



Paving the Way for and Achieving Excellence in Evidence-informed Health Care in the Belt and Road Regions



Abstract Book

The First Cochrane Hong Kong Symposium
23-24 May 2019

Post-symposium Workshops
27-28 May 2019

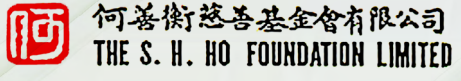
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This material/event is funded by the Professional Services Advancement Support Scheme of the Government of the Hong Kong Special Administrative Region.

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Keynote Address I (23 May 2019, 10:25 – 11:25)

Use of Cochrane evidence to inform practice and healthcare policy

Professor Martin J. BURTON

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Cochrane aspires to produce ‘trusted evidence’ which can be used to make ‘informed decisions’. What do we mean by ‘trust’ in this context? We often say that Cochrane evidence is of high quality, but what do we mean by that?

Patients and health professionals make many decisions about their care. Ideally, these are made together, using a process of shared decision-making. What is the best way for Cochrane to contribute to that process?

In addition to addressing these important questions, in this talk I will consider how Cochrane ensures that all of its systematic reviews and other evidence synthesis products achieve the goal of improving health, through being ‘fit for purpose’ to inform practice and healthcare policy making. I will provide some case studies of where it has done so.

I will also reflect on the importance of ensuring that the focus of Cochrane’s evidence production is on what matters most to patients, the public and those who fund and organise their health care. And I will look at the ways in which we present evidence to patients and help them to understand it.

Note: The views expressed in this keynote address are – unless otherwise stated - my own, and not necessarily those of Cochrane or the University of Oxford.

Plenary Session I (23 May 2019, 11:50 – 12:50)

Integrating genomics into nursing practice

Professor Laurie BADZEK

Dean and Professor, College of Nursing, The Pennsylvania State University,
Pennsylvania, United States

This presentation outlines activities initiated by the presenter and colleagues to integrate genomics into nursing practice and policy. As the largest single healthcare professional group, nurses worldwide have a pivotal role in the integration of genomics into healthcare. Transformation of nursing practice is not easily obtained. Sharing of initiatives is needed to create nursing practice changes related to genomics.

The largest US study, *A Method for Introducing a New Competency (MINC) into Nursing Practice* assessed the outcomes of an intervention to improve registered nurses' capacity to integrate genomics into practice. This study guided by Rogers Diffusion of Innovation was a longitudinal intervention study of over 8,000 RNs from 23 Magnet® Designated Hospitals.

Most nurses felt genomics was important but were inadequately prepared to incorporate it into their practice, though they were receptive to learning more. This workforce analysis revealed genomic knowledge gaps in all nurses regardless of their highest level of education indicating that all nurses would benefit from a broad scale education intervention. The study demonstrated Nurse Champions can shape healthcare through leadership to integrate genomic content into education, policy, and practice.

Interventions carried out by the hospitals in an effort to move genomics into practice were varied and overall more difficult and time consuming than expected.

Following the MINC project, two projects were undertaken by members of the original study team: 1. Creation of a toolkit to assist in translation of genomics to practice; 2. Sharing of genomic information that led to a Global Genomics Nursing Alliance (G2NA) (January 2017). The initial meeting included representatives from 19 countries and 7 major nursing organisations.

A second broader meeting aimed at disseminating pathways and resources for genomic integration into nursing practice, education, healthcare leadership, and policy is now planned for April 27-29, 2020.

Plenary Session I (23 May 2019, 11:50 – 12:50)

Opportunities and challenges in the use of innovative health informatics and technologies for mental health care

Professor Sally Wai Chi CHAN

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The use of e-technologies, such as Internet, Mobile Technologies and Apps, in support of health and health-related fields is rapidly rising in popularity. There is a collective recognition of the value and contribution of e-technologies in advancing universal health coverage and other health aims of the Sustainable Development Goals (World Health Organisation (WHO), 2019).

While many general principles of eHealth apply in various mental health conditions and contexts in terms of diagnosis, treatment, management and prevention, there are subtle nuances specific to different populations of patients and situations that require attention to ensure success. Culture, gender, socioeconomic factors and other social determinants of health exert additional influence on the various ways e-technologies are leveraged for the delivery of mental health care.

However, e-technologies sometimes are publicised and promoted before adequate evidence has been generated through research in terms of their effectiveness. As a result, the health system views these interventions with healthy skepticism and is cautious about integrating these approaches into routine health service delivery.

In this presentation, Professor Chan will share her work on using e-technology in promoting mental health and psychosocial well-being for carers and people with various health conditions. She will discuss the opportunities and challenges of technology-driven approach to support carers and patients in diverse contexts to achieve optimal wellness. The presentation intends to stimulate regional and global collaboration towards strengthening design principles in eMental Health as well as ways to advance eMental Health globally through research, capacity building and health system integration.

Reference

WHO Guideline: recommendations on digital interventions for health system strengthening. Executive Summary. Geneva: World Health Organisation; 2019. Licence: CC BY-NC-SA 3.0 IGO.

Keynote Address II (24 May 2019, 08:45 – 09:45)

Developing clinical practice guidelines using evidence: Tobacco cessation for patients with cardiovascular disease

Professor Linda P. SARNA

Dean and Professor, School of Nursing,
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Lulu Wolf-Hassenplug Endowed Chair in Nursing

Tobacco use is a known risk factor for cardiovascular disease morbidity and mortality which can be significantly reversed if patients quit smoking. However, the consistent delivery of tobacco cessation treatment in the cardiovascular setting remains challenging for this chronic condition. The purpose of this presentation is to describe the creation of an Expert Consensus Document that provides a structured approach to tobacco cessation treatment for patients at risk for/or with cardiovascular disease as one model for supporting evidence-based clinical practice. Expert Consensus Documents where evidence may be limited, new or evolving, can complement existing clinical practice guidelines. The creation of a decision pathway included the use of Cochrane systematic reviews as well as the synthesis of other research appropriate for the population and providers. An interprofessional expert panel from across the U.S. was identified by the American College of Cardiology to consider available evidence supporting clinical practice in this area. Assumptions and definitions were clarified. The decision pathway includes a systematic stepwise guide for addressing smoking during a routine encounter in an out-patient cardiology care setting. The pathway was based on the 2008 U.S. Public Health Service '*Clinical Practice Guideline for Treatment of Tobacco Use and Dependence*', including the assessment of tobacco use, options for resources/treatment (i.e., pharmacotherapy and behavioural interventions) and follow-up. The specific role of providers, with a focus on cardiology care, are clarified. Controversies addressed included the use of other tobacco products such as e-cigarettes. This presentation will include the importance of nursing involvement in the development of algorithms that can be used by clinicians and patients to develop a treatment plan. Nursing leadership is critical in implementing practice recommendations, reducing system barriers and encouraging adoption of the pathways. Although specific to tobacco dependence treatment, this approach to supporting evidence-based practice may be useful to other areas.

Plenary Session II (24 May 2019, 10:30 – 11:30)

Life-cycle approach to population ageing: Evidence and challenge

Professor Rintaro MORI

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In the Asia-Pacific region, rapid population ageing is recognised as a common challenge that transcends national boundaries, and it is a major issue to be addressed to pursue sustainability of our society. In 2017 there were 547 million people aged 60 years and older (refer to as 'older persons' henceforth) in the region. This number is expected to more than double to nearly 1.3 billion by 2050, at which point one in four people will be over 60 years old, with the majority being women.

UNFPA advocates a life-cycle approach to population ageing as the flagship solution. A wider life-course approach to population ageing, which emphasises on the sequential events and developmental steps throughout a person's life, will be adopted. Many later-life events could be underpinned by fertility and lifestyle decisions, as well as social expectations and preferences during early-life. Enabling an environment for women to work and have children at the same time is also necessary to ameliorate fertility issues. Furthermore, there should be an increase in investment in sexual, reproductive, maternal, neonatal and child health to improve lifestyles and to promote healthy ageing. The Developmental Origin of Health and Diseases is a theory showing that early-life nutritional environment has a significant and substantial impact on lifestyle diseases such as hypertension and diabetes, as well as mental health. One's lifestyle is also likely passed down from the preceding generation.

When it comes to seeking evidence-based interventions compiled for the policy package, however, evidence from Cochrane Reviews may not necessarily be useful. The notable features of the policy package are perceived as challenges in this era of evidence-based health policy. Potential collaboration between Cochrane and UN/WHO should be discussed.

Plenary Session II (24 May 2019, 10:30 – 11:30)

A road toward evidence-based healthcare: Experience from Taiwan

Dr. Chiehfang CHEN

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Director, EBM Centre and Division of Plastic Surgery,
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Wan Fang Hospital, Taipei, Taiwan

Gordon Guyatt coined the term 'evidence-based medicine' (EBM) in a 1991 editorial in *Annals of Internal Medicine* which formally unveiled the new era of EBM.

Relatively late, the first EBM centre in Taiwan was established in Changhua Christian Hospital in central Taiwan in 1996. At the turn of the century, Taipei Municipal Wanfang Hospital started the first EBM centre in northern Taiwan. After that, more and more hospitals set up their own EBM centres focusing on integrating EBM into clinical training. The EBM development in Taiwan can be described as 'grassroots development'. Most of the activities were initiated by frontline healthcare personnel including physicians, nurses, pharmacists and physical therapists, which is different from many places where the development comes from academic institutes.

EBM contest is one of the signature EBM activities in Taiwan. The national EBM competition in Taiwan started in 2006 by the Joint Commission of Taiwan (JCT) in collaboration with the National Health Research Institutes (NHRI), and later with Taiwan Evidence-Based Medicine Association (TEBMA), as an effort to apply EBM into clinical practice. The competition was developed using information infrastructure and game-specific elements. There were two main phases of the contest: preparation and execution.

Another important milestone in EBM development in Taiwan was the inauguration of TEBMA in 2007. It was an important step forward in the EBM movement. The founder and the first president was Professor Ken N. Kuo.

Since the beginning of 2006, NHRI has provided EBM-related information resources and promotional activities for healthcare professionals of regional hospitals in Taiwan. The project launched by NHRI to promote the implementation of EBM was multifaceted, which consisted of offering information resources and carrying out a series of activities. The project set up a Chinese EBM website, offered free usage of the Cochrane Library, and started translation of abstracts published in Cochrane Database of Systematic Reviews into Traditional Chinese for health professionals to access. Furthermore, NHRI conducted monthly workshops with a total of 4,714 attendees throughout Taiwan. As a result, all these efforts led to the establishment of TEBMA in 2007. In cooperation with NHRI, TEBMA organised annual conferences and competitions pertaining to EBM implementation.

Taiwan hosted the 3rd International Society for Evidence-Based Health Care Conference (ISEHC) in 2014. There were 537 attendees from 24 countries participating in the conference. During the event, the concept of shared decision making was first introduced to Taiwan.

Lately, EBM-related publications including meta-analyses and Cochrane reviews have been increasing dramatically. There were more than 800 EBM-related publications in Taiwan in 2018. Comparing to the number in 1991, it has increased 8 times. For the updated and steady development of EBM in Taiwan, we would like to acknowledge the effort and assistance of two expert teams from neighbour regions, i.e. Dr. Edwin Chan and his colleagues from Singapore, and Professor Yaolong Chen and his team from Lanzhou, China. Dr. Edwin Chan visits Taiwan for teaching almost every year since 2007. Professor Yaolong Chen visited five times and introduced the methods of GRADE to Taiwan. Through our cooperation, the GRADE handbook in Traditional Chinese was published last year.

In addition, formal EBM curriculum was established for medical and nursing students at university. For example, Taipei Medical University has a series of EBM courses for medical students, as well as on-job master's programmes introduced by its College of Medicine and College of Nursing.

Cochrane Taiwan has designed several activities to promote EBM and Cochrane Library. For example, translation is important for promoting EBM knowledge. We continue our effort in translating abstracts in the Cochrane Library into Traditional Chinese. We translate more than 100 abstracts into Traditional Chinese annually. In the past few years, we have published several EBM books as educational materials. We also promote Cochran evidence to the public via media. Cochrane Taiwan has a Facebook page and holds several promotional activities including contests every year.

Knowledge translation is an important part in EBM movement. In this presentation, I will introduce our ways of promoting shared decision making (SDM), evidence-based practice guidelines (EBPG), health technology assessment (HTA), Choosing Wisely, etc.

For all EBM activities we have done, our ultimate goal is to achieve 'better population health in Taiwan'.

Plenary Session III (24 May 2019, 11:30 – 12:30)

Generating and translating evidence in nursing: Achieving the best in health care

Professor Alexandra McCARTHY

Head, School of Nursing, The University of Auckland,
New Zealand

There can be no doubt that rigorous research that challenges conventional thinking has, overall, benefited human kind. Yet in 2014, the respected journals *PLOS Medicine* and *The Lancet* ran articles that questioned the value and integrity of the scientific research evidence that has recently been published by academics, and this line of thinking continues to this day. Authorities in evidence appraisal and implementation science acknowledge that a significant proportion of health research activity is both wasted opportunity and wasteful of human and material resources. They argue cogently that much research activity appears to benefit the academic community but has little benefit to the community that health care providers serve.

This presentation explores these issues in nursing. The aim of the presentation is to scope how nurses who wish to make a difference with their research can:

1. Generate the best, most useful evidence
2. Use evidence to achieve the best in health care
3. Work with the barriers to, and facilitators of, evidence translation.

Evidence-based cardiac rehabilitation: The changing face of usual care

Professor David R. THOMPSON

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United Kingdom

Cardiac rehabilitation is a complex intervention that has its origins in the 1940s when reports emerged of the harms of prolonged bed rest for people with acute myocardial infarction. Since then, the provision of cardiac rehabilitation services has grown tremendously. This, together with clinical guidelines and policies, has largely been informed by evidence from clinical trials and systematic reviews and meta-analyses. However, the evidence has at times been confusing and conflicting. For example, in the late 1980s two seminal systematic reviews and meta-analyses provided strong evidence attesting to the benefits of exercise-based cardiac rehabilitation, particularly on mortality. These findings were confirmed by the first Cochrane review of exercise-based rehabilitation in 2001. However, the latest (2016) of two subsequent Cochrane reviews of exercise-based cardiac rehabilitation found that though there was a reduction in cardiovascular mortality there was also a reduction in hospital admissions and improvements in quality of life. The mortality benefit of cardiac rehabilitation appears reduced in the modern era and this may be a reflection of the changing face of usual care. Also, perhaps, mortality might not be the most appropriate primary outcome.

This presentation aims to cover six areas pertaining to this topic. Firstly, it defines contemporary cardiac rehabilitation. Secondly, it surveys its history and development. Thirdly, it reviews contemporary models of service provision. Fourthly, it reviews the evidence base pertaining to exercise-based cardiac rehabilitation. Fifthly, it identifies gaps and weaknesses in the organisation, content and delivery of cardiac rehabilitation. Finally, it suggests future research directions to address these gaps in the evidence base.

Plenary Session IV (24 May 2019, 13:30 – 14:00)

Instrument development, testing, and use: The importance of reliable and valid tools for measuring outcomes

Dr. Suzanne H. CAMPBELL

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Effectively translating knowledge into clinical practice requires confidence in the level of evidence, which requires trust in the methodology, including the instruments used to measure results of interventions. Reliable and valid instruments are necessary for effective measurement of changes and outcomes. Present challenges are in the lack of reliable and valid instruments especially in areas such as the measurement of non-technical skills like communication, team-based care, and leadership – key areas in the transformation of the health care system. As communication errors lead to the majority of adverse events in health care, evaluating communication between providers and patients and during patient hand-offs and critical events (e.g. trauma, codes, and emergencies) is imperative. This plenary session will examine the availability of reliable and valid instruments to measure communication in multiple situations, and provide an overview of effective instrument development based on the DeVellis method and rigorous statistical analysis. It outlines processes for translation and testing of reliable and valid instruments, comparing and contrasting present methods and needs for future research. Apart from delineating challenges and solutions for the use of reliable and valid instruments in the development of evidence-based methodologies to advance research, this session will also incorporate global translation of reliable and valid instruments for use to advance knowledge translation in key areas.

Concurrent Session I: 1. Knowledge translation and communication of evidence

A01 The short-term effects of lifestyle interventions on self-efficacy for health practice among metabolic syndrome population: A randomized control trial

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³School of Nursing, The Hong Kong Polytechnic University

Background: Lifestyle interventions have been widely recognized as the first line intervention for metabolic syndrome (MetS), which refers to the coexistence of multiple cardio-metabolic risk factors. All lifestyle interventions have to change participants' health practices. Self-efficacy is the critical behavior-specific factor for health practice. The aim of the current study was to examine the effects of lifestyle interventions on self-efficacy for health practice among MetS population in three months.

Methods: A two-armed randomized control trial was designed. Adult patients that meet the International Diabetes Federation definition for MetS were recruited from a general hospital in Qingdao, China. The participants were randomized to either the intervention group (IG) or the control group (CG) by a computer-generated random number. The study hospital provided usual care and discharge education for all participants. In addition, the IG received lifestyle interventions for three months, including a face-to-face health education, a health practice booklet, and 6 bi-weekly telephone follow-ups. The self-efficacy was assessed through the Self-rated Abilities of Health Practice Scale (28-item, range 0-112), including four sub-scales on nutrition, exercise, psychological well-being, and health responsibility. Data were collected at baseline, 1-month, and 3-month. Generalized estimating equation (GEE) model were employed for data analysis.

Results: A total of 173 participants (85 males, mean age: 55.62 years) were recruited, with 86 in IG and 87 in CG. In IG, participants' self-efficacy increased from 70.67 at baseline to 81.28 at 1-month, and 82.29 at 3-month. The GEE analyses also revealed significant group-by-time effect on every sub-scale and the overall scale at 3-month (all p values < 0.05). Moreover, the nutrition sub-scale showed significant group-by-time effect at 1-month (p = 0.014).

A02 Efficacy and safety of traditional Chinese combined with western medicine for treating acute exacerbation of chronic obstructive pulmonary disease: A network meta-analysis

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¹Nursing School of Shandong University

Background: Using network meta-analysis (NMA) method, Western medicine was used as common control to assess the efficacy and safety of Ten kinds of Chinses traditional medicine (CTM) combined with western medicine for Acute Exacerbation of Chronic Obstructive Pulmonary Disease (AECOPD).

Methods: According to PRISMA statement, randomized controlled trials (RCTs) of traditional Chinese combined with Western medicine in the treatment of AECOPD published in China Knowledge Resource Integrated Database (CNKI), WanFang, Vip, CBM, PubMed, Web of Science, Embase and Cochrane Library databases were searched up to November 2018. Two reviewers screened, extracted data and evaluated the quality of references independently. Review Manager 5.3, Stata14.0 and R 3.5.1 were used for quality assessment and data analysis.

Results: 81 RCTs were included, involving 10 kinds of CHMs and 7079 patients. The network meta-analysis showed: In the treatment of efficiency, the order of CHM in CHM + western medicine from high to low were LiuJunzi decoction, Weijing Tang, Dingchuan decoction, Erchen decoction, bailing capsule, Xiaoqinglong Decoction, Qingjin Huatan Decoction, Suzi Jiangqi decoction, YuPingFeng, Mxing Shigan decoction. In the lung function (FEV1%), the top three of the CHM from high to low were Weijing Tang, Xiaoqinglong Decoction, bailing capsule. In the lung function (FEV1/FVC%), the top three of the CHM from high to low were Weijing Tang, Mxing Shigan decoction, Erchen decoction.

Conclusion: The existing researches shows that CHM + western medicine is more effective and less adverse effective in treating patients with AECOPD. Considering the efficacy and lung function, it is shown that Weijing Tang + western medicine is the most likely to be the best treatment. However, the quality of the included studies is not enough, the exact conclusion still needs more high quality RCTs to confirm.

A03 The effect of community nurse-led transitional care program to enhance patient and health service utilization outcomes for the older adults with high risk hospital readmissions: A randomized controlled trial

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Background: Elderly patients with chronic illnesses are discharged from hospital early in response to the overstretched hospital services. However, a substantial amount of evidence had identified the shortcomings of under-prepared hospital discharge for elderly patients and would easier lead to an increased risk hospital readmission. The aim of the study is to develop community nurse-led transitional care program and examine its effect to enhance post-discharge outcomes of elderly patients with chronic illnesses who are at high risk readmission.

Methods: The transitional care model (TCM), which was developed by Naylor et al. (2010), was used as framework to guide the entire care of elderly patients from hospital to home. A 8-week single blind randomized controlled trial study was conducted. The subjects were recruited from medical wards. They were randomly assigned into either intervention or control groups. The primary outcomes of the hospital service utilization in terms of the number of hospital readmissions, number of AED visits and length of hospital stays were evaluated. The secondary outcomes were measured including psychological status by using Hospital Anxiety and Depression Scale (HADS), quality of life by using the Chinese version of the EuroQoL-5D (EQ-5D) questionnaire; self-efficacy by using Chinese version of the short-form chronic disease self-efficacy scales (CDSSES-SF) and patient satisfaction of care questionnaire.

Results: A total of 106 subjects were recruited in the study with attrition rate of 7.5%. The mean age was 80 years and 67% were male. The results indicated that those who received transitional care had significantly fewer events in terms of hospital readmission and AED utilization by the evaluative endpoint at 4 weeks ($p=0.045$). By the evaluative point at the 8 weeks and 12 weeks after hospital discharge, it was found that those who received transitional care had significantly lower rate of AED utilization ($p=0.026$) and ($p=0.021$) respectively. The generalized estimating equations (GEE) analysis affirmed that the intervention group had significantly greater improvement in depression status across the evaluative endpoints at 8 weeks ($p=0.035$) and also self-reported health –related quality of life in EQ-5D visual analogue scale scores ($p=0.021$).

Conclusion: The study affirms that community nurse-led care interventions are feasible and effective in applying into the local health care context to improve post-discharge outcomes of the elderly patients.

A04 Health consequences of natural disaster exposure on the mother-infant dyad: A systematic review

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² *Methodist Hospital*

Background: Pregnant women and their unborn child are especially vulnerable to long-term effects of natural disasters. Prenatal maternal stress (PNMS) can lead to serious negative consequences to both mother and child. Experiments that expose pregnant women to moderate to severe stress are unethical and are not allowed. Exposure to a natural disaster provides naturalistic quasi-experimental conditions to determine the short and long-term effects of a traumatic stressor during pregnancy on the mother-offspring dyad. Natural disasters tend to have a sudden onset, independent of the individual's control and prior psychological functioning; their prevalence and severity are projected to increase due to population growth and climate change.

Methods: The purpose of this systematic review is to synthesize the findings from original research on the consequences of exposure to a natural disaster on the mother-offspring dyad. Academic Search Complete, CINAHL, PubMed, and PsycINFO were accessed using the keywords: "natural disaster," "effects," "mother," and "children." Data from relevant articles (N=32) were synthesized and grouped according to the type of natural disaster: ice storm, earthquakes, hurricanes and tropical storms, floods, and wildfire.

