. Naslund, PhD

Boston, USA

Justine Parker

Boulder, USA

Mario C. Raviglione

Geneva, Switzerland

Nicolas Ray, MSc, PhD

Geneva, Switzerland

Serena Scarpelli, PhD

Rome, Italy

Gamal Shiha, MBBCH, MSc,

MD, PhD

Dakablia, Egypt

Wei Song

Nanjing, China

Gianni Testino, MD

Genoa, Italy

Wei-Dong Tu

Guangdong, China

Stefanos Tyrovolas, BS, MS, PhD
Barcelona, Spain

Dominique Vervoort, MD, CPH
Baltimore, USA

Luigi Vetrugno, MD

Udine, Italy

Jia-Sheng Wang, MD, PhD

Athens, USA

Qungang Wang

Zhangjiagang, China

Mellissa Withers, PhD, MHS

Los Angeles, USA

Li Ping Wong

Malaya, Malaysia

Wei Yang, PhD, MD

Reno, USA

Lu-Gang Yu

Suzhou, China

Cover Image Illustrator

Zhijing Xu

Shanghai, China

Managing Editors

Grace S. Li

Eunice X. Xu

Corresponding Editor

Lucine M. Gao

Language Editor

John Ayric Gray

Aims and Scope

Journal of Public Health and Emergency (J Public Health Emerg; JPHE; jphe.amegroups.com; ISSN: 2520-0054) is an open access, international, peer-reviewed online journal. It publishes original research articles and reviews on public health and emergency, including health improvement, health protection, service improvement, acute injury, sudden illness, etc. It aims to advance the research, policy, practice, and education of public health and emergency medicine.

JPHE is sponsored by

- ❖ Jiangsu Province Center for Disease Control and Prevention (JSCDC)

JPHE is co-sponsored by

- ❖ Nanjing Prevention and Treatment Center for Occupational Diseases (NJCOD)
- ❖ Changzhou Center for Disease Control and Prevention (CZCDC)
- ❖ Jiangyin Center for Disease Control and Prevention (JYCDC)
- ❖ Suzhou Center for Disease Control and Prevention (SZCDC)
- ❖ Zhangjiagang Center for Disease Control and Prevention (ZJGCDC)
- ❖ SIP Centers for Disease Control & Prevention (SIPCDC)
- ❖ Suzhou New District Center for Disease Control and Prevention (SNDCDC)

- ❖ Heron
- ❖ SKYTE Testing Services

Indexing

Journal of Public Health and Emergency is indexed and covered by

- ❖ Scopus

Editorial Correspondence

Lucine M. Gao, Science Editor, *Journal of Public Health and Emergency*

HK office: Rm C, 16/F, Kings Wing Plaza 1, No. 3 On Kwan Street, Shatin, NT, Hong Kong

Phone: +86 20 66355775

Email: jphe@amegroups.com

Note to NIH Grantees

Pursuant to NIH mandate, *Journal of Public Health and Emergency* will post the accepted version of contributions authored by NIH grant-holders to PubMed Central upon acceptance. This accepted version would be made publicly available 2 months after publication. For further information, see jphe.amegroups.com.

Conflict of Interest Policy for Editors

The full policy and the Editors' disclosure statements are available online at: jphe.amegroups.com.

Disclaimer

The Publisher and Editors cannot be held responsible for errors or any consequences arising from the use of information contained in this journal; the views and opinions expressed do not necessarily reflect those of the Publisher and Editors, neither does the publication of advertisements constitute any endorsement by the Publisher and Editors of the products advertised.

For submission instructions, subscription and all other information visit jphe.amegroups.com

© 2021 Journal of Public Health and Emergency

Table of Contents

| | |
|--|----|
| AB001. Mental health policy for university students in Hong Kong: a shared responsibility among all university members Toi Wing Tseng | 1 |
| AB002. Association low-birthweight babies with environmental factors in Indonesia: a cross-sectional study Aulia Salmaddiina | 2 |
| AB003. Factors influencing the coping experience of health science students in remote learning during the coronavirus disease (COVID-19) pandemic in the Philippines Maria Margarita Lota, Emely Dicolon | 3 |
| AB004. All-cause mortality of seasonal influenza vaccination among the elderly: a systematic review and meta-analysis Hon Ting Terence Tsang, Chiu Hang Mok | 4 |
| AB005. Post-disaster solo dining and healthy food behavioral change through cooking class participation Ai Tashiro, Kayako Sakisaka, Yuriko Saitoh, Yoshiharu Fukuda | 5 |
| AB006. Financial risk protection: a brief revisitation of Universal Health Care Act during coronavirus disease (COVID-19) Charles Jason Cahilig | 6 |
| AB007. Health-DRR nexus: where is the rub?—a case study on the Philippines’ response to the coronavirus disease (COVID-19) pandemic Ebinezzer Florano | 7 |
| AB008. Social media marketing practices by alcohol brands and drinking venues: influence on youth drinking Rufina H. Chan, Dong Dong, Jiazhou Yu, Jean H. Kim | 8 |
| AB009. How should doctors be paid?—a systematic review of the impacts of provider payment methods for primary care physicians on patient healthcare utilisation Margaret Kay Ho, Elaine Tian | 9 |
| AB010. Effects of different walking intensities on alleviating depression in older adults with major depressive disorder: a pilot randomized controlled trial Danny J. Yu, Angus P. Yu, Chit K. Leung, Jacky M. Mo, Joshua K. Bernal, Edwin C. Chin, Welton W. Leung, Whitney W. Au, Daniel Y. Fong, Calvin P. Cheng, Parco M. Siu | 10 |
| AB011. Assessment of permissibility of behavioral change counseling in the Philippine Family Planning Program: basis for learning and development strategy Aldrin Riel Boyano, Carmelita Canila | 12 |
| AB012. ‘Care for Our Future Scholars’: prevalence and psychosocial correlates of mental health of mainland Chinese PhD students in Hong Kong Jing Jia, Nelson Chun-Yiu Yeung | 13 |
| AB013. Impact of coronavirus disease (COVID-19) pandemic on sleep of undergraduate students: a systematic literature review Rafael Lorenzo Valenzuela, Raphael Ian Velasco, Manuel Peter Paul Jorge | 14 |

| | |
|---|----|
| AB014. Does poor awareness of antimicrobial resistance among general public and health professionals lead to high prevalence of it?—a study in a Sri Lankan urban setting Yasodhara Gunasekara, Thilini Nisansala, Tierney Kinnision, Isuru Wijewickrama, Yasodha Basnayake, Sanda Kottawatta, Ayona Silva-Fletcher, Ruwani Kalupahana | 15 |
| AB015. Association between usage of cooking oils and risk of lung cancer among women: a hospital-based case control study in Singapore Xin Er Frances Jin, Adeline Seow, Wei Jie Seow | 17 |
| AB016. The differences in the elderly's travel behaviour during the coronavirus disease (COVID-19) pandemic: metro and health cohort study in Hong Kong Eun Yeong Choe, Yao Du, Guibo Sun | 18 |
| AB017. Understanding the knowledge, awareness and perceptions of the gut microbiome and Fecal Microbiota Transplantation (FMT) in Singaporean adults Lydia Wan Zhen Lim, Rachel Quek, Kai Yee Toh, Jeremy Lim | 19 |
| AB018. Social vulnerability, stressors and adaptive strategies among migrant workers in Singapore Aysha Farwin, Huso Yi, Amanda Low, Natasha Howard | 20 |
| AB019. Systematic review and meta-analysis of the current coronavirus disease 2019 vaccines for potential dose-optimal vaccine allocation based on reactogenicity and immunogenicity Wesley Rosete, Rein Gerard Salenga, Aubrey Mae Divinagracia | 21 |
| AB020. The role of telehealth interventions on clinical outcomes in patients with chronic hepatitis C infection: a systematic review Lok Yee Jane Lam, Hui Ling Yen | 23 |
| AB021. Malaria in rural northern Uganda: a household survey of Malaria infection rates and common prevention strategies Heather Wipfli, Sarah Phillips, Peninah Tumuhimbise, Kenneth Odur, Ally Koh, Kathy Lam, Maya Spencer, Valeria Flores-Cadena, Kayla Samimi, Abigail Kim | 24 |
| AB022. Angiotensin receptor blocker (ARB) versus angiotensin-converting enzyme inhibitor (ACE-I) use for new-onset pneumonia and lung infections: a propensity score-matched population-based cohort study with competing risk analyses Jeremy M. H. Hui, Jiandong Zhou, Yan Hui A. Lee, Oscar H. I. Chou, Teddy T. L. Lee, Tong Liu, Abraham K. C. Wai, Bernard M. Y. Cheung, Qingpeng Zhang, Gary Tse | 25 |
| AB023. Metformin versus sulfonylurea use for new-onset dementia and anxiety disorder and depression: a propensity score-matched population-based cohort study with competing risk analyses Jeremy M. H. Hui, Jiandong Zhou, Teddy T. L. Lee, Kyle Hui, Oscar H. I. Chou, Yan Hui A. Lee, Abraham K. C. Wai, Kamalan Jeevaratnam, Carlin Chang, Tong Liu, Gary Tse | 27 |
| AB024. Out-of-pocket payment and health insurance utilization by migration status in China Wanyue Chen, Lucy Porter Jordan | 29 |
| AB025. The development of a smart health technological framework for improving the health of ageing population in the Smart City (Hong Kong) Tak Wing Tsui, Sai Chung Ip, King Nam Hung, Tsui Wa Tam, Wai Fan Cheng, Cheong Fai Li, Kam Ming Lau | 30 |
| AB026. Cross-regional collaboration to promote digital mental health equity in the Asia Pacific in the context of coronavirus disease (COVID-19) Jill Murphy, Erin E. Michalak, Andrew Greenshaw, Chee H. Ng, Arun Ravindran, Mellissa Withers, Promit Ananyo Charkraborty, Raymond W. Lam | 31 |

| | |
|--|----|
| AB027. Long coronavirus disease (COVID-19) syndrome: a comprehensive review of its effect on various organ systems and recommendation on rehabilitation plans | |
| Michael Zhipeng Yan, Ming Yang, Dennis Tse-Wah Law, Wing-Sze Yuen, Ching-Lung Lai | 32 |
| AB028. Teaching bioethics and bioethics research using inquiry-based pedagogy | |
| Leander Marquez | 34 |
| AB029. Health professionals with human immunodeficiency virus on antiretroviral therapy: a mixed design study | |
| Lheanne Ruth Castil, Renei Iza Niu, Carla Marie Calosa, Gia Margarette Cruz, Agnes Raymundo | 35 |
| AB030. Characterizing and forecasting common infectious diseases in China: a time series analysis | |
| Zonglin Dai, Eric H. Y. Lau | 36 |
| AB031. Medication risk communication: a cross-sectional survey among healthcare professionals in Malaysia | |
| Rema Panickar, Zorah Aziz, Adeeba Kamarulzaman | 37 |
| AB032. Factors associated with uptake of cervical cancer screening: a population-based study of 2,305 Chinese females | |
| Junjie Huang, Chun Ho Ngai, Man Sing Tin, Veeleah Lok, Xianjing Liu, Lin Zhang, Jinqiu Yuan, Wanghong Xu, Zhi-Jie Zheng, Martin Wong | 38 |
| AB033. Alcohol marketing exposure and alcohol drinking in university students in Hong Kong: an ecological momentary assessment | |
| Minjin Zhang, Derek Yee Tak Cheung, Qi Wang, Bonnie Xin Yan Wu, Man Ping Wang, Daniel Sai Yin Ho, Tai Hing Lam | 40 |
| AB034. Cancer incidence and mortality in Asian countries: a trend analysis | |
| Junjie Huang, Man Sing Tin, Chun Ho Ngai, Veeleah Lok, Yunyang Deng, Lin Zhang, Jinqiu Yuan, Wanghong Xu, Zhi-Jie Zheng, Martin Wong | 41 |
| AB035. Comparative sensitivity of different self-sampling methods for SARS-CoV-2 RT-PCR testing | |
| Nicole Ngai Yung Tsang, Hau Chi So, Ka Yan Ng, Benjamin J. Cowling, Gabriel M. Leung, Dennis Kai Ming Ip | 42 |
| AB036. Ego integrity and adaptation of urban dwelling Filipino older adults amidst the coronavirus disease (COVID-19) pandemic | |
| Arlene Nera, Agnes Raymundo, Hannah Faith Martinez, Clarisse Sy, Ariel Moreno | 43 |
| AB037. Quality measurement of specialty care in Pacific Rim countries: an analysis of five models | |
| Junqiao Chen, Kawa Cheong | 44 |
| AB038. Neighbourhood health niche and well-being related behaviour change after coronavirus disease (COVID-19) pandemic | |
| Siyu Chen, Ying Chang ¹ , Jack Benton | 45 |
| AB039. Mental health status and coping ability among older Filipino adults in an institutional care facility | |
| Louie Jay Cruz, Doneal Andrei Decapia, Benedict Ignacio, John Edward Escote, Michael John Flores | 47 |
| AB040. Urbanisation, relocation and mental health of elderly farmers and the changes during the coronavirus disease (COVID-19) pandemic | |
| Ying Chang, Guibo Sun, Houhua Zhu | 48 |
| AB041. Economic evaluation of colorectal cancer screening programme in Hong Kong | |
| Matthew Shing Him Lee | 49 |

| | |
|--|----|
| AB042. Perceptions and experiences of young adults regarding the coronavirus disease (COVID-19) pandemic in Uganda: a focus group study Valeria Flores-Cadena, Kayla Samimi, Ally Koh, Peninah Tumuhimbise, Odur Kenneth, Abigail Kim, Sarah Phillips, Maya Spencer, Kathy Lam, Heather Wipfli | 50 |
| AB043. Biosimilar medicines: a cross-sectional study on hospital pharmacists' perceived confidence and barriers to promote prescribing among clinicians in Malaysia Noraisyah Mohd Sani, Zorah Aziz, Adeeba Kamarulzaman | 51 |
| AB044. Healthy ageing and socio-physical environments: re-designing high-rise housing estates in compact Hong Kong Rebecca L. H. Chiu, Bo Kyong Seo | 52 |
| AB045. Chronic disease knowledge among migrant workers in Singapore Annabelle Pan, Hui Xiang Chia, Min Xian Wang, Prathiksha Karthikeyan, Gwendolyn Lee, Jeremy Lim | 53 |
| AB046. Sexuality 360@ School: an ecosystem approach to comprehensive sexuality education in Hong Kong Neda Ng, Edmond Pui Hang Choi, Ellie Bostwick Andres, Alice Wai Chi Fung, Kevin Wing Chung Lau, Monique Yeung | 54 |

AB001. Mental health policy for university students in Hong Kong: a shared responsibility among all university members

Toi Wing Tseng

Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong, China

Correspondence to: Toi Wing Tseng. Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong, China. Email: carltyw@connect.hku.hk.

Background: The rationale for this paper is based on the pressing concerns on the impacts of the social unrest, particularly of the university students who participated in a majority of the movement arising from the Extradition Bill since 2019. The outbreak of the coronavirus disease (COVID-19) pandemic that began in 2019 further deteriorated the campus life of university students in Hong Kong. This paper aims to propose short-term initiatives and future directions in addressing university student mental health issues in Hong Kong.

Methods: This paper reviews the literature on the (I) mental health challenges posed by the university students, (II) mental health services provided by the public sector of the mental health system in Hong Kong, and (III) obstacles encountered by the university mental health services and outlines the initiatives for a coordinated system of university health system according to the Hong Kong context.

Results: Short-term initiatives for enhancing accessibility of counselling services and future direction for developing a coordinated system of the university health system are discussed. The author proposed that (I) Mental Wellness Clinic, (II) Campus-wide Promotion and Assessment, (III) Effective Triage, and (IV) Clinical Emergencies and Crisis Support should be considered in the university health system.

Conclusions: A timely tackle is required to respond to the overwhelming needs of student mental health services in Hong Kong. Mental health resources and efforts will fail if not supported by a coordinated health system within the campus and not considered as a shared responsibility among all university members. This paper also calls attention to the importance of setting up universal policies for informing standards of university mental health care services in Hong Kong.

Keywords: Student mental health; university students; mental health policy; university health system; Hong Kong

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab001

Cite this abstract as: Tseng TW. Mental health policy for university students in Hong Kong: a shared responsibility among all university members. J Public Health Emerg 2021;5:AB001.

AB002. Association low-birthweight babies with environmental factors in Indonesia: a cross-sectional study

Aulia Salmaddiina

Universitas Indonesia, Depok, Indonesia

Correspondence to: Aulia Salmaddiina. Universitas Indonesia, Depok, Indonesia. Email: aulia.salmaddiina@gmail.com.