Results: Maternal effects of natural disaster exposure included depression, non-affective psychosis, and posttraumatic stress disorder (PTSD). Effects on the offspring reportedly include poor intellectual and language functioning, low birthweight, and difficult infant temperament, with conflicting results. The magnitude and timing of the disaster exposure seem to be predictors to determine the short and long-term effects of PNMS as well as their severity on maternal mental health and offspring development.

Conclusion: Exposure to a natural disaster during pregnancy negatively impacts maternal mental health and the physical and cognitive development of the offspring. These findings will inform the design of appropriate evidence-based interventions to address issues pertinent to maternal mental and physical health, optimize the development of the offspring, and promote community resilience.

A05 A qualitative study on engaging persons with early dementia (PWEDs) in advance care planning (ACP): The perspectives of PWEDs, carers and healthcare professionals

Cheryl Chi Yan YEUNG¹, Helen Yue Lai CHAN²

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Background: As the global population ages, dementia is gaining prevalence. As there is a growing consensus that dementia is a progressive life-limiting disease, and persons with dementia will gradually lose mental capacity and decision-making capacity, the introduction of ACP to dementia care becomes important and relevant. ACP encourages PWEDs to discuss and arrange future care earlier. Their views are essential to guide person-centered palliative care. However, limited evidence is available to support the design of ACP intervention for the PWEDs.

Method: This study adopted a qualitative inquiry approach to examine the barriers, enablers, and approaches to engage PWEDs in ACP from the perspectives of various stakeholders through data source triangulation. Informants were purposively sampled and comprised of 14 PWEDs, 8 carers of PWEDs, 10 carers of persons with advance dementia, and 11 healthcare professionals (HCPs) working in dementia care. Both semi-structured individual interviews and focus group interviews were conducted. All interviews were recorded and transcribed verbatim. A content analysis approach was adopted.

Results: Barriers to engage PWEDs in ACP included: i) PWEDs were lack of insight, knowledge and platform to discuss; ii) ACP is not their concern; iii) lack of a formal diagnosis of early dementia; iv) PWEDs' preferences were not respected; v) lack of resources to support ACP discussions. Enablers included: i) peer experience on caring persons with dementia; ii) trusting relationships between the PWEDs and HCPs; iii) physician's involvement; iv) PWEDs do not fear to talk about EOL issues.

Conclusion: ACP is theoretically beneficial to the triad of PWEDs, carers and HCPs. Yet, the key elements of an ACP intervention for this population remain unknown. This study explored the barriers and enablers to engage PWEDs in ACP, and also suggested some key elements of the ACP intervention. These findings help designing an evidence-based ACP intervention for the PWEDs.

Concurrent Session I: 2. Knowledge translation and communication of evidence

A06 A systematic review and meta-analysis of couple-based intervention on sexuality and quality of life of cancer patients and their partners

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Background: Couple-based intervention is usually used for couples coping with cancer on sexuality and quality of life issues, but the evidence is not clear and some are conflicting.

Methods: A systematic review and meta-analysis of randomized and non-randomized controlled trials of interventions delivered to couples aimed at improving sexuality (sexual function, self-concept and relationship) and quality of life (physical and mental health) of both cancer patients and partners was conducted. We searched CINAHL, PsycINFO, PubMed and CNKI for studies published in English and Chinese from the establishment of databases to October 2018. Quality of studies was assessed by the Effective Public Health Practice Project.

Results: Thirty five articles were identified for systematic review and meta-analysis. Majority (65.7%) of studies are in moderate quality. The interventions of included studies mainly are psychosocial interventions. Majority (71.43%) of studies focused on prostate cancer and breast cancer. Random effect size model was used for meta-analysis due to heterogeneity. For cancer patients, the couple-based intervention had a marginal effect (Hedges' g) 0.54 (95%CI = -0.023-1.106, $P=0.06$, $I^2=82%$) for sexual function; moderate effect 0.535 (95%CI = 0.196-0.874, $P=0.002$, $I^2=79%$) for physical health; and moderate effect 0.462 (95%CI= 0.055 - 0.344, $P=0.019$, $I^2=86%$) for mental health compared with the control group. Promising effect for sexual self-concept of patients was found and narratively reviewed due to less studies. For partners of cancer patients, the Hedges' g was 0.242 (95% CI = 0.082-0.402, $P=0.003$, $I^2=0%$) for sexual relationship and 0.768 (95% CI = 0.070-1.465, $P=0.031$, $I^2=94%$) for mental health.

Conclusion: Patients could get positive effects on sexual function, physical health and mental health from couple-based interventions; while partners could get positive effects on sexual relationship and mental health. Future research should explore more about sexual self-concept in cancer patients and target to some other types of cancer that compromise sexuality and quality of life.

A07 Accuracy of PRE-DELIRIC (PREdiction of DELIRium in ICu patients) Delirium Prediction Model: A systematic review and meta-analysis

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Background: Delirium is hard to be detected and diagnosed in the intensive care unit (ICU) settings. Delirium prediction model (PREdiction of DELIRium in ICu patients, PRE-DELIRIC) was developed to assist critical healthcare professionals to predict delirium effectively. This study aimed to evaluate the predictive accuracy of the PRE-DELIRIC model.

Methods: A systematic literature search was performed using the Cochrane Library, PubMed, CINAHL, Embase, and Scopus. Studies evaluated the diagnostic performance of PRE-DELIRIC and published in English or Mandarin from inception until December 2018 were included. The revised quality assessment of diagnostic accuracy studies (QUADAS-2) was used to assess the methodological quality of the included studies by two review authors independently. The moderate risk (20-40%) group of PRE-DELIRIC was used as a cut-off point to be evaluated. Data were pooled on the basis of sensitivity, specificity, and diagnostic odds ratio (DOR) by the bivariate random effects model. Overall test performance was summarized using a hierarchical summary receiver operating characteristic (HSROC) curve and the area under the curve (AUC). The univariate meta-regression analysis was adopted for identifying potential source of heterogeneity in the diagnostic performance.

Results: We identified eight studies with a total of 5,817 critical ill patients. When predicting delirium in the meta-analysis, the result revealed pooled sensitivities and specificities of 0.58 (95% confidence interval [CI] 0.40-0.73), 0.86 (95% CI 0.73-0.93) for a moderate risk level of PREDELIRIC score respectively, with a DOR of 8.00 (95% CI 6.00-12.00) and the AUC was 0.80 (95% CI 0.76-0.83). In meta-regression, an average length of ICU stays, on mechanical ventilation and percentage of male patients were associated with study heterogeneity.

Conclusion: PRE-DELIRIC yield good discrimination in predicting delirium among moderate risk group of critical ill patients, but the results must be interpreted with caution due to the between-study heterogeneity.

A08 Effectiveness of acupressure on postoperative gastrointestinal function among patients undergoing surgery for colorectal cancer: A randomised controlled trial

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Background: Colorectal cancer (CRC) is the third most common cancer worldwide in 2018. After CRC surgery treatments, gastrointestinal function is impaired which resulted in prolonged hospitalisation. Acupressure is a promising technique to improve gastrointestinal function. This study aims to evaluate the effectiveness of acupressure to improve postoperative gastrointestinal function among patients undergoing CRC surgeries.

Methods: This study is a randomised controlled trial conducted in a university affiliated hospital in mainland China. Adult patients (≥ 18 years old) ($n=112$) who were scheduled to undergo CRC surgeries were randomised to an intervention group receiving acupressure or a control group receiving sham acupressure at the acupoint Stomach 36 (ST36, 足三里) for five days after the operation. The primary outcomes included time of first passage of flatus and defecation, and the secondary outcomes included postoperative nausea and vomiting, abdominal distension, pain and bowel motility. The outcomes were analysed by using student *t*-test, regression analysis and generalised estimating equation (GEE) models to compare the effects of acupressure on gastrointestinal symptoms at different time points.

Results: The multivariate regression analysis showed that acupressure at ST36 significantly shortened the time interval of first flatus passage by 8.46 hours (95% CI $-16.241 \sim -0.679$, $P = 0.033$). There was no significant effect found on the time of first passage of defecation. Furthermore, the GEE models showed that, compared with the control, patients who received acupressure exhibited significantly improved bowel motility by 0.752 (95% CI $0.147 \sim 1.357$, $P = 0.015$) when measured by stethoscope and decreased abdominal distension by 0.304 (95% CI $-0.513 \sim -0.095$, $P = 0.004$) when evaluated by Numeric Rating Scale.

Conclusion: This study demonstrated the effectiveness of acupressure on shortening the time interval of first flatus passage, improving bowel motility and reducing abdominal distension among patients with CRC surgery. Future multi-centre study is needed to verify the conclusion.

A09 The effects of video decision aid to promote advance care planning in community-dwelling older adults in Hong Kong: A cluster randomized controlled trial

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Background: With the advanced of medical technology, there are increasing numbers of life-sustaining treatments (LST) that could prolong life and delay dying (HAHO, 2015). The process of advance care planning (ACP) enable individual to define future medical goals. Video decision aid (VDA) is effective in supporting individuals engaging in ACP. Yet, little is known about its effectiveness among Chinese population. This study aims to explore the effect of VDA in promoting ACP among community-dwelling older adults in Hong Kong.

Methods: This is a multisites cluster randomised controlled trial with qualitative component. Eligible clusters were recruited and randomised. Both groups received 30-minute ACP verbal narrative. On addition, the intervention group watched a 6-minute VDA. Primary outcome was readiness. Secondary outcome were knowledge, certainty of care preferences and decisional conflicts. As process measures, qualitative interview with older adults and social workers were conducted. Data was collected at two time-points, baseline (T0) and after intervention (T1). Generalised estimating equation models were used to investigate the interaction effect between groups and time.

Results: Eight clusters with 182 subjects were recruited and randomised to control ($n=78$) or intervention ($n=104$) group. 77% were female with a mean age 75. Majority of subjects were married (76%), educated (66%) and have chronic disease (83%). Significant improvement in mean readiness score on ACP discussion ($p=0.003$) and documentation ($p=0.008$) were detected. Mean knowledge score also increased [OR=0.549 (0.077-1.022) $p=0.023$]. Certainty on care preferences improved. Decisional conflicts were lower ($p<0.001$). Qualitative interview revealed that although older adults feel positive towards death & dying, however, barriers such as family disagreement, misunderstanding of children & physical constraints still exists.

Conclusion: Promoting ACP using VDA is feasible, practical & innovative. This is the first RCT in HK to investigate the effect of VDA. This study provides mass effectiveness information and qualitative information on the ACP development. Public health initiatives, legal policy, professional training and further studies are warranted.

A10 Effects of advance care planning for adult patients with heart failure: A systematic review

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Background: Patients with heart failure (HF) are at considerably risk of experiencing complications and death. Recent studies found that lacking communication between HF patients and clinicians/surrogates regarding future care may make it difficult for patients to receive care concordance with their value. Advance care planning (ACP) is a communication process helping individuals to define and express their goals and preferences for future care. This systematic review aimed to systematically evaluate the effects of ACP for HF patients on the concordance between patients' preference and received care or surrogates' preference, quality of life and health service utilization, and to identify the knowledge gap.

Methods: Eight databases (Medline, CINAHL, EMBASE, PsycINFO, Cochrane Central Register of Controlled Trials, WanFang, CNKI, CBM) were searched for articles in English or Chinese from the beginning of database to January 2019. The study quality was assessed independently by two reviewers using Cochrane Risk of Bias.

Results: Out of the 1069 articles, four articles describing three RCTs were included representing 413 participants from US and UK. Significant effect of ACP intervention was found for improving the concordance of surrogate' and patients' preferences. However, no significant effects on the concordance of patients' preferences and received care, quality of life, health care utilization (number of hospital readmissions, days hospitalized) were found within studies. All included articles had methodological limitations including lack of blinding and insufficient sample size.

Conclusion: We found that evidence on ACP for HF patients to improve concordance between patients' preference and received care/surrogate's preference, quality of life or change health care utilization is very limited. More research with rigorous RCT studies with larger sample size is needed to examine the effects of ACP intervention.

Concurrent Session I: 3. Evidence-based health policy and leadership in health care

A11 Benchmarking nurse outcomes in Australian magnet® hospitals: Cross-sectional survey

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Background: Positive reports of nursing-related outcomes and good practice environments are necessary for Magnet® designation. Most Magnet®-designated organisations are in the US (N=482) and their aggregate nursing outcomes are widely published. Three of the eight Magnet®-designated organisations outside the US are Australian. Australian data on nursing outcomes have not been aggregated or published.

Methods: The primary aim was to benchmark educational preparation for practice, occupational burnout, job satisfaction, intention to leave and the hospital working environment in Australian Magnet®-designated facilities. The second aim was to determine the reliability of the Practice Environment Scale-Australia.

A cross-sectional multisite survey was undertaken. Measures included demographics, job satisfaction and intent to stay in current employment. The Maslach Burnout Inventory explored nursing engagement (depersonalisation, personal achievement and emotional exhaustion). The Australian Practice Environment Scale interrogated participants' perceptions of their work environments.

Results: 2004 predominantly female nurses participated (response rate: 45.9%). Respondents' mean age was 39.2 years, and they had worked in their current facility for over five years. 85.2% had at least a Bachelor's degree. 85.8% were satisfied or very satisfied with their position. 88.2% had no intention of leaving their current employer within the next year. Participants rated their hospitals highly in all domains of the practice environment. The internal consistency of the Practice Environment Scale-Australia was confirmed (Cronbach α 's: 0.87-0.9 for the subscales and 0.89 for the composite score). Respondents reported lower levels of burnout in the personal accomplishment and depersonalisation domains, and average levels of burnout.

Conclusion: Magnet®-employed nurses in Australia report job satisfaction, intention to continue their current employment and a better working environment than their United States Magnet® colleagues, average levels of emotional exhaustion, low levels of depersonalisation and good levels of personal accomplishment. The data from this study provide a benchmark for future Australian and international Magnet® studies.

A12 The application of evidence-based quality control circle activities in improving the rate of central venous catheterization in pediatric cancer patients with chemotherapy

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Background: The extravasation of chemotherapy drugs caused by peripheral veins is very harmful, improving the rate of central venous catheterization in pediatric cancer patients with chemotherapy through the application of evidence-based practices combined with quality control circle activities is great necessary.

Methods: 279 cases of pediatric cancer patients with chemotherapy were selected as the control group from January to December in 2017, 97 cases were selected as observation group from January to April in 2018. QC group was established, select the topic and make plans of the activity. Find the best evidence by evidence-based method and the main factors through cause analysis. Based on the evidence, the strategy was formulated and implemented according to the plans. The rate of central venous catheterization in cancer children with chemotherapy was evaluated before and after the activity.

Results: The rate of central venous catheterization in cancer children with chemotherapy rose from 35.8% in 2017 to 79.4% in 2018 (P<0.05) after the evidence-based practices combined with quality control circle activities.

Conclusion: Evidence-based practice combined with quality control circle activities can effectively improve the rate of central venous catheterization in cancer children with chemotherapy, reduce the incidence of puncture pain and extravasation of chemotherapy drugs.

A13 What is essentially enough for midwives in Indonesia?

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Note: The authors decided to withdraw their abstract for presentation.

A14 The methodology review for integrating qualitative research or evidence into guidelines development: A comparative analysis

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Aims: To understand methodology of integrating qualitative research or evidence into guidelines development.

Background: The development and implementation of guidelines in health care field is complex. Qualitative research may be considerable way to improve the quality and application of guidelines, and the methodology of its usage in guideline development is worthy to explore.

Design: A systematic review and comparative analysis

Methods: WHO, NICE, SIGN, NGC, and RAO, PubMed, Embase, Web of Science, CNKI, Wanfang, CBM, and VIP, were searched from January 1, 2011 to September 16, 2018. Relevant English or Chinese guidelines using qualitative research or evidence into guidelines development were included. Two authors extracted significant information and completed data extraction forms. Appraisal of Guidelines for Research and Evaluation (AGREE II) tool was used to evaluate the quality of the guidelines included. The data was analyzed with SPSS version 17.0 and R version 3.3.2. The information such as retrieving, evaluating quality of qualitative evidence, the number of recommendations supported by qualitative evidence, the quantity and type of qualitative evidence were extracted and analyzed.

Results: 72 guidelines were identified. The ICC values for all six domains were over 0.75. The overall quality of the guidelines was optimistic (almost over 60%). No guideline developers applied qualitative research to identify clinical questions. 97.22% of the guidelines developers retrieved qualitative evidence, 59.72% of whom evaluated quality of qualitative evidence, and 52.78% of whom graded qualitative evidence. The number of recommendations supported by qualitative evidence ranged from 1 to 12 (mainly based on primary research).

Conclusion: The overall quality of the included guidelines was high. Qualitative research has made a positive influence in the process of guidelines, such as beneficial for formulating recommendations and identify facilitators and barriers of guideline implementations. In addition, we provide a hypothesis path map that interpret the role of qualitative research or evidence and their task in guidelines development in order to further discussion by more guidelines methodology experts.

A15 Education interventions on prevention and management of extravasation for paediatric nurses: A literature review

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Background and Aims: Extravasation is a known complication associated with peripheral intravenous catheters which can cause severe tissue damage and necrosis. Children are more vulnerable to extravasation due to multiple risks including their small fragile veins and unable to verbalize their discomfort. Yet, it can be prevented with paediatric nurses' early recognition, prevention and prompt treatment. An education programme using best practice guidelines on prevention and management of extravasation injuries would help to increase nurses' knowledge level and compliance. In this article, we aimed to review the available literature on current education interventions on paediatric extravasation and to examine their effectiveness and identify the key components in the interventions.

Methods: Electronic databases of Cochrane Central Register of Controlled Trials, MEDLINE, CINAHL, EMBASE, PubMed, Ovid Nursing Database and Maternity and Infant Care Database were searched. Both experimental and quasi-experimental designs which published in English were included. Studies were eligible if they reported an educational intervention aiming to improve nurses' prevention and management of extravasation in general paediatric population. Outcome measure of interest included the rate of extravasation, nurses' knowledge level and compliance rate on best practice of intravenous site care. Quality appraisal was done with the Effective Public Health Practice Project Quality Assessment Tool by two reviewers independently.

Results: Eight studies that met our inclusion criteria were identified. One of them was a controlled clinical trial, one was a prospective case series while the rest were of one group pretest posttest design. Interventions identified included various types and formats of nursing staff education, enhancement on intravenous site assessment and securement, family involvement of intravenous site care, early referral to specialist team and an implementation of treatment protocol. Regarding outcomes, all the eight studies reported a decrease in the incidence of intravenous extravasation after intervention. Two studies demonstrated an improvement in the compliance rate on best practice of care of peripheral venous cannula sites for paediatric nurses. Three studies also reported an improvement in the knowledge level of extravasation after intervention.

However, the overall study quality of the eight studies were rated as "weak" due to high risk of selection bias, unclear descriptions on the validity and reliability of data collecting methods, the existence of confounding variables in studies, and lack of blinding of outcome assessors.

Conclusion: We identified eight studies reported educational interventions for prevention and management of extravasation for paediatric nurses. All studies showed beneficial effects in outcomes measured, however, due to high risk of bias, the finding should be interpreted cautiously.

Concurrent Session I: 4. Contemporary issues and challenges in achieving collaboration in best practice

A16 Instrument development of professional role modeling behaviour in nursing

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Background: Role modeling is important to promote professionalism in nursing education. Thus, educators of future health care professionals, such as nurse educators, must be a role model for their students. Despite some authors claim that role modeling as a proposed intervention to address unprofessional behavior in nursing education, there has been little evidence to guide educators regarding the characteristics of role modelling especially in nursing education. The purpose of this study was to develop an instrument measuring professional role model behavior of nurse educator in nursing education.

Methods: This study applied a mixed-method exploratory study using an online questionnaire (Survey Monkey Inc.) A sample of 287 students involved in the first phase of this study.

Results: Several main categories revealed including helping, smart, caring, compassion, commitment, competent, integrity and Christ-like characters. These categories were developed into 35 item of questionnaire. Then, the developed professional role modelling questionnaire was tested for its validity (Cronbach's Alpha 0.970) with 30 respondents.

Conclusion: The new developed questionnaire is a list of characteristics of ideal role model that could lead nurse educator to demonstrate a good example in teaching and practice to foster positive characters, especially for students as future nurses.

A17 Student nurse perceptions of professional role modelling in Indonesian nursing education

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Background: Nurse educators as role models are important to facilitate student nurse for learning and assists in the development of student nurse professional identity. Role modelling by nurse educator could lead the students to imitate the educators' behaviours, either positive or negative, in the academic and clinical settings. It is noted that only few studies investigated role modelling in nursing. The purpose of this study was to describe perceived nurse educator professional role modelling of nursing by nursing students at a private faculty of nursing in Indonesia.

Methods: A 35 item questionnaire was developed and self-administered to undergraduate nursing students. Respondents provided opinions on a four point scale (strongly disagree, disagree, agree, and strongly agree). A descriptive statistic was used to describe its item of the questionnaire. Total of 263 nursing students agreed to involve in the study.

Results: Most students (> 80%) agreed that nurse educators behave professionally in nursing education settings. However, there was a small number of students said that few nurse educators acted unprofessionally (1.5% -2.3%). Interestingly, there were six students (2.3%) stated that nurse educators did not guide the student learning in classroom, skills laboratory and clinical practice as well as did not support students to be an independent person (2.3%).

Conclusion: This study developed a new characteristics of professional role modelling in nursing education settings. These characteristics are essential and desirable for role models in which could assist nurse educators to strengthen those characteristics within their institutions.

A18 Beliefs and implementation of evidence-based practice among nurses: A descriptive study

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Note: The authors decided to withdraw their abstract for presentation.

A19 Overcoming the barriers for the implementation of clinical practice guidelines in China: Still a long way to go

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Background: Clinical practice guidelines aim to improve the quality of patient care by providing specific recommendations for daily practice. In China, while medical staff and researchers are increasing their efforts in developing guidelines, guideline adherence has been given insufficient attention.

Methods: We conducted a mixed method research study to collect and analyze both quantitative and qualitative data within this study in order to uncover, explore and interpret barriers and enabler to guideline implementation. Questionnaires were distributed to medical staff in 11 cities. Frequency and ranking of barriers and enabler were analyzed. Spearman correlations were computed to explore the correlation between years of practice, professional title ranking and educational background with self-reported guideline adherence. Using a constructivist grounded theory method, the main source of data were face to face in-depth interviews with Chinese medical practitioners.

Results: A total of 359 medical practitioners were surveyed and 32 medical practitioners interviewed in 11 cities. Higher frequency and higher ranking of barriers all converged on “lack of access”, “less convenient”, “lack of applicability” and “lack evidence from Chinese sample”. Higher frequency and higher ranking of enabler converged on “Short formats presentation”, “Utilization of various media”, “Information visualization” and “Linking to patient electronic medical records”. There were no relationships between characteristics of respondents with self-reported adherence. This research produced a theoretical understanding of the experience of medical practitioners when using guidelines. Themes identified were: existing intrinsic flaws in guidelines, deficient or incomplete system mechanism and being ambiguous.

Conclusion: Our findings provide a comprehensive and culturally sensitive perspective in understanding guideline implementation in China. Strategies addressing those barriers should be further discussed and researched in the future.