Background: In 2017, Indonesia's under-five mortality rate reached 34 per 1,000 births. This value is 4 times greater than under-five mortality in European countries. The main cause of mortality among children under five is low birthweight, which is suspected to be associated with environmental hazards exposure. The environmental health condition in Indonesia was poor at that time, with a low implementation of good hygiene and sanitation (49.3%) and a lack of quality monitoring of drinking water (22.8%). This study aims to identify the association between the incidence of low birth weight with environmental factors.

Methods: This is a cross-sectional study with multivariate analysis using binary logistic regression test (IBM SPSS 25). Using data from Indonesia Demographic and Health Survey (2017). Variables included are baby size and weight, maternal factors, and environmental factors.

Results: This study found an association between baby size with type of sanitation facility (OR 1.25; P value 0.000) and floor type (OR 1.25; P value 0.001) which was also influenced by the mother's education level (OR 1.20; P value 0.005). In addition, another correlation was found between the baby's weight with the type of cooking fuel (OR 1.32; P value 0.000) which is influenced by the mother's age,

education level, and literacy skill.

Conclusions: Low-birthweight babies were born from mothers under 30 years of age with low education and literacy levels. Furthermore, from this study policymakers could start to conduct supervision of sanitation and floor construction using improved materials, and urged the use of clean cooking fuel.

Keywords: Low-birth-weight infant; environments; risk factor; cross-sectional study

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab002

Cite this abstract as: Salmaddiina A. Association low-birthweight babies with environmental factors in Indonesia: a cross-sectional study. J Public Health Emerg 2021;5:AB002.

AB003. Factors influencing the coping experience of health science students in remote learning during the coronavirus disease (COVID-19) pandemic in the Philippines

Maria Margarita Lota¹, Emely Dicolén²

¹Department of Medical Microbiology College of Public Health, University of the Philippines, Manila, Philippines; ²National Teacher Training Center for the Health Professions, University of the Philippines, Manila, Philippines

Correspondence to: Maria Margarita Lota, Department of Medical Microbiology College of Public Health, University of the Philippines, Manila, Philippines. Email: mmlota@up.edu.ph.

Background: In response to coronavirus disease (COVID-19) restrictions, many countries have resorted to alternative learning activities for education. Remote learning is now considered as the ‘new normal’—with the greatest burden on countries that have underutilized this method and its platforms. With the sudden shift in teaching methodologies, there is a need to determine the factors in the coping experience of students during the pandemic to provide evidence-based solutions to bridge the various gaps faced in remote learning.

Methods: A descriptive, quantitative, cross-sectional study design was employed for this study. There were 167 undergraduate health science college students, who consented and completed the online, self-administered, structured questionnaire.

Results: For technological factors, respondents had access to a stable internet of at least 4 hours (52.1%) and resources such as personal mobile phone (91.6%) and laptop (88%); and learning management systems such as Zoom (99.4%) and Canvas (82.6%). Human factors (i.e., teaching methods and course handling) were major influencers in learning. Most agreed that their study habits and attitudes—regularly checking for announcements (90%), and accomplishing assigned tasks (80%), resulted in more time spent for schoolwork (81%). The identified psychosocial factors

contributing to the stress and anxiety of the students included a combination of concerns on health (81.4%), deadlines (92.8%), school and household workload (86.3%), school delay (79.6%), and isolation (67.6%).

Conclusions: Although the respondents noted advantages of remote learning, the majority disagreed with continuing its implementation after the pandemic (75.4%); traditional face-to-face remained the preferred mode of learning. The experience of students with remote learning during this pandemic provides valuable data to understand coping with shifts in teaching methodologies. The findings of the study underscore the importance of a resilient education system that also considers the learning capacity and mental health of students, especially for resource-limited countries.

Keywords: Remote learning; coronavirus disease pandemic (COVID-19 pandemic); undergraduate students; health science; learning experience

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab003

Cite this abstract as: Lota MM, Dicolén E. Factors influencing the coping experience of health science students in remote learning during the coronavirus disease (COVID-19) pandemic in the Philippines. J Public Health Emerg 2021;5:AB003.

AB004. All-cause mortality of seasonal influenza vaccination among the elderly: a systematic review and meta-analysis

Hon Ting Terence Tsang, Chiu Hang Mok

Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Chiu Hang Mok, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: mokch@hku.hk.

Background: Despite the recommendation of seasonal influenza vaccination (SIV) for the elderly, vaccine effectiveness (VE) remains doubtful among this age group. Evidence regarding VE is needed for justification and evaluation. We sought to develop pooled VE estimates using all-cause mortality as an outcome measure to provide better insights for VE evaluation.

Methods: A systematic review was performed to identify observational studies reporting all-cause mortality as an outcome measure for the VE of SIV. We searched MEDLINE (Ovid) and EMBASE from inception to June 2020. Meta-analysis with random effects model for all-cause mortality was conducted. Heterogeneity and publication bias were assessed.

Results: We identified 8 observational studies for systematic review and meta-analysis from a total of 1,782 studies in the initial search. The pooled VE estimate of SIV among the elderly considering all-cause mortality as the outcome was 22% [95% confidence interval (CI): 12% to 31%, $P < 0.05$]. Significant heterogeneity ($I^2 = 95.7\%$) was demonstrated. A large P value (0.969) in Egger's test and symmetrical funnel plot were observed.

Conclusions: Pooled VE estimate of SIV considering all-cause mortality as the outcome was derived. The heterogeneity of our study could be due to differences

among study characteristics and designs, vaccine strain match, underlying conditions and previous vaccination status. The funnel plot suggests no significant publication biases, while this study may still be prone to other possible biases such as reporting bias. Overall, a review of current evidence demonstrated significant VE of SIV among the elderly by reducing all-cause mortality, which could be utilised in the encouragement of SIV uptake by public health officials in the future.

Keywords: Influenza; vaccination; systematic review; meta-analysis

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab004

Cite this abstract as: Tsang HTT, Mok CH. All-cause mortality of seasonal influenza vaccination among the elderly: a systematic review and meta-analysis. J Public Health Emerg 2021;5:AB004.

AB005. Post-disaster solo dining and healthy food behavioral change through cooking class participation

Ai Tashiro¹, Kayako Sakisaka², Yuriko Saitoh³, Yoshiharu Fukuda²

¹Tokushima University Graduate School of Biomedical Sciences, Japan;

²Teikyo University Graduate School of Public Health, Japan; ³Post-disaster Reconstruction Support Project (“Red Apron Project”), The Ajinomoto Foundation, Japan

Correspondence to: Ai Tashiro. Tokushima University Graduate School of Biomedical Sciences, Japan. Email: atashiro11@gmail.com.

Background: Natural disasters affect residents’ eating patterns and behaviors. However, post-disaster changes in residents’ eating patterns and behaviors have not been examined. Thus, we aimed to examine the association between eating patterns (solo dining or not) and healthy food awareness/behavioral change through post-disaster cooking class participation.

Methods: We conducted a questionnaire-based survey in disaster-affected areas by the 2011 Great East Japan Earthquake and Tsunami (GEJET) in 2020. We applied Poisson regression models to a cross-sectional dataset of cooking class participants, examining their food awareness and cooking behavioral change by their eating pattern. Dependent variables were changes to (M1) cook more than before; (M2) be more conscious of nutritional balance; (M3) intake low salt; (M4) pay attention to hygiene, and; (M5) increase the opportunity to eat with families/friends. In each model, adjusted rate ratios (ARRs) were calculated by sociodemographic characteristics.

Results: We applied 242 valid data. The mean age of the participants was 70 yrs. and approximately 80% were aged 65 or older. Seventy-five percent of participants were female and 18% of them ate alone. Poisson models showed positive behavioral changes among solo diners [M1: ARR, 1.62; 95% confidence interval (CI) 1.19–2.21; M2: ARR, 1.28; 95% CI: 1.07–1.53; M3: ARR, 1.15; 95% CI: 1.01–1.30; M4: ARR, 1.29; 95% CI: 1.07–1.55] (*vs.* not solo diners). Eating alone was not associated with M5 ($P>0.05$). In contrast, the

interaction effect of eating alone and living alone showed negative association with their behavioral changes (M1: ARR, 0.60; 95% CI: 0.36–1.01; M4: ARR, 0.61; 95% CI: 0.45–0.82; M5: ARR, 0.24; 95% CI: 0.08–0.62).

Conclusions: This study suggests that cooking participation would be positively associated with solo diners’ healthy food behavioral change, but it may negatively affect those who live alone. We conclude the importance of re-establishing a post-disaster support system in cooking class activities for solo diners who live alone.

Keywords: Volunteer activity; solo dining; eating behavior; health promotion

Acknowledgments

Funding: This study was financially supported by The Ajinomoto Foundation Research Fund, approved as Teikyo University Research Grant Number 18111 (16 January 2020), and JSPS KAKENHI Grant Number 20K02191.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab005

Cite this abstract as: Tashiro A, Sakisaka K, Saitoh Y, Fukuda Y. Post-disaster solo dining and healthy food behavioral change through cooking class participation. J Public Health Emerg 2021;5:AB005.

AB006. Financial risk protection: a brief revisit of Universal Health Care Act during coronavirus disease (COVID-19)

Charles Jason Cahilig

College of Medicine, University of the Philippines, Manila, Philippines
Correspondence to: Charles Jason Cahilig. College of Medicine, University of the Philippines, Manila, Philippines. Email: cpcahilig@up.edu.ph.

Background: Through the initiation and enactment of the Universal Health Care (UHC) Act, it seeks to realize UHC in the Philippines through a systematic approach and a clear description of the functions and responsibilities of the key agencies and stakeholders. The law ensures all Filipinos with guaranteed equitable access to quality and affordable health care goods and services and protection from financial risk. This paper aims to revisit the UHC Act to emphasize the right to health as a matter of State interest and how Philippine Health Insurance Corp. (PhilHealth) enacted UHC in the current pandemic response. The paper focuses on the UHC and national health insurance program of PhilHealth's financial risk protection management during coronavirus disease (COVID-19) situation.

Methods: Secondary data analysis is used in this paper to analyze the existing data collected by others. Secondary analysis affords to investigate the enactment of UHC law of the Philippines specifically to address financial risk protection of the general population during COVID-19 pandemic. It gives a general view of the social situation and financial risk management in the country.

Results: The Philippine government increased its budget allocation and safety nets for health to respond to COVID-19 pandemic. Despite reforms, financial health protection remains limited. Out-of-pocket spending continues to dominate as source for health care financing, while others forgo medication. According to the 4-month study conducted in University of the Philippines – Philippine General Hospital, Tabuñar and Dominado

estimated 12% average out-of-pocket payment per patient of the total hospital expenses.

Conclusions: Although the level of financial protection provided remains limited, PhilHealth has claimed success in terms of population coverage: estimated at 86% in 2010, coverage increased to 92% in 2016, and to a 'universal' coverage, at 100%, in 2019 due to the implementation of Republic Act no. 11223, known as UHC Act. However, a real universal health could be attained through a restructured health financing system that emphasizes government and shared risk sourcing of funds and minimizes reliance on out of pocket payments at the point of service.

Keywords: Universal Health Care (UHC); Philippine Health Insurance Corp. (PhilHealth); right to health

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab006

Cite this abstract as: Cahilig CJ. Financial risk protection: a brief revisit of Universal Health Care Act during coronavirus disease (COVID-19). J Public Health Emerg 2021;5:AB006.

AB007. Health-DRR nexus: where is the rub?—a case study on the Philippines' response to the coronavirus disease (COVID-19) pandemic

Ebinezer Florano

National College of Public Administration and Governance, University of the Philippines, Manila, Philippines

Correspondence to: Ebinezer Florano. National College of Public Administration and Governance, University of the Philippines, Manila, Philippines. Email: efloranoy@yahoo.com.

Background: This paper reviews the theoretical, legal, and operational links between health emergency management and disaster risk reduction (DRR) in the context of the coronavirus disease (COVID-19) pandemic. While the Sendai Framework for DRR recognizes epidemics and pandemics as among the biological hazards that should be addressed in DRR, there seems to be a disconnect in the way the world, and national governments treated DRR of the SFDRR and the Health Emergency Disaster Risk Management (Health-EDRM) framework adopted by the WHO in 2019. An initial study on the topic notes the “silo” between the two when it stated that “there is no mention of disaster at all within the WHO COVID-19 technical guidance” and “it is not clear whether COVID-19 is leading to collaboration between the WHO and the UN Office for Disaster Risk Reduction”. At the country level, it has been noted that countries took dramatically different implementation approaches in managing the pandemic.

Methods: This paper examines the theoretical, legal, and inter-operational relationships between DRR and Health-EDRM at the national and local levels as the Philippine government responds to the threats of COVID-19. The case at the national level and three case studies at the local level are analysed through key informants' interview and document analysis.

Results: The study found out that the COVID-19

pandemic management in the Philippines, whether at the national or local level, has been led mostly by the health sector. However, the DRR sector closely collaborates with it on a case-to-case basis because different local governments have different levels of pandemic management capabilities.

Conclusions: There are still lingering questions whether the DRR sector should just focus on responding to disasters caused by natural hazards and/or still be at the forefront of pandemic management. If in the case of the latter, the follow-up question is—could and should its roles/tasks be standardized nationwide?

Keywords: Public health emergency; disaster risk reduction; coronavirus disease pandemic (COVID-19 pandemic)

Acknowledgments

Funding: This article is supported by University of the Philippines Resilience Institute.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab007

Cite this abstract as: Florano E. Health-DRR nexus: where is the rub?—a case study on the Philippines' response to the coronavirus disease (COVID-19) pandemic. J Public Health Emerg 2021;5:AB007.

AB008. Social media marketing practices by alcohol brands and drinking venues: influence on youth drinking

Rufina H. Chan, Dong Dong, Jiazhou Yu, Jean H. Kim

JC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China

Correspondence to: Rufina H. Chan. JC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China. Email: rufinachan@link.cuhk.edu.hk.

Background: Young adults are highly active users of social networking sites. Past studies have shown that social media use is correlated with the use of illicit drugs and tobacco. In recent years, the alcohol industry has scaled up its digital advertising expenditures on sites such as Facebook with broad-reaching campaigns to encourage youth drinking. This study examines social media marketing strategies targeting Hong Kong young adults by popular alcohol brands and drinking venues.

Methods: A mixed-method content analysis of 974 social media posts published by ten alcohol brands and four alcohol-serving venues on Facebook in 2011–2019. Descriptive statistics were conducted to understand the prevalence of social media alcohol marketing strategies.

Results: The sample contained 639 alcohol brand posts (217.0 reactions and 7.8 shares per post). The main marketing practices involved were linking products with a specific consumption time and place (40.2%) and with branded events that occurred offline, or “real-world tie-ins” (36.3%). The main theme invoked was crafting an identity (80.1%) by associating drinking with an aspirational lifestyle (25%). For venues, 335 posts were captured (16.9 reactions and 1.7 shares per post). The main practices employed were associated with time and place (60.3%) and real-world tie-ins (36.4%). The main themes were crafting an identity (85.1%) by associating drinking with a party setting

(53.4%) and celebratory events (30.4%). Over 70% of the posted comments were positive and suggestive of alcohol consumption. Of note, only 8.1% of the posts by brands and none by the venues contained messages promoting responsible consumption.

Conclusions: The absence of ‘responsible drinking’ messages combined with the promotion of social drinking images where binge drinking commonly occurs is likely to encourage heavy alcohol consumption in this age group. Government health authorities should consider establishing regional, evidence-based policies on alcohol social media marketing.

Keywords: Social media; alcohol marketing; content analysis

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab008

Cite this abstract as: Chan RH, Dong D, Yu J, Kim JH. Social media marketing practices by alcohol brands and drinking venues: influence on youth drinking. J Public Health Emerg 2021;5:AB008.

AB009. How should doctors be paid?—a systematic review of the impacts of provider payment methods for primary care physicians on patient healthcare utilisation

Margaret Kay Ho, Elaine Tian

Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Margaret Kay Ho, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: margaretkayho@gmail.com.

Background: Physician payment methods are valuable supply-side measures that may be reformed to achieve health policy objectives. However, few studies provide a comparison of the various methods of payment, to inform policy development. This review examines how payment methods for primary care physicians (PCPs) affect their patients' healthcare utilisation, as a reflection of quality of care.

Methods: PubMed, Embase, MEDLINE, EconLit, CINAHL Complete, and Web of Science were searched to identify papers in English investigating comparisons of payment methods for PCPs and their patients' care usage. Payment methods included fee-for-service (FFS), capitation, salary, pay-for-performance (P4P), or a blend of these. Relevant outcomes were patient use of inpatient, outpatient or emergency care services.

Results: Thirty-one studies involving 49,008 PCPs and 11,998,174 patients were included. The most commonly examined reimbursement mechanism was FFS (N=23), followed by capitation (N=18), P4P (N=13), and salary (N=6). Most outcomes concerned inpatient care (N=21), compared to emergency (N=15) and outpatient (N=1) care; some studies compared multiple methods and outcomes. Of the eight countries covered, the two most widely represented were USA (N=14) and Canada (N=9). The most consistent finding was improvement in outcomes under PCPs with a P4P adjunct compared to PCPs without; this

was demonstrated in six of the nine studies. Of the thirteen studies comparing FFS and capitation reimbursement, four of seven studies with statistically significant outcomes showed that patients under FFS PCPs had lower care utilisation. No significant relationships were observed for studies comparing FFS and salary payments or investigating mixed payment models.

Conclusions: This is the largest and most up-to-date study evaluating commonly used payment methods in terms of patient healthcare utilisation, and may serve as preliminary evidence in guiding policy reforms. Further research should employ more rigorously controlled designs, longer follow-up periods, and a wider range of quality outcomes to establish stronger conclusions.

Keywords: Medical care utilisation; payment methods; primary health care; reimbursement mechanisms

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab009

Cite this abstract as: Ho MK, Tian E. How should doctors be paid?—a systematic review of the impacts of provider payment methods for primary care physicians on patient healthcare utilisation. J Public Health Emerg 2021;5:AB009.

AB010. Effects of different walking intensities on alleviating depression in older adults with major depressive disorder: a pilot randomized controlled trial

Danny J. Yu¹, Angus P. Yu¹, Chit K. Leung¹,
Jacky M. Mo¹, Joshua K. Bernal¹, Edwin C. Chin¹,
Welton W. Leung¹, Whitney W. Au¹,
Daniel Y. Fong², Calvin P. Cheng³, Parco M. Siu¹

¹Division of Kinesiology, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China;

²School of Nursing, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China; ³Department of Psychiatry, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Danny J. Yu. Division of Kinesiology, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: dannyu@connect.hku.hk.

Background: The Global Burden of Disease Study 2017 reported that depression is a common global illness and over 264 million people are affected. WHO global physical activity recommendation suggests to older adults to perform 150–300 minutes moderate-intensity or 75–150 minutes vigorous-intensity physical activity to gain health benefits. Although physical activity has been demonstrated to be beneficial to patients with clinical depression, the optimal exercise intensity remains ascertained. This study aims to compare the effects of 12-week moderate- or vigorous-intensity walking exercise on alleviating depression in older depressed patients.

Methods: Older adults aged ≥ 50 years diagnosed with depression were recruited from January 2019 to June 2021. Participants were randomly allocated to the control group ($n=9$), vigorous-intensity (6.5 metabolic equivalents) walking group ($n=9$), or moderate-intensity (3.25 metabolic equivalents) walking exercise group ($n=9$). The walking intervention lasted for 12 weeks, and the exercise frequency was thrice a week. Participants in the control group were instructed to maintain daily life routines during

the intervention period. Beck depression inventory and generalized anxiety disorder 7 were used to measure the depression and anxiety levels, respectively, at baseline and post-intervention measurement. The treatment effects were assessed using generalized estimating equations.

Results: Compared to the control group, depression level was significantly reduced in both walking intervention groups ($P<0.001$). There was 43.9% reduction in the depression score in the moderate-intensity walking group compared to the baseline, and 43.2% reduction in the vigorous-intensity walking group. There was no significant difference between the two walking groups. Similarly, compared to the control group, anxiety level significantly decreased in two walking intervention groups ($P<0.001$) and there was no significant difference between the two walking groups.

Conclusions: Our results demonstrated that 12-week walking training at both vigorous- and moderate-intensity significantly alleviated depression and anxiety levels in older adults with clinical depression.

Trial Registration: Clinical Trial Registration No. NCT04403373.

Keywords: Depression; walking exercise; exercise intensity

Acknowledgments

Funding: This project was supported by The University of Hong Kong Seed Fund for Basic Research and Health and Medical Research Fund (17182461) of Food and Health Bureau, Hong Kong SAR.

Footnote

Reporting Checklist: The authors have completed the CONSORT for Abstracts reporting checklist. Available at <https://dx.doi.org/10.21037/jphe-21-ab010>

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International

License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab010

Cite this abstract as: Yu DJ, Yu AP, Leung CK, Mo JM, Bernal JK, Chin EC, Leung WW, Au WW, Fong DY, Cheng CP, Siu PM. Effects of different walking intensities on alleviating depression in older adults with major depressive disorder: a pilot randomized controlled trial. *J Public Health Emerg* 2021;5:AB010.

AB011. Assessment of permissibility of behavioral change counseling in the Philippine Family Planning Program: basis for learning and development strategy

Aldrin Riel Boyano¹, Carmelita Canila²

¹University of Perpetual Help - Dr. Jose G. Tamayo Medical University, Community and External Services, Manila, Philippines;

²University of the Philippines Manila - College of Public Health, Department of Health Policy and Administration, Manila, Philippines
Correspondence to: Aldrin Riel Boyano. University of Perpetual Help - Dr. Jose G. Tamayo Medical University, Community and External Services, Manila, Philippines. Email: aboyano@uphsl.edu.ph.

Background: Family planning is one of the many aspects that affect maternal, child well-being and family economic welfare. Over the past 18 years, the Philippines has ranked 12th amongst Asian countries with the highest population growth rate, this could be due to the existing gaps in the manner of communication being imparted during family planning counseling especially during a pandemic.

Methods: The study employed a mixed methods design. A case study design was used to analyze the policies, guidelines and procedures of behavior change counseling and learning and development strategy. Meanwhile, a cross-sectional study was designed to determine the extent of behavioral change counseling skills and practices of frontline healthcare providers. It was participated by 9 key persons and 65 frontline health care providers.

Results: Results revealed that there is a high permissibility of behavioral change counseling in the current family planning because of a pending policy approval by the Department of Health Executive Committee which includes individual based behavioral change communication. The gaps identified included a no clear policy on the use of behavioral change counseling in the National Family Planning Program. Meanwhile, supervisory health care

providers such as the Public Health Nurse and City Family Planning Coordinator are the direct supervisors of frontline health care providers and are in charge of providing supportive supervision, appropriate job aids and training. However, the supervisors are not trained in supervision, communication strategies and family planning in general. On the other hand, both professional and barangay frontline health care providers perceived having minimal skills and practices in empathic listening and summarizing skills.

Conclusions: The recommendations include a learning and development strategy of frontliners and inter-agency policies with the aim of contributing to the improvement of the communication skills and involving behavioral change.

Keywords: Family planning; reproductive health; behavioral change; counseling

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab011

Cite this abstract as: Boyano AR, Canila C. Assessment of permissibility of behavioral change counseling in the Philippine Family Planning Program: basis for learning and development strategy. J Public Health Emerg 2021;5:AB011.

AB012. 'Care for Our Future Scholars': prevalence and psychosocial correlates of mental health of mainland Chinese PhD students in Hong Kong

Jing Jia, Nelson Chun-Yiu Yeung

The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China

Correspondence to: Jing Jia, The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China. Email: JIAJing@link.cuhk.edu.hk.

Background: Ph.D. students' prevalence of depression is high. International Ph.D. students' mental health should not be overlooked as well. According to the Education and Life Transition (ELT) model, international Ph.D. students usually go through transitions both from academic and acculturation lives. Unsuccessful transitions may cause stress and harm the psychological well-being of these academic sojourners. Mainland Ph.D. students occupy the largest population of non-local research postgraduate students in Hong Kong. As a special case of internal migration in China, they are at risk of suffering from poor mental health but remain understudied. This study aimed to assess the prevalence and characteristics of mental health problems (depression) among mainland Chinese Ph.D. students in Hong Kong and examine the major psychosocial risk factors.

Methods: An online cross-sectional survey was conducted with 511 full-time mainland Ph.D. students in Hong Kong. Participants were invited to complete questionnaires measuring their depression (DASS-21), psychosocial (perceived academic stress, acculturative stress, and social support) and demographic variables.

Results: The prevalence of probable depression was 30.9%. Multivariate logistic regression analysis revealed that higher perceived academic (ORs =1.66–2.49) and acculturative stress (ORs =1.09–1.20), lower perceived social support (ORs =0.39–0.68), lower perceived English proficiency (ORs =0.52–0.71), living in the county (OR =7.91) and

village (OR =8.38) (*vs.* city), coming from Northeastern (OR =8.78) and Western China (OR =12.78) (*vs.* Eastern China) were associated with greater risk of probable depression. Unexpectedly, risk predictors also included higher perceived Cantonese proficiency (OR =1.86), religious beliefs (OR =9.58) and acculturation experience (OR =2.91) (all $P < 0.05$).

Conclusions: The prevalence of probable depression among mainland Ph.D. students in Hong Kong is high. The economic development level positively predicts the psychological well-being of Chinese academic internal migrants. Universities may pay more attention to students from less-developed regions and care for their psychological needs. Practitioners may consider organizing stress-reducing activities and providing more social support for these students.

Keywords: Mental health; Chinese PhD student; prevalence; psychosocial correlates

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab012

Cite this abstract as: Jia J, Yeung NCY. 'Care for Our Future Scholars': prevalence and psychosocial correlates of mental health of mainland Chinese PhD students in Hong Kong. J Public Health Emerg 2021;5:AB012.

AB013. Impact of coronavirus disease (COVID-19) pandemic on sleep of undergraduate students: a systematic literature review

Rafael Lorenzo Valenzuela¹, Raphael Ian Velasco¹, Manuel Peter Paul Jorge²

¹College of Medicine, University of the Philippines, Manila, Philippines; ²Department of Physiology, College of Medicine, University of the Philippines, Manila, Philippines

Correspondence to: Rafael Lorenzo Valenzuela. College of Medicine, University of the Philippines, Manila, Philippines. Email: rgvalenzuela@up.edu.ph.

Background: The coronavirus disease has infected over 187 million globally and continually disrupting society. Global universities and colleges have closed and have shifted to distance learning. This sudden change in the living environment aggravates pre-pandemic mental and physical vulnerabilities of undergraduate students, including sleep. This systematic literature review aims to describe the prevalence of sleep problems, circadian rhythm disruption, sleep duration, sleep quality, insomnia symptoms, and psychological factors affecting the sleep of undergraduate students from various countries.

Methods: A systematic search on March 2, 2020 for articles published from January 1 to December 31, 2020 using the words “COVID-19,” “Coronavirus,” “Pandemic,” “Sleep,” “Mental Health,” and “Students” from PubMed, Scopus, and Cochrane yielded 757 articles. After removing duplicates, and excluding articles not meeting the selection criteria, 26 articles were included. Criteria for selection were: article is originally open-access and in English, participants are undergraduate students and not in the postgraduate level, sleep outcomes were assessed via objective or subjective tools, and participants did not belong to allied health courses.

Results: Included works came from the USA (5), Italy (5), Spain (1), China (8), Bangladesh (2), UAE (1), Jordan (1), India (2), and Indonesia (1). All included studies recorded data on sleep after stay-at-home orders. Point prevalence

of self-reported sleep problems varied across regions, while longitudinal studies showed that prevalence increased during stay-at-home orders. Most studies showed a significantly increased sleep duration, and circadian rhythm disruption. Increased stress, depression, anxiety, discrimination, shame, stigma, negative affect, increased cases, increased digital media use, and living in rural residence, being unemployed, inaccurate knowledge of pandemic, and being a college student negatively influenced sleep.

Conclusions: Results highlight the impact of stay-at-home orders on the sleep of undergraduates and reveal opportunities for local and global institutions to intervene with policies and programs to promote the well-being of this group.

Keywords: Severe Acute Respiratory Syndrome Coronavirus-2; lockdown; insomnia; Pittsburgh Sleep Quality Index

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab013

Cite this abstract as: Valenzuela RL, Velasco RI, Jorge MPP. Impact of coronavirus disease (COVID-19) pandemic on sleep of undergraduate students: a systematic literature review. J Public Health Emerg 2021;5:AB013.

AB014. Does poor awareness of antimicrobial resistance among general public and health professionals lead to high prevalence of it? – a study in a Sri Lankan urban setting

Yasodhara Gunasekara¹, Thilini Nisansala¹,
Tierney Kinnison², Isuru Wijewickrama¹,
Yasodha Basnayake¹, Sanda Kottawatta¹,
Ayona Silva-Fletcher², Ruwani Kalupahana¹

¹Department of Veterinary Public Health and Pharmacology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Kandy, Sri Lanka; ²The Royal Veterinary College, University of London, London, UK

Correspondence to: Yasodhara Gunasekara. Department of Veterinary Public Health and Pharmacology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Kandy, Sri Lanka. Email: yadeegunasekara@gmail.com.

Background: Antimicrobial resistance can be the next global pandemic. Because of high population density, urban areas will be more vulnerable. Urban wild animals may be exposed to antimicrobials through livestock, humans, and the environment. Hence, they could act as reservoirs and indicators of environmental contamination. This study aimed to investigate the antimicrobial resistance profile in *Escherichia coli* isolated from livestock and wild animals in an urban ecosystem and to investigate the knowledge, awareness and perception of antibiotics and antimicrobial resistance among general public and health professionals in an urban setting in Sri Lanka.

Methods: A one-square kilometer area with potential antimicrobial resistance sources was selected. Freshly voided fecal samples were collected from livestock and wild animals. Isolation, identification of *E. coli* and antimicrobial sensitivity test was performed for 12 antibiotics according to standard protocols. A self-administered questionnaire was conducted among the general public and analyzed. Health professionals were interviewed by an independent

interviewer and analyzed using thematic content analysis.

Results: Out of all tested *E. coli* isolates, 54.4% and 46.7% isolates from livestock and wildlife were resistant to at least one antibiotic. The highest resistance was for Ampicillin (36%) followed by Tetracycline and Nalidixic acid. Only 26% of the general public had a good ability to identify antibiotics correctly and 40% of them thought they had poor knowledge on antimicrobial resistance. Ten major themes were identified including thoughts among health professionals regarding how antimicrobial resistance develops and spreads.

Conclusions: Antibiotic resistance was observed for commonly used antibiotics in both livestock and wildlife in urban ecosystems. Both health professionals and the general public showed poor awareness regarding how antimicrobial resistance develops and spreads. This lack of awareness can lead to AMR development. Therefore, it is important to educate both health professionals and the general public regarding antimicrobial resistance in said setting in Sri Lanka.

Keywords: Antimicrobial resistance; *Escherichia coli*; general public; health professionals

Acknowledgments

Funding: This study was funded by a joint project between the Department of Veterinary Public Health and Pharmacology, Faculty of Veterinary Medicine and Animal Science, Sri Lanka and Royal Veterinary College, UK under UKRI Research England, the Bloomsbury SET Knowledge Exchange programme (grant no. CCF-17-7779) UK.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International

License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab014

Cite this abstract as: Gunasekara Y, Nisansala T, Kinnision T, Wijewickrama I, Basnayake Y, Kottawatta S, Silva-Fletcher A, Kalupahana R. Does poor awareness of antimicrobial resistance among general public and health professionals lead to high prevalence of it?—a study in a Sri Lankan urban setting. J Public Health Emerg 2021;5:AB014.

AB015. Association between usage of cooking oils and risk of lung cancer among women: a hospital-based case control study in Singapore

Xin Er Frances Jin¹, Adeline Seow^{1,2},
Wei Jie Seow^{1,2}

¹Saw Swee Hock School of Public Health, National University of Singapore and National University Health System, Singapore;

²Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore and National University Health System, Singapore

Correspondence to: Wei Jie Seow. Saw Swee Hock School of Public Health, National University of Singapore and National University Health System, Singapore. Email: ephswj@nus.edu.sg.

Background: Lung cancer is one of the most frequently diagnosed cancer and the leading cause of cancer deaths globally. It is also the third most frequently diagnosed cancer in Singaporean women. While previous studies have shown that cooking-related factors like cooking oil fumes are risk factors for lung cancer, they failed to take into consideration that cooking oils differ in properties like cooking fumes' mutagenicity, which have a direct impact on associated risk levels. Given that cooking is a universal activity, there is a need to examine the associations between different cooking oils and lung cancer risk, and the corresponding risk levels imposed on vulnerable populations like housewives due to their daily usage of these cooking oils.

Methods: A total of 399 lung cancer cases and 815 frequency-matched hospital controls from the Gene and Environment Life Study, a Singapore hospital-based case control study conducted from 2005 to 2008, were included in the analysis. Information on demographics, cooking oil use (corn, soybean, peanut, palm, blended vegetable, sunflower oil or lard), dietary and lifestyle factors were collected using questionnaires. Odds ratios (ORs) and

95% confidence intervals (CIs) were estimated using multivariable logistic regression, adjusting for potential confounders.

Results: Frequent lard users had higher odds of lung cancer (OR =3.42, 95% CI: 1.21–9.69) compared to blended vegetable oil users, particularly among never-smokers (OR =9.33, 95% CI: 1.13–76.75). In peanut oil users, ever-smokers had a higher odds of lung cancer (OR =7.52, 95% CI: 1.37–41.05) compared to blended vegetable oil users.