A20 Missed nursing care in hospital and contributing factors for future intervention

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Background: Patient safety is central to the quality of nursing practice. Missed nursing care, i.e. incomplete, undone or delayed required care, constitutes a daily threat to patient safety and outcomes. There is a lack of prevalence of missed nursing care in China, suggesting the need for an epidemiological study to inspire the design of intervention to prevent missed care.

Methods: Nursing directors in the capital city shared the hyperlink to the online survey with frontline registered nurses without psychiatric disorders in their own hospitals. We used the socio-demographic information sheet and adapted instruments of MISSCARE Survey and McCloskey/Mueller Satisfaction Scale (MMSS) in Chinese to collect data about frequency and reasons of missed nursing care as well as job satisfaction.

Results: 6,158 nurses from 23 general hospitals (3 tertiary) and 11 specialty hospitals (5 tertiary) returned valid questionnaire. The mean age was 30.6 years. 2.5% were male. The most frequently reported missed care was food preparation (51.8%), warm food (39.9%), bathing (37.7%), ambulation (37.7%), turning (18.3%) and psychological support (18%), while the most rarely reported was drainage care (3.5%) and sample taking (3.2%). Staffing (73.8%), material resources (68.8%) and communication (67.5%) were main reasons for missed care. Being male, attending nurse, over 10 night shifts monthly, resigning plan and little friend support were contributory factors to the risk of missed care.

Conclusion: Missed care was rare phenomenon. The pattern of reported missed care was different from existing evidence regarding the influence of male sex, working experience, senior position, and friend support. Male and experienced nurses shall be the target for intervention stressing social networking.

Concurrent Session I: 5. Evidence-informed health care

A21 Caring for a family member with dementia: Longitudinal, case study research of five intergenerational Singapore-Chinese families

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Objective: The aim of this longitudinal, case study research using a participatory approach was to better understand the everyday caregiving experience of intergenerational Singapore-Chinese families within the context of each family unit living together in Singapore 'under one roof'.

Methods: Family biographies were co-constructed with five intergenerational families living 'under one roof' during repeated and scheduled visits with each participating family over a period of between six to 15 months. The interviews included the completion of a 23-item structured questionnaire, co-construction of a genogram and ecomap with each family, drawings, audio recordings and digital photographs of the home environment, items and activities.

Results: Narrative analysis of the five intergenerational cases resulted in the emergence of three themes that explained and explored the various dynamics in the data, namely: i) Family values, and its supporting sub-themes of culture; religion; and filial piety; ii) Family support, and its supporting sub-themes of timeliness; internal support network; and external support network; and iii) Family bonds, and its supporting sub-themes of relational; closeness and conflict; and challenges. Data analysis also generated a meta-theme 'Intergenerational Family Connections' which was supported by three properties: i) Strongly held beliefs and practices; ii) Shared space; and iii) Supporting family togetherness.

Conclusion: This study has led to an in-depth understanding of the everyday experience of the intergenerational Singapore-Chinese families of a person with dementia, within the shared context of their family construction. This study makes an original and significant contribution to knowledge through the development of a new theoretical model on intergenerational family connections in dementia care. The findings will better inform formal and informal service providers and policy makers on how best to support and maintain the relational dynamics of intergenerational Singapore-Chinese families who provide care for the person with dementia at home.

A22 Gender dimensions of health and social support among older adults: A community based study

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Note: The authors decided to withdraw their abstract for presentation.

A23 Reminiscence intervention based on screening an alternative for optimizing basic cognitive processes of older adult: A quasi-experimental study

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Background: Reminiscence Intervention Based on Screening is a new approach for optimizing sensation, perception, attention, and memory of healthy older adults. This study was an applied product research that funding from the government by 2018 for responding phenomena about declining cognitive function amongst the healthy elderly at one nursing home in Jakarta for three consecutive years since 2016.

Methods: A quasi-experimental study was carried out using the nonequivalent control group pretest-posttest design on 46 healthy older adults who selected by criteria inclusion and passed on screening. One way to minimize the limitation the result, so the score before and after intervention have compared in this group. The intervention was about brain activated, so participants chosen pictures either printing or video, then thinking awhile the past events which related to the pictures, afterward telling story in the peer group.

Results: The findings indicated that the group had significantly higher mean score cognitive score from 25.5 on pretest to 27.65 on the posttest with video images (0.001) and print images (0.089). This situation has an impact on cognition and verbal communication in the elderly when sharing past experiences with significance value 0.012 ($p < 0.05$). The participants showed more paid attention by choosing image and the verbal communication in the peer group.

Conclusion: The product was associated with a significant decrease in the early dementia amongst healthy elderly. Future research should test whether the effectiveness of image via video are depend on reminiscence factors.

A24 Effects of a physical restraint reduction program for nurses in rehabilitation hospital on restraint prevalence, proportion and patient fall number

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Background: The use of physical restraint (PR) is remained as a routine nursing practice at bedside among elderly patients in Hong Kong. The aim of the study is to examine the effectiveness of a PR reduction program for nurses to reduce the use of PR among elderly patients in local public hospital setting.

Methods: A quasi-experimental intervention study with pretest and posttest design was conducted in two local rehabilitation hospitals randomly assigned as control group (CG) and intervention group (IG). Nurses in CG follow cluster guideline to care patients under PR as usual practice. A nursing education program with on-site consultation on PR reduction as study intervention was conducted in IG on top of the current usual practice. The difference in the change in PR use (in terms of prevalence and proportion) and number of falls between IG and CG was assessed by logistic regression with adjustment for patient's age.

Results: A total of 116 nurses were recruited and the numbers of patients with PR assessed before and after intervention were respectively 482 and 494 in IG and 501 and 482 in CG. The prevalence of PR in CG and IG was respectively 30.9% and 33.2% before intervention, and was 28% and 31.6% after intervention, with no difference between groups. The proportion of patients with 75% of time with PR decreased in both IG (from 24.3% to 14.4%) and CG (from 16.4% to 11.6%) but the magnitude of decrease was greater in IG ($p < 0.001$). The percentage of falls in both IG and CG were low before and after intervention ($< 2.3\%$) with no difference between groups.

Conclusion: A nursing education program with on-site consultation on PR reduction reduced the proportion but not the prevalence of PR or number of falls in elderly patients in public hospital settings.

A25 Effects of a physical restraint reduction program for nurses in rehabilitation hospital on nurse's knowledge, attitude and practice on physical restraint

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Background: The use of physical restraint (PR) is a routine nursing practice at bedside among elderly patients in Hong Kong. The aim of the study is to examine the effectiveness of a PR reduction program for nurses to reduce the use of PR among elderly patients in local public hospital setting.

Methods: A quasi-experimental intervention study with pretest and posttest design was conducted in two local rehabilitation hospitals randomly assigned as control group (CG) and intervention group (IG). The study intervention which consisted of a 6-hour nursing education program and a 32-hour on-site nursing consultation on PR reduction was conducted for nurses in IG only. Nurse's knowledge, attitude and practice on PR within group and between groups before and after intervention were assessed by paired t-test and by the Generalized Estimating Equation model respectively. Individual question response between groups was compared by Pearson Chi-square test.

Results: A total of 116 nurses were recruited in the study with 59 in CG and 57 in IG. Compared with CG, nurses in IG attained higher level of knowledge and attitude on PR after intervention, but there was no significant difference on the score between groups. Upon sub-group analysis, there was significant difference in registered nurses' score on knowledge and attitude on PR in IG after intervention with $p=0.012$ and $p=0.036$ respectively. No interaction effect on registered nurse's score between groups over time was achieved. For individual question response analysis, more nurses in IG acknowledged patient's right to refuse to be placed in PR than that in CG after intervention with $p=0.011$. Also, more nurses in IG agreed that the use of restraint could not decrease the number of patient fall than that in CG with $p<0.001$.

Conclusion: A nursing education program and on-site consultation on PR reduction can improve nurse's knowledge and attitude on PR use.

Concurrent Session I: 6. Knowledge synthesis

A26 qSOFA is a poor predictor of short-term mortality in all patients: A systematic review of 410,000 patients

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Background: To determine the validity of the Quick Sepsis-Related Organ Failure Assessment (qSOFA) in the prediction of outcome (in-hospital and 1-month mortality, intensive care unit (ICU) admission, and hospital and ICU length of stay) in adult patients with or without suspected infections where qSOFA was calculated and reported;

Methods: Cochrane Central of Controlled trials, EMBASE, BIOSIS, OVID MEDLINE, OVID Nursing Database, and the Joanna Briggs Institute EBP Database were the main databases searched. All studies published until 12 April 2018 were considered except case series, reports, and conference abstracts. Studies that included patients with neutropenic fever exclusively were excluded. Risk of bias were assessed using an adapted version of the Quality In Prognosis Studies instrument. Six potential bias domains were explored and were graded as “high risk”, “low risk”, or “unclear”.

Results: 45 papers were included in the final analysis (27 were retrospective cohorts, 13 had data prospectively collected but retrospectively analyzed, and 5 were prospective cohorts). The studies recruited a total of 413,634 patients from Europe, North America, Asia and Australasia with median age ranging from 49 to 80 years.

Median AUROC for in-hospital mortality (27 studies with 380,920 patients) was 0.68 (range 0.55 to 0.82). Meta-analysis of 377,623 subjects showed pooled AUROC of 0.68 (0.65 to 0.71), however it also confirmed high heterogeneity among studies ($I^2=98.8\%$, 95%CI 98.6 to 99.0). Median sensitivity and specificity for in-hospital mortality (24 studies with 118,051 patients) was 0.52 (range 0.16 to 0.98) and 0.81 (0.19 to 0.97), respectively. Median positive and negative predictive values were 0.2 (range 0.07 to 0.38) and 0.94 (0.85 to 0.99), respectively.

Conclusion: qSOFA is not a clinically useful prognostic tool for in-hospital, 1-month mortality or ICU admission for patients with or without suspected infection.

A27 Meta-analysis of the incidence of post-stroke fatigue

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Objective: To estimate the incidence of post-stroke fatigue by using Meta-analysis, and provide scientific evidence for its related prevention and control work.

Methods: PubMed, Web of science, The Cochrane Library, CNKI, WanFang Data and CBM databases were searched for studies investigating the characteristics of incidence of post-stroke fatigue up to November 2014, supplemented by reference traceability and manual retrieval methods. Meta-analysis was performed using Stata13.0 software, two reviewers independently screened the literature, extracted the data, and evaluated the methodological quality of the included studies according to the inclusion and exclusion criteria.

Results: A total of 42 articles were included in the literature, with a total of 6901 stroke patients. Meta-analysis showed that the post-stroke fatigue rate was 47% [95% CI (0.47, 0.53), $P < 0.0001$]. Subgroup analysis showed that the post-stroke fatigue rates in Asia, Europe, North America, Oceania, and Africa were 39% [95% CI (0.32, 0.46), $P < 0.0001$], 49% [95% CI (0.43, 0.54), $P < 0.0001$], 57% [95% CI (0.47, 0.66), $P < 0.0001$], 54% [95% CI (0.49, 0.60), $P < 0.0001$]; using Fatigue Severity Scale, The post-stroke fatigue rates of the Multidimensional Fatigue Inventory, Fatigue Assessment Scale, and Chalder Fatigue Scale were 47% [95% CI (0.42, 0.52), $P < 0.0001$], 52% [95% CI (0.45, 0.59), $P < 0.0001$], 37% [95% CI (0.22, 0.53), $P < 0.0001$]; the incidence of fatigue after stroke in January, January, 1-6, and June was 42% [95% CI (0.36, 0.49), $P < 0.0001$], 43% [95% CI (0.34, 0.51), $P < 0.0001$], 48% [95% CI (0.41, 0.50), $P < 0.0001$].

Conclusion: The incidence of fatigue after stroke is generally high, so effective measures are needed to prevent and control it.

A28 Economic evaluation in three types of central venous catheters: A systematic review

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Objective: To systematically review the economic evaluations for three types of central venous catheters including PICC, CVC and PORT.

Methods: Databases including the Cochrane Library, JBI Library, PubMed, EMBASE, CINAHL, Medline, ProQuest, Wiley Online Library, Centre of Review and Dissemination, CBM, CNKI, Wangfang, and VIP were electronically searched to collect studies on economic evaluation for central venous catheters from inception to January 2018. Two reviewers independently selected studies based on the inclusion and exclusion criteria, assessed the risk of bias of included studies using the JBI ACTUARI assessment tool, and extracted data of included studies. Due to heterogeneity of included studies, meta-analysis was not performed in this systematic review.

Results: A total of 12 published studies were included in this systematic review. Six were of moderate quality, and six were of low quality. The main defects of methodological quality were: no describe the measurement method for costs, no adjust the discount rate, and no provide sensitivity analysis. All included studies adopted cost analysis for central venous catheters. Among the included studies, seven studies evaluated the cost of PICC and CVC, but the costs of catheter insertion and maintenance were different among studies. Eight studies compared the cost of PICC and PORT. All studies concluded that the catheter insertion cost of PICC was lower than that of PORT, but the catheter maintenance cost of PICC is higher than that of PORT during the indwelling period. However, there is a difference in total cost including insertion and maintenance between PICC and PORT among included studies.

Conclusions: The studies of economic evaluation on three types of central venous catheters is limited. The methodological quality of include studies were low. Most studies only adopted cost analysis for economic evaluation on central venous catheters. Due to quality and quantity of included studies, more studies of economic evaluation including cost-effectiveness analysis, cost-benefit analysis and cost-utility analysis with high quality, large sample are required to provide evidence for decision makers and practitioners to choose the best central venous access.

A29 The use of journal writing in families of a critically ill patient: An integrative review

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Note: The authors decided to withdraw their abstract for presentation.

A30 Effectiveness of electromyostimulation on improving muscle condition in the elderly: A meta-analysis

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Background: The world population is getting older and the percentage of elderly people is continually increasing. One effect of aging is a gradual and steady reduction of muscle mass and strength, especially and decreased muscle physiological function. Electromyostimulation (EMS) is an electrical stimulation of the muscle that induces muscle action, which makes EMS is potential to improve muscle condition. Several studies on the effect of EMS have been conducted, but the results are inconsistent and controversial. The aim is to examine the effect of EMS on improving muscle condition of the elderly.

Methods: Controlled trials about EMS versus traditional methods for elderly muscle condition were searched in seven databases. The meta-analysis was performed using RevMan 5.3 software after data extraction and quality appraisal.

Results: Totally six controlled trials were finally included, including three randomized controlled trials (RCTs) and three quasi-randomized controlled trials (quasi-RCTs). The results of three RCTs' meta-analysis showed EMS could improving appendicular skeletal muscle mass compared with traditional training [WMD=249.04, 95%CI (110.97, 387.82) , $P<0.001$] , as well as enhancing maximum isometric strength of trunk extensors [WMD=13.09, 95%CI (3.03, 23.06) , $P=0.01$] and maximum isometric strength of leg extensors [WMD= 51.73, 95%CI (28.19, 75.28) , $P<0.0001$]. However, the meta-analysis of the quasi-RCTs failed to support the effectiveness of EMS on improving muscle function of the elderly ($P>0.05$) .

Conclusion: The current evidence shows that EMS can play a role in improving muscle condition to a certain extent as it is effective in improving muscle mass and enhancing muscle strength. However, compared to traditional training, EMS seems less effective in improving muscle function. Therefore, to improve muscle condition of the elderly, EMS training combined with traditional training may achieve better effectiveness.

Concurrent Session I: 7. Evidence-informed health care in the Belt and Road regions

A31 Systematic review of ten years of Turkish studies which included cancer patients' caregivers (2007-2017)

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Background: Caregiver of cancer patients have key and very valuable roles in cancer care. Caregivers' needs should be considered during treatment and care process. In this study, it was aimed to systematically review of ten years of Turkish studies which included cancer patients' caregivers.

Methods: The studies which included cancer patients' caregivers and were conducted in Turkey (published between 2007 and 2017) were reviewed. The international databases (PubMed, Embase, Ovid, ProQuest and Ebscohost) were scanned with the keywords of "cancer, caregiver, family, oncology, Turkey". The national databases (ULAKBİM Turkish Medical Index, Google Scholar), and National Thesis Center of Higher Education Institution (YÖK) were scanned with the keywords of "cancer, caregiver, patient relative, family and oncology (in Turkish)". The articles; published before 2007, not available for full texts, the review articles and the congress papers were not included in this review.

Results: A total of 330 records were screened, with 136 studies deemed eligible for inclusion (85 articles, and 51 thesis). Most of these studies are descriptive studies (n=101). The mostly evaluated topics in these studies were the quality of life, care burden and psychological effects of cancer process on caregivers. The lack of intervention studies is drawing attention (n=3). The most frequent health profession that studies conducted by was nursing (n=93). It was determined that most of the studies have addressed caregivers of adult patients and that no distinction has been made between cancer type and grade.

Conclusion: It has been emphasized that interventions for caregivers could relieve caregivers psychosocially and economically, increased positive outcomes for the patient and supported both sides. It is suggested that to conduct intervention studies to empower caregiver' outcomes.

A32 Diabetic peripheral neuropathy and glycemic control among patients with type 2 diabetes mellitus in a peri-urban community in Sri Lanka

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Background: Prevalence of diabetes mellitus is increasing each year throughout the world. Diabetic neuropathy is a debilitating complication of uncontrolled diabetes resulting in foot ulcers and amputation of limbs. Thus it is important to monitor the patients for glycemic control as well as screen for diabetic peripheral neuropathy (DPN) in routine diabetic clinics. Early screening for DPN using simple screening methods is essential to routinely screen patients at busy community clinics. Poor glycemic control and duration of diabetes seem to be the strongest risk factors for the development of vascular complications. Therefore this study aims to determine the glycemic control and DPN among type 2 diabetes mellitus (T2DM) patients attending peri-urban community clinics in Colombo district, Sri Lanka.

Methods: A descriptive cross sectional study was conducted on 228 T2DM patients attending selected central dispensaries in Colombo district. Base line data were obtained by a questionnaire. Michigan Neuropathy Screening Instrument (MNSI) and Monofilament test were used to screen for DPN. Monofilament test was done with 10g Semmes Weinstein monofilament and vibration perception threshold (VPT) was determined using 126 Hz tuning fork. Glycemic control was determined by the HbA1c level.

Results: 144 (78.3%) T2DM patients had poor glycemic control. 107 (47%) T2DM patients had DPN. Mean HbA1c of the neuropathy and non-neuropathy groups were 8.25±2.08 SD and 8.36±6.33 SD respectively. 79 (34.6%) had abnormal VPT of both lower limbs, 50 (22%) had abnormal monofilament test results and 120 (52.6%) had poor scores for MNSI questionnaire. Duration of diabetes was significantly different between neuropathy and non-neuropathy groups (p<0.05).

Conclusion: T2DM patients should be urgently made aware about importance of glycemic control. MNSI questionnaire and VPT at great toe are the most useful tests to early screen for neuropathy and can be used to early diagnose neuropathy in busy community clinics.

A33 Prevalence and factors associated with needle stick and sharp injuries among nurses in National Hospital Sri Lanka

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Background: Needle stick and sharp injuries are the most common occupational hazards that nurses are exposed at work places and one of the major risk factors for blood and body fluid borne infections such as Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus. Objective of the study was to determine the prevalence and factors associated with needle stick and sharp injuries among nurses in National Hospital Sri Lanka

Methods: Descriptive cross-sectional study was conducted among randomly selected 341 nurses using pre tested self-administered questionnaire. Data was analysed using descriptive statistics and chi square test.

Results: Among the participants' majority, 308 (90.3%) were female nurses less than thirty years of age category. Of them 250 (73.3%) were grade three nursing officers who had working experience less than 5 years. The prevalence of needle stick and sharp injuries among nurses in national hospital Sri Lanka was 67.4%. Among them 4.1% (20) nurses encountered needle stick and sharp injuries more than 5 times and 82 (32.8%) injuries were occurred within last year. Nurses who work in medical wards (28.2%), surgical wards (27.9%) and operation theatres (21.4%) were more prone to encounter needle stick and sharp injuries. Age category ($P = 0.003$), working experience ($P = 0.041$), higher work load ($P = 0.015$), extended working hours ($P = 0.028$), training on occupational health safety ($P = 0.038$), unsatisfied working environment ($P = 0.009$) were significantly associated with needle stick and sharp injuries.

Conclusion: The prevalence of needle stick and sharp injuries were high among nurses in National Hospital Sri Lanka. Staff shortage and lack of occupational health safety programmes need to be addressed to prevent needle stick and sharp injuries among nurses.

A34 Prevalence of risk factors for non-communicable diseases and work-related health problems among Trishaw drivers in Gampaha Urban Council Area in Sri Lanka

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Background: Today trishaw driving is an easy job and popular among the youth that is associated with various health problems. This job itself creates a greater risk among for developing Non Communicable Diseases (NCDs) among the trishaw drivers. There is a scarcity of evidence related to health problems and the risk factors for Non Communicable Diseases in Trishaw drivers in Sri Lanka. The aim of the study was to determine the prevalence of risk factors for non-communicable diseases, work related health problems and associated factors among trishaw drivers in Gampaha Urban Council area In Sri Lanka.

Methods: A descriptive cross sectional study was carried out among 289 randomly selected trishaw drivers to ascertain the data related to selected risk factors for Non Communicable Diseases and work related health problems. An interviewer administered questionnaire was used to collect data. Descriptive statistics were used to analyze data by utilizing SPSS statistical software (version 23); Associations were determined with chi- square test.

Results: Among trishaw drivers, 79.9% used alcoholic beverages, 61.9% had ever smoked and 45.3% still smoking and 38.8% had habit of betel chewing. According to the BMI values 16.3% were over-weight and 51.6% were obese. More than half (57.8%) had high abdominal circumference and 38.8% had high blood pressure. The predominant occupational health problem was back pain (35.3%) and back pain was significantly associated with work experience, working hours per day, sitting time in hours, type of the engine of the trishaw, perceived health status and abdominal circumference ($p < 0.05$).

Conclusion: Prevalence of risk factors for Non Communicable Diseases were high among the three wheel drivers and the alcohol usage, smoking, high abdominal circumference and obesity were the major risk factors. Back pain was the major occupational Health problem. Steps need to be taken to monitor, control and prevent NCDs among this working population.

Concurrent Session II: 1. Knowledge synthesis

B01 The effectiveness of horticultural therapy in people with dementia: A systematic review and meta-analysis

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Background: The number of people with dementia is increasing rapidly and horticultural therapy is one of the non-pharmacological interventions for people with dementia. Many original studies have examined the effectiveness of horticultural therapy in people with dementia in the last two decades. However, these studies vary in study design, research settings, type and duration of interventions, outcomes and measurement. Our study is conducted to evaluate the effectiveness of horticultural therapy on cognitive function, agitation, positive emotion, and engagement in people with dementia.