Conclusions: Cooking with lard and peanut oil are associated with lung cancer risk, though confirmation in prospective studies with bigger sample sizes is warranted.

Keywords: Lung cancer; cooking oil; Chinese women

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab015

Cite this abstract as: Jin XEF, Seow A, Seow WJ. Association between usage of cooking oils and risk of lung cancer among women: a hospital-based case control study in Singapore. J Public Health Emerg 2021;5:AB015.

AB016. The differences in the elderly's travel behaviour during the coronavirus disease (COVID-19) pandemic: metro and health cohort study in Hong Kong

Eun Yeong Choe¹, Yao Du², Guibo Sun²

¹Faculty of Architecture, The University of Hong Kong, Hong Kong, China; ²Department of Urban Planning and Design, The University of Hong Kong, Hong Kong, China

Correspondence to: Yao Du. Department of Urban Planning and Design, The University of Hong Kong, Hong Kong, China.

Email: yydu@connect.hku.hk.

Background: The coronavirus disease (COVID-19) pandemic led to unprecedented changes in people's activities, travel behaviour, daily life and overall well-being. In particular, the absence of adequate movement and outside contact for the older people has become a hazard to serious public health concerns in Hong Kong.

Methods: This study used longitudinal data from the Metro and Elderly Health in Hong Kong study, which is a natural experiment to investigate the impact of new MTR stations on elderly health. Baseline data were collected between May and December 2019 before the pandemic. In May 2020, we conducted a telephone-based survey of COVID-19's potential impact on the elderly's travel behaviour. We compared the differences in overall active travel and public transport use between participants at baseline and follow-up surveys.

Results: The results showed significant decline in the older people's travel behaviour during the pandemic. Active travel declined significantly more among the older people with lower activity levels and less social networking. Another finding was that public transport use reduced more among the older people living in the higher perceived neighbourhood walkability area than those living in the lower perceived neighbourhood walkability area. It suggests

that the older people of high walkable neighbourhoods tend to avoid using public transports and stay within walking distance in the neighbourhood area.

Conclusions: This study highlights the difference of older people to change their travel behaviour in the face of the pandemic. The uneven impacts of COVID-19 on the elderly's travel and public transport use could widen health inequalities in the older population. During the pandemic, addressing equity concerns on various changing policy instructions must be a priority for decision-makers in government.

Keywords: Coronavirus disease pandemic (COVID-19 pandemic); travel behaviour; physical activity; older people

Acknowledgments

Funding: This work is supported by Research Grants Council (RGC) of Hong Kong [17600818].

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab016

Cite this abstract as: Choe EY, Du Y, Sun G. The differences in the elderly's travel behaviour during the coronavirus disease (COVID-19) pandemic: metro and health cohort study in Hong Kong. J Public Health Emerg 2021;5:AB016.

AB017. Understanding the knowledge, awareness and perceptions of the gut microbiome and Fecal Microbiota Transplantation (FMT) in Singaporean adults

Lydia Wan Zhen Lim¹, Rachel Quek²,
Kai Yee Toh¹, Jeremy Lim³

¹Laboratory and Operations, AMILI Pte Ltd., Singapore; ²Marketing and Research, AMILI Pte Ltd., Singapore; ³Saw Swee Hock School of Public Health, National University of Singapore, Singapore
Correspondence to: Lydia Wan Zhen Lim. Laboratory and Operations, AMILI Pte Ltd., Singapore. Email: lwzlydia@gmail.com.

Background: Recent scientific developments have suggested Fecal Microbiota Transplantation (FMT) as a promising treatment modality for diseases as diverse as Inflammatory Bowel Disease and autism. Recent studies have also highlighted the importance of the gut microbiome (GM) in many common diseases such as diabetes. Nonetheless, the level of public knowledge and perceptions of the GM and FMT remain unclear. This study aims to identify the degrees of knowledge, awareness and perception in Singaporean adults regarding human GM and FMT, which would allow the implementation of education programmes that effectively inform target groups.

Methods: A 19-question online survey was administered to 1,831 Singaporean adults from the Singapore Population Health Studies Online Panel, a population-based cohort consisting of Chinese, Malay and Indian participants. The questionnaire provided information about FMT and GM, and surveyed participants' knowledge and perceptions of both topics.

Results: Only 32.6% of participants have ever heard of GM before. However, 92.7% have consumed probiotic drinks, of which almost half consumed for gut health. Nearly 84.8% have not heard of FMT before, but 72.0% would consider undergoing FMT to treat CDI. Approximately 58.1% chose colonoscopy over the nasal passage as the preferred mode

of FMT. Preference for oral medication (57.2%) and being uncomfortable with the concept of FMT (54.1%) were the main reasons behind refusing FMT. About 52.1% were much more inclined to accept FMT if orally administered in capsule-form. Willingness to receive FMT depended on recommendation from healthcare providers (77.1%) and clinical studies (59.7%).

Conclusions: Awareness regarding GM and FMT were relatively low despite high engagement amongst participants in behaviours that improve gut health. Strategies to raise awareness may focus on the benefits of GM to cater to an increasingly health-conscious society. Barriers to accepting FMT may be overcome by making validated sources of information readily available for the public.

Keywords: Awareness; gut microbiome; fecal microbiota transplantation; knowledge

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab017

Cite this abstract as: Lim LWZ, Quek R, Toh KY, Lim J. Understanding the knowledge, awareness and perceptions of the gut microbiome and Fecal Microbiota Transplantation (FMT) in Singaporean adults. J Public Health Emerg 2021;5:AB017.

AB018. Social vulnerability, stressors and adaptive strategies among migrant workers in Singapore

Aysha Farwin, Huso Yi, Amanda Low, Natasha Howard

Saw Swee Hock School of Public Health, National University of Singapore, Singapore

Correspondence to: Aysha Farwin. Saw Swee Hock School of Public Health, National University of Singapore, Singapore. Email: ephaysh@nus.edu.sg.

Background: Migrant workers make up approximately 4.8% of the global labour force of 167 million workers. Despite their contributions to the development of the receiving countries, low-wage migrant workers are not adequately protected by the labour and health policies putting them at risk of precarious working conditions and adverse health outcomes. The study aims to identify the sources of stressors and explore the interplay between social vulnerabilities and adaptive strategies to health risk among low-wage dormitory-dwelling migrant workers in Singapore.

Methods: In-depth interviews with 33 migrant workers that focused on their living conditions, individual and collective social capital of migrant workers, and health risks and practices were conducted by the research team. Interpretive thematic analysis was used to identify the sources and pathways of vulnerabilities, their impacts on health and their strategies to overcome the hardships.

Results: Major stressors that resulted in the susceptibility of migrant workers to adverse health outcomes were predominantly structural in nature, including inadequate labour protection, dire living conditions, barriers to healthcare access, food insecurity and social isolation. In addition, employer gatekeeping of healthcare and over-reliance on employers for essential needs disempowered

migrant workers and caused them to adopt maladaptive coping strategies to deal with their everyday experiences.

Conclusions: Non-inclusive protection systems were underlying sources of vulnerabilities, further propagated by their living conditions, making migrant workers susceptible to health risks. Collective agency needs to be developed to respond to the risk posed by these environments. Resilient health systems should be inclusive and focus on mitigating the harms caused by socio-environmental vulnerabilities of underserved populations.

Keywords: Migrant workers; vulnerability; structural stressors; coping mechanisms; resilience

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab018

Cite this abstract as: Farwin A, Yi H, Low A, Howard N. Social vulnerability, stressors and adaptive strategies among migrant workers in Singapore. J Public Health Emerg 2021;5:AB018.

AB019. Systematic review and meta-analysis of the current coronavirus disease 2019 vaccines for potential dose-optimal vaccine allocation based on reactogenicity and immunogenicity

Wesley Rosete, Rein Gerard Salenga, Aubrey Mae Divinagracia

New Era University, Center for Medical and Allied Health Sciences, Manila, Philippines

Correspondence to: Wesley Rosete. New Era University, Center for Medical and Allied Health Sciences, Manila, Philippines. Email: wesleyrosete@gmail.com.

Background: With the limited coronavirus disease 2019 vaccine stockpile available, developing an equitable vaccination allocation strategy to maximize the number of people that escape infection is an ongoing global challenge. This study aims to bridge the reactogenicity and immunogenicity effects of coronavirus disease 2019 vaccines to a potential dose-optimal vaccine allocation.

Methods: We included Phase 1 to 3 randomized clinical trials conducted in healthy human subjects 18 years old and older. Data were pooled via random-effects models. Risk ratio (RR) and standardized mean difference (SMD) for reactogenicity and immunogenicity responses were used, respectively. Risk of bias and quality of evidence assessments were performed according to Cochrane's Risk of Bias tool and the Grading of Recommendations, Assessment, Development and Evaluation Approach Handbook.

Results: Fifteen trials comprising 99,102 subjects were included. Local adverse reactions [RR =1.97; 95% CI: 1.61–2.40, P<0.00001] and neutralizing antibody seroconversion rate [SMD =2.84; 95% CI: 1.23–4.45, P=0.0006] were higher using low dosage vaccines on first vaccination. Local

and systemic adverse reactions, neutralizing antibody titer and seroconversion rate were higher using high dosage vaccines on the first and second vaccinations and low dosage vaccines on second vaccination (All RR >1.0, SMD >0 and P<0.05). At 14/21 days dose-timing using low and high dosage vaccines and at 28/56 days dose-timing using low dosage vaccines, neutralizing antibody seroconversion rate was significantly increased [All SMD >0 and P<0.05]. At 28/56 days dose-timing, neutralizing antibody titer [SMD =1.46; 95% CI: 0.26–2.66, P=0.02] using low dosage vaccines and systemic adverse reactions [RR =2.25; 95% CI: 1.21–4.19; P=0.01] using high dosage vaccines were significantly increased.

Conclusions: The current vaccines have uniquely varying magnitudes of reactogenicity and immunogenicity responses per dosage regimen and dose-timing. Vaccinations have shown that the second dose has bigger effects on immunogenicity responses than the first. Therefore, vaccination allocation strategy should be dose-optimal to maximize the immune responses while minimizing reactogenicity responses and achieve equitable use.

Keywords: SARS-CoV-2; coronavirus disease vaccines (COVID-19 vaccines); reactogenicity; immunogenicity; dose-optimal vaccine allocation

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-

commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab019

Cite this abstract as: Rosete W, Salenga RG, Divinagracia AM. Systematic review and meta-analysis of the current coronavirus disease 2019 vaccines for potential dose-optimal vaccine allocation based on reactogenicity and immunogenicity. J Public Health Emerg 2021;5:AB019.

AB020. The role of telehealth interventions on clinical outcomes in patients with chronic hepatitis C infection: a systematic review

Lok Yee Jane Lam, Hui Ling Yen

School of Public Health, The University of Hong Kong, Hong Kong, China

Correspondence to: Lok Yee Jane Lam. School of Public Health, The University of Hong Kong, Hong Kong, China. Email: jane1230@connect.hku.hk.

Background: Despite the development of effective treatments and vaccines, chronic viral hepatitis remains the predominant cause of liver cirrhosis and hepatocellular carcinoma. Only 1% have adequate access to treatment globally. Telemedicine has gained wider attention during coronavirus disease (COVID-19) and has been proposed as an alternative to traditional healthcare modalities. This review examined and synthesized available data on the impact of telemedicine on health outcome and patterns of usage of healthcare services in chronic HCV patients, aiming to provide evidence for potential telehealth interventions in improving accessibility to HCV treatment.

Methods: Databases including PubMed and EMBASE were searched to compare the impact of telemedicine *vs.* standard care on chronic HCV patients' rates of sustained virologic response, treatment completion rates and loss to follow-up. The qualities of included studies were assessed by a mixed methods appraisal tool. Relative risk (RR) estimates were pooled by meta-analyses and stratum-specific analyses were performed to evaluate differences by nationality and telemedicine modalities.

Results: Twelve observational studies conducted in Canada, the United States, Australia, Taiwan and Mexico were included. Sustained virologic response rates attained in telemedicine were equivalent to that attained in traditional healthcare modalities. The pooled RR of sustained virologic response rates in participants treated by telemedicine was 0.864 [95% confidence interval (CI): 0.769–0.960]. Compared to standard modalities, chronic HCV patients

receiving telemedicine had a higher compliance rate [pooled RR of treatment completion rate: 0.541 (95% CI: 0.256–0.826)], lower dropout rate [pooled RR of loss to follow-up: 0.555 (95% CI: 0.132–0.978)]. Major barriers in standard modalities included geographic inconvenience, financial constraints, and psycho-social challenges.

Conclusions: Telemedicine for HCV management yields equivalent clinical outcomes to standard care, while circumventing the limitations of geographic and economic barriers. Its roles in facilitating in-between visit monitoring and promoting health empowerment have been demonstrated. Further research is yet required to determine optimal ways for telemedicine integration into routine clinical care management.

Keywords: Chronic hepatitis; hepatitis C; telehealth; telemedicine; digital health

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab020

Cite this abstract as: Lam LYJ, Yen HL. The role of telehealth interventions on clinical outcomes in patients with chronic hepatitis C infection: a systematic review. J Public Health Emerg 2021;5:AB020.

AB021. Malaria in rural northern Uganda: a household survey of Malaria infection rates and common prevention strategies

Heather Wipfli, Sarah Phillips,
Peninah Tumuhimbise, Kenneth Odur,
Ally Koh, Kathy Lam, Maya Spencer,
Valeria Flores-Cadena, Kayla Samimi, Abigail Kim

Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

Correspondence to: Sarah Phillips. Keck School of Medicine, University of Southern California, Los Angeles, CA, USA. Email: sarahphi@usc.edu.

Background: Malaria continues to be one of the leading causes of morbidity and mortality in Sub-Saharan Africa despite years of preventative efforts. While over 80% of Ugandans have access to mosquito nets, Uganda is one of six countries that account for over half of global malaria cases (World Health Organization, 2019. World malaria report 2019. World Health Organization. <https://apps.who.int/iris/handle/10665/330011>. License: CC BY-NC-SA 3.0 IGO). Pregnant women are particularly vulnerable to malaria, due to increased susceptibility and reduced treatment options, making them a population of interest. This survey of 512 households assessed the efficacy and usage of tools commonly used in malaria prevention, namely mosquito nets and insecticides.

Methods: In collaboration with the Peace Corps, community member volunteers aged 18–22, trained by Ray United Foundation Corp workers, distributed PC-provided mosquito nets and conducted surveys following receipt of consent from the heads of each household. Analysis was conducted in Qualtrics.

Results: Of 512 households, 154 males and 179 females, 333/512 (65.03%) households, reported having malaria in the past six months; 187/330 (56.66%) used insecticides 2–3 times per year. Of 508 households, 475 (93.2%) reported it was extremely difficult to access insecticides 430/510 (84.32%) said they knew how to properly hang and

use a mosquito net, and 311/475 (65.47%) had malaria in the past six months. Of 511 households, 71 had a pregnant woman (13.89%) and 54/71 (76.05%) reported having malaria.

Conclusions: The majority of the households that had reported having malaria in the past six months also had access to mosquito nets, suggesting that net access alone isn't sufficient for malaria reduction. Insecticide access is another challenge, for reasons such as availability and high cost. Persistently high infection rates, particularly among pregnant women, suggest that new strategies are needed to reduce the burden of malaria in Uganda.

Keywords: Malaria; mosquito net; insecticide

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab021

Cite this abstract as: Wipfli H, Phillips S, Tumuhimbise P, Odur K, Koh A, Lam K, Spencer M, Flores-Cadena V, Samimi K, Kim A. Malaria in rural northern Uganda: a household survey of Malaria infection rates and common prevention strategies. J Public Health Emerg 2021;5:AB021.

AB022. Angiotensin receptor blocker (ARB) versus angiotensin-converting enzyme inhibitor (ACE-I) use for new-onset pneumonia and lung infections: a propensity score-matched population-based cohort study with competing risk analyses

Jeremy M. H. Hui^{1,2}, Jiandong Zhou³, Yan Hiu A. Lee^{1,4}, Oscar H. I. Chou^{1,2}, Teddy T. L. Lee⁵, Tong Liu⁶, Abraham K. C. Wai⁵, Bernard M. Y. Cheung², Qingpeng Zhang⁷, Gary Tse^{6,8}

¹Cardiovascular Pharmacology Unit, Cardiovascular Analytics Group, China-UK Collaboration, Hong Kong, China; ²Department of Medicine, The University of Hong Kong, Hong Kong, China; ³Nuffield Department of Medicine, University of Oxford, Oxford, UK; ⁴Department of Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong, China; ⁵Emergency Medicine Unit, The University of Hong Kong, Hong Kong, China; ⁶Department of Cardiology, Second Hospital of Tianjin Medical University, Tianjin, China; ⁷School of Data Science, City University of Hong Kong, Hong Kong, China; ⁸Department of Medicine, Kent and Medway Medical School, Kent, UK

Correspondence to: Gary Tse. Department of Medicine, Kent and Medway Medical School, Kent, UK. Email: gary.tse@kmms.ac.uk.

Background: The effects of angiotensin receptor blockers (ARB) and angiotensin-converting enzyme inhibitors (ACE-I) on new-onset respiratory tract infections remain unclear. This study aimed to compare the risks of pneumonia and lung infections between ARB and ACE-I users.

Methods: This retrospective cohort study included patients who were prescribed ARB/ACE-I in Hong Kong between 1st January 2000 and 31st August 2020. The primary outcomes were new-onset pneumonia and new-onset bacterial, viral, and influenza lung infections. The secondary outcomes were pneumonia, cardiovascular, and all-cause

mortality. Patients <18 years old or with prior diagnoses of the above events were excluded. A one-year lag time since initial ARB/ACE-I use was introduced to account for the latency of outcomes and reverse causality. 1:1 propensity score matching was performed based on demographics, prior comorbidities, use of other medications, and laboratory tests.

Results: After 1:1 propensity score matching, the study cohort consisted of 54,436 ARB users (45.9% male, mean age: 69.3±13.6 years, median follow-up time: 4.8 years [interquartile range (IQR): 3.1–7.8]) and 54,436 matched ACE-I users [54.0% male, mean age: 68.3±13.6 years, median follow-up time: 7.6 years (IQR: 4.3–13.5)]. ARB use was associated with higher risks of pneumonia [hazard ratio (HR): 5.73, 95% confidence interval (CI): 4.49–7.32, P<0.0001], bacterial lung infection (HR: 4.17, 95% CI: 2.94–5.91, P<0.0001), viral lung infection (HR: 4.02, 95% CI: 1.83–8.83, P=0.0005), influenza lung infection (HR: 9.84, 95% CI: 6.61–14.63, P<0.0001), pneumonia mortality (HR: 2.86, 95% CI: 2.78–2.95, P<0.0001), cardiovascular mortality (HR: 2.36, 95% CI: 2.30–2.42, P<0.0001), and all-cause mortality (HR: 1.82, 95% CI: 2.30–2.42, P<0.0001) than ACE-I use. These associations remained significant across follow-up times since initial ARB/ACE-I use. However, in the first three years, there were no significant differences in the risks of bacterial and viral lung infections, and mortality between ARB and ACE-I users. The results were confirmed by sensitivity analyses with cause-specific hazard models and sub-distribution hazard models.

Conclusions: The use of ARB was associated with higher risks of pneumonia, lung infections, and mortality than ACE-I use. The decision whether to prescribe ARB or ACE-I for short-term treatment should be made by weighing pneumonia and mortality risks.

Keywords: Angiotensin receptor antagonists; angiotensin-converting enzyme inhibitors; pneumonia; influenza; mortality

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related

to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant

DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab022

Cite this abstract as: Hui JMH, Zhou J, Lee YHA, Chou OHI, Lee TTL, Liu T, Wai AKC, Cheung BMY, Zhang Q, Tse G. Angiotensin receptor blocker (ARB) versus angiotensin-converting enzyme inhibitor (ACE-I) use for new-onset pneumonia and lung infections: a propensity score-matched population-based cohort study with competing risk analyses. J Public Health Emerg 2021;5:AB022.

AB023. Metformin versus sulfonylurea use for new-onset dementia and anxiety disorder and depression: a propensity score-matched population-based cohort study with competing risk analyses

Jeremy M. H. Hui^{1,2}, Jiandong Zhou³,
Teddy T. L. Lee⁴, Kyle Hui^{1,2}, Oscar H. I. Chou^{1,2},
Yan Hiu A. Lee^{1,5}, Abraham K. C. Wai⁴,
Kamalan Jeevaratnam⁶, Carlin Chang², Tong Liu⁷,
Gary Tse^{7,8}

¹Diabetes Research Unit, Cardiovascular Analytics Group, China-UK Collaboration, Hong Kong, China; ²Department of Medicine, The University of Hong Kong, Hong Kong, China; ³Nuffield Department of Medicine, University of Oxford, Oxford, UK; ⁴Emergency Medicine Unit, The University of Hong Kong, Hong Kong, China; ⁵Department of Medicine & Therapeutics, The Chinese University of Hong Kong, Hong Kong, China; ⁶Faculty of Health and Medical Sciences, University of Surrey, Guildford, UK; ⁷Department of Cardiology, Second Hospital of Tianjin Medical University, Tianjin, China; ⁸Department of Medicine, Kent and Medway Medical School, Kent, UK

Correspondence to: Gary Tse. Department of Medicine, Kent and Medway Medical School, Kent, UK. Email: gary.tse@kmms.ac.uk.

Background: The effects of metformin and sulfonylurea on new-onset cognitive dysfunction in type 2 diabetes mellitus (T2DM) remain unclear. This study aimed to compare the risks of dementia and anxiety disorder and depression between metformin and sulfonylurea users.

Methods: This retrospective cohort study included patients with T2DM in Hong Kong between 1st January 2013 and 31st December 2019. The primary outcomes were new-onset dementia and new-onset anxiety disorder and

depression. The secondary outcome was all-cause mortality. Patients >18 years old with metformin or sulfonylurea use were included. Patients with prior diagnoses of the above events or relevant medications usage were excluded. 1:1 propensity score matching was performed based on demographics, prior comorbidities, use of other medications, and laboratory tests.

Results: After 1:1 propensity score matching, the final study cohort consisted of 21,244 matched metformin users (45.2% male, mean age: 67.9±12.0 years) and 21,244 sulfonylurea users (49.6% male, mean age: 66.8±13.7 years). The overall mean follow-up time was 4.33±1.79 years. Metformin use was associated with lower risks of dementia [hazard ratio (HR): 0.88; 95% confidence interval (CI): 0.80–0.97, P=0.0074], anxiety disorder and depression (HR: 0.71, 95% CI: 0.61–0.82, P<0.0001), and all-cause mortality (HR: 0.83, 95% CI: 0.80–0.85, P<0.0001) than sulfonylurea use. These associations remained significant in the sensitivity analyses with cause-specific hazard models and sub-distribution hazard models.

Conclusions: The use of metformin was associated with lower risks of dementia, anxiety disorder and depression, and mortality than sulfonylurea use in patients with T2DM.

Keywords: Metformin; sulfonylurea; cognitive dysfunction; mortality; diabetes mellitus; type 2

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons

Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab023

Cite this abstract as: Hui JMH, Zhou J, Lee TTL, Hui K, Chou OHI, Lee YHA, Wai AKC, Jeevaratnam K, Chang C, Liu T, Tse G. Metformin versus sulfonylurea use for new-onset dementia and anxiety disorder and depression: a propensity score-matched population-based cohort study with competing risk analyses. *J Public Health Emerg* 2021;5:AB023.

AB024. Out-of-pocket payment and health insurance utilization by migration status in China

Wanyue Chen, Lucy Porter Jordan

Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong, China

Correspondence to: Wanyue Chen. Department of Social Work and Social Administration, The University of Hong Kong, Hong Kong, China. Email: cwanyue@connect.hku.hk.

Background: In China, migrants and non-migrants, categorized by the possession of local household registration (i.e., hukou), obtain different health insurance benefits and procure diversified support from the healthcare system. Previous studies identified that migrants received less reimbursement than local residents, and were not well protected by health insurance, but limited studies attempt to examine the association between migration and out-of-pocket payment of medical expense (Zhang, Nikoloski & Mossialos, 2017; Qin, Pan & Liu, 2014; Chen, Zhang, Renzaho, Zhou, Zhang & Ling, 2017; Zhao *et al.*, 2014). The current study seeks to fill this gap. Diversified health insurance programs may influence the effect of hukou-based migration on out-of-pocket, which will also be examined.

Methods: We used one wave of data from China Family Panel Studies (2014, N=19,133). Multiple linear and logistic regression models were applied. Subsamples were created by insurance participation to explore the heterogeneous effect. Migration coefficients were compared across groups through testing interactions and conducting Chow tests.

Results: The main findings are as follows. Migration decreased the likelihood of utilizing reimbursement by 35%. Migrants had lower medical expenditure ($b=-965.8$, $P<0.001$) and out-of-pocket cost ($b=-425.2$, $P<0.001$), but higher out-of-pocket ratios ($b=0.05$, $P<0.001$) than local residents, and this association with out-of-pocket ratios also existed in subsamples that participated in basic health insurances, although the coefficients across groups were not

significantly different.

Conclusions: The healthy migrant hypothesis might explain why migrants cost less, but migrants still received insufficient support from health insurance which indicates long-term financial and health risks. Currently, one in every four Chinese people are migrants, but hukou-based health policies excluded migrants from Universal Health Coverage. The small-scale migrant-oriented policies that were established in recent years shall be expanded and benefit more people.

Keywords: Migration; universal health coverage; out-of-pocket payment; health insurance

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab024

Cite this abstract as: Chen W, Jordan LP. Out-of-pocket payment and health insurance utilization by migration status in China. J Public Health Emerg 2021;5:AB024.

AB025. The development of a smart health technological framework for improving the health of ageing population in the Smart City (Hong Kong)

Tak Wing Tsui¹, Sai Chung Ip², King Nam Hung³, Tsui Wa Tam⁴, Wai Fan Cheng⁴, Cheong Fai Li⁵, Kam Ming Lau⁶

¹Shape, Vocational Training Council, Hong Kong, China;

²Department of Marketing, Hang Seng University of Hong Kong, Hong Kong, China; ³Quality Assurance, HKU SPACE, Hong Kong, China; ⁴Marketing, Marketing and Advertising Alumni Ltd., Hong Kong, China; ⁵International Development Office, Vocational Training Council, Hong Kong, China; ⁶Centre for Learning & Teaching, Vocational Training Council, Hong Kong, China

Correspondence to: Tak Wing Tsui. Shape, Vocational Training Council, Hong Kong, China. Email: paulpaulmofo@gmail.com.

Background: The purpose of this research is to study the use of innovative technologies in developing an innovative Smart Health technological framework for ageing population. This framework can enhance health education and increase knowledge of preventive measures. The health of ageing population is becoming one of the major concerns in Hong Kong. According to the population projections by Census and Statistics Department, the number of elderly persons aged 65 and over is projected to increase from 1.16 million (17% of the total population) in 2016 to 1.82 million (25%) in 2026. According to the second edition of Smart City Blueprint for Hong Kong (Blueprint 2.0), the vision is to embrace innovation and technology to build a world-famous Smart Hong Kong and the mission includes providing better care for the elderly and making people happier and healthier.

Methods: Tsui, Pang and Cheng (2015) and Tsui *et al.* (2020) have developed an innovative technological framework for ageing population. In the framework, different innovative technologies (such as mobile technologies, cloud computing, search engines, online health portals, social media and networks, wearable health

devices) are applied for improving the quality of life of ageing population. This framework is continuously being enhanced to include artificial intelligence, online medical services and Internet of Things for developing an innovative Smart Health technological framework for this research.

Results: This framework was successfully applied at the course 'Live Nutritiously Regimen and Technology' run by the Elder Academy of a local university and has proven to improve the health education of an ageing population.

Conclusions: The research findings can be applied across a range of public health and education stakeholders for improving the health education as well as the health of ageing population in Hong Kong.

Keywords: Smart City; technology; ageing population; innovation

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab025

Cite this abstract as: Tsui TW, Ip SC, Hung KN, Tam TW, Cheng WF, Li CF, Lau KM. The development of a smart health technological framework for improving the health of ageing population in the Smart City (Hong Kong). J Public Health Emerg 2021;5:AB025.

AB026. Cross-regional collaboration to promote digital mental health equity in the Asia Pacific in the context of coronavirus disease (COVID-19)

Jill Murphy¹, Erin E. Michalak¹,
Andrew Greenshaw², Chee H. Ng³,
Arun Ravindran⁴, Mellissa Withers⁵,
Promit Ananyo Charkraborty¹, Raymond W. Lam¹

¹Psychiatry, The University of British Columbia, Vancouver, Canada;

²Psychiatry, University of Alberta, Canada; ³Psychiatry, University of Melbourne, Australia; ⁴University of Toronto, Toronto, Canada;

⁵Institute on Inequalities in Global Health, University of Southern California, Los Angeles, CA, USA

Correspondence to: Jill Murphy, Psychiatry, The University of British Columbia, Vancouver, Canada. Email: jill.murphy@ubc.ca.

Background: The coronavirus disease (COVID-19) pandemic has led to an unprecedented shift to the use of digital mental health technologies. While this presents an opportunity to improve access to care, there is a risk of excluding populations experiencing barriers to digital health access. The APEC Digital Hub for Mental Health ('the Digital Hub') and the Research on Mental Health Equity in the Asia Pacific-Digital Research Cluster (REMAP-Digital) have developed a cross-regional collaboration to advance research on digital mental health equity in the Asia Pacific. The objectives of this presentation are: (I) to present the results of a study identifying barriers and opportunities for equitable digital mental health care; and (II) to introduce opportunities for cross-regional collaboration.

Methods: We use a mixed method, modified Delphi consensus approach consisting of consultations with policy makers (n=8), healthcare providers (n=7) and people with lived experience (n=8), and an online survey (n=2578). We used thematic analysis to identify key themes emerging from the consultations. Survey analysis consisted of descriptive statistics, T-tests and ANOVA to identify associations between the relevant key variables.

Results: Results identified (I) several populations at risk of

experiencing access barriers to digital mental health care, (II) key access and delivery barriers from the perspective of service users and providers, (III) resources and approaches needed to improve equitable digital care access.

Conclusions: Digital mental health presents an opportunity to improve access to care, but its delivery must prioritize access by vulnerable populations. Cross-regional recommendations for best practices can help to support the equitable delivery of digital care. The collaboration led by the Digital Hub and REMAP-Digital cluster has great potential to advance evidence to guide Asia Pacific countries to maximize the delivery of equitable digital mental health care.

Keywords: Mental health; digital health; coronavirus disease (COVID-19); equity; Asia Pacific

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab026

Cite this abstract as: Murphy J, Michalak EE, Greenshaw A, Ng CH, Ravindran A, Withers M, Charkraborty PA, Lam RW. Cross-regional collaboration to promote digital mental health equity in the Asia Pacific in the context of coronavirus disease (COVID-19). J Public Health Emerg 2021;5:AB026.

AB027. Long coronavirus disease (COVID-19) syndrome: a comprehensive review of its effect on various organ systems and recommendation on rehabilitation plans

Michael Zhipeng Yan, Ming Yang,
Dennis Tse-Wah Law, Wing-Sze Yuen,
Ching-Lung Lai

Medicine, The University of Hong Kong, Hong Kong, China
Correspondence to: Michael Zhipeng Yan. Medicine, The University of Hong Kong, Hong Kong, China. Email: u3537821@hku.hk.

Background: Despite the majority of coronavirus disease (COVID-19) survivors fully recovered within a few weeks. Many COVID-19 survivors suffer from long-lasting problems similar to the multi-organ damage in acute infection, or continuous symptoms after discharge. Post-COVID-19 Syndrome (PC19S) refers to the diseases in survivors 4 months after initial symptoms onset. It requires further understanding of the systemic effects, manifestations and rehabilitations of PC19S in survivors to restore functional recovery.

Methods: A literature search was done on databases to evaluate the systemic effects, its manifestations and rehabilitations of PC19S patients. The keywords were: Long COVID-19 Syndrome, Post-COVID-19 Syndrome, Rehabilitations.

Results: Multi-organ impairments persist after recovery in PC19S. Common cardiopulmonary presentations were persistent lung pathology (63%), pulmonary function deficit (54%), diffusion impairment (47.2%), endothelial-cell dysfunctions, vasculitis changes and myocarditis (60%). Haematological impairments included elevated D-dimer (30%), persistently elevated cytokines and white-blood-cells (90%), and decreased lymphocytes and platelet counts. Renal injury such as acute-kidney-injury (<1%), decreased glomerular-filtration-rate (60%) and chronic-renal-failure

(1.4%) were observed. A three-tier rehabilitation system was proposed: low-risk patients were managed with surveillance and telemedicine consultations; moderate-risk patients by community-therapy teams with regular follow-up, and high-risk patients by multidisciplinary care with specialist one-stop clinics. A six-week rehabilitation program gave promising clinical outcomes.

Conclusions: The literature on long-term effects of PC19S, effective rehabilitation programs, cost per quality-adjusted-life-year and patient demographics are limited to date. Standardization of PC19S-severity-reporting-system is required to facilitate clinical communications and evaluations of disease progressions. A clinical scoring system that includes functional assessment, self-reported symptoms, prognosis of multiorgan involvement, biomarkers, radiological findings at different times after discharge should be established to stratify the risk of patients and predict morbidity and mortality to facilitate rehabilitations. The three-tier rehabilitation system should start early to improve long-term recovery of PC19S patients. Revision of rehabilitation guidelines is required to optimize function, disability and earlier return to premorbid status.