Methods: We searched PubMed, Embase, CINAHL, Web of Science Core Collection, BIOSIS Previews, China National Knowledge Infrastructure (CNKI), Wanfang, Sinomed, Cochrane Central Register of Controlled Trials and ProQuest Health & Medical Complete. Reference lists of included studies and relevant journal "Journal of therapeutic horticulture" were searched. Studies from database inception to March 1st, 2019 were included. Randomized controlled trials and quasi-experimental studies, involving horticultural therapy for people with dementia were considered. Risk of bias assessment was performed using the Cochrane Collaboration's tool and appraisal instruments from Joanna Briggs Institute for quasi-experimental studies. Meta-analysis was conducted using Review Manager 5.3.

Results: Fourteen studies (4 RCTs and 10 quasi-experimental studies) involving 411 patients were included. The results of meta-analysis showed that the effectiveness of horticultural therapy in people with dementia on the total score of cognitive function, positive emotion and engagement were statistically significant. The results of subgroup analysis showed that different intervention types can affect the total score of agitation.

Conclusions: The existing evidence supports the effectiveness of horticultural therapy on cognitive function, agitation, positive emotion and engagement. Due to heterogeneity and the relatively small sample size of included studies, future high-quality original studies are needed to draw more robust conclusions.

B02 Effectiveness of interventions for feeding difficulties in patients with dementia: An overview of systematic reviews

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Background: Approximately 50% of individuals has difficulty in self-feeding within eight years of dementia onset. People who have feeding difficulties may show change of appetite and food preference, inability to finish the eating tasks by oneself, dysphagia, eating behavioral problems, which results in weight loss, malnutrition and other adverse outcomes. However, interventions to promoting eating in dementia patients are dispersed in clinical trials and systematic reviews (SRs), lacking sufficient evidence on effectiveness of them.

Methods: We searched nine databases from inception up until 27 December, 2018. SRs or meta-analysis (MAs) associated with feeding difficulties in dementia patients were included. We considered all interventions supporting dementia patients to eat. Two researchers independently selected the SRs on the basis of selection criteria, extracted data, and assessed eligible studies using A MeaSurement Tool to Assess Systematic Reviews 2 (AMSTAR-2).

Results: 26 eligible reviews included. The result of quality appraisal shows more than half of SRs included were rated of critically low overall confidence and only included 3 high-quality SRs. The top three critical flaws were the item13, item2, and item7. There were positive effects of animal-assisted therapy and music played during mealtimes for increasing food consumed, Montessori-based activities for eating behaviors, as well as oral nutrition supplement for improve nutritional status. No insufficient evidence indicated environmental modifications, education and training programmes supported dietary intake. Strong evidence showed enteral nutrition wasn't beneficial to advanced dementia.

Conclusions: The overall quality of SRs included wasn't high. Due the quantity and quality of current researches, further researches about environmental modifications, education and training programmes are needed to develop.

B03 The effectiveness of pictorial COPD action plan on reducing hospital readmissions in elderly patients with COPD in Hong Kong

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Background: Chronic Obstructive Pulmonary Disease (COPD) is a highly prevalent chronic illness among elderly in Hong Kong and worldwide. Evidences unveiled that acute exacerbation action plan could effectively reduce the related negative impact to patient, while elderly, usually with low health literacy, could not be benefit from the textual-based action plan. The aim of this integrative review of literature is to review research evidence regarding the effectiveness of pictorial action plan on patients with respiratory disease.

Method: An integrated review was conducted with database searching of Academic Search Ultimate, CINAHL Complete, Cochrane Library, ERIC, MEDLINE, PubMed, China Journal Net and WanFang Data and Chinese Dissertations Database. 69 records have been identified through database searching and 3 additional records have been identified through bibliographies and manual search. Removing duplicated records, 50 records were screened, in which 38 records were excluded following title and abstract screening. 12 full-text articles are eligible for assessed and 5 of them were excluded due to unrelated topics (1 health system action plan, 1 visual thematic analysis, 1 unrelated and 2 comments/ letters to the editor).

Results: 7 studies were included in the integrative review that positive effect of pictorial aids was found toward comprehension, adherence, counselling-related outcomes, health-related outcomes and health care utilization.

Conclusion: Patients with low literacy skills had diminished knowledge on disease progress and treatment regimen and thus, their self-management skill are lower to make appropriate health decisions than literate patients. Existing research evidence has shown that action plans were effective in managing COPD, while the efficacy of these action plans on patients with low health literacy is not known. Therefore, as COPD was disproportionately significant in elderly population, further study on providing evidence regarding to the effectiveness of pictorial action plans among elderly patients with COPD was recommended.

B04 Peer-based interventions for health promotion in adults over 60 years: A systematic review

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Background: More than two billion people are predicted to be over 60 by 2050, with China's population growing most rapidly. The World Health Organization suggests peer support and peer mentor programs are feasible strategies that allow older people to age actively and positively. To-date, effectiveness of such programs has focused primarily on self-management for chronic diseases. This systematic review aimed to identify the effect of health promoting peer programs compared to alternative programs, on behavioural, psychological and/or social outcomes in people over 60.

Methods: A systematic review was undertaken following PRISMA guidelines. Searches of multiple English and Chinese databases were conducted initially in September 2016 and updated in 2018, with no date filter applied. Independent reviewers in Hong Kong and Australia selected studies meeting set inclusion criteria as outlined in a previously published protocol. Included studies were critically appraised using the Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument.

Results: Initial results from searching English databases identified 5769 titles and 1522 entries in the Chinese databases for screening. After removing duplicates and checking full-texts, no studies were found to meet the inclusion criteria from the Chinese literature. Sixteen English studies included in the review. Ten studies focused on physical activity peer programs, five reported on social support interventions via health education or social interaction and one reported on a strategy for promoting immunization rates in the target population. Heterogeneity in populations, peer program content, delivery and outcomes prevented meta-analysis.

Conclusion: Preliminary synthesis supports peer programs as having some effect on improving moderate-to-vigorous physical activity in older people. Significant results on other outcomes are not found. Additional rigorous studies that consider intervention fidelity, dose and consistency of terminology are required for identifying true impact.

B05 Synthesis of cold compress from cassava as an innovative stress therapy to prevent exacerbations and improve quality of life of lupus patients

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Background: Cassava is one of Indonesia's natural materials that can be utilized as a basic ingredient of cold compress.

Purpose: To know the effects of cold compress from cassava to reduce cortisol level and stress responses, decrease exacerbations, and improve quality of life of Lupus patients.

Methods: Four groups of young adult Lupus patients with similar in sex, ethnicity, education status, active disease activity (Mex-SLEDAI score ≥ 2), and medication were measured their salivary cortisol levels using ELISA (abcam kit ab154996), stress responses, and quality of life using Lupus Quality of Life Questionnaire (Lupus-QoL) (pretest). The measured stress responses include physical responses (blood pressure, respiratory, headache scale, and insomnia using Insomnia Rating Scale (IRS), cognitive responses using Cognitive Symptoms Inventory (CSI), and emotional responses using Perceived Stress Scale (PSS)). Lupus patients with positive stress responses (n=28 each group) were given therapy of 17-24°C cold compress (control, traditional cold compress using wet washcloth, cold compress from cassava, or modern cold compress using Physiopack from BSN Medical) on forehead area for 20 minutes before bedtime for one month. Patients with cold allergies, open wounds in the compressed area, circulatory disorders, and Raynaud's syndrome were excluded. Cortisol level, stress responses, Mex-SLEDAI score, and quality of life were measured on week 1, week 2, and week 4 (posttest).

Results: Cassava and modern cold compress have significant effects in decreasing cortisol levels and stress responses including headache, insomnia, cognitive impairment, and stress levels ($p < 0.05$) on week 2 ($p < 0.05$). The Mex-SLEDAI score decreased ($p < 0.05$) and the Lupus-QoL increased ($p < 0.05$). There were no significant effects on week 1 and week 4. No side effects were found, but the modern cold compress was more expensive.

Conclusions: Two weeks stress therapy with cassava cold compress could prevent exacerbation and improve quality of life of lupus patients efficiently.

B06 The effectiveness of dance intervention on depression: A systematic review & meta-analysis

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Background: Depression appears to be one of the health challenges globally with almost 322 million people affected. Between 2020 & 2030 it was projected to be the leading cause of the global burden of diseases. Hence, the need to identify and examine the effects of dance intervention as a non-pharmacological intervention in the reduction of depression. Dance intervention refers to the rhythmical movement in response to music administered by a therapist or specialist. The objective of the study was to evaluate the effects of dance therapy on an adult with depression.

Methods: Six electronic databases were used to search related trials, and they include CINAHL, Medline, PsycINFO, Embase, AMED, and PubMed. Ten Randomized Controlled Trials (N = 970) that evaluates the effects of dance therapy on depression published between 2008 and 2018 were assessed. PEDro scale was used for evaluating the quality of the included studies. A spreadsheet was developed for data extraction using the TIDieR checklist & the information gathered were synthesized & analyzed using the RevMan software 5.0.

Results: Ten Randomized Controlled Trials was assessed using the PEDro Scale and was found to be of fair (n = 4) to good quality (n = 6). The study revealed that there is a significant effect of dance therapy on depression with the overall effect of $z = 4.02$ ($p = 0.0001$) with SMD of -0.37 (95% CI -0.54 to -0.19).

Conclusion: Dance therapy might be beneficial for an individual with depression.

Concurrent Session II: 2. Knowledge translation and communication of evidence

B07 Clinical translation of an evidence-based rehabilitation nursing program for stroke patients with dysphagia: A pilot study

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Background: Dysphagia is a common complication among stroke survivors, and it can affect over 78% of the patients. Some patients may keep dysphagia for over 6 months. Dysphagia can result in aspiration, dehydration, malnutrition, depression and even choke. Currently, there are no evidence-based effective dysphagia rehabilitation nursing practice applied in China. The purpose of this study was to design and to implement dysphagia rehabilitation nursing program with the best evidence and adaption of the Chinese domestic context.

Methods: Three phases were included in the study. Phase one--The construction of a nursing program was based on reviewing and evaluating guidelines and systematic review articles by using AGREE II methodology and OQAQ methodology; Phase two--The nursing program was revised through interviews among multiple professional health care providers; and Phase three--the nursing program was applied in three health institutions to evaluate the effects of clinical translations during two circles of Plan-Do-Check-Action process in terms of i-PARIHS framework.

Results: In the clinical translation, the nursing records and the nursing program management were standardized, including the responsibilities of speech and language therapists (SLT) and nurses on swallowing rehabilitation, and a swallowing rehabilitation recording form of stroke patients between SLT and nurses. In addition, the nurses' knowledge ($t=15.842$, $P<0.01$) and compliant behaviors of dysphagia rehabilitation increased significantly after implementing the nursing program. The qualitative data from interviews found that conducting the nursing program made nursing practices systematical, standardized, active and prompt. Also, it helped nurses gain special nursing knowledge, increase confidence, and advance nursing awareness, enhance the relationship between patients and nurses, and improve research awareness. Increasing nursing tasks could be handled by routine work, fragmented services, and screening priority.

Conclusion: Clinical translation of the nursing program approved that the nursing program was scientific and practical, which provided direction for nursing practices related to dysphagia rehabilitation care for post-stroke patients in China.

B08 User engagement in the development of an evidence-based online self-management programme for stroke survivors and caregivers

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Background: Increasing evidence supports the use of self-management programme and telehealth to address stroke survivors' and caregivers' changing health needs in the community. However, incorporating users' preference and experience is significant to better inform the development of a sustainable online stroke self-management programme. Purpose: To explore stroke survivors' and their caregivers' health needs and their perceptions of the usefulness of a tailored evidence-based online programme targeting at enhancing self-care skills and promoting self-efficacy.

Methods: A total of six stroke survivors and four caregivers were purposively recruited from a stroke nurse clinic. Individual face-to-face semi-structured interviews were conducted. Stroke survivors were asked for their (1) post-stroke experiences; (2) perceived health needs; (3) self-management habits; and (4) expectations of an online SSMP. Caregivers were asked for their (1) experiences of care for stroke survivors; (2) perceived health needs; and (3) expectations of an online SSMP. Data was transcribed verbatim. Themes and subthemes were generated.

Results: The majority of respondents perceived an online SSMP could enhance their ability to perform or assist with self-care management at home. Repeated visits for medical appointment or rehabilitation activities impeded engagement in self-care activities. One of the themes that emerged was the need for ongoing emotional support. Communication with healthcare professionals along the continuum of care using information technologies and experience sharing from stroke survivors or caregivers facilitate smooth transitions of care.

Conclusion: User engagement using interviews improves understanding of users' expectations and triggers improvement ideas to translate evidence-based research into useful and pragmatic services. It offers a valuable opportunity to inform the development of a tailored online SSMP and potentially improve clinical outcomes.

B09 A Journey to evidence-based practice in a regional hospital in Hong Kong: Knowledge translation on prevention of venous thromboembolism with non-pharmacological measures

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Background: Although mechanical devices for venous thromboembolism (VTE) prevention have been widely used in PYNEH, various practices were noted. Therefore, an Evidence-based Practice (EBP) working group has been established since 2013 to identify knowledge and practice gap in this aspect with an aim to promote knowledge translation into action.

Methods: Johns Hopkins Nursing PET model (practice question-evidence-translation) was adopted. Literature appraisal was conducted. Evidence on use of Graduated Compression Stockings (GCS) was confirmed and successfully adopted in 2015 by one specialty unit which did not use GCS before. Review of the related evidence was conducted again in 2017. The refined knowledge was incorporated to develop a guideline on non-pharmacological measures to prevent VTE for surgical patients across different departments. Then measures to ensure ease application of the guideline in local context were designed. Before the full implementation of the practice, a pilot was launched in 6 specialities units. Finally a forum was organized in collaboration with Department of Physiotherapy (DP) for promotion of evidence and dissemination of the EBP guideline.

Results: The evidence showed GCS or Intermittent Pneumatic Compression (IPC) could significantly reduce VTE incidents. In addition, thigh-length GCS did not show statistical benefit over the knee-length GCS. Promotion of early ambulation, adequate hydration, education to nurses and team approach were essential elements for effective VTE prevention. Based on the evidence and recommendations, an EBP guideline on "Management of patient with the use of non-pharmacological measures to prevent VTE" was prepared and successfully implemented in October 2018. The GCS or IPC sleeves were single-patient used and transferable from ICU to general wards to facilitate the continuity of care. Furthermore, 23 patients were recruited to trial use the standardised nursing care plan and nursing prescription for VTE prevention, which were well accepted by nurses. A user-friendly tailor-made tape prepared by (DP) was also introduced for quick calf measurement and selection of an appropriate size of GCS. Lastly, 114 participants (105 nurses and 9 physiotherapists) joined the forum and most of them (>90%) gave positive responses.

Conclusion: This EBP project significantly helped to build up collaboration among health care providers on VTE alertness and preventive measures. Finally, the quality of patient care and professional practice could be improved.

B10 Body image and health-related quality of life in Chinese colorectal cancer survivors

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Background: Existing literature has reported the negative impacts of colorectal cancer and its related treatments on body image and health-related quality of life among survivors. However, the relationship between these two outcomes was rarely examined, and the majority of current studies were based on Western and Arabic colorectal cancer survivors. Hence there exists a knowledge gap in research on colorectal cancer survivors of other cultural backgrounds. This study aims to assess body image and health-related quality of life, and to examine their relationship among Hong Kong Chinese colorectal cancer survivors during transitional survivorship.

Methods: Chinese colorectal cancer survivors 1-5 years post active curative treatments from an oncology outpatient clinic of a local hospital in Hong Kong were recruited to complete a cross-sectional survey on socio-demographic and clinical data, the Chinese versions of Functional Assessment of Cancer Therapy - General and Body Image Scale.

Results: A convenience sample of 41 Chinese colorectal cancer survivors with a mean age of 60.0 was recruited. The majority were male patients with stage III cancer. The result indicated that the respondents had satisfactory body image but only fair health-related quality of life. Correlation analyses demonstrated that body image was positively associated with all domains of health-related quality of life except the social/family well-being domain. Multiple regression analysis suggested that body image was independently associated with overall health-related quality of life after controlling for potential socio-demographic and clinical characteristics ($B = -9.283, p = 0.002$).

Conclusion: Managing body image issues may help in improving the health-related quality of life of Chinese colorectal cancer survivors in their transitional survivorship. As body image dissatisfaction is a neglected topic in local clinical settings, further research should be conducted to develop and facilitate early assessment and interventions.

B11 Non-pharmacological interventions to improve sleep quality in ICU patients: A network meta-analysis

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Objective: To study the effect of non-drug intervention on improving sleep quality in ICU patients by network meta-analysis.

Methods: Computer search database The Cochrane Library, PubMed, Embase, Web of Science, China Journal Full-text Database (CNKI), Wanfang Database (WanFang Data), VIP Database (VIP) and China Biomedical Literature Database (CBM), search and construction The library reviewed the RCT literature on non-pharmaceutical interventions to improve the sleep quality of ICU patients in December 2018, using the Stata13.0 software for network meta-analysis.

Results: This study included 18 RCTs with a total of 1720 patients and 11 non-pharmacological interventions. The Pittsburgh Sleep Quality Index (PSQI) network meta-analysis showed that non-drug interventions improved sleep quality in ICU patients, and comprehensive nursing interventions, lavender essential oil aromatherapy, eye masks, eye masks and earplugs were statistically different from conventional care. There was no significant difference between the Richards-Campbell Sleep Scale and the VSH sleep scale. The Pittsburgh Sleep Quality Index (PSQI) ranked as follows: eye mask and earplugs > eye mask > comprehensive nursing intervention > lavender essential oil aromatherapy > routine care.

Conclusion: Based on the results of the Pittsburgh Sleep Quality Index (PSQI) network meta-analysis and ranking results, non-drug intervention eye mask and earplugs were the best in improving sleep quality in ICU patients compared with other interventions.

B12 Psychometric assessment of the Chinese version of the short-form survivor unmet needs survey (SF-SUNS) among cancer patients

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Background: Cancer patients have long been found to have multiple types of unmet needs during their survivorship. Composite psychological instruments are essential for unmet needs evaluation. There are currently few tools developed and evaluated in population-based sample for assessing unmet needs of Chinese cancer patients.

Objective: To evaluate the psychometric properties of the Chinese version of the Survivor Unmet Needs Survey (SF-SUNS-C).

Methods: The standard Functional Assessment of Chronic Illness Therapy (FACIT) translation methodology was adopted in the cross-cultural adaption process. Total 428 Chinese cancer patients in two provincial hospitals completed the survey from October 2016 to October 2017. Inter-rater reliability, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were analyzed. Latent class analysis (LCA), an individual-oriented method, was used to identify homogeneous, mutually exclusive groups in cancer patients.

Results: The Chinese version of the SF-SUNS contains 30 items, and the EFA extracted 4 factors, explaining 50.681% of the total variation. Confirmatory factor analysis supported the four-factor structure with good model fit: (1) $\chi^2 = 530.006$, GFI = 0.926, AGFI = 0.914, RMR = 0.027, SRLR = 0.041, RMSEA = 0.028; (2) IFI = 0.954, TLI = 0.949, CFI = 0.953; (3) PGFI = 0.795, PNFI = 0.768, Chi-squared Freedom Ratio $\chi^2/df = 1.328 < 2$. Cronbach's alpha of 0.894 for the overall scale and intraclass correlation coefficients (0.703-0.812) indicated that reliability was satisfactory. A three-class latent class solution was the best fit model for unmet needs data. Three categories (subgroups) of cancer patients were defined as: "highly unmet needs group" (21.6%), "mixed transition group" (63.4%), "Living well with cancer group" (15.0%).

Conclusions: The Chinese version of SF-SUNS was proved to be a valid instrument for assessing unmet needs among cancer patients. Tailoring this unmet needs evaluation tool and cancer care is meaningful to cancer patients and clinical nurses.

Concurrent Session II: 3. Evidence-informed health care

B13 Bowel preparation for colonoscopy among the adults in a tertiary hospital in Shanghai: A best practice implementation project

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Background: Colorectal cancer is the third most common cancer and the third highest mortality rate cancer in world. The situation in China is the same. Regular screening could identify patients with colorectal cancer early and the mortality could be reduced. Colonoscopy is the current gold standard method for colorectal cancer diagnosis. To have a clear view of bowel mucous of bowel and prevent post-op complications, bowel preparation has been a standard care for patients before they undergo the colonoscopy. Therefore, the quality of the preparation is essential and important to colonoscopy.

Objectives: This project aimed to make a contribution to improve current compliance with evidence-based recommendations regarding bowel preparation for colonoscopy patients. And to improve the quality of bowel preparation for colonoscopy and implement a standardized bowel preparation process.

Methods: This evidence implementation project used the JBI Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit and feedback tool for promoting change in healthcare practice. A baseline audit of 30 of bowel preparation for colonoscopy was conducted and measured against seven best practice recommendations, followed by the implementation of targeted strategies and a follow-up audit.

Results: The baseline audit revealed significant deficits between current practice and best practice in all but one criterion. Barriers for implementation of bowel preparation for colonoscopy best practice criteria were identified by the project team, and a standardized bowel preparation process for colonoscopy was implemented. There were significantly improved outcomes across all best practice criteria in the follow-up audit.

Conclusions: The findings showed how audits may be used to promote best practice in healthcare and that focused education and provision of relevant resources can have an immediate and positive impact on clinical practice. Some of the measured criteria improved to a moderate degree, leaving room for improvement; however, by the end of the project bowel preparation for colonoscopy had been a standardized process for both patients and medical staff. Future audits are planned to ensure sustainability.

B14 Bladder irrigation post transurethral resection of the prostate in urology unit: A best practice implementation project

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Background: Continuous bladder irrigation (CBI) is designed to prevent the formation and retention of blood clots following transurethral resection of the prostate (TURP). Nurses should take to assess whether or not a catheter is blocked and the interventions needed to restore catheter patency. However, there is a gap between clinical nursing and the best practice recommendations in bladder irrigation.

Objectives: To make a contribution to promoting evidence-based practice in Bladder Irrigation Post Transurethral Resection of the Prostate in urology unit and thereby improve patient outcomes and resource utilization.

Methods: The Joanna Briggs Institute three-phase Practical Application of Clinical Evidence System and Getting Research Into Practice audit and feedback tool were used to enhance evidence-based practice. In phase 1, seven audit criteria were developed and a baseline audit was conducted. In phase 2, barriers to compliance were identified, and strategies were adopted to promote best practices. In phase 3, a follow-up audit was conducted.

Results: In the baseline audit, no nursing record chart of fluid input and output specifically for bladder irrigation, hence compliance with the third audit criterion was 0%. Compliance with the fourth criterion was 37%. Compliance with the other five criteria was more than 75%. Four barriers were identified, including nursing staffs' lack of knowledge of bladder irrigation; Lack of nursing record chart of fluid input and output specifically for bladder irrigation; Resistance from nurses, Lack enough communication with doctor. After applying strategies to address these barriers, compliance with the audit criteria 1~6 was 100%, compliance with the seven audit criteria was 93%, respectively in the follow-up audit.

Conclusions: Best practice in bladder irrigation post transurethral resection of the prostate has successfully been established in our ward.