Keywords: Long coronavirus disease syndrome (long COVID-19 syndrome); post-COVID-19 syndrome; prevention; rehabilitations

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the

noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab027

Cite this abstract as: Yan MZ, Yang M, Law DTW, Yuen WS, Lai CL. Long coronavirus disease (COVID-19) syndrome: a comprehensive review of its effect on various organ systems and recommendation on rehabilitation plans. *J Public Health Emerg* 2021;5:AB027.

AB028. Teaching bioethics and bioethics research using inquiry-based pedagogy

Leander Marquez

Philosophy, University of the Philippines, Diliman, Philippines

Correspondence to: Leander Marquez. Philosophy, University of the Philippines, Diliman, Philippines. Email: lpmarquez@up.edu.ph.

Background: Bioethics, which was previously confined to the related studies of philosophy, ethics, biology, and medicine is a growing field of study that has broadened to include public health, law, and globalization among others. This has made the teaching of bioethics and bioethics research education increasingly significant. In this light, this paper discusses how bioethics and bioethics research can be taught using an inquiry-based pedagogy, particularly, through building a community of inquiry.

Methods: The succeeding discussions detail each aspect of the Lipman-Sharp five-point approach to building a community of inquiry. The method is then applied to several concepts and issues in bioethics and bioethics research. These concepts and issues serve as sample cases to determine how they can be taught to students using the Lipman-Sharp approach. There is a clear distinction between bioethics education and bioethics research education.

Results: For this reason, several cases are presented to entirely cover both areas of investigation. The result of this application is a pedagogical approach to teaching bioethics and bioethics research. It is expected that if the results of this research are adopted by educational institutions and organizations that are concerned with bioethics, it can help improve how bioethics and bioethics research is taught and

practiced in many parts of the world.

Conclusions: Such conclusions are drawn from the inherent nature of the community of inquiry to be democratic and reasonable. As such, the teaching of bioethics as well as bioethics research education will avoid being didactic, infallible, and teacher-centered. Rather, it would be reflective, open to questions, and student-driven.

Keywords: Bioethics; education; community of inquiry; global health; research

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab028

Cite this abstract as: Marquez L. Teaching bioethics and bioethics research using inquiry-based pedagogy. J Public Health Emerg 2021;5:AB028.

AB029. Health professionals with human immunodeficiency virus on antiretroviral therapy: a mixed design study

Lheanne Ruth Castil, Renei Iza Niu, Carla Marie Calosa, Gia Margarette Cruz, Agnes Raymundo

College of Nursing, Manila Central University, Manila, Philippines
Correspondence to: Agnes Raymundo. College of Nursing, Manila Central University, Manila, Philippines. Email: ging2raymundo@yahoo.com.

Background: While health professionals have specific roles in the care and treatment of clients with human immunodeficiency virus, there is a growing cohort of infected health professionals in the Philippines on antiretroviral treatment. The study determined the level of knowledge, degree of disposition, and level of adherence of a select group of Filipino health professionals with human immunodeficiency virus to antiretroviral treatment. Moreover, the study explored their lived experiences while on antiretroviral treatment.

Methods: The study employed the sequential explanatory mixed method of inquiry. It was conducted in a non-government human immunodeficiency virus support center. The purposive sample (N=30) consisted of Filipino health professionals diagnosed with non-occupational related human immunodeficiency virus. The study utilized the descriptive-correlational design for the quantitative phase. Data were collected using validated self-administered questionnaires developed by the researchers. The qualitative phase applied the descriptive phenomenology design using face-to-face, in-depth, semi-structured interviews. The hypotheses were tested using Fisher's statistics. Colaizzi's method was used to analyze the qualitative data.

Results: The study revealed that participants had high levels of knowledge and adherence and a very high degree of disposition to antiretroviral therapy. There were no significant differences among the measured variables. Four themes emerged in the qualitative phase, namely: on antiretroviral therapy, it is a struggle, for antiretroviral

therapy, it is a partnership, with antiretroviral therapy, there is anchorage, and through antiretroviral therapy, there is valuing of self. Study participants struggled with ambiguity while on antiretroviral therapy. However, with the immense support, they were able to assert control over their lives.

Conclusions: A high level of adherence is required for antiretroviral therapy to be effective. Adherence to antiretroviral therapy entails client empowerment and a supportive environment. Continued research and key policy changes could greatly improve health outcomes for human immunodeficiency virus-positive health professionals.

Keywords: Antiretroviral therapy; health professionals; human immunodeficiency virus; mixed design study

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab029

Cite this abstract as: Castil LR, Niu RI, Calosa CM, Cruz GM, Raymundo A. Health professionals with human immunodeficiency virus on antiretroviral therapy: a mixed design study. J Public Health Emerg 2021;5:AB029.

AB030. Characterizing and forecasting common infectious diseases in China: a time series analysis

Zonglin Dai¹, Eric H. Y. Lau^{1,2}

¹School of Public Health, The University of Hong Kong, Hong Kong, China; ²Laboratory of Data Discovery for Health, Hong Kong Science and Technology Park, Hong Kong, China

Correspondence to: Zonglin Dai. School of Public Health, The University of Hong Kong, Hong Kong, China. Email: aland@hku.hk.

Background: Common infectious diseases affect over 5 million people in China every year. In this study, we characterized the 10 most common infectious diseases, and performed a short-term forecast of the disease burden.

Methods: We analyzed the monthly cases of the 10 most common notifiable infectious diseases from the Chinese Center for Disease Control and Prevention, from January 2004 to April 2021. Autoregressive integrated moving average (ARIMA) model and Holt-Winters' multiplicative damped trend method was fitted and used to forecast the monthly cases in the following 5 years. Spectral analysis was used to characterize the spectral density.

Results: Hand-foot-and-mouth disease, influenza, hepatitis disease, tuberculosis, syphilis, epidemic parotitis, gonorrhea, dysentery, scarlet fever and acquired immune deficiency syndrome (AIDS) ranked the top 10 infectious diseases with the highest total number of cases in China in the past five years. The annual number of cases of the 10 top infectious diseases has increased by 160% from 2004 to 2019 with 8.8 million people infected but dropped by 48% in 2020 during the coronavirus disease (COVID-19) pandemic. Holt-Winters' multiplicative damped trend method and spectral analysis were used to model hepatitis A virus and influenza respectively, while the other 8 infectious diseases

were modelled using ARIMA model. We predicted the annual cases of AIDS and syphilis will increase by 34% and 17% in the next 5 years, whereas dysentery would see a dramatic decrease of 55%. Other diseases were predicted to remain stable over the next 5 years. The spectral analysis suggested strong annual seasonality in influenza.

Conclusions: AIDS and syphilis are predicted to increase, whereas dysentery is predicted to decrease in the next 5 years in China. Other top infectious diseases would likely remain stable in the near future. Enhanced control measures may be needed to reduce the disease burden.

Keywords: Infectious disease; time series analysis; forecast

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab030

Cite this abstract as: Dai Z, Lau EHY. Characterizing and forecasting common infectious diseases in China: a time series analysis. J Public Health Emerg 2021;5:AB030.

AB031. Medication risk communication: a cross-sectional survey among healthcare professionals in Malaysia

Rema Panickar^{1,2}, Zoriah Aziz^{1,3}, Adeeba Kamarulzaman¹

¹Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia;

²Ministry of Health, National Pharmaceutical Regulatory Agency, Petaling Jaya, Malaysia; ³Faculty of Pharmacy, MAHSA University, Kuala Lumpur, Malaysia

Correspondence to: Zoriah Aziz. Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia. Email: zoriah@um.edu.my.

Background: Effective medication risk communication is essential at every stage of the pharmacovigilance risk management process. However, this fundamental activity has never been evaluated among Malaysian healthcare professionals. We aimed to assess the awareness of doctors and pharmacists on risk communication methods in Malaysia, and identify factors predicting the usefulness of medication risk communication.

Methods: We conducted a cross-sectional, web-based survey involving doctors and pharmacists across Malaysia. The adapted questionnaire covered four risk communication methods used in Malaysia, namely Direct Healthcare Professional Communications, educational materials, safety alerts and safety bulletins. We used the Pearson χ^2 test to examine the association between awareness of risk communication methods and demographic variables. To determine factors which predicted the usefulness of risk communication, we used logistic regression analyses.

Results: Of the 1,146 responses received, 650 (56.7%) were from pharmacists. Overall, 71.5% of respondents were aware of educational materials, while awareness of the other three risk communication methods ranged from 20.7% to 53.9%. Private sector healthcare professionals were significantly more aware of Direct Healthcare Professional Communications [$\chi^2_{(1, N=237)} = 21.5$, $P < 0.001$] compared to those in the public sector. The significant predictors

for finding risk communication useful included being a pharmacist [odds ratio (OR) 18.2; 95% confidence interval (CI): 11.0–30.1; $P < 0.001$], having more than 30 years' work experience (OR 4.9; 95% CI: 2.0–12.1; $P < 0.001$), working in the pharmaceutical industry (OR 4.6; 95% CI: 1.1–19.7; $P = 0.039$), and having received medication safety training (OR 1.6; 95% CI: 1.2–2.2; $P = 0.004$).

Conclusions: Awareness on medication risk communication in Malaysia needs to be increased. Key suggestions to enhance risk communication usefulness are to improve public-private healthcare sector collaboration for better outreach, enlist pharmacists as contact points for dissemination, and establish regular training programmes for healthcare professionals and risk communicators.

Keywords: Pharmacovigilance; doctors; pharmacists; awareness; predictors

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab031

Cite this abstract as: Panickar R, Aziz Z, Kamarulzaman A. Medication risk communication: a cross-sectional survey among healthcare professionals in Malaysia. J Public Health Emerg 2021;5:AB031.

AB032. Factors associated with uptake of cervical cancer screening: a population-based study of 2,305 Chinese females

Junjie Huang¹, Chun Ho Ngai¹, Man Sing Tin¹, Veeleah Lok², Xianjing Liu³, Lin Zhang⁴, Jinqiu Yuan⁵, Wanghong Xu⁶, Zhi-Jie Zheng⁷, Martin Wong¹

¹JC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China; ²Department of Global Public Health, Karolinska University Hospital, Solna, Sweden; ³Department of Radiology and Medical Informatics, Erasmus University Medical Centre, Rotterdam, The Netherlands; ⁴Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Australia; ⁵Clinical Research Centre, The Seventh Affiliated Hospital, Sun Yat-sen University, Guangzhou, China; ⁶School of Public Health, Fudan University, Shanghai, China; ⁷Department of Global Health, School of Public Health, Peking University, Beijing, China

Correspondence to: Junjie Huang, JC School of Public Health and Primary Care, The Chinese University of Hong Kong, Hong Kong, China. Email: junjie_huang@link.cuhk.edu.hk.

Background: Cervical cancer screening is one of the most common cancers amongst females. It is also one of the leading causes of female cancer death globally and in Hong Kong. Cervical cancer screening has been suggested as an effective means to reduce the incidence and mortality rate; however, the uptake rate remains suboptimal in many countries. In 2017, the proportion of Hong Kong women aged 61–64 who registered for the cervical cancer screening programme run by the government was only 22.1%. To provide more insights on enhancing the uptake rate, we explored the association between socio-demographic factors and cervical cancer screening uptake among a Chinese population.

Methods: Data from 2,305 participants were collected through a telephone survey via simple random sampling of

telephone numbers in a territory-wide directory (from 2016 to 2018). Sociodemographic factors (e.g., education level, marital status, occupation status, income level) and health-related factors (e.g., smoking habit, self-perceived health condition) were collected. A binary logistic regression model was constructed to identify the association between the above factors and cervical cancer screening uptake.

Results: Older individuals [66–70 *vs.* 61–65 (referent): adjusted odds ratio (AOR) =0.63, 95% confidence interval (CI): 0.50–0.79, $P<0.001$] and lower level of self-perceived health condition (normal *vs.* very good: AOR =0.54, 95% CI: 0.37–0.79, $P<0.001$) were less likely to participate. In contrast, higher monthly household income (HKD >20,000 *vs.* HKD ≤10,000: AOR =1.93, 95% CI: 1.46–2.55, $P<0.001$) and higher level of education (tertiary *vs.* primary: AOR =4.15, 95% CI: 2.64–6.50, $P<0.001$) were significantly associated with cervical cancer screening.

Conclusions: Policy-makers may develop new strategies, such as education, publicity, and subsidies among these target groups in order to enhance the participation rate of cervical cancer screening. Our findings suggested that age, self-perceived health condition, household income, and education level were associated with uptake of cervical cancer screening. Future studies may identify effective strategies to increase its uptake rate.

Keywords: Screening; cervical cancer; Hong Kong

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons

Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab032

Cite this abstract as: Huang J, Ngai CH, Tin MS, Lok V, Liu X, Zhang L, Yuan J, Xu W, Zheng ZJ, Wong M. Factors associated with uptake of cervical cancer screening: a population-based study of 2,305 Chinese females. J Public Health Emerg 2021;5:AB032.

AB033. Alcohol marketing exposure and alcohol drinking in university students in Hong Kong: an ecological momentary assessment

Minjin Zhang¹, Derek Yee Tak Cheung¹,
Qi Wang¹, Bonnie Xin Yan Wu¹, Man Ping Wang¹,
Daniel Sai Yin Ho², Tai Hing Lam²

¹School of Nursing, The University of Hong Kong, Hong Kong, China; ²School of Public Health, The University of Hong Kong, Hong Kong, China

Correspondence to: Derek Yee Tak Cheung, Assistant Professor, School of Nursing, The University of Hong Kong, Hong Kong, China. Email: derekcheung@hku.hk.

Background: Alcohol marketing, including advertisement and promotion of alcohol drinking culture, was ubiquitous and easily accessible by young adults in Hong Kong. This study used ecological momentary assessment to assess real-time temporal association between young adults' exposure to alcohol marketing and their drinking behavior in real-world setting.

Methods: We recruited students aged 18 to 35 who drank any alcohol during the past 30 days from universities. Consented participants were individually randomized to the EMA group or non-EMA group. Participants in the EMA group installed an EMA smartphone app in their smartphone for 5 time-based system-triggered EMAs for 14 consecutive days. In each EMA prompt, participants documented their exposure to alcohol marketing (yes/no), drinking (yes/no), and purchase of alcohol (yes/no) in the past 3 hours. Generalized estimating equation was used to assess the association between exposure to alcohol marketing (yes/no) and drinking behaviors (yes/no), adjusting for age, gender, AUDIT-C score. Further use lagged analyses to explore prospective association between daily alcohol marketing exposure (0, 1, ≥ 2 times) and daily drinking/purchase of alcohol (yes/no).

Results: Forty-nine current drinkers responded to 2,529 EMA prompts (compliance 73.3%). The mean episode of exposure to alcohol marketing, drinking, and purchase of alcohol was 3.8, 3.2 and 1.2 times. The

top three channels of alcohol marketing exposure were restaurants (n=45), social media (n=30) and point-of-sale display (n=16). Exposure to alcohol marketing in the past 3 hours was positively associated with drinking (AOR =2.52, 95% CI: 1.70–3.75) and purchasing alcohol (AOR =4.20, 95% CI: 2.66–6.61) in the past 3 hours. A significantly prospective association has also been found between daily alcohol marketing exposure and daily drinking/ daily purchase of alcohol.

Conclusions: Exposure to alcohol marketing is prospective positively associated with drinking behaviors. Further study with a larger sample size is needed to explore the mediation between exposure to alcohol marketing and drinking behaviors.

Keywords: Ecological momentary assessment; alcohol marketing; university students

Acknowledgments

Funding: Seed Fund for Basic Research, The University of Hong Kong.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab033

Cite this abstract as: Zhang M, Cheung DYT, Wang Q, Wu BXY, Wang MP, Ho DSY, Lam TH. Alcohol marketing exposure and alcohol drinking in university students in Hong Kong: an ecological momentary assessment. J Public Health Emerg 2021;5:AB033.

AB034. Cancer incidence and mortality in Asian countries: a trend analysis

Junjie Huang¹, Man Sing Tin¹, Chun Ho Ngai¹,
Veeleah Lok², Yunyang Deng¹, Lin Zhang³,
Jinqiu Yuan⁴, Wanghong Xu⁵, Zhi-Jie Zheng⁶,
Martin Wong¹

¹Jockey Club School of Public Health and Primary Care, Chinese University of Hong Kong, Hong Kong, China; ²Department of Global Public Health, Karolinska University Hospital, Solna, Sweden; ³Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Australia; ⁴Clinical Research Centre, The Seventh Affiliated Hospital, Sun Yat-sen University, Guangzhou, China; ⁵School of Public Health, Fudan University, Shanghai, China; ⁶Department of Global Health, School of Public Health, Peking University, Beijing, China

Correspondence to: Junjie Huang, Jockey Club School of Public Health and Primary Care, Chinese University of Hong Kong, Hong Kong, China. Email: junjie_huang@link.cuhk.edu.hk.

Background: This study aimed to evaluate the updated burden and trends of cancer incidence and mortality in Asian countries.

Methods: The data used in this study is retrieved from the Global Cancer Observatory, Cancer Incidence in Five Continents volumes I–XI, and the World Health Organization mortality database. These data are used to calculate the Average Annual Percentage Change (AAPC), with a 95% confidence interval (CI) to determine the epidemiological trend in the past decade, from the joinpoint regression analysis.

Results: In 2020, the cancer incidence in Asia was 169.1 per 100,000, accounting for 49.3% of the global cancer incidence. The most common cancers included lung (13.8%), breast (10.8%), and colorectal (10.6%). Its mortality was 101.6 (58.3% of the global cancer death) with lung (19.2%), liver (10.5%), and stomach (9.9%) cancers being the most common causes of cancer death. The cancer incidence had been increasing in female population, with Korea [AAPC =5.73, 95% CI: 5.30–6.17, P<0.001], Japan (AAPC =2.67, 95% CI: 2.12–3.23, P<0.001), and Kuwait

(AAPC =2.08, 95% CI: 0.49–3.69, P=0.016) showing the most significant increases in the past decade. The incidence increase was also observed among females aged <40 years old, with Korea (AAPC =8.42, 95% CI: 7.40–9.45, P<0.001), China (AAPC =2.94, 95% CI: 2.07–3.81, P<0.001), and Japan (AAPC =2.88, 95% CI: 1.88–3.88, P=0.016) showing the most significant increases. However, there was an overall decreasing trend of cancer mortality.

Conclusions: There was a substantial burden of cancer incidence and mortality in Asia. Although there was a decreasing trend in cancer mortality, its incidence had been increasing especially among female and younger populations. More intensive cancer prevention measures are recommended for these populations.

Keywords: Cancer; incidence; mortality; trends; Asia

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab034

Cite this abstract as: Huang J, Tin MS, Ngai CH, Lok V, Deng Y, Zhang L, Yuan J, Xu W, Zheng ZJ, Wong M. Cancer incidence and mortality in Asian countries: a trend analysis. J Public Health Emerg 2021;5:AB034.

AB035. Comparative sensitivity of different self-sampling methods for SARS-CoV-2 RT-PCR testing

Nicole Ngai Yung Tsang, Hau Chi So, Ka Yan Ng, Benjamin J. Cowling, Gabriel M. Leung, Dennis Kai Ming Ip

WHO Collaborating Centre for Infectious Disease Epidemiology and Control, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Dennis Kai Ming Ip. WHO Collaborating Centre for Infectious Disease Epidemiology and Control, School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: dkmip@hku.hk.

Background: Alternative sampling methods allow for the possibility for self-collection to facilitate SARS-CoV-2 testing in ambulatory care settings. Self-sampling has been well defined for influenza in community settings, but remains unclear in the context of coronavirus disease (COVID-19). A systematic review and meta-analysis assessing the comparative sensitivity of different self-sampling methods for SARS-CoV-2 testing is needed.

Methods: In this meta-analysis, we systematically searched 4 different databases and 2 preprint platforms. We included original clinical studies that examined the performance of nasopharyngeal swabs and any additional respiratory specimens for the diagnosis of SARS-CoV-2 infection among individuals presenting in ambulatory care. Studies without data on paired samples, or those that only examined different samples from confirmed SARS-CoV-2 cases were not useful for examining diagnostic performance of a test and were excluded. Sensitivity of the diagnostic test was examined using random effects models.

Results: A total of 26 studies including 9684 participants were included. Using nasopharyngeal swabs as the gold standard, pooled nasal and throat swabs gave the highest sensitivity of 97% [95% confidence interval (CI): 93–100%], whereas lower sensitivities were achieved by nasal swabs (86%, 77–93%), saliva (85%, 75–93%) and gargle (85%, 65–98%), and a much lower sensitivity by throat swabs (68%, 35–94%). Comparison between health-care-worker collection and self-collection for pooled nasal and throat

swabs and nasal swabs showed comparable sensitivity.

Conclusions: Our review suggests that pooled nasal and throat swabs would be the best alternative sampling approach to nasopharyngeal swabs, for diagnosis of SARS-CoV-2 infection in ambulatory care. Saliva, gargle and nasal swabs gave a comparably good and still reasonable sensitivity and are clinically acceptable alternative sampling approaches. All these alternative sampling approaches appeared as a feasible option to facilitate self-collection of specimens and scaling up of diagnostic testing programs. Throat swabs gave a much lower sensitivity and should not be recommended.

Keywords: SARS-CoV-2; coronavirus disease (COVID-19); diagnosis; sampling approach; nasal and throat swab

Acknowledgments

Funding: This project was supported by the Theme-based Research Scheme (T11-712/19-N) of the Research Grants Council of the Hong Kong Special Administrative Region Government.

Footnote

Conflicts of Interest: BJC has consulted for Roche, Sanofi Pasteur, GSK, AstraZeneca and Moderna. The other authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab035

Cite this abstract as: Tsang NNY, So HC, Ng KY, Cowling BJ, Leung GM, Ip DKM. Comparative sensitivity of different self-sampling methods for SARS-CoV-2 RT-PCR testing. J Public Health Emerg 2021;5:AB035.

AB036. Ego integrity and adaptation of urban dwelling Filipino older adults amidst the coronavirus disease (COVID-19) pandemic

Arlene Nera, Agnes Raymundo,
Hannah Faith Martinez, Clarisse Sy, Ariel Moreno

College of Nursing, Manila Central University, Manila, Philippines

Correspondence to: Arlene Nera. College of Nursing, Manila Central University, Manila, Philippines. Email: lenesky982@gmail.com.

Background: The coronavirus pandemic is a global public health threat that significantly affects the older adult population in developing countries such as the Philippines

Methods: The inquiry employed the descriptive-correlational, cross-sectional research design. The sample (N=30) consisted of Filipino older adults, residents of an urban community in the city of Caloocan, mentally capable and with sensory capacitation. They were selected utilizing a non-probability purposive sampling design. Self-report method was used in gathering the data. The self-administered questionnaires were adopted with permission from the Integrity Subscale of the Modified Eriksonian Psychosocial Inventory to assess the level of ego integrity of the participants and Brief COPE instrument to determine their extent of adaptation ability during the coronavirus disease (COVID-19) pandemic. Data collected were analyzed using descriptive statistics of mean and standard deviation. Hypotheses were tested using inferential statistics of Pearson chi-square and Phi and Cramer's V. The research protocol was reviewed and approved by the ethics review board of a comprehensive university in Metro Manila.

Results: Most study participants were male (57%), married (63%), and high-school graduates (50%). They had a moderate level of ego integrity and little extent of adaptation ability during the pandemic. Moreover, there was no significant relationship among the profile of the

study participants and their level of ego integrity and extent of adaptation ability. However, there was a significant relationship between the participants' level of ego integrity and their extent of adaptation ability.

Conclusions: The balance and relationship between older adults' ego integrity and adaptation ability are challenged and become more acute in recent times. It is therefore imperative that opportunities are created to promote healthy ageing during the pandemic. They must be amply supported in all aspects by strengthening the healthcare delivery system of the country.

Keywords: Adaptation; coronavirus disease pandemic (COVID-19 pandemic); adaptation; older adults

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab036

Cite this abstract as: Nera A, Raymundo A, Martinez HF, Sy C, Moreno A. Ego integrity and adaptation of urban dwelling Filipino older adults amidst the coronavirus disease (COVID-19) pandemic. J Public Health Emerg 2021;5:AB036.

AB037. Quality measurement of specialty care in Pacific Rim countries: an analysis of five models

Junqiao Chen¹, Kawa Cheong²

¹Health System Partnership, Roche Hong Kong and Macau, Hong Kong SAR, China; ²Quality, Safety and Operations, DeltaHealth China, Shanghai, China

Correspondence to: Junqiao Chen. 22/F FTLife Tower, 18 Sheung Yuet Rd, Kowloon Bay, Hong Kong SAR, China. Email: junqiao.chen@roche.com.

Background: Due to its complexity, specialty care is more concentrated in urban areas, and less subject to being measured by standardized quality indicators. A quality measurement program can inform resource allocation and patient care-seeking. Particularly for specialty care, rural residents might need to travel to unfamiliar urban facilities. This analysis surveys existing initiatives to inform stakeholders of the diverse ways to develop such a program.

Methods: We purposefully sampled five initiatives for their diverse program setup: Society for Thoracic Surgery (STS) clinical registries; Chinese government non-payer branch's National Report on Quality and Safety (CN-NRQS; all specialties), US government payer branch's Care Compare (US-CC; all specialties), a partnership between the Japanese government, National Cancer Center and Hospital Association (JP-NCC-DCCH), and Singapore National Eye Centre's clinical audit (SG-NEC).

Results: STS is a society-led international initiative (US, Canada, Australia, etc.) while others are on a country or facility level. STS developed its measures and sought external endorsement. CN-NRQS's measures were developed by the government. Some of US-CC's and all JP-NCC-DCCH's measures were developed by government-sponsored academia, while US-CC also built upon other US quality programs. SG-NEC aligned internal measures with existing publications. Every year, CN-NRQS is published as a book, with aggregated results on a random sample of

hospitals. JP-NCC-DCCH published several one-off papers for different cancers. Hospital participation was voluntary and anonymous. STS and US-CC were most transparent, as hospital-identifiable information was either voluntarily (STS) or mandatorily (US-CC) available on websites. SG-NEC used to update annually on their website. STS, CN-NRQS and SG-NEC heavily relied on outcome measures, while US-CC and JP-NCC-DCCH also had process measures. Each JP-NCC-DCCH paper only selected a subset of measures from its library.

Conclusions: Healthcare executives on all levels could learn from these initiatives to develop specialty care quality programs that meet their needs.

Keywords: Clinical quality measures; specialty care; oncology; cardiology; ophthalmology

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab037

Cite this abstract as: Chen J, Cheong K. Quality measurement of specialty care in Pacific Rim countries: an analysis of five models. J Public Health Emerg 2021;5:AB037.

AB038. Neighbourhood health niche and well-being related behaviour change after coronavirus disease (COVID-19) pandemic

Siyu Chen¹, Ying Chang¹, Jack Benton²

¹Department of Urban Planning and Design, Design School, Xi'an Jiaotong-Liverpool University, Suzhou, China; ²Manchester Centre for Health Psychology, School of Health Sciences, University of Manchester, Manchester, UK

Correspondence to: Ying Chang. Department of Urban Planning and Design, Design School, Xi'an Jiaotong-Liverpool University, Suzhou, China. Email: ying.chang@xjtlu.edu.cn.

Background: The quality of open space within the neighbourhood becomes crucial post- coronavirus disease (COVID-19) pandemic. This paper enriches the concept of health niche (Sarkar *et al.*, 2014) by relating well-being-related behaviour with small neighbourhood open space configuration.

Methods: The dataset is 216 hours of video observation of elderly' activities in 9 different open spaces of resettlement neighbourhoods. The baseline was in October of 2019 and follow-up was in October 2020. The sampling of sites has two levels: density and location. The Wilcoxon signed-rank test was used to compare the total number of older adults observed per hour pre- and post-COVID-19, by five well-being-related behaviours: walking, connecting, vigorous exercise, taking notice, and sedentary activities (Benton *et al.* 2018).

Results: There was a decrease in the total number of elderly people observed per hour from pre COVID-19 (median =14.5, IQR =21.5) to post COVID-19 (median =12.5, IQR =21.5). The Wilcoxon signed rank test showed that these differences were significant ($Z=-2.774$, $P=0.006$). For high density neighbourhoods, the Wilcoxon signed rank test showed that these differences were only significant in sedentary ($Z=-3.073$, $P=0.002$) and vigorous ($Z=-2.625$, $P=0.009$) activities, and insignificant in the total counts. The decreases were not significant for the medium density

neighbourhood ($Z=-0.394$, $P=0.694$), except for taking notice activity ($Z=-2.867$, $P=0.004$). In terms of location, decreases of elderly people were mainly significant at the open spaces near doorway of buildings of low density neighbourhoods, with significant decreases in total elderly ($Z=-2.23$, $P=0.026$) and sedentary ($Z=-2.67$, $P=0.008$), walking ($Z=-2.949$, $P=0.003$) and vigorous ($Z=-3.064$, $P=0.002$) activities. The decrease was also significant for sedentary activities occurred at the doorway of high-rise buildings ($Z=-2.732$, $P=0.006$).

Conclusions: The study found an absolute decline in elderly outdoor activities within resettlement neighbourhoods, but only significant for low density neighbourhoods. The health niche being affected the most by the COVID-19 pandemic is open space at the doorway. The main change in the built environment is the government's prohibition of informal self-made sitting furniture, as a social distancing control measure. This measure should be revisited to restore the health niche for the elderly.

Keywords: Elderly; built environment configuration; density; health niche; resettlement

Acknowledgments

Funding: This research is funded by National Natural Science Foundation of China (NSFC 51808451) Elderly-friendly Environment Making during Rapid Urbanisation-Longitudinal Empirical Study of the Impact of Built-Environment on Health.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The research ethics approval was granted by Xi'an Jiaotong-Liverpool University Ethics Committee (EXT-19-06).

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International

License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab038

Cite this abstract as: Chen S, Chang Y, Benton J. Neighbourhood health niche and well-being related behaviour change after coronavirus disease (COVID-19) pandemic. J Public Health Emerg 2021;5:AB038.

AB039. Mental health status and coping ability among older Filipino adults in an institutional care facility

Louie Jay Cruz, Doneal Andrei Decapia, Benedict Ignacio, John Edward Escote, Michael John Flores

College of Nursing, Manila Central University, Manila, Philippines

Correspondence to: Louie Jay Cruz. College of Nursing, Manila Central University, Manila, Philippines. Email: louiercruz921@gmail.com.

Background: Older adults confined to care facilities may experience negative health impacts, especially during the pandemic. Less contact with loved ones can lead to depression, which is linked to the mental health status and coping skills of older adults. This study sought to determine the relationship between respondents' self-perceived mental health status and coping abilities.

Methods: The study utilized a descriptive-correlational design and was conducted in a select institutional care facility located in Metro Manila. Purposive sampling was utilized for the selection of respondents. The sample (N=28) consists of 14 Filipino elders in an institutional care facility and 14 caregivers who provided care to the client, based on established criteria that are met. Data were collected through questionnaires along with an informed consent form; due to the pandemic, face-to-face interaction was restricted by the institution. Ethical principles were observed throughout this research. The study was approved by the ethics review board from a higher education institution in Metro Manila.

Results: The level of mental health status (GWM =1.33) and coping ability (GWM =2.73) of respondents resulted in "poor" and "good" verbal interpretation respectively. There was a significant relationship between educational attainment and self-perceived level of coping ability (P value =0.0004). Self-perceived level of mental health status and coping abilities showed a high level of significance (computed t -value

=4.78). Both the self-perceived level of mental health status of the respondents and as perceived by caregivers, and the self-perceived level of coping abilities of the respondents and as perceived by caregivers showed no significant difference (computed t -value =0.47).

Conclusions: The 'poor' mental health status of older adults and 'good' coping skills are outcomes relating to their admission to an institutional setting. Coping skills were related to the mental health issues of respondents. Hence, care facilities must prioritize the provision of adequate care for older adults, especially in times of pandemics.

Keywords: Older adults; caregivers; mental health status; coping ability; institutional care facility

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab039

Cite this abstract as: Cruz LJ, Decapia DA, Ignacio B, Escote JE, Flores MJ. Mental health status and coping ability among older Filipino adults in an institutional care facility. J Public Health Emerg 2021;5:AB039.

AB040. Urbanisation, relocation and mental health of elderly farmers and the changes during the coronavirus disease (COVID-19) pandemic

Ying Chang^{1,3}, Guibo Sun^{2,3}, Houhua Zhu²

¹Department of Urban Planning and Design, Design School, Xi'an Jiaotong-Liverpool University, Suzhou, China; ²Department of Urban Planning and Design, Faculty of Architecture, The University of Hong Kong, Hong Kong, China; ³Healthy High Density Cities Lab, Faculty of Architecture, The University of Hong Kong, Hong Kong, China

Correspondence to: Ying Chang. Department of Urban Planning and Design, Design School, Xi'an Jiaotong-Liverpool University, Suzhou, China. Email: ying.chang@xjtlu.edu.cn.

Background: Rapid urbanisation has caused a considerable elderly population to relocate from rural countryside to urban neighbourhoods. This study examines the impact of built environment change on their health and the inequality aggravated by living density and built environment configuration.

Methods: The primary data is from a longitudinal study on urbanisation and health of relocated farmers in Suzhou, China. The baseline survey was conducted from June to November in 2019 from two groups, relocated farmers (N=1,053) and the control group of farmers still living in the rural countryside (N=1,597). A Follow-up survey (N=367) was undertaken from Oct to December 2020, with interviews to understand the impact of the coronavirus disease (COVID-19) pandemic on their health, perception, and lifestyle.