B15 Postoperative pain management at a private hospital in central Indonesia

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Background: Pain is the most common expressed complaint by postoperative patients. The pain may affect patients' daily activity, and if it is not treated, it may cause neurogenic shock. The role of nurses in pain management for postoperative patients is very important, both in independent action and collaborative action through pharmacological management and non-pharmacological management. The purpose of this study was to identify the pain management in postoperative patients at a private hospital in Central Indonesia.

Methods: A quantitative descriptive method were used in this research and a total of 137 documents in January to March 2018 were collected in May 2018 using total sampling technique.

Results: The result of the study showed that 114 patients (83.2%) experienced mild pain, 17 patients (12.4%) experienced moderate pain, 6 patients (4.4%) did not report any pain, and no one reported severe and worst pain. It also showed that 72 patients (53%) received a combined pharmacology and no pharmacology pain management, 54 patients (39%) received pharmacological pain management, and the last 4 patients (3%) received non-pharmacological pain management.

Conclusion: It was shown that nurses used collaborative action more than pharmacological or non-pharmacological treatment only.

B16 Comparative study on the knowledge level and hand hygiene practice of Nepalese immigrants and the general population of Hong Kong

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Background: Hand washing is a simple and cost-effective method for preventing the infectious diseases such as diarrhea, tuberculosis in the communities and health care setting. Infectious diseases are the leading cause of death worldwide accounting for more than 13 million deaths annually. Many studies show that the severity of infectious diseases is high in the middle and low-income countries. Further, the risk of developing infectious diseases is high among the people who have migrated from high endemic area to a new host country. Nepalese in Hong Kong are migrated from Nepal in which infectious diseases are the leading cause of death. They are categorized as the disadvantaged group and vulnerable to various health related risks including infectious diseases. Therefore, this study aims at determining and comparing the knowledge level and behavior towards hand hygiene among Nepalese and local Chinese population in Hong Kong.

Methods: This study is a cross sectional comparative study design. An online platform SurveyMonkey was used to collect the data. The sociodemographic characteristics, knowledge level and behavior towards hand hygiene behavior are presented by descriptive statistics. Chi square test or fisher's exact test were used as appropriate to examine the association between the categorical variables.

Results: A total of 1008 questionnaires which consists of Nepalese residing in Hong Kong (n=482) and the local population (n=526) were collected. The study results show that hand hygiene knowledge level and self-reported hand hygiene behavior of the Nepalese participants are significantly lower than that of the local population of Hong Kong. Lower knowledge level on hand hygiene was associated with young people, elders, low educational level or with comorbid illness(es) in both groups. More Nepalese than local respondents always/ sometimes dried their hands on their own clothing irrespective whether after performing hand washing in public washroom or at home. Misconceptions and suboptimal practices on hand hygiene were not only prevalent among Nepalese but also in the local Hong Kong population.

Conclusion: The local population of Hong Kong generally exhibited better knowledge level and more favorable hand hygiene behavior than the ethnic minorities from Nepal. In order to increase the knowledge level and appropriate behavior towards hand hygiene in both groups, it is necessary to design a culturally and linguistically appropriate health intervention.

B17: Inspiratory muscle training in critically ill adults with mechanical ventilation: A meta-analysis

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Objective: To evaluate the effectiveness of inspiratory muscle training (IMT) among mechanical ventilation (MV) patients.

Methods: We searched databases including Cochrane Library, PubMed, Web of Science, EMBASE, CBM, CNKI and Wanfang Data. We used RevMan 5.3 software to conduct meta-analysis.

Results: A total of 21 RCTs including 1014 patients were included in this meta-analysis. The meta-analysis showed that IMT could improve terminal maximal inspiratory pressure(MIP) , difference MIP, PaO₂ and SaO₂ [*WMD* and 95%*CI* were 7.98(7.22, 8.73); 5.76(4.23, 7.29); 9.55(4.00, 15.10); 2.00(1.15,2.85)]; decrease duration of MV, duration of weaning and LOS of ICU [*SMD/WMD* and 95%*CI* were -0.33(-0.52, -0.14); -0.99(-1.50, -0.48); -3.46(-5.36, -1.56)], and reduce mortality [*RR*=0.55,95%*CI*(0.33,0.91),*P*=0.02].

Conclusion: IMT was effective in improving MIP and respiratory muscle strength and endurance, then improving the patient's oxygenation status and reducing duration of MV and weaning and mortality.

B18 The effect of early mobilization for patients with delirium in intensive care unit: A meta-analysis

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Background: To evaluate the effectiveness of early mobilization for patients with delirium in Intensive Care Unit.

Methods: Randomized Controlled Trials (RCT) were searched in the following database such as Cochrane Library, PubMed, Web of Science, EMBASE, CNKI, CBM and WangFang database. Two researchers independently selected the papers, extracted data and assessed the study quality. RevMan5.3 software was used for meta-analysis.

Results: Fifteen RCTs with 1666 patients were included in the study. The results of the meta-analysis showed that the result of incidence of ICU delirium was [*OR*=0.34, 95%*CI* (0.26, 0.44), *P*<0.00001], the duration of delirium was [*MD*=-1.13, 95%*CI* (-1.26, -1.00), *P*<0.00001], and the length of stay was [*SMD*= -1.16, 95%*CI* (-1.95, -0.36), *P*=0.004].

Conclusion: Early mobilization can obviously reduce the incidence of delirium among patients in Intensive Care Units, shorten the duration of delirium and reduce the length of stay, which is worth being popularized.

Concurrent Session II: 4. Evidence-informed health care

B19 Factors associated with caregiver burden among informal caregivers of terminal cancer patients: A literature review

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Background: Informal caregivers play a vital role in caring and supporting the cancer patients. During the terminal phase of cancer, the informal caregivers are expected to take up a wide range of caregiving responsibilities thus leads to higher caregiver burden and poorer quality of life. Understanding the determining factors of caregiver burden can aid to identify the informal caregivers who are at risk of caregiver burden; as well as to facilitate the planning of specific interventions to support this group of high-risk population.

Methods: Electronic databases were searched with keywords. All articles written in English, examining correlating factors of caregiver burden among informal caregivers of terminal cancer adult patients were identified.

Results: The literature review is in progress. Currently, a total of 738 articles were identified and eventually eight articles met the eligible criteria. All of them were non-experimental cross sectional or longitudinal studies. Caregiver burden has potential adverse effects on caregivers' health such as depression and anxiety. Factors associated with an increased caregiver burden were younger age, female gender, lower income, ineffective coping, limited social network and higher involvement in caregiving responsibilities.

Conclusion: This review provided useful information for healthcare professionals to develop effective interventions for relieving burden of caregivers. Interventions which target at improving social support and training on effective coping can be potentially beneficial.

B20 Evidence summary for prevention and management of radiation dermatitis in cancer patients

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Background: Radiation dermatitis is a common side effect of cancer patients receiving radiotherapy. 95% percent of the tumor patients receiving radiotherapy experience some degree radiation dermatitis, especially breast cancer、lung cancer、head and neck cancer patients. Most of them were mild to moderate reactions, 20%-25% were severe reactions. Radiation dermatitis is often characterized by itching、pain, which often makes patients feel discomfort, affect the quality of life. In severe cases, the radiotherapy plan will be affected, the hospitalization period will be prolonged, and the hospitalization expense will be increased. The aim of the evidence summary was to evaluate and summarize the best available evidence on prevention and management of radiation dermatitis in cancer patients.

Methods: We searched JBI Library、Cochrane Library、UpToDate、EMbase, PubMed、National Guideline Clearinghouse(NGC)、Registered Nurses' Association of Ontario(RNAO)、Scottish Intercollegiate Guideline Network(SIGN)、Guideline International Network (GIN)、National Institute for Health and Care Excellence(NICE). To collect relevant guideline, evidence summary, recommended practice, systematic review. Two review authors independently assessed the quality and extracted data.

Results: Totally 8 articles were selected including 1 guideline, 4 evidence summary, 2 systematic review, 1 clinical decision. The best evidence include prevention (skin washing and daily hygiene) and management (non-drug and drug management). Specific evidence such as routine skin assessment and recording、skin washing with water alone or with mild soap、Aloe Vera is not recommended、Low-dose corticosteroid cream may be beneficial for itching and irritation and so on.

Conclusion: Nurses should prevent and management radiation dermatitis from the view of evidence, summarize the best evidence according to the continuous updating evidence, and improve the quality of nursing.

B21 Training programme to improve knowledge of South Asian community health workers on cervical cancer screening and prevention

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Background: Community health workers are increasingly being tasked for providing interventions to increase cancer screening uptake for ethnic minority women. However, they must undergo rigorous and relevant training. This study described and assessed the effectiveness of training programme on improving community health workers' knowledge and competency in delivering intervention on cervical cancer screening and prevention.

Methods: A community health worker training programme was developed based on literature review. The programme consists of seven sessions with various delivery formats such as lectures, interactive discussions, and practical sessions. It covers information about cervical cancer and screening; resources and access to screening tests; beliefs and misconceptions about cancer and cancer screening; barriers to cancer screening; facilitators and strategies to overcome these possible barriers; communication and problem-solving skills; and navigation support. The knowledge and performance of the community health workers were evaluated through questionnaires and an exit test.

Results: A total of six South Asian women (two Nepalese, two Pakistanis and two Indian women) were recruited. The results showed that the training programme was feasible and acceptable. Significant improvements in knowledge scores were found after training. Besides, only a small decline in the knowledge scores were noted 3-months post-training. All community health workers were satisfied or highly satisfied with the programme.

Conclusion: The results indicated that the training programme help to increase the knowledge and competency of community health workers in providing intervention related to cancer screening and prevention. Through appropriate training, community health workers may make a significant contribution to promote ethnic minority women's screening for cervical cancer.

B22 Evidence-based oral care protocol for nurses and cancer patients to prevent and minimize the symptoms of mucositis after chemotherapy and radiotherapy

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Background: Mucositis is one of the common complications in patient who received chemotherapy and radiotherapy. Patient suffers from pain and inability to eat may increase the risk of malnutrition and affected patients' quality of life. Nurses may feel frustrated to manage patients with mucositis without adequate knowledge and clear guidelines. Establishing an evidence-based oral care protocol in the clinical practice could benefits both patients and health care providers in receiving and delivery of evidence-based quality care.

Objectives: To establish an evidence-based oral care protocol for nurses and cancer patients to prevent and minimize the symptoms of mucositis.

Methods: Before setting up the standard oral care protocol, the authors conducted the literature review using electronic databases and visited the Bone Marrow Center in public hospital for their current practice and protocol used. The included studies with oral care protocol and/or the use of oral assessment tools were critically appraised. The oral care protocol was developed based on high quality studies and the applicability of protocol and assessment tools for cancer patients in Hong Kong private hospital.

Results: The oral care protocol includes three parts:

- 1) Prevention: Educate the patient with the protocol before chemotherapy and radiotherapy.
- 2) Early detection: Daily oral assessment after chemotherapy and radiotherapy.
- 3) Intervention: Appropriate nursing care when mucositis developed.

Conclusion: Maintain good oral care is very important in cancer patient. Evidence based protocol provide interventions to avoid mitigate oral complications development and improve patient's quality of life. The protocol is easy and feasible to implement for both patients and nurses. This protocol also facilitates patients and nurse to develop nursing skills and knowledge for best oral care and to prevent mucositis after chemotherapy and radiotherapy.

B23 Effects of virtual reality intervention on anxiety among adolescent cancer patients who had undergone peripheral intravenous catheter insertion for multiple times

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Background: Peripheral intravenous catheter insertion is one of the most distressing procedure experienced by pediatric patients. Evidence suggests that virtual reality (VR) may decrease procedural anxiety and pain in pediatric patients undergoing needle-related procedures. However, its effect on adolescent cancer patients who had undergone peripheral intravenous catheters insertion for multiple times was unknown.

Methods: A pilot randomized controlled trial was conducted between June 2018 and March 2019. A total of 40 adolescent cancer patients aged 12 and 17 years were recruited from a regional public hospital and randomly assigned to either the intervention or control group. The intervention group received VR intervention, while the control group received standard care only. Patients' anxiety level, pain level, and heart rate were assessed. Data was collected at baseline, during and immediately after the procedure.

Results: Adolescent cancer patients in the intervention group reported statistically significant reduction in anxiety ($p=0.01$) and pain ($p=0.04$) levels than the control group. However, no significant difference in heart rate was noted ($p=0.40$).

Conclusions: The results of this pilot trial provide preliminary evidence on the effects of virtual reality in reducing anxiety and pain in adolescents with cancer who had undergone peripheral intravenous cannulation for multiple times. Future definitive trial with larger sample is required to validate these findings.

Concurrent Session II: 5. Knowledge synthesis

B31 Effects of supportive interventions for family carers of people with hypertension in the community: A systematic review and meta-analysis

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Background: Hypertension remains a major challenge for chronic illness management worldwide. Family support plays an essential role in blood pressure control; however, the effectiveness of current health programmes for family carers is not consistent and conclusive. The objective of this review was to examine the effectiveness of supportive interventions for family carers on patient and family outcomes.

Methods: Six English databases were searched up to current year to identify randomized controlled trials and quasi-experimental studies that assessed effectiveness of supportive interventions for family carers, with or without patients, to develop caring skills and improve patients' hypertension. Reference lists of included articles and related reviews were also screened.

Results: We included 12 articles from 10 studies, nine were RCTs and one was quasi-experimental study. Supportive intervention for family carers and patients decreased systolic blood pressure (SBP) by 8.88 mmHg (95% CI: 0.23, 17.53), diastolic blood pressure by 6.04 mmHg (95% CI: 2.76, 9.33) at <6 months follow-up. Two studies used interventions for supporting family carers only; whereas, one reported a significant decrease of patients' SBP and DBP. One of three studies with supporting interventions for family carers and patients, identified significant increase in proportion of patients with controlled BP. Three of four studies targeting on treatment adherence reported significant improvements in hypertensive patients.

Conclusion: Supportive interventions for family carers and/or their patients can provide positive effect on BP change of community-resided hypertensive patients. Studies with interactive education sessions, continuous support at follow-ups and structured support strategies within the interventions for family carers showed significantly improved hypertension-related outcomes.

B32 The effects of seated Tai Chi on health outcomes among stroke survivors: An integrative review

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Background: Stroke is the second leading cause of death and one of the leading causes of disability-adjusted life-years worldwide. Sustainable interventions that promote stroke survivors' recovery to address life challenges is needed. Holistic approaches to recovery include the use of complementary therapies such as Tai Chi (TC). TC is a type of mind-body exercises and is based on collective philosophies of Taoism, Confucianism, and Buddhism. Recent evidence highlights the positive effects of TC on stroke survivors' physical and psychosocial health outcomes that include promoting better balance control and improving upper extremity function to enable participation in activities of daily living (ADL). However, there is a potential risk of falls among stroke survivors with hemiparesis while practising the traditional TC. Using seated position to perform TC may be a safer choice to achieve its health benefits and promote recovery for stroke survivors. This integrative review aims to assess the effects of seated TC on physical and psychosocial functions among stroke survivors in acute recovery phases and community-dwelling stroke survivors.

Methods: We searched nine English and two Chinese databases till December 2018. The review included adult stroke survivors who had received seated TC training with or without a comparison group.

Results: Four quasi-experimental studies were included. Most trials were assessed as having a substantial risk of bias. The review showed seated TC has potential benefits in improving ADL and upper extremity function, and reducing depressive symptoms and shoulder pain. The effects of the seated TC on balance were undetermined given the paradoxical findings in two studies.

Conclusion: Three studies concluded that seated TC could be effective in promoting stroke recovery. Due to the limited number of studies, limitation of the methodological quality and unclear phases of post stroke of the participants, a need for well-designed studies to evaluate its effectiveness is warranted.

B33 Concept analysis of adjuvant endocrine therapy beliefs of breast cancer survivors: A hybrid model

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Background: Adjuvant endocrine therapy beliefs is an essential key in adherence of adjuvant endocrine therapy which can improve survival rate and decrease mortality. However, there is no clear definition of adjuvant endocrine therapy beliefs. The purpose of this study is to identify and clarify the definition and attributes of adjuvant endocrine therapy beliefs for breast cancer survivors.

Methods: A hybrid model of concept analysis was used in this study. At the first phase, we performed literature review of endocrine therapy medication beliefs. During the second fieldwork phase, we conducted in-depth interviews with 20 breast cancer patients, who were undergoing or having an adjuvant endocrine therapy to analyze concept. At the final analysis phase, we compared theoretical phase and fieldwork phase data to define and clarify adjuvant endocrine therapy beliefs.

Results: A total number of 5,007 studies were found via database search and 3,285 studies remained after duplicate removed. We reviewed title and abstract, 160 studies included in literature review for medication beliefs, e.g., diabetes, antiepileptic, and rheumatoid arthritis. Finally 10 studies with adjuvant endocrine therapy beliefs were analyzed. We defined 701 code in text analysis using in-depth interviews data. In the results of data analysis, there were 4 dimensions, i.e., behavioral beliefs, normative beliefs, control beliefs and uncertainty, with 12 attributes, and 53 categories in adjuvant endocrine therapy beliefs for breast cancer survivors. Adjunctive endocrine therapy beliefs were defined as trust of anti-hormonal medication and uncertainty in the efficacy of recurrence or metastasis for breast cancer survivors who rely on adjuvant endocrine therapy.

Conclusion: Behavioral beliefs, normative beliefs, and control beliefs are major attributes of adjuvant endocrine therapy beliefs. Therefore, health care providers should verify adjuvant endocrine therapy beliefs to promote trust and reduce uncertainty of breast cancer survivors.

B34 Effectiveness of a group- plus home-based Tai Chi program in improving functional health for people with coronary heart disease

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Background: Compared with healthy age-matched person, people with coronary heart disease (CHD) reported lower physical capacity and higher physical strain. Tai Chi (TC) is accessible, affordable, and acceptable among older adults; yet effectiveness of home-based Tai Chi program are lacking.

Methods: A total of 98 participants (mean age=69.2±4.68 years, 70.4% female) with CHD were randomly assigned to either TC (n=49), or control (C, n=49) groups. Participants in TC group attended the gradual group-based TC classes, namely, twice a week during weeks 1 and 2, three times a week during weeks 3 and 4, and then four times a week during weeks 5 and 6, with 60 minutes/class. After 6-week group-based TC section, participants in TC group practiced home-based TC four times per week, 60 minutes for each time, for another six weeks. The primary outcome was 2-Minute Step Test (2MST). Secondary outcomes were: Chair Stand Test (CST), Chair Sit-and-Reach Test (CSRT), body mass index (BMI), body fat percentage, blood pressure (BP) and fasting blood sugar (FBS). Data were collected at baseline, 6-week (post group-based TC), and 12-week (post intervention). Generalized estimating equations (GEE) models were used to compare changes in outcomes over time between groups.

Results: At baseline, no significant differences between groups. TC significantly improved 2MST (13 scores), CST (3 scores), CSRT (4.84 cm), and BP (diastolic -7.74 mmHg) at 12-week, compared to C group. Significant improvements were also found in TC group on BMI (-0.64) and body fat percentage (-2.48%) at 6-week, compared to C group. Intervention adherence rates were TC=81.6%, C=77.5%; with 20.4% study attrition at 12-week.

Conclusion: A short-term group-based TC could be benefit for maintaining home-based TC to promote functional health and managing cardiovascular risk factors on CHD patients, and such hybrid TC program would consider as an important exercise component in healthcare systems.

B35 The effectiveness of mindfulness-based interventions in health-related outcomes in patients with heart failure: A systematic review

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Background: Patients with heart failure (HF) frequently experience physical and psychological symptoms (depression and anxiety) that significantly impair quality of life. Mindfulness-based interventions, which combine mindfulness practices and contemporary psychological therapy, may be a promising approach to benefit this population. This systematic review aimed to assess the effectiveness of mindfulness-based interventions in improving health-related outcomes, including psychological and physical outcomes and quality of life, in patients with HF.

Methods: Seven English and two Chinese electronic databases were searched with keywords from inception to January 2019 to identify randomized controlled trials (RCTs) and non-randomized controlled trials (Non-RCTs) of mindfulness-based interventions in adults with HF. Two reviewers independently screened records for eligibility and assessed quality of included studies using EPHPP instrument. **Results** were narratively synthesized because of insufficient data for performing meta-analysis.

Results: Four studies (2 RCTs and 2 Non-RCTs) involving 456 participants were included. We rated two studies as moderate quality and two as weak quality. Three studies were modeled on original Mindfulness-Based Stress Reduction (MBSR) program and one study combined MBSR with Mindfulness-based cognitive therapy (MBCT). The dosage and duration of interventions varied across studies. Two studies assessed and reported consistent findings that mindfulness-based interventions significantly reduced depression and anxiety compared with usual care (all $p < 0.05$). One study assessed and observed significant improvement in quality of life ($p < 0.05$). However, the effects on physical outcomes such as HF symptoms and physical function were mixed or insignificant.

Conclusions: This review provides preliminary evidence for the effectiveness of mindfulness-based interventions in improving psychological outcomes and quality of life for patients with HF. Those findings should be carefully generalized due to the methodological flaws in the included studies. More empirical studies with rigorous design are required to further confirm the effects of mindfulness-based interventions in patients with HF.

B36 The correlates of death anxiety among elderly people in China: A meta-analysis

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Background: Death anxiety becomes one of the main concerns experienced by elderly people as they are growing older, which may influence their will to live and well-being. The purpose of the current study was to explore the correlates of death anxiety by summarizing and synthesizing related studies examining the correlates and predictors of death anxiety in Chinese older adults.

Methods: In this meta-analysis study, subject headings and key words were used to search relevant studies published in English or Chinese from seven electronic databases (PubMed, Web Of Science, Scopus, CNKI, CBM, VIP and WanFang), as well as reference lists of eligible papers. Eligible studies should quantitatively examine the association between at least one correlate/factor and death anxiety among Chinese older adults aged 60+ years. Papers using reusable data or with no access to acquire necessary information, poor design or low-quality were excluded. The included studies were analysed using RevMan5.3 and stata14.1 software.

Results: From a total of 1801 identified articles, 14 studies were adopted into the meta-analysis (with a total of 4969 participants). Correlates associated with death anxiety among Chinese elderly people included educational level (SMD=0.12, 95%CI[0.03,0.21]), status of talking about death in family (SMD=-0.63, 95%CI[-1.00,-0.26]), living in home or institutions (SMD=-0.80, 95%CI [-1.56,-0.03]), conditions of chronic illnesses (SMD=-0.47, 95%CI [-0.71,-0.23]). The results of begg or egger's test demonstrated there was no evidence of publication bias across studies except the synthesized results of "status of talking about death in family".

Conclusions: Chinese elderly people who have a primary school or lower educational level, talk less about death in family, live at home or suffer from chronic illnesses will experience higher level death anxiety. The findings were meaningful in terms of providing evidence for building interventions for death education. However, more studies are required to address such a wide range of factors of death attitude.

Concurrent Session II: 6. Knowledge synthesis

B37 The effect of educational interventions on the preparedness of care home staff in dementia care: A systematic review

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Background: Inadequate knowledge and skills in dementia care increase the care challenges. A number of educational interventions were delivered for staff members working in residential care homes for the elderly (RCHEs). This review aimed at systematically evaluating evidence of the effects of educational interventions on the preparedness of staff members in dementia care and highlighting knowledge gap in existing evidence.

Methods: Articles on educational intervention about dementia care in RCHEs were searched in nine electronic databases: MEDLINE, Embase, PsycINFO, CINAHL Complete, Cochrane Library, Pubmed, British Nursing Index, Wanfang and China National Knowledge Infrastructure. The included papers were appraised using The Cochrane Collaboration Risk of Bias tool by two investigators independently.

Results: After eligibility screening, 21 randomized controlled trials were included. They were conducted in nine developed countries: United States, Australia, Netherlands, Denmark, Ireland, Norway, France, Germany, Sweden and United Kingdom. Only four studies were classified as high-quality. Significant improvement of knowledge was noted in seven out eight studies but the effects on attitudinal change, stress, burnout, self-efficacy and physical health, cannot be drawn due to inconsistent findings. No significant change was noted in job satisfaction in all studies. Meta-analysis was not feasible due to variation in intervention and study instruments. The finding showed that medium to high intensity training, broader spectrum of educational content on dementia, multiple training approaches and additional post-training supports through field visits are more likely to have positive impact on staffs' outcomes. In addition, dementia-care mapping and reminiscence are strategies for dementia care were likelihood of improving staff outcomes.

Conclusion: Staff trainings are potentially effective in improving preparedness of care home staff for dementia care. However, due to the methodological limitation in the existing studies and cultural differences, they may not be applied directly to countries in other areas such as in Asia.

B38 Effectiveness of partnership interventions for staff and families of residents with dementia in long-term care facilities: A systematic review

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Background: Family-staff partnership in long-term care facility has been suggested beneficial effects on residents, families, as well as facility staff; however, the effectiveness in dementia care remains unclear. This review aimed to synthesise the effectiveness of partnership interventions on family and facility staff relationship and their well-being in long-term dementia care.

Methods: Eight databases, including Medline, Cochrane Library, Embase, PsycINFO, CINAHL, Web of Science, WanFang Data, and China Journal Net, were searched for relevant interventional studies published in English or Chinese up to December 2018. Two reviewers independently assessed the eligibility of the articles. **Methodological** appraisal and data extraction were performed by two reviewers independently using JBI Critical Appraisal Tools and Standardized Data Extraction Form, respectively. A narrative summary of the included studies was presented.

Results: The search yielded 1032 articles and four (two cluster randomized controlled trials and two quasi-experimental studies) were finally included in this review. Partnership interventions for staff and families of residents with dementia in long-term care facilities mainly included training, joint meeting with administrators, and negotiating partnership agreement forms. Significant intervention effects were found in reducing interpersonal conflict between facility staff and family members and improving their perceived relationship. Families' caregiving burden was not statistically significantly affected. For the outcomes of family involvement, family satisfaction, behavioural and psychiatric symptoms in residents, and staff burnout, the results were inconsistent.

Conclusion: This review suggests that partnership interventions have potential beneficial effects in improving the relationship between facility staff and families of residents with dementia. However, it is inconclusive for the effects on family involvement, family satisfaction, behavioural and psychiatric symptoms in residents, and staff burnout.

B39 Effects of character strength intervention on psychological well-being among patients suffering from chronic illness: A systematic review

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Background: Character strength intervention has been used in patients suffering from chronic illness to enhance their psychological well-being and other patient outcomes. However, there is a lack of evidence providing an overview on its effectiveness.

Objective: To identify and evaluate the available evidence on the efficacy of character strength intervention on psychological well-being among patients with chronic illness.

Methods: A systematic search was conducted to identify English articles and the period for publication was up to December 2018. Six databases were included in our literature search. Reference list of the retrieved articles were also reviewed to identify relevant studies. The study quality was evaluated with the use of the Joanna Briggs Institute critical appraisal checklist.

Results: There are limited clinical studies on character strength intervention for patients with chronic illness. A total of eight studies involving 692 patients were identified and critically appraised in the review. Meta-analysis results for three comparable studies indicated that character strength intervention was effective in improving self-esteem among patients with chronic illness (MD = 2.31; 95% CI, 1.33 to 3.28). According to two of the three studies, character strength intervention also significantly enhanced the general self-efficacy of patients (MD = 2.02; 95% CI, 0.49 to 3.54). Regarding depression, another two comparable studies indicated the intervention appeared to have benefits in reducing depression symptoms of patients (MD = -2.58; 95% CI, -4.59 to -0.57).

Conclusions: The findings support the effectiveness of character strength intervention in patients with chronic illness. Further research is needed to provide strong evidence on the applicability of the intervention in the clinical practice.

Implications for clinical nursing: This review adds weight to the need of a better understanding on the application of character strength intervention. Analyses on its effectiveness in different groups of patients are recommended in future studies.

B40 Measuring the clinical reasoning in nursing education: A systematic review

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Background: Healthcare environments have changed with technical improvements in diagnosis and care. A higher level of clinical competency such as clinical reasoning in nurses is needed. Most studies used tools proxy measure of clinical reasoning in nursing education. The aim of this study was to review systematically the measurement of concept of clinical reasoning.

Methods: This is a systematic review to measure clinical reasoning in nursing education. This study was performed according to the systematic reviews guideline and PRISMA checklist by the Cochrane Collaboration. A literature search was conducted in PubMed, Embase, MEDLINE complete, CINAHL with Full Text, Korean database including the KoreaMed, Riss databases up to January 2019. The searching keywords were "nur*," "clinical reasoning," "measur*" with single search terms or in combination with Boolean and wildcard.

Results: Following the primary search, 440 studies were found by reviewing searching the databases; 324 studies remained after redundant literature was eliminated. After review the abstract, a total of 11 studies selected for systematic review. Most studies were published since 2010. Of the eleven selected studies, seven studies used high-fidelity simulation, two used standardized patient (SP), one used computer-based simulation, one used case study. Final selected studies represented clinical reasoning using the health science reasoning test (n=4, 36.4%) or proxy measure such as clinical competency, clinical judgment and critical thinking (n=4, 36.4%). Several studies used author developed instruments through literature review and faculty consensus (n=3, 27.3%).

Conclusion: This study was conducted to verify the measurement concept of clinical reasoning. Most previous studies used proxy or researcher own developed tools such as prioritizing problem, analysis and inference. Future studies are in need to develop effective clinical reasoning measurement in nursing education.

B41 Examining interventions for managing older patients with multimorbidity in primary care settings using cumulative complexity model: A systematic review

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Background: The multimorbidity management cannot be successful without patients' well adherence to self-care and treatment regimens. Older patients with multimorbidity are usually highly overburdened caused by complex regimens. The excessive burden of treatment can result in lower adherence to treatment and self-care activities and poor health outcomes. The Cumulative Complexity Model presents that patients' workload and capacity have impact on the enactment of self-care behaviors and health outcomes, which are important considerations for the effectiveness of interventions. The aim of this systematic review was to identify and synthesize the effectiveness of interventions in consideration of its impact on patients' workload and capacity for older patients with multimorbidity in primary care settings.

Methods: Studies were identified from 12 databases published between January 1990 and January 2019. Two reviewers independently assessed the quality of included studies and extracted data. The effects of interventions on workload and capacity were identified from included studies and the effectiveness of interventions was narratively synthesized.

Results: Out of the 15,797 identified articles, 22 were included in review. The interventions were categorized into three types: mainly reducing workload of demands, mainly increasing capacity to cope with demands and both reducing workload and increasing capacity. Interventions including care coordination and medication review could reduce patients' workload; interventions including providing options for patients and families to improve their self-management, supporting access to community- and social- resources and involvement of social network could increase patients' capacity. Studies both reducing workload and increasing capacity were limited. Outcomes of included studies were mixed. Interventions mainly increasing capacity appeared more effective compared with those mainly reducing workload.

Conclusion: Interventions increasing capacity without adding extra burden are more effective to improve outcomes for older patients with multimorbidity. The scarcity of studies on the effectiveness of interventions specifically designed to manage treatment burden is also identified.

B42 Non-pharmacological multicomponent interventions to prevent delirium in intensive care settings: A systematic review

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Background: Non-pharmacological multicomponent interventions such as reducing sleep sedation, early mobilisation, cognitive stimulation and sleep promotion have been widely suggested to prevent delirium for critically ill patients admitted to intensive care units (ICU). However, there are inconsistencies in intervention descriptors and outcomes that impede the use of evidence in practice. This systematic review aims to summarise the effects of non-pharmacological multicomponent interventions on physical and psychological outcomes of patients in intensive care settings.

Methods: Eight English and two Chinese databases were searched from their inception to November 2018. Studies were included if they examined the effects of non-pharmacological multicomponent interventions in ICU patients. Outcomes included delirium incidence, delirium duration, ICU length of stay, mortality and anxiety level. The Joanna Briggs Institute Critical Appraisal Checklists were used to assess the methodological quality. Two reviewers extracted details of the included studies. When feasible, data were statistically pooled for meta-analysis. Otherwise, narrative summary of the evidence will be presented.

Results: Twenty trials (two randomised controlled trials, four controlled clinical trials, six controlled before and after, and eight cohort studies) were included. The pooled analysis of these studies showed non-pharmacological multicomponent interventions were associated with a significant reduction in delirium incidence (odds ratio [OR]: 0.50; 95% confidence interval [CI], 0.36-0.71; $p < 0.001$); delirium duration (mean difference [MD]: -1.51 days; 95% CI, -2.34 to -0.67 days; $p < 0.001$); ICU length of stay (MD: -0.87 days; 95% CI, -1.21 to -0.52 days; $p < 0.001$) and anxiety levels (MD= -18.89; 95% CI, -28.59 to -9.19; $p < 0.001$). No significant reduction in mortality (OR: 0.85; 95% CI, 0.60-1.19; $p = 0.33$) was found.

Conclusions: Non-pharmacological multicomponent interventions are potentially effective to prevent delirium. Further studies to explore the effects on psychological outcomes are needed.

Concurrent Session III: 1. Knowledge synthesis

C01 Review literature: Correlation between menopause and cognitive decline

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Background: Menopause is the point of time in a woman's life when menstrual cycles permanently missed for 12 consecutive months. Several studies found that menopause women report complaint with memory such as forgetfulness and lack of social relationship. It was because estrogen could impact the cognitive function in the brain. The purpose of this study was to identify the correlation between menopause and the decline cognitive function.

Methods: The method used was a simplified approach through four databased articles namely ProQuest, BMC, EBSCOhost, and hand searching Google scholar via Boolean operators "AND" and "OR" from 2009 to 2019.

Results: A systematic review database conducted to identify menopause and cognitive decline found 17.623 articles. However, there were only 21 articles met our criteria. From those 21 articles there were 13 studies (62.1 %) met the requirements p value $\alpha < 0.05$, meaning that menopause has correlation with cognitive impairment. From 13 references of the study, there were found factors which influence cognitive function decline with menopause. There are estrogen ($n = 4$), FSH ($n = 1$), executive function ($n=2$), psychological ($n=2$), emotional changes ($n = 2$), lifestyle ($n = 1$), lack of social relations ($n = 1$), and among these factors, estrogen hormone has the highest chance to influence cognitive function with menopause.

Conclusion: Therefore, the conclusion of this review literature were found factors correlated between declining cognitive function with menopause for woman.

C02 Literature review: Description of use biometric identification technology in outpatient in hospital

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Background: Patient misidentification is considered as the root of errors in patient safety. One Security system that implements at least two identification data could reduce patient misidentification, but the errors can not be eliminated as it is vulnerable to human errors. The use of biometric identification technology has a potential to become a solution to reduce the number of patient misidentification in the hospital.

Aim: This literature review was aimed at reviewing the use of biometric identification technology in patients at outpatients department at a hospital.

Methods: Databases searched consisted of EBSCO and PubMed using key terms implementation/ using, biometric identification technology, outpatient, hospital, with boolean operator "AND" atau "OR". Inclusion criteria consisted of research articles, outpatient participants. Articles were appraised using english and bahasa, JBI Critical Appraisal Checklist (2007-2017). This research is using thematic analysis: simplified approach method.

Results: Out of six articles retrieved, 12% (50 articles) were reviewed. Themes emerged from this review included: finger vein, Iris recognition and fingerprint.

Recommendations: The results of this study were expected to be a source for conducting future empirical research on the use of biometric identification technology in outpatients in hospitals.

C03 Associations of the serotonin transporter promoter polymorphism (5-HTTLPR) with bipolar disorder and treatment response: A systematic review and meta-analysis

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Background: Associations of the serotonin transporter promoter polymorphism (5-HTTLPR) with bipolar disorder (BPD) and treatment response in bipolar patients were not conclusive. This study not only assessed the association between the 5-HTTLPR and BPD with accumulating relevant studies, but also in the first time evaluated the effect of the 5-HTTLPR on both anti-depressive and anti-manic treatment responses in bipolar patients.

Methods: PubMed, Embase, PsycINFO, Cochrane Library and Cochrane Control Trials databases were systematically searched before February 2017. This meta-analysis followed the PRISMA guidelines.

Results: A total of 32 population-based studies (5567 cases and 6993 controls) and 9 family-based studies (837 trios) were finally screened out and statistically joined into a single meta-analysis that revealed an association between S allele and an increased risk of BPD (OR = 1.06, p = .038). Pooled analysis of the 32 population-based studies indicated an association of S-carrier genotypes with an increased risk of BPD (OR = 1.10, p = .029). Meanwhile, the association remained significant in Caucasians (OR = 1.15, p = .004), which could provide an enough power (88%) to detect a significant association. Regarding the treatment response studies, 6 studies reporting the relationship of the 5-HTTLPR in anti-depressive remission rate (1034 patients) and 7 studies reporting in response rate (1098 patients) were included for pooled analyses. We observed a significant association of S-carrier genotypes with a reduced anti-depressive remission rate (OR = 0.64, p = .006) but not with anti-depressive response rate. The association between the 5-HTTLPR with anti-manic response rate was not observed in the included 6 studies (676 patients).

Conclusions: The present study supported the presence of a marginal but detectable effect of the 5-HTTLPR on susceptibility to BPD. Moreover, the detected association in Caucasian was statistically reliable. Besides, the 5-HTTLPR was identified as a useful predictor for anti-depressive remission but not for anti-depressive or anti-manic response.

C04 Telehealth interventions for improving self-management in patients with hemophilia: A systematic review of clinical studies

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Background: Innovative interventions delivered by telehealth routes may help to improve the self-management of hemophilia, which is often demanding and complex. This systematic review aims to summarize the literature evaluating the effectiveness of telehealth interventions for improving health outcomes in patients with hemophilia, and provides direction for future research.

Methods: A search was conducted on Ovid MEDLINE, EMBASE and PubMed for studies (1) conducted on patients with hemophilia A or B; (2) tested the use of telehealth interventions via Internet, wireless, satellite, telephone or/and mobile phone media; and (3) reported on outcomes related to quality of life, functional status, or empowering patients to be decision-makers in the emotional, social or medical management of their illness. Reviews, commentaries or case reports comprising >10 cases, were excluded. Quality of studies was assessed using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies.

Results: Sixteen articles were included. Methodological quality of most studies (n=13) was rated "weak" or "moderate" as they were single-arm and cross-sectional in nature. The components of the interventions were rather homogenous and typically involved electronic logging and reminders for prophylactic infusions (n=10); reporting of bleeding events (n=9); monitoring of infusion product usage and inventory (n=6); and real-time communication with healthcare professionals (n=5). Telemedicine-supported education and information interventions seemed to be particularly effective among adolescent and young adult patients. Although the patients reported improvements in their quality of life and perception of illness, telemonitoring devices did not appear to have a significant effect on quantifiable health outcomes, such as joint health. Longitudinal studies (n=2) seemed to suggest that the response and compliance rates decreased over time.

Conclusion: Preliminary evidence suggests that telehealth-delivered interventions could feasibly promote independence in disease management. A dedicated network of support is required to maintain the technology, improve compliance and validate the electronic data locally.

C05 Cancer survivors' experiences with financial toxicity: A systematic review and meta-synthesis of qualitative studies

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Background: Patients with cancer often face serious financial distress of cancer treatment, which may increase symptom burden, reduce compliance to therapy, health-related quality of life and even survival rate. The aim of this study is to synthesize evidence based on the experiences and perceptions of cancer survivors regarding financial toxicity, identify their coping strategies and unmet needs.

Methods: A comprehensive search of published and unpublished studies was performed in PubMed/Medline, Medline (Ovid), EMBASE (Ovid), CINAHL (EBSCO), Web of Science, ProQuest Dissertations and Theses, Cochrane Library (Wiley) and Open Grey. Qualitative and mixed-method studies aimed to explore the adult cancer survivors' experiences with economic burden due to cancer treatment were included. A checklist for qualitative research from the Joanna Briggs Institute Reviewer's Manual was applied to assess for the risk of bias across studies. Meta-aggregation was performed to synthesis the data from included studies, by using the Joanna Briggs Institute System for the Unified Management, Assessment and Review of Information (JBI-SUMARI). The confidence level of synthesized findings was assessed using the JBI approach for rating confidence of synthesized qualitative findings (ConQual).

Results: A total of 5466 studies was returned from the search strategies. The screening and selection are in progress. Now, nine studies fulfilled the inclusion criteria and can be included in the meta-synthesis. Four synthesized findings will be identified, covering reasons of financial toxicity, impacts on patients, coping strategies and unmet needs.

Conclusion: Cancer survivors experience financial toxicity and have unmet needs for coping these issues. Further research combining reduction of financial toxicity and improving coping strategies is recommended.

Concurrent Session III: 2. Evidence-informed health care

C07 Female breast cancer survivors can report similar problems to woman without a history of cancer: Implications for assessment

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Background: According to GLOBOCAN 2018, breast cancer is the most commonly diagnosed cancer (11.6% of the total cases) among females across the globe. In China, the incidence of breast cancer is approximately 272.4 per 100,000. With therapeutic advances and earlier detection over decades, the BCS five-year relative survival rate in China has increased from 73.1% 2003-2005 to 82% 2012-2015. Breast cancer survivors (BCS) can experience a substantial burden after completion of cancer therapies. Cancer therapy (surgery, radiotherapy, and/or chemotherapy, or other systemic treatment) can contribute to approximately one third to one half of cancer survivors experience acute, long-term, and late effects. However, little is known about differences between adult Chinese breast cancer survivors and a non-cancer comparison (NCC) group on problem areas.

Objectives: To determine whether adult Chinese BCS differ from a NCC group on problem areas assumed to be cancer survivor specific.

Methods: The Chinese version of the CSPro-Breast Cancer (CSPro-BC) was used to measure self-assessment of symptom burden, functional status, lifestyle, financial strain and health care seeking skills in both the BCS cases (n=234) and a NCC group (n=230). The mean scores of the BCS and NCC group were determined. Differences between BCS and the NCC group were tested using chi-squared tests and independent t tests. A Bonferroni correction (.05/18 = .0003) was used to determine the threshold level of significance for the multiple t tests.

Findings: There were no differences in education, age, marital status and children number between the two groups. The only group difference was work status with fewer BCS working than the NCC group. T-tests indicated that the BCS group reported more problems in fear of recurrence, body image, cognitive limitations, sexual concerns, financial strain, patient-provider communication, health message and information acquisitions. The two groups did not differ on pain, fatigue, depressive symptoms, anxiety, social function, sleep, or health care competence. The NCC group reported more problems related to unhealthy diet although the clinical significance of this differences is unclear (p < .0001).

Conclusions: This study represents the first attempt to determine whether CSPro scores on the full 18 problem areas reported by BCS differ from a NCC group similar on demographics. As the findings indicate, the BCS group does experience higher scores on certain scales generally considered problem areas for BCS following primary treatment. These problems include fear of cancer recurrence, body image, physical activity, cognitive limitations, sexual concerns, work, patient-provider communication, health message, information acquisition and financial strain. The findings indicate that when compared to NCC group on potential problem areas, BCS demonstrate some statistically significant problems. However, certain problem areas do not differ between the two groups. The NCC group was observed to have a poorer score on "Healthy diet". The results indicate that not all problems typically measured in cancer survivors are BCS specific. The lack of cancer specific differences on certain measures of the CSPro-BC reflects the presence of these symptoms and functional outcomes in the general population have implications for clinical assessment tools.

C08 Description of the implementation of standard operational procedures of diabetic wound care in medical surgical inpatient room

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Note: The authors decided to withdraw their abstract for presentation.

C09 The relationship between sleep quality/sleep-wake pattern and frailty among older adults: A systematic review and meta-analysis

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Objective: Although sleep disturbances and frailty are both prevalent health conditions among older adults, the mechanism of frailty and the role of sleep disturbances are yet to be fully explored. This is the first systematic review and meta-analysis that examined the association between frailty and both sleep quality and sleep-wake pattern among older adults.

Methods: A comprehensive search has been conducted from inception to 12/2018 to source relevant peer-reviewed studies in the following databases: CINAHL Complete, PsycINFO and Ovid-Medline. The two authors independently screened the titles, abstracts and full-text of the studies using selection criteria. The Grading of Recommendations Assessment, Development and Evaluation system was used to assess the quality of evidence. When there were three or more studies reporting the same outcome and type of effect estimates, meta-analysis would be conducted. Otherwise, narrative analysis would be carried out.

Results: Out of the 3,234 studies identified, seven were included in this review. The meta-analysis suggested that excessive daytime sleepiness was not related to higher risk of frailty (Pooled odds ratio: 1.62; 95% CI: 0.96-2.73; $p=0.07$), with a moderately high level of heterogeneity ($I^2 = 85\%$, $P = 0.001$). Gender bias was proposed to explain the heterogeneous result by comparing the baseline characteristics of the included studies qualitatively. Also, the synthesized data suggested consistent evidence on the association between subjective sleep quality and frailty among older adults; while the findings for the outcomes of sleep-wake pattern and insomnia were inconclusive.

Conclusion: Despite a systematic search, this review has identified limited and inconclusive evidence on the association. Further rigorous research on cross-sectional data is needed to strengthen the quality of present evidence on the association. Nevertheless, this systematic review has provided a comprehensive profile of present evidence, which guides future studies that aim at examining the nature and causality of this relationship.

C10 qSOFA vs SIRS vs NEWS vs NEWS2 in the emergency department: A prospective study

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Background: Sepsis is the primary cause of death from infection worldwide. In 2016, Sepsis-3, a new clinical concept termed 'Quick Sepsis-Related Organ Failure Assessment' (qSOFA) was introduced to identify high risk patients with suspected infection. The present study aimed to validate qSOFA in an emergency department in Hong Kong. Furthermore, we compared the prognostic value of qSOFA and the previous criteria- Systemic Inflammatory Response Syndrome (SIRS)- as well as a commonly used early warning score, National Early Warning Score (NEWS) and its updated version National Early Warning Score (NEWS) 2.

Methods: This is a single-centre, prospective study conducted in the ED of Prince of Wales Hospital, HK between July 2016 and June 2017, triaged as category 2 (Emergency) and 3 (Urgent) were recruited. All variables for calculating qSOFA, SIRS, NEWS and NEWS2 were collected. The primary outcome measure was 7-day mortality. Venous lactate was also measured to investigate whether lactate levels provide additional value for the prediction of 7-day mortality. The prognostic value of the different scores to predict 7-day mortality was studied. Receiver Operating Characteristic analysis were performed to determine the Area Under the Curve (AUC), sensitivity, specificity, positive and negative predictive value, positive and negative likelihood ratio for qSOFA \geq 2, SIRS \geq 2, NEWS \geq 5 and NEWS2 \geq 5.

Results: Of 1253 patients recruited, median age was 72 years (IQR: 59-84); 638 (50.9%) were male. Overall 7-day mortality was 2.6%. The AUC for prediction of 7-day mortality for qSOFA \geq 2, SIRS \geq 2, NEWS \geq 5 and NEWS2 \geq 5 were 0.57 (95%CI 0.54-0.60), 0.70 (95%CI 0.67-0.72), 0.68 (95%CI 0.66-0.71) and 0.68 (95%CI 0.66-0.71) respectively. NEWS \geq 5 ($p=0.014$), NEWS2 \geq 5 ($p=0.014$) and SIRS \geq 2 ($p=0.012$) performed better than qSOFA \geq 2 to predict 7-day mortality in ED patients.

Conclusion: Among emergency and urgent patients presenting to the ED, NEWS/NEWS2 and SIRS perform better than qSOFA to predict 7-day mortality.

C11 Veterans team recovery integrative immersion process (Vet TRIIP): A qualitative evaluation of participation and impact

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Background: Vet TRIIP is a short-term multi-modality complementary integrative immersion program for Veterans with post-traumatic stress and related symptoms. Geared towards Veterans, active duty service members, family members, and caregivers, it aims to honor and empower them to create healthy, happy, and productive civilian lives. Vet TRIIP has not been evaluated although it has been existence for years. This study determined the impact of Vet TRIIP on the quality of life of participants and strategies to improve the program.

Methods: Veterans (N=13) who received treatment (i.e., aromatherapy, emotional freedom technique (EFT), clothes-on therapeutic massage, Qigong, Reiki, chiropractic care, meditation, reflexology, and acupuncture) were interviewed for their reason for participation, most bothersome symptoms and the effects of Vet TRIIP, service most and least appreciated, suggestions for improvement, and things learned that helped them with their daily lives. Responses were analyzed for emerging themes.

Results: The Veterans participated because of physiological and psychological needs, social support, and curiosity to address symptoms such as pain, stress, anxiety, and depression. Vet TRIIP reportedly improved their quality of life and decreased stress. The Veterans appreciated most the support of the Vet TRIIP staff and specific interventions such as reiki and massage; some participants did not like acupuncture due to their fear of needles. Participants suggested the addition of professional psychological services. EFT/tapping and guided breathing were most useful in their daily lives.

Conclusion: Vet TRIIP was a positive experience that helped the Veterans' pain, anxiety, and stress management, improving their quality of life. This study provided qualitative evidence for the effectiveness of nontraditional nonpharmacological interventions for pain, anxiety, and stress. Further studies to quantitatively assess the effects of Vet TRIIP for pain, stress, and mental health issues are recommended to support evidence-informed care addressing significant health issues among Veterans and their families.

C12 Correlation between time of diagnosis with quality of life for the patient with coronary artery disease at one of the private hospital in middle part of Indonesia

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Note: The authors decided to withdraw their abstract for presentation.

Concurrent Session III: 3. Evidence-informed health care

C15 The study on the preliminary establishment of pre-pregnancy risk assessment index for reproductive female renal allograft recipients

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C16 Women's experience in using complementary nursing on infertility

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Background: One in four couples in developing countries has experienced infertility. Indonesia as a developing country still has a high prevalence for infertility cases, which 10-15% in reproductive age population. The development of complementary therapies especially infertility treatment is increasing, but there has not been a specific study that examine women's experiences in using complementary nursing in infertility.

Methods: A qualitative research was conducted to explore the experience of infertile women undergoing nursing complementary therapy. Eight women participated in this research were selected by purposive sampling method based on the inclusion criteria. Selection of participants was done using snowball sampling. Data were collected through in-depth interviews and field notes. Data analysis was performed using thematic content analysis and stages suggested by Collaizi.

Results: The results of this research, there are six themes, they were: 1) Feeling of sadness was experienced by infertile women 2) Increasing age and the insistence of the family caused anxiety to infertile women, 3) Infertile women chose nursing complementary because they want to get pregnant naturally 4) Various way and effort were done by infertile women to get pregnant, 5) Infertile women had appropriate perception toward complementary nursing 6) Family supports were needed to succeed the complementary nursing.

Conclusion: In conclusion, complementary nursing was very important to be chosen as one of solution for infertile couples. It is recommended that maternity nurses optimize their roles in giving information and support to infertile women.

C17 Factors of a mother's postnatal decision about infant feeding and the sustainability of breastfeeding

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Objective: The benefits of breastfeeding to both infants and mothers are widely recognised. Nonetheless, about one third of mothers have stopped breastfeeding upon discharge from our hospital despite the fact that they elected to breastfeed before delivery. This study aimed to examine factors affecting mothers' postnatal decision about infant feeding and sustainability of breastfeeding.

Methods: This was a prospective study using a questionnaire to collect the subjective information from all mothers who were Chinese and who delivered in our hospital from March to April 2015. As maternal factors alone can only partially predict a mother's decision to breastfeed, a thorough exploration of other variables was also performed.

Results: Analysis of the 172 questionnaires returned revealed that maternal intention to breastfeed correlated with initiation of skin-to-skin contact in the labour ward (odds ratio=2.1, 95% confidence interval, 0.97-4.60; p=0.046) and the presence of the husband during labour (odds ratio=2.3, 95% confidence interval, 0.97-5.51; p=0.048).

Conclusion: Skin-to-skin contact and presence of the husband during labour should be promoted and advocated. These factors are also important for us to develop promotional policies and provide effective counselling in order to improve the breastfeeding rate and sustain a longer duration of breastfeeding.

C18 Effect of family empowerment on the utilization of maternal child health handbook for pregnant women

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Background: Maternal Child health Handbook (MCHH) are a medium for transferring information about health during pregnancy, childbirth, to five-year-old children. In 2013 Indonesia Basic Health Research, pregnant women who were able to address KIA books were only 40.4%. Hagiwara, A. (2011) states, Mothers who have MCHH visit health services more often than mothers who do not have MCHH. This study aims to determine the effect of family empowerment on increasing utilization of MCHH books.

Methods: The study was conducted in a *pre-experiment* with *The One Group Pretest Posttest*. The research was conducted in March-November 2018 in Karawang and Bukittinggi district. The number of samples included 60 respondents. Data analysis was carried out by univariate, bivariate and multivariate tests using the *Wilcoxon Match Pairs Test* and *Mann-Whitney U-Test*. This research is useful for increasing community participation in family health services and as a reference and consideration for determining policies on MCHH services.

Results: The results of this study found that family empowerment influences the use of MCHH, $p = 0,000$ with R^2 15.4%, trust in pregnant women for MCHH $p = 0,000$ with R^2 24.2%, Ease of information $p = 0,000$, with R^2 47.1%, detection ability $p = 0.000$ with R^2 21.8% and profits of KIA books $p = 0.000$, with R^2 4.1%.

Conclusion: Suggestions for health workers are to include families in the health services of pregnant women by increasing their involvement and ability to detect the use of MCHH for pregnant women.

C19 Development and validation of food frequency questionnaire with glycemic index for post-menopausal women in Hong Kong

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Concurrent Session III: 4. Contemporary issues and challenges in achieving collaboration in best practice

C22 Linking HIV cases (all ages), new HIV infections and deaths due to AIDS

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Background: The global trend and health impact of HIV is becoming one of the major challenges of our time. It has affected individuals, families and societies with fiscal and emotional costs, and considerable morbidity and mortality.

Method: The study determined the relationships among HIV cases (all ages), new HIV infections, and deaths due to AIDS. It utilized secondary data in 2017 taken from the Global Health Observatory Data Repository of the World Health Organization. There were 123 countries included in the study. The secondary data was statistically treated using Pearson Correlation Coefficient and Bivariate Linear Regression analysis.

Results: Eight countries have more than 1 million HIV cases, all ages (6.5%). This includes Kenya, Malawi, Mozambique, Nigeria, South Africa, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. Ten countries have more than 40,000 new HIV infections. This includes Brazil, Indonesia, Kenya, Mozambique, Nigeria, South Africa, Uganda, United Republic of Tanzania, Zambia and Zimbabwe. In terms of deaths due to AIDS, three countries have more than 50,000 cases which includes Mozambique, Nigeria and South Africa. Using Pearson Correlation Coefficient and a scatter plot, all three variables have strong positive correlation with each other. Regression model specifications were developed: New HIV Cases = 1447.116 + 0.043 HIV cases all ages + ϵ_i ; Deaths due to AIDS = 1388.210 + 0.021 HIV cases all ages + ϵ_i ; Mortality = 278.465 + 0.523 New Cases + ϵ_i .

C23 The different levels of fear of death between nursing students in second year education and professional program

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C24 Motivation and self-learning readiness of blended learning in research and statistics course for Indonesian nursing students

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Background: Though blended learning has been applied in nursing schools in Indonesia, there were lack of studies in regard with students' motivation and self-readiness in their courses. In addition, many student nurses claimed that research and statistics course more difficult than their other nursing courses. This study aimed to assess the nursing students' motivation and self-learning readiness of blended learning in a research and statistics course at a private nursing school.

Methods: Approval for the study was obtained from the Mochtar Riady Institute for Nanotechnology Ethics Committee. A preliminary study recruited forty nursing students for validity and reliability test purposes. Two questionnaires were translated and tested including adapted Academic Motivation Scale (Vallerand, Pelletier, Blais, Briere, Senecal, et al., 1992; Natalya, L. & Purwanto, 2018) and adapted Self-Directed Learning readiness Scale for Nursing Education (Fisher & King 2010). Both Cronbach's alpha of the questionnaires were above 0.8 (good reliability), however some questions were revised based on its validity test results and its readability.

Results: A total of 181 students involved in the study and descriptive statistics was applied in the data analysis. In this study, it was revealed that nursing students had relatively moderate self-directed learning readiness (mean 90.18). In regard with academic motivation, intrinsic motivation to know of the students (mean 3.35) was higher than others sub dimensions of the academic motivation. It also means that most of the students felt happy while learning and exploring something new in the course.

Conclusion: The findings of this study will assist nurse educators to identify students' learning needs to provide student-centered learning especially in the blended learning of research and statistics course.

C25 An exploration of the socio-ecological factors that influence health literacy in women diagnosed with cancers of the breast and/or cervix in Kenya

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C26 Asian pathways of healing: Language policy and use of Chinese medicine in Singapore

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Background: Despite the statistics revealed by the World Health Organization that one-fifth of the world's population use traditional medicines, of which one of the most popular forms is Chinese Medicine (CM), the global dominance of Western medicine has created structural inequalities in medical systems that affect how patients enact their agency of using CM as a pathway of healing. This research studies on how the language policy created a communication gap between patients and practitioners in accessing their desired healing pathways in Singapore.

Methods: This research draws on works adopting the Culture-Centered Approach (CCA), using qualitative research methods, conducting in-depth interviews with 25 CM physicians and 51 patients in Singapore between March 2015 and April 2016.

Results: Using the voices of CM physicians and CM users, this research proposes a grounded theoretical framework, which illustrates the interrelationship between factors that affected the legitimacy of CM. The legitimacy of CM is constituted as a result of policies (healthcare policy, language policy etc.), the professionalization of Western medicine and CM (registration and social status), and education in CM. This will hence shape the communication challenges, accessibility, and utilization of CM.

Conclusion: It is important to allow the public enacting their agency in respect to their culture and belief. These results help the health policy makers reflect on their roles in providing a better medical system to the public. This research provides new insights for developing a more nuanced understanding of how patients and CM physicians are communicating their needs when seeking better health with their service providers. By engaging policy makers, the gaps can be plugged and communication can be made effective and efficient.

C27 Cochrane global ageing and Department of Rehabilitation Science Hong Kong Polytechnic University

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C28 Application of therapeutic group therapy against the development of school of children's industry with empowerment of caregivers, teachers and mental health care

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Concurrent Session III: 5. Knowledge translation and communication of evidence

C36 Stability and impact of symptom clusters in end-stage renal disease patients undergoing dialysis

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Background: Patients with end-stage renal disease who undergo dialysis experience six to 20 concurrent symptoms. These symptoms cluster together and exert synergistic impact on quality of life (QoL). Previous studies on symptom clusters are predominantly cross-sectional.

Methods: This longitudinal study aimed to evaluate for changes in the symptom clusters and their impact on QoL and functional status over time. Eligible patients: had a diagnosis of end-stage renal disease; had received dialysis for a minimum three months; and gave a written informed consent. Patients were assessed at enrolment, six, and twelve months. Data were collected using self-report questionnaires (i.e., Dialysis Symptom Index, Kidney Disease QoL-36, Karnofsky Performance Scale) and medical record review. Exploratory factor analysis and linear regression models were used to analyse data.

Results: A total of 354 patients were recruited from two sites and 271 patients completed the study (completion rate = 90.3%). The most prevalent symptoms were itching (75.9%), dry skin (74.4%), and feeling tired or lack of energy (72.6%). The exploratory factor analyses revealed a consistent 4-factor structure. The four factors were named uraemic, gastrointestinal, skin, and emotional symptom clusters. The symptoms within each cluster varied across time. The skin symptom cluster remained relatively stable. The uraemic symptom cluster demonstrated largest amount of variability. A higher uraemic cluster factor score was persistently associated with a lower physical component summary score and Karnofsky Performance Scale score. A higher emotional cluster factor score was consistently associated with a lower mental component summary score.

Conclusion: This longitudinal study is the first to examine symptom clusters in dialysis patients. **Results** show that four symptom clusters occurred over a period of one year. The uraemic and emotional symptom cluster factor scores were stable predictors of impaired QoL. Our findings support the need for effective and ongoing management of these symptom clusters.

C37 Development of an evidence-based retraining programme to reduce risk of peritonitis among continuous ambulatory peritoneal dialysis (CAPD) patients

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Background: CAPD is mainstream of home-based renal replacement therapy for patients with end stage renal disease in HK. Peritonitis is most serious and frequent complication among CAPD patients. Noncompliance to CAPD exchange procedure put themselves at risk of peritonitis. Nursing professional play an important role in providing CAPD education and training to help the patients to execute all CAPD exchange procedures and related care. Developing an evidence-based retraining program aims to reinforce patient's compliance and enhance related knowledge, and it may eventually decrease their risk of peritonitis.

Methods: Strategic search of literature on nursing intervention and CAPD related peritonitis was done in September 2018. Two prospective cohort studies were identified and reported that peritonitis incidents were decreased significantly after they developed and implemented a retraining program for their CAPD patients. International Society of Peritoneal Dialysis (ISPD) also made recommendation for developing CAPD retraining program and suggested that periodic retraining is helpful in reducing peritonitis. Characteristics and results from both studies and ISPD recommendation were used to guide the development of an evidence-based CAPD retraining program.

Results: Based on the assessment tools from available studies, we have redesigned and validated new tools appropriate for local CAPD practice for our retraining program to assess both CAPD-related knowledge and practical skills, including the CAPD exchange technique, handwashing technique and exit-site care. It will be conducted at 3-month after the patients start their home CAPD regimen. One-to-one retraining will be tailored to individual learning needs based on the principle from adult learning theory. A pictorial booklet and posters will be used to guide the revision, modification, discussion and demonstration on individual's non-competence areas. Return demonstration and knowledge evaluation will be held at the end to ensure patient competence on their knowledge and performing all practical skills correctly. If they fail to accomplish the retraining goals, they will be rearranged to attend another session to ensure their proficiency in related knowledge and skills.

Conclusion: Reducing peritonitis incidents is the most important task for the renal nurses in caring CAPD patients. Through the integration of the limited literature review findings and ISPD recommendation, several effective strategic components guide us to develop an evidence-based CAPD retraining program, which would enhance patient's knowledge and compliance on their CAPD self-care. However, further study is needed to validate the effectiveness of the retraining program on reducing peritonitis incidents.

C38 SARC-CalF for screening of sarcopenia among older adults: A meta-analysis of screening test accuracy

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Background: Sarcopenia is a syndrome characterised by progressive and generalised loss of skeletal muscle mass and strength with a risk of adverse outcomes. SARC-F is a questionnaire used to screen sarcopenia according to strength, assistance in walking, rise from a chair, climb stairs, and falls. It's suggested that SARC-CalF that is produced by adding calf circumference to the SARC-F could increase sensitivity of SARC-F. The aim of this meta-analysis is to examine the screening ability of SARC-CalF for older adults.

Methods: Articles were searched in seven databases. The bivariate random effects model was used to calculate the summary estimates of sensitivity, specificity, positive likelihood ratio (PLR), negative likelihood ratio (NLR), and diagnostic odds ratio (DOR). The summary receiver operating characteristic curve was used to summarize the overall test performance.

Results: Four studies involving a total of 850 subjects met the eligibility criteria of our study. The pooled results of sensitivity, specificity, PLR, NLR, DOR and area under curve (AUC) with the European Working Group on Sarcopenia in Older People as the reference standard were 0.55[95% confidence interval (CI), 0.33-0.75], 0.91(95% CI, 0.82-0.95), 5.91 (95% CI, 3.93-8.87), 0.55 (95% CI, 0.33-0.77), and 2.47 (95% CI, 1.98-2.96), 0.86 [0.83-0.89] respectively. The sensitivity and NLR were moderate while the specificity and PLR were high. DOR and AUC were high shows that the SARC-CalF's screening ability was great.

Conclusions: SARC-CalF is an effective tool for screening who are in high risk of sarcopenia as its specificity is high. Even though there is a possibility of misdiagnosis as the sensitivity of SARC-CalF is moderate, it definitely increase that of SARC-F. Therefore, SARC-CalF is feasible to screen sarcopenia.

C39 Factors predicting quality of life among hepatocellular carcinoma patients undergoing transarterial chemoembolization

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C40 Translation, adaptation and validation of revised colorectal cancer perception and screening instrument (RCRCPS) among first-degree relatives of colorectal cancer patients in China

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Background: The screening rate of recommended colonoscopy remains low among first degree relatives (FDRs) of people with colorectal cancer (CRC). The Health Belief Model (HBM) provides a theoretical foundation to explain and predict one's health-related behaviors, particularly in regard to the uptake of health services. An accurate and reliable assessment of psychosocial constructs derived from HBM is crucial to understand the low screening rate. However, there is a lack of appropriate validated tool to measure these constructs for colonoscopy screening among Chinese FDRs of CRC patients.

Methods: The revised Colorectal Cancer Perception and Screening Instrument (RCRCPS) was translated from English to Simplified Chinese using Brislin's forward and backward translation method. After translation, the instrument was further adapted for specific colonoscopy screening test. For the terms "screening" in all items were replaced by "colonoscopy screening". Expert panel was used to assess the content validity. Then RCRCPS (Chinese version) was tested with a convenience sample of 176 Chinese FDRs of CRC patients.

Results: The content validity index (CVI) of RCRCPS (Chinese version) was satisfactory (Item CVI=0.83-1, Scale CVI=0.92). The results demonstrated acceptable internal consistency (Cronbach' alpha=0.725-0.796) and test-retest reliability in 4-week interval (Intraclass coefficient=0.52-0.72). Confirmatory factor analysis revealed that RCRCPS (Chinese version) conforms the four-factor model suggested by original version ($\chi^2/df=1.237$, RMSEA=0.037, CFI=0.907, SRMR=0.6780.).

Conclusion: The results provide preliminary support for the reliability and validity of the RCRCPS (Chinese version). It also provides a useful outcome measure for nursing interventions to promote colonoscopy screening among first-degree relatives of colorectal cancer.

C42 Evidence-informed health care on distress management for gastric cancer patients receiving chemotherapy in a medical oncology unit

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Background: Distress has serious adverse effects on cancer patients and their family members. Evidence-informed health care was conducted to promote distress management for gastric cancer patients receiving chemotherapy, and thereby improve patients' outcomes.

Methods: From June 2018 to August 2018, "The Distress Management Guideline for Cancer Patients" was integrated into clinical practice based on CAN-IMPLEMENT: built a multidisciplinary team, developed an implementation plan, conducted a baseline gap analysis, assessed implementation barriers and supports, selected and tailored implementation interventions, and tested the guideline implementation plan. The study design for the guideline implementation testing was historical control trial. In a medical oncology unit, all the distress management related healthcare professionals and 60 gastric cancer patients were recruited. Distress management audit chart, Distress Thermometer and Hospital Anxiety and Depression Scale were used in the testing to assess the effectiveness of the guideline implementation.

Results: The compliance of medical institution and healthcare professionals on the distress management mainly improved from 0.0% to 44.0%-100% ($p<0.05$). There is a trend on decreased rate of distress in gastric cancer patients receiving chemotherapy, with reduced rate from 20.0% to 16.7%, though did not reach significant level due to small sample size and short follow up period ($p>0.05$), and the level of distress decreased from 1.93 ± 2.100 to 1.50 ± 2.286 ($p>0.05$). The rates of anxiety and depression in gastric cancer patients receiving chemotherapy with moderate to severe distress also present a trend of reducing, though did not reach significant level.

Conclusion: The application of "The Distress Management Guideline for Cancer Patients" was feasible in our setting. Most of the medical institution and healthcare professionals' compliance on distress management was improved significantly. However, there was no significant reduction on positive rate and level of distress, anxiety and depression. Small sample size and short follow up period may be the negative influence factors.

Concurrent Session III: 6. Knowledge synthesis

C43 Meta-analysis of risk factors for ventilator-associated pneumonia in ICU patients

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Objective: To systematically evaluate the risk factors of ventilator-associated pneumonia (VAP) in ICU patients, and to provide evidence for clinical prevention strategies.

Methods: The databases of CNKI, Wanfang, VIP, Pubmed, Cochrane Library, EMBASE and Web of Science were retrieved. Studies on VAP risk factors of ICU patients at home and abroad were collected and screened according to inclusion and exclusion criteria. Data were extracted and meta-analyzed by Stata 15.1 software.

Results: Twelve studies were included: 3 in English and 9 in Chinese; 900 in VAP group and 2509 in non-VAP group. Risk factors affecting VAP in ICU patients included the use of multiple antibiotics, age ≥ 60 years, APACHE II score (Acute Physiology and Chronic Health Evaluation) > 18 points, mechanical ventilation ≥ 7 days, invasive operation, antacid, antacid, indwelling gastric tube and disturbance of consciousness.

Conclusion: Targeted preventive measures should be taken to reduce the incidence of VAP in ICU patients.

C44 A systematic review of the effects of psychoeducation on self-care of family caregivers of stroke sufferers

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Background: Stroke has an acute onset and often causes long term disabilities. Stroke patients are usually discharged prematurely due to the inadequate medical resources and short period of hospital stay. The caregiving burden then shifts to the family caregivers who have inadequate preparedness and huge burden of the care, resulting in negative impacts and self-care deficits among these caregivers. Persistent self-care deficits among caregivers may in turn disrupt their caregiving activities. Therefore, approaches to psychoeducation programmes have been designed for these caregivers to promote their self-care or other health outcomes. These psychoeducation programmes were identified and analysed, and their effectiveness was examined in this systematic review.

Methods: CINAHL, Cochrane Library, EMBASE, MEDLINE, ProQuest, and PUBMED were searched from their inception to March 2019, to identify all randomized controlled trials on psychoeducation for family caregivers of stroke, or the dyads.

Results: Six studies were finally included in the review. Most of the RCTs were targeted at family caregivers of patients with first-episode stroke. Psychoeducation programmes with similar contents were found to be effective in improving caregivers' psychological health, especially depression and distress. Psychoeducation can also enhance physical health by decreasing injuries during the caregiving, and increase social support. There were also increased preparedness and decreased impulsivity or carelessness, reflecting enhanced mastery and competence, and positive problem orientation skills acquired post-intervention.

Conclusion: Psychoeducation programme can be effective in improving self-care among stroke family caregivers, through enhancing psychological wellbeing, physical health, social support and mastery. Overall, a 2-month-psychoeducation group with weekly phone calls is recommended for these stroke caregivers.

C47 Effects of maternal sound stimulation (MSS) on preterm infants: A systematic review and meta-analysis

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Note: The authors decided to withdraw their abstract for presentation.

C48 The effectiveness of exercise on fatigue, sleep disturbance, depression symptom cluster and quality of life in breast cancer patients undergoing adjuvant chemotherapy: A systematic review and meta-analysis

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Background: Patients receiving adjuvant chemotherapy for breast cancer often experienced multi-concurrent distressing symptoms. Among which, fatigue, sleep disturbance and depression were found as most common and concurrent symptoms. Highly correlated symptoms could deteriorate the severity of each other, and symptom cluster further impacts the overall quality of life (QoL) among cancer patients. Exercise was proved could effectively manage many single symptoms among cancer population. However, its effectiveness on symptom cluster during active treatment period was underreported. Thus, a systematic review was conducted to evaluate the effectiveness of exercise on this most common symptom cluster and QoL among breast cancer patients receiving adjuvant chemotherapy.

Methods: Ten electronic English and Chinese databases were searched from inception through November 7, 2018. Randomized controlled trials using exercise intervention to address at least two out of the three symptoms among breast cancer patients undergoing adjuvant chemotherapy were included. We used both narrative synthesis and meta-analysis approaches to evaluate the effectiveness of the exercise programme.

Results: Seven studies met eligible criteria for this review. Three studies investigated the effects of exercise on fatigue-sleep disturbance symptom cluster, all reported that changes in fatigue favored exercise group, and most of them demonstrated exercise was helpful in sleep disturbance. Meta-analysis showed non-significant effect on fatigue (SMD=-0.36, P=0.13) while borderline significant effect on sleep disturbance (SMD=-0.35, P=0.05). Four studies explored the efficacy of exercise on fatigue-depression symptom cluster. Exercise was effective dealing with fatigue, but not sure for depression. Meta-analysis showed significant effect on fatigue (SMD=-0.25, P<0.001), but no beneficial effect on depression (SMD=-0.06, P=0.52). The pooling result for QoL demonstrated borderline significant effect (SMD=0.36, P=0.05).

Conclusion: Exercise may have potential effect on managing fatigue and sleep disturbance but its effects on depression is unclear. It is promising in QoL improvement among breast cancer patients undergoing adjuvant chemotherapy.

C49 Effectiveness of electromyostimulation in prevention of elderly sarcopenia: A meta-analysis

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Note: The authors decided to withdraw their abstract for presentation.

C50 The application of family-centered health education pathway in children's hematopoietic stem cell transplantation

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Objective: To explore the application effect of family-centered health education pathways in children with hematopoietic stem cell transplantation and their families, and to summarize nursing experience.

Methods: A total of 187 children with hematopoietic stem cell transplantation and their families who admitted to BMT unit from 2016 to 2017 were enrolled. 87 children were provided with traditional health education and 100 children were educated according to the family-centered health pathway. Take the health education time forward (pre-operative), and implement targeted and personalized education in different stages of transplantation, and strengthen the first three days of mission after admitting. The satisfaction of children and their families, the incidence of complications in children and the identity of the nurses were observed.

Results: The satisfaction of patient and their families increased from 96% in 2016 to 98.8% in 2017. The incidence of oral ulcers, diarrhea and other complications respectively decreased by 22.67%, 16.83%, 16.39% after implementing the family-centered health education pathway. The nurse's recognition of the path is 100%.

Conclusion: The family-centered health education can effectively reduce the anxiety of patients and their families, improve the caregiver's caring ability and compliance, and nurses' satisfaction to care, and reduce the incidence of complications. Harmonize the relationship between parents inside and outside BMT unit and maximize mutual support and cooperation.

Concurrent Session IV: 1. Knowledge synthesis

D01 Management of non-muscle-invasive bladder cancer: A systematic review of clinical practice guidelines

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Note: The authors decided to withdraw their abstract for presentation.

D02 Maternal pre-pregnancy BMI, gestational weight gain and cessation of breastfeeding: A systematic review and meta-analysis

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Note: The authors decided to withdraw their abstract for presentation.

D03 Efficacy of smoking cessation interventions to promote quitting among patients attending to the emergency department: A systematic review

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Background: According to WHO, more than 7 million of deaths are due to smoking each year. Smoking affects the health and well-being of all smokers. It is a well-known cause of many diseases and causes substantial economic burdens to the societies. Smoking cessation is identified as both effective and cost-effective intervention to reduce smoking-related mortality and morbidities; and is recommended to be offered in clinical settings, including Emergency Department (ED). This presentation reports a systematic review about the efficacy of ED-based smoking cessation interventions to ED patients on quit rate.

Methods: We conducted a systematic review of the literature according to PRISMA guideline. We searched the following databases: Ovid Embase, Ovid Medline, PsychInfo, Cochrane library, Scopus, CINAHL Plus, PUBMED and Web of Science. Reference list of the included studies was screened manually to identify additional studies. Studies were included if they: 1.) were an RCT or non-RCT; 2.) recruited patients (adult or paediatric) presenting to the ED for care; 3.) initiated smoking cessation intervention to patients during their ED stay and 4.) assessed quit rate at follow-up.

Results: Total 15 studies (sample size N=40-1295) were identified. It included 13 RCTs and 2 controlled trials. Interventions are characterized with having all or parts of the following components: 1.) screening process to identify patients' smoking status, 2.) a brief intervention to support quitting (including pharmacotherapy and/or self-help materials) and 3.) a referral mechanism to further treatment. The quit rate in the treatment group ranged from 6.2% to 47% at 1-month to 14.2% to 20.8% at 12-month follow up. In control group, the quit rate ranged from 7.5% to 16.8% at 1-month to 11.3% to 18.1% at 12-month follow up.

Conclusion: This review suggests that offering smoking cessation is feasible and effective in ED setting for short term quit rate, but more research is needed to support its long term health outcomes.

D04 Anxious Chinese adults with silicosis is at higher 10-year risk of cardiovascular diseases

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Background: Development of silicosis is a global occupational hazard, characterized by progressive and irreversible deterioration of lung function. Adults with silicosis are at risk for depression and anxiety, which have established associations with cardiovascular disease (CVD). However, little is known about the prevalence of these psychological distress and the 10-year CVD risks among adults with silicosis.

Methods: We enrolled 390 Chinese adults (mean age=68.7±7.8, men=99.5%) with confirmed silicosis by the Pneumoconiosis Medical Board, in which 269 participants aged between 30 to 74 years and without CVD. The Compensation Ordinance determines the lung function loss based on the forced vital capacity. The 10-year CVD risk was determined by the Framingham CVD algorithm. Level of depression and anxiety was examined by the Hospital Anxiety and Depression Scale. Occupational information included job type and duration of dust exposure. Validated questionnaires were used to measure respiratory symptoms, activity limitation and physical activity level. Insulin resistance, fasting glucose, high sensitivity C-reactive protein and lipid profiles were via 8-hour fasting venous sample. Anthropometric characteristics and blood pressure were also measured. Logistic regression model was used to adjust covariates of 10-year CVD risk.

Results: Among 269 participants, 23% and 44% of them presented with potential anxiety and depression respectively. More than 40% of adults with silicosis was at high 10-year CVD risk as defined by CVD risk >20%. After adjusting for year with silicosis, history of tuberculosis, use of respiratory medication, habit of alcohol drinking, exercise capacity, waist circumference, levels of triglyceride and depression, higher anxiety level was significantly associated with higher odds of 10-year CVD risks (OR=1.10, 95%CI=1.00 to 1.20).

Conclusion: Adults with higher anxiety level have an intensifying risk of CVD development. Rehabilitation programs needs to address the psychological needs of this vulnerable group with impaired lung function to reduce CVD development.

Concurrent Session IV: 2. Evidence-informed health care

D06 The utility of new skill-training strategy to improve the triage ability of newly nurses: A randomized controlled trial

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Note: The authors decided to withdraw their abstract for presentation.

D08 The impact of spiritual growth on depression among nursing students

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D09 Quality of life among hemodialysis patients in selected dialysis units in the Philippines

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Note: The authors decided to withdraw their abstract for presentation.

Concurrent Session IV: 3. Evidence-informed health care

D11 Innovative educational program for children with asthma and their families: A research protocol

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Background: In Hong Kong, there is an increasing trend of hospital admission for preschool wheeze. Systematic reviews indicated that family-centered education program and receiving intervention during patients' hospitalization are effective in decreasing length of hospital stay and controlling asthma. Specialist nurse intervention can reduce the time of unscheduled asthma care and tailored education program can increase the self-efficacy of caregivers in caring for their child's asthma. Moreover, evidence suggests eHealth application exhibited positive effects on health behaviour and asthma knowledge. We hypothesize that children with asthma receiving an innovative educational program will exhibit decreased unscheduled doctor consultations due to asthmatic attack. Parents of such children will improve their knowledge, attitude, and practice with regard to asthma and its management.

Methods and Results: This will be a single-blind parallel-group randomised controlled trial with follow-up measurements immediately and at 8 weeks post-intervention. 112 children aged 4–11 years who are admitted due to asthmatic attack or recurrent wheezing to an acute pediatric unit in Hong Kong during the study period will be recruited along with their parents. The education program includes animation on pathophysiology of asthma, asthma medication and physical exercise; videos on inhaler administrative demonstration; asthma-related online games; tailor-made discussion and an electronic version of the asthma education package. The primary outcomes include readmission rate and unscheduled doctor consultation for asthma attack within 1 month after discharge and the parents' knowledge, attitude, and practice with regard to asthma. The secondary outcomes include asthma symptoms, anxiety relating to inhaler use and medication adherence. Asthma self-management activities will also be recorded using online self-management diaries.

Conclusion: The results will inform the development of evidence-based interventions to improve outcomes of children with asthma and their families. It is anticipated the multimedia educational program can be integrated in existing services to enhance family-centered care.

D12 The life burden of caregiver of children with autism spectrum disorder (ASD)

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Background: Autism Spectrum Disorder (ASD) is a complex neurological disorder which cause impairments in multiple areas development include social interaction, communication, and behavior. The parents as the main caregiver of children with ASD face the life burden as the disorder is associated with many behavior problems. This study aimed to explore life burden of parents as the main caregiver who caring for children with Autism Spectrum Disorder (ASD).

Methods: This descriptive phenomenology study used in-depth semi-structured interviews to explore parents experiences related to the life burden during their activity with ASD children. Thirty participants were recruited from The Center of Autism Services in Malang City, East Java, Indonesia by using purposive sampling. The interviews were digitally recorded and transcribed verbatim. The thematic were analyzed using Colaizi's phenomenological method.

Results: Four themes were extracted according to the specific purposes: (1) Physical burden; (2) Psychological burden; (3) Social burden; and (4) Financial burden. The major life burden of parents of children with ASD in the Center of Autism Services in Malang, East Java, Indonesia is social burden. The caregiver choose to reduce the social interaction and their involvement in the community. It is to avoid the social stigma from the communities around them.

Conclusion: It can be concluded that the life burden which is most felt by parents as the main caregiver for children with ASD is social burden. It is important to assist the parents for parenting children with ASD to prevent their physical and mental health problems.

D13 Development and validation of self-management scale of type 1 diabetes for Chinese adults

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Background: Self-management is beneficial to improve health and quality of life for adults with type 1 diabetes, but there is no validated instrument in China. This study is aimed to develop and validate a new self-management instrument of type 1 diabetes for Chinese adults (SMOD-CA).

Methods: The scale was developed by using semi-structured interview with type 1 diabetes and undergoing two-round extensive review by a panel of experts. A total of 243 adults with type 1 diabetes were enrolled. The coefficient of variation, critical ratio, internal consistency and the exploratory factor analysis were applied for data analysis.

Results: The content validity of the scale was 0.904. Exploratory factor analysis revealed four domains, including daily performance, disease management and collaboration, coping with disease-related problem and goals of disease management ($\alpha=0.773$ to 0.857). The stability of the SMOD-CA ranged from 0.816 to 0.925 at 2-week. All the domains of SMOD-CA had a negative relationship with HbA1c. It demonstrates that better self-management is associated with a better metabolic control.

Conclusion: The SMOD-CA demonstrated a good reliability and validity. It's a credible and effective assessment instrument, social workers and health care professionals can use the SMOD-CA to assess the diabetes self-management for adults with type 1 diabetes in China.

D14 A nurse-led smartphone applications (apps) for T2DM patients' self-management: Does it work in Chinese population?

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Background: Well-designed self-management apps targeting behaviors change and increasing disease literacy can improve the outcomes of diabetes patients. This study aims to explore the appropriateness and efficiency of applying a nurse-led apps for Chinese T2DM patients in self-managements.

Methods: A RCT study was held. 152 poor glycemic control T2DM patients were recruited into study from Macau and Guangzhou, China in 2017. Participants were randomized to receive either the apps intervention or usual care intervention. In the apps group, enrolled individuals used apps for self-management. In addition, messages about glycemic control were sent to their apps frequently. Data on blood glucose, HbA1c, and SMBG behaviors had been gathered after 12th week and 36th week.

Results: There were 1.65 times higher in SMBG checkup among the apps group ($r=24.225$, $p<0.001$). Improvement of HbA1c level in the apps group had been 10.5% and 23.9% more than usual care group in the 12th week ($X^2=7.630$, $p<0.05$) and 36th week ($X^2=33.935$, $p<0.01$), respectively. The results of the binary logistic regression analysis showed that factors included: apps group ($B=7.136$, $p=0.001$), 12th week HbA1c level ($B=41.001$, $p<0.001$), differences of postprandial blood glucose between 12th week ($B=0.516$, $p=0.009$) and 36th week ($B=2.554$, $p<0.001$), were significantly associated with the improvement of glycemic control.

Conclusions: Nurse-led smartphone apps offers significant benefits on improving Chinese T2DM patients in the SMBG behaviors, short-term and long-term glycemic control. Therefore, nurses should consider new and advanced technology like apps into clinical practice along with routine care to improve effectiveness of self-management of T2DM patients.

Concurrent Session IV: 4. Evidence-based health policy and leadership in health care

D16 Short stay palliative pain management for Southwestern VA

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Note: The authors decided to withdraw their abstract for presentation.

D17 Exploring young adults' community reintegration needs after stroke

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Background: Stroke occurring in young adults is increasing significantly worldwide. Promoting community reintegration is internationally recommended as one of the rehabilitation priorities for stroke survivors. Systematic reviews reported younger stroke survivors who were in the productive years of their life had common challenges such as returning to work or resuming leisure activities.

Aim: To explore young adults' community reintegration needs after stroke.

Methods: A qualitative study with face-to-face semi-structured interviews were conducted. Community-dwelling adults who had a first-ever or recurrent ischaemic or haemorrhagic stroke at an age between 18 and 64 years were recruited from two support groups. The participants were asked to share their experiences of recovery, and their perceived barriers to and facilitators of community reintegration after stroke. The interviews were filmed and transcribed verbatim for thematic analysis.

Results: A total of six female and four male stroke participants (mean age 58.9 years, SD 10.3) were interviewed. They had a mean of 9.4 years (SD 4.6) after the onset of stroke. Three of them walked unaided, six walked with a stick and one walked with a cane. The findings showed all participants were distressed immediately after their sudden and traumatic experience of stroke. Four key themes were generated that represented the young stroke participants' distinct community reintegration needs: (1) felt inferior when receiving community-based rehabilitation services that were composed mostly of older adults; (2) more uncertain about their future socially and financially; (3) encountered greater difficulties in finding meaning after stroke and reintegrating into their social roles; and (4) found inadequate psychological support during their chronic recovery phase.

Conclusion: The findings supported younger stroke survivors had distinct community reintegration needs and which have not been fully addressed by the current services. The evidence will inform the development of age-appropriate services to support their reintegration into the community.

D18 The effect of family factors on life quality of diabetes type 1 in Indonesia: An analytic cross-sectional study

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Background: Diabetes has a negative impact on the quality of life of children. Family as a support system is present in optimizing the quality of life of children with type 1 diabetes (DMT1). This study aims to analyze family conflict, number of children in the family and depressed conditions on the quality of life of children with DMT1.

Methods: The research design used a cross-sectional analytic study, the number of sample was 51, who involved age 4-18 years who outpatient care at the hospital. KINDLR instrument was used to measure quality of life. Depression Inventory to measure depression and Revised Diabetes Family Conflict Scale was used to measure family conflict. Multivariate analysis was used to obtain a model that was fit to predict the quality of life of children with DMT1.

Results: The results found that average quality of life is 76.39 ± 13.27 versions of children and 78.64 ± 9.38 versions of parents. Family conflicts has mean score 31.03 ± 9.28 . Almost 40% of children experience depression with mean score reaching 8.28 ± 5.02 . Depression is negatively correlated to quality of life of children with $r = .287$ with $p = .025$. Multivariate analysis shows that the interaction of family conflict with the number of children in the family ($p = .017$) and depression ($p = .050$) as the main factors in reducing the quality of life.

Conclusion: The greater family conflict and number of children will further reduce the quality of life of children DMT1. Recommended handling of conflict in the family and depression in children so that the quality of life of children DMT1 can be increased.

D19 Implementing evidence-based self-determination smoking cessation intervention with brief advice to smokers attending emergency departments in Hong Kong

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Background: The provision of medical attention to smokers in physical discomfort who visit emergency departments could be an excellent teachable model, as it provides an invaluable opportunity to encourage smoking cessation. But smoking is addictive, cessation is difficult and relapse is common. We evaluated the effectiveness of a brief smoking cessation intervention based on the self-determination theory on smokers attending emergency departments.

Methods: A multi-centre randomized controlled trial was conducted in emergency departments of four acute hospitals in Hong Kong. Of 1571 patients recruited, 787 were randomized into the intervention group and 784 into the control group. Participants in the intervention group were allowed to select their own schedules of quitting (immediate or progressive). The control group received a leaflet on smoking cessation. The primary outcome was biochemically validated abstinence at 6 months. Secondary outcomes included (i) biochemically validated abstinence at 12 months, (ii) self-reported 7-day point prevalence of abstinence at 6 and 12 months, and (iii) incremental cost per quality-adjusted life-year (QALY) saved by intervention.

Results: Subjects in the intervention group had a statistically significantly higher self-reported quit rate than those in the control group (12.2% vs 9.3% at 6 months, $p < .05$; 13.0% vs 8.5% at 12 months, $p < .01$). The biochemically validated abstinence was also statistically significantly higher in the intervention group (6.7% vs 2.8% at 6 months, $p < .001$; 7.0% vs 3.7% at 12 months, $p < .001$). Each subject in intervention group costed an extra \$0.465 but gained an additional 0.0238 QALY, with an incremental cost per QALY of \$19.53 falling within the acceptable thresholds.

Conclusions: This brief, self-determination intervention was effective in promoting smoking cessation for smokers attending emergency departments. The findings could serve for the development of clinical practice guidelines to encourage more healthcare professionals to promote smoking cessation to smokers in their clinical practice.

Concurrent Session IV: 5. Knowledge translation and communication of evidence

D26 A review on serum biomarkers of sarcopenia

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Background: Sarcopenia is an age-related syndrome of skeletal muscle loss accompanied by decreased muscle function, which will seriously reduce the quality of life of the elderly. Dual energy X-ray absorptiometry (DXA) and Bioelectric impedance analysis (BIA) are commonly used to assess muscle mass, but their measurement accuracy is not high. Although Magnetic resonance imaging (MRI) and Computed tomography (CT) are presently considered to be the gold standard method for the diagnosis of sarcopenia, their application scenarios are limited. Therefore, exploring serum biomarkers becomes a new strategy for screening or diagnosis of sarcopenia.

Methods: We searched the following databases until December 2018: PubMed, Web of Science, Embase, ScienceDirect, SpringerLink, CNKI and WANGFANGDATA to review and summarize research progress on serum biomarkers of sarcopenia.

Results: Potential serum biomarkers can be mainly categorized into five groups according to pathogenesis of sarcopenia, including neuromuscular junction dysfunction, imbalance between muscle growth and inhibitory factors, endocrine dysfunction, inflammation and oxidative stress damage, and behavior-related factors (malnutrition and Lack of physical activity) as yet. Because a valid and unique biomarker of sarcopenia has not been identified, several studies have proposed a number of molecules potentially involved in the pathogenesis of sarcopenia that may reveal very promising in the future. There are also two common limitations among research. The first is the most studies use a cross-sectional survey to analyze the relationship between a serum molecule and sarcopenia and the second is the method for diagnosing sarcopenia vary between different studies.

Conclusion: It's recommended that future researches adopt the standard diagnosis method of sarcopenia in accordance to the different Working Group for Sarcopenia criteria, combine multiple serum markers to judge muscle condition and carry out more longitudinal study.

D27 Nurses' attitude & perceived barriers towards error reporting in health care: An integrative review

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Note: The authors decided to withdraw their abstract for presentation.

D28 Evidence synthesis for non-pharmacological prevention of postoperative delirium in elderly patients

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Note: The authors decided to withdraw their abstract for presentation.

D29 'Gather youth power, bye cervical cancer'- cervical cancer prevention program for both Chinese and ethnic minority secondary school students

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Background: Human Papillomavirus vaccine (HPV) is an effective cervical cancer preventive measure. Yet, current evidences reflected the low uptake rate of School-aged girls, and lack of health promotion activities conducted in schools with both Chinese and ethnic minority (EM) students. This project aims to address the current evidence – raise these students' awareness and knowledge of cervical cancer, and promote the uptake of HPV vaccination.

Methods: The project will be carried out in a local secondary school, with 50 form 4 and 5, Chinese and South Asian students joining. The project includes a health talk and tutorials in small groups, which will be conducted in Cantonese and English concurrently in 2 different rooms. This helps to facilitate both local and South Asians' students understanding of content by using appropriate language and enhance their knowledge and awareness towards the topic. The contents of both sessions are culturally sensitive and designed based on existing literature. For instance, with respect to South Asian's culture, sketched and simple pictures would replace the detailed ones when discussing anatomy of female reproductive system. The main content of health talk will emphasize