Results: The results from the preliminary analysis showed that both depression and cognitive impairment rates were higher among rural farmers than relocated farmers and associated with the more inferior self-perceived overall health of rural farmers. Relocated farmers generally had an overall higher cognitive score, maybe because of the need for memory and information as essential abilities in city life. The pandemic saw an increase in the cognitive score of relocated farmers, likely because of intensive exposure to information from mass media. The follow-up survey did not find a significant increase in depression. Instead, interview findings showed the possible positive contribution of the

pandemic to the perceived health of relocated farmers, because of the improved public health environment.

Conclusions: This study found a mild impact of the COVID-19 pandemic on mental health but more significant lifestyle changes, including reduced time on daily walking, social activities, and social network, associated with increased time spent indoors, within neighbourhood, time on TV and mobile phone. These behaviours may aggregate obesity and mental illness in the long-term and should be prioritised in post-pandemic public health intervention measures.

Keywords: Built environment; depression; cognitive abilities; satisfaction; lifestyle

Acknowledgments

Funding: This research is funded by National Natural Science Foundation of China (NSFC 51808451) Elderly-friendly Environment Making during Rapid Urbanisation-Longitudinal Empirical Study of the Impact of Built-Environment on Health.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The research ethics approval was granted by Xi'an Jiaotong-Liverpool University Ethics Committee (EXT-19-06).

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab040

Cite this abstract as: Chang Y, Sun G, Zhu H. Urbanisation, relocation and mental health of elderly farmers and the changes during the coronavirus disease (COVID-19) pandemic. J Public Health Emerg 2021;5:AB040.

AB041. Economic evaluation of colorectal cancer screening programme in Hong Kong

Matthew Shing Him Lee

Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China

Correspondence to: Shing Him Matthew Lee. Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, China. Email: u3558099@connect.hku.hk.

Background: With the increasing incidence and mortality rate, colorectal cancer (CRC) has become a major public health problem for the Hong Kong (HK) population. At present, it has the highest incidence with the second-highest mortality rate among all cancers in HK, exerting enormous pressure on the local healthcare system which has already been pressurized by the problems of aging population and chronic diseases. This study aims to perform an economic analysis on the Colorectal Cancer Screening Programme (CRCSP) in HK for the prevention of CRC so as to evaluate the cost-effectiveness of the measure.

Methods: The incremental cost-effectiveness ratio (ICER) would serve as the core outcome of the cost-effectiveness analysis. The cost is defined as all items that would be associated with the CRCSP, including administrative cost, consultation fees, laboratory analysis, colonoscopy fee as well as co-payment fees. The effectiveness is measured as life-years gained (LYG), which is defined by the difference between the number of life-years lost due to CRC in the cohort participating in the CRCSP and the number of life-years lost due to CRC in the cohort not participating in the CRCSP.

Results: Compared to without screening, the ICER presented HK\$39,344/LYG for the CRCSP, which is lower than the willingness-to-pay threshold of HK\$50,000/LYG established. The additional costs incurred for the

implementation of the CRCSP is justified as it could provide effective prevention and protection for the HK population from the consequences and complications of CRC.

Conclusions: The CRCSP provides subsidized CRC screening tests for eligible HK citizens to prompt early detection, prevention and treatment of CRC. It is a cost-effective intervention, which increases survival rate of participants with justified costs incurred. More effort should be employed to promote eligible citizens in participating in the programme.

Keywords: Colorectal cancer; colorectal cancer screening; cost-effectiveness; economic evaluation

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab041

Cite this abstract as: Lee MSH. Economic evaluation of colorectal cancer screening programme in Hong Kong. J Public Health Emerg 2021;5:AB041.

AB042. Perceptions and experiences of young adults regarding the coronavirus disease (COVID-19) pandemic in Uganda: a focus group study

Valeria Flores-Cadena¹, Kayla Samimi¹, Ally Koh¹, Peninah Tumuhimbise², Odur Kenneth³, Abigail Kim¹, Sarah Phillips¹, Maya Spencer⁴, Kathy Lam¹, Heather Wipfli¹

¹Keck School of Medicine of USC, University of Southern California, Los Angeles, CA, USA; ²Public Health Programming, Ray United FC, Uganda; ³Public Health Programming, Children's Chance International, Lira, Uganda; ⁴School of Public Health, University of California Berkeley, Berkeley, CA, USA

Correspondence to: Valeria Flores-Cadena. Keck School of Medicine of USC, University of Southern California, Los Angeles, CA, USA. Email: vfloresc@usc.edu.

Background: Uganda is amid its third resurgence of coronavirus disease (COVID-19). The government instituted its second lockdown on June 7, 2021, closing schools and other public facilities. This study explored the perceptions and experiences of young adults related to social isolation and other measures regarding the COVID-19 pandemic in Uganda.

Methods: Twenty-seven Ugandan residents (18–22 years old) from the district of Lira were divided into five groups by parish (Bar Pii, Acut Kumu, Otara, Te-Adwong, and Agweng) for focus group interviews. Interviews were conducted in English by health facilitators trained by Ray United FC to evaluate personal and community perceptions and experiences from the COVID-19 pandemic. Responses were compiled, transcribed, and analyzed using NVivo software to code responses for thematic insights.

Results: Qualitative analysis revealed recurring themes of social, financial, reproductive, and educational impacts from school and business closures. Though they understood the purpose of lockdown in mitigating the pandemic's effects, participants cited concerns about rising instances of crime, domestic violence, early marriage, and social isolation.

Barriers to vaccination included doubled transportation costs, lack of public interest, and fear. Sources of fear included religious condemnation, distrust in vaccine providers, and community myths.

Conclusions: This study found that the COVID-19 pandemic has worsened pre-existing community-specific challenges in Uganda. Cultural, political, and religious beliefs have negatively impacted perceptions and behaviors regarding public health initiatives to combat the pandemic. This study emphasizes the need for future public health policies and interventions that address these social issues and misconceptions.

Keywords: Coronavirus disease (COVID-19); public health; qualitative research; focus group

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab042

Cite this abstract as: Flores-Cadena V, Samimi K, Koh A, Tumuhimbise P, Kenneth O, Kim A, Phillips S, Spencer M, Lam K, Wipfli H. Perceptions and experiences of young adults regarding the coronavirus disease (COVID-19) pandemic in Uganda: a focus group study. J Public Health Emerg 2021;5:AB042.

AB043. Biosimilar medicines: a cross-sectional study on hospital pharmacists' perceived confidence and barriers to promote prescribing among clinicians in Malaysia

Noraisyah Mohd Sani^{1,2}, Zoriah Aziz^{1,3}, Adeeba Kamarulzaman¹

¹Faculty of Medicine, University of Malaya, Lembah Pantai, Kuala Lumpur, Malaysia; ²Pharmacy Services Programme, Ministry of Health Malaysia, Petaling Jaya, Selangor, Malaysia; ³Faculty of Pharmacy, MAHSA University, Bandar Saujana Putra, Jenjarom, Selangor, Malaysia

Correspondence to: Zoriah Aziz. Faculty of Medicine, University of Malaya, Lembah Pantai, Kuala Lumpur, Malaysia. Email: zoriah@um.edu.my.

Background: The use of biosimilar medicines offers potential cost savings in healthcare. As biosimilars become more widely available, pharmacists are better positioned to spearhead the appropriate and safe administration of biosimilars among clinical prescribers. Thus, we aimed to determine pharmacists' perceived confidence and barriers towards promoting the use of biosimilars in clinical practice among clinical prescribers in Malaysia.

Methods: We conducted a cross-sectional study using a web-based survey involving all registered pharmacists working in Malaysian hospitals. We refined the questionnaire from previous studies and piloted it before finalising the 41-items questionnaire. We analysed the data descriptively.

Results: From a total of 913 responses received, 65.9% of pharmacists have dealt with biosimilar medicines in their workplace. Most of them (87.4%) had a good basic knowledge related to marketing authorisation requirements of biosimilars. On the aspect of how confident they would be in promoting a switch to a biosimilar in patients currently receiving the originator product, about 50% of them were confident. The major barriers cited to promote prescribing

of biosimilar medicines included efficacy concerns (68.7%), prescribers' preferences (64.6%), insufficient information resources (51.4%) and lack of knowledge (43.0%).

Conclusions: The findings show a lack of perceived confidence among pharmacists in promoting biosimilars to clinical prescribers. One of the main barriers identified was the lack of knowledge or training on biosimilars. These data provide preliminary information needed to introduce educational programs in the undergraduate pharmacy curriculum and launch continuing educational programmes among the pharmacists to improve their overall confidence.

Keywords: Pharmacists; barriers; originator product; biosimilar medicines

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab043

Cite this abstract as: Mohd Sani N, Aziz Z, Kamarulzaman A. Biosimilar medicines: a cross-sectional study on hospital pharmacists' perceived confidence and barriers to promote prescribing among clinicians in Malaysia. J Public Health Emerg 2021;5:AB043.

AB044. Healthy ageing and socio-physical environments: re-designing high-rise housing estates in compact Hong Kong

Rebecca L. H. Chiu, Bo Kyong Seo

Faculty of Architecture, The University of Hong Kong, Hong Kong, China

Correspondence to: Rebecca L. H. Chiu. Faculty of Architecture, The University of Hong Kong, Hong Kong, China. Email: rlhchiu@hku.hk.

Background: The paper aligns with WHO's call for concerted global actions to achieve healthy aging. It aims to provide sustainable physical and social environments to enable healthy ageing by investigating and enhancing the contribution of mixed age high-rise housing estates of compact cities like Hong Kong and by recommending more socially sustainable estate planning, design and management principles and practices.

Methods: Applying the concept of social sustainability of housing, data were collected from a questionnaire survey of 600 residents living in eight different and mixed-age high-rise housing estates. Chi-square test and ANOVA identified how the use of and satisfaction with the estate facilities differ across different age groups. Multiple linear regression analyses examined whether and how people's use of and satisfaction with the facilities/services were associated with perceived social and realistic physical environments.

Results: The use and assessment of housing estate facilities were similar across all age groups except the use of recreation facilities and restaurants. Residents who commended neighbourliness usually perceived open space as helpful in facilitating neighbor interaction, liked natural features, felt safer with more residents around, and complimented the quality and accessibility of community facilities. Residents who felt safe were those who found the management office supportive and helpful, public facilities good and accessible, and natural green features provided in their estate. Residents who felt unsafe with outsiders using the shopping centres opined their housing estates possessed

special character.

Conclusions: The physical and social environments of high-rise housing estates help facilitate healthy ageing, particularly for sustaining functional ability and mental wellbeing. Estate planning and design must prioritise the quantitative and qualitative provision of open space, natural features, accessibility and quality of community facilities for nurturing neighbourliness, not only meeting daily needs. Apart from maintaining physical estate quality, estate management must also prioritise residents' sense of safety and supportiveness.

Keywords: Healthy ageing; high-rise estates; socio-physical environment, estate planning/design

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: Both authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab044

Cite this abstract as: Chiu RLH, Seo BK. Healthy ageing and socio-physical environments: re-designing high-rise housing estates in compact Hong Kong. J Public Health Emerg 2021;5:AB044.

AB045. Chronic disease knowledge among migrant workers in Singapore

Annabelle Pan¹, Hui Xiang Chia²,
Min Xian Wang², Prathiksha Karthikeyan³,
Gwendolyn Lee⁴, Jeremy Lim²

¹Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA; ²Saw Swee Hock School of Public Health, National University Singapore, Singapore; ³School of Biological Sciences, Nanyang Technological University, Singapore; ⁴Department of Occupational Therapy, Singapore Institute of Technology, Singapore
Correspondence to: Annabelle Pan, Medicine, Johns Hopkins University School of Medicine, Baltimore, MD, USA. Email: Apan1636@gmail.com.

Background: Chronic disease knowledge can influence an individual's ability to effectively prevent and manage metabolic diseases such as diabetes, hypertension, and hyperlipidemia. Migrant workers in Singapore, an under-resourced population with high levels of undiagnosed chronic disease, may benefit from chronic disease education and outreach efforts. This exploratory pilot study examines the distribution of chronic disease knowledge amongst migrant workers in Singapore by using a convenience sample of individuals visiting a migrant worker healthcare center.

Methods: A cross-sectional, interviewer-administered survey was carried out with 229 international migrant workers visiting HealthServe, a clinic located in Geylang, Singapore that exclusively serves migrant workers. The survey contained a self-designed questionnaire asking participants about their knowledge of chronic diseases, with a focus on diabetes, hypertension, and high cholesterol. Correct responses to 25 questions were added to form a total score. Logistic regression was used to assess predictors of adequate chronic disease knowledge.

Results: The vast majority of participants identified themselves as Bangladeshi (92.6%), while less than 10% identified as either Indian, Malaysian, or Chinese. The mean age of respondents was 36 years, and one-third of respondents had at least one of the chronic conditions of

interest (diabetes, hypertension, and hyperlipidemia). An attention-check question was answered correctly by 94% of respondents. The mean total score was 20 correct out of 25. Preliminary analysis showed that migrant workers with chronic disease morbidity had higher odds of having chronic disease knowledge [OR, 3.74; 95% confidence interval (CI): 1.42–9.80; $P < 0.05$] as compared to those with no chronic disease. A higher age was also correlated to a higher chronic disease knowledge score ($P < 0.05$).

Conclusions: In general, migrant workers visiting HealthServe are well informed about chronic diseases, particularly those who are older or have a chronic disease. Certain areas that are slightly weaker could be targeted by future education and outreach programs.

Keywords: Chronic disease knowledge; migrant workers; diabetes; hyperlipidemia; hypertension

Acknowledgments

Funding: None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab045

Cite this abstract as: Pan A, Chia HX, Wang MX, Karthikeyan P, Lee G, Lim J. Chronic disease knowledge among migrant workers in Singapore. J Public Health Emerg 2021;5:AB045.

AB046. Sexuality 360@ School: an ecosystem approach to comprehensive sexuality education in Hong Kong

Neda Ng¹, Edmond Pui Hang Choi²,
Ellie Bostwick Andres³, Alice Wai Chi Fung⁴,
Kevin Wing Chung Lau⁴, Monique Yeung¹

¹Community Services, Mother's Choice, Hong Kong, China; ²School of Nursing, The University of Hong Kong, Hong Kong, China;

³School of Public Health, The University of Hong Kong, Hong Kong, China; ⁴Youth Services, Mother's Choice, Hong Kong, China

Correspondence to: Neda Ng. Community Services, Mother's Choice, Hong Kong, China. Email: nedang@motherschoice.org.

Background: The number of teen pregnancies in Hong Kong is unknown. According to Hong Kong census data along with pregnancy termination data from Hospital Authority and the Family Planning Association, it is estimated that approximately 5,000 girls aged 15–24 face crisis pregnancies each year. Among sexually active adolescents in Hong Kong, 44 percent report inconsistent use of contraceptives and 11% report no use of contraceptives [Lau, M.W., 2016, June 8. #LetsTalkAboutIt - Sexuality education in Hong Kong. (Web log post). Ming Wai Lau. Retrieved from <http://hello.mingwailau.hk/wp-content/uploads/2016/06/Sex-Ed-Report-FINAL-CLEAN.pdf>]. The study purpose is to develop a comprehensive sexuality education (CSE) program for Hong Kong adolescents.

Methods: Adapting the WHO Health Promoting School approach, Mother's Choice developed a CSE ecosystem program to empower adolescents and key adults in their support networks (i.e., school and family) with the sexual health knowledge, attitudes, skills and connection to motivate healthy sexual decision-making.

Results: We developed a four-year CSE curriculum for Hong Kong secondary school youth (Form 1–Form 4) along with training programs for teachers and parents. The curriculum adapts best practices from International Technical Guidance from UNESCO and National Sexuality

Education Standards (USA) that is suitable for Hong Kong's context. In our initial testing of the program with secondary students, we found that both teachers and students responded positively to our program and students generally found our program useful.

Conclusions: Going forward, we hope to test the CSE curriculum in more schools and refine the program as needed to empower healthy sexual decision making among Hong Kong adolescents.

Keywords: Adolescents; sexual health; teenage pregnancy; comprehensive sexuality education; health promoting school; health ecological model

Acknowledgments

Funding: This project was supported by the Health Care and Promotion Scheme Project No. 02180538 under the Health and Medical Research Fund, which is administered by the Food and Health Bureau of Hong Kong.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the noncommercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

doi: 10.21037/jphe-21-ab046

Cite this abstract as: Ng N, Choi EPH, Andres EB, Fung AWC, Lau KWC, Yeung M. Sexuality 360@ School: an ecosystem approach to comprehensive sexuality education in Hong Kong. J Public Health Emerg 2021;5:AB046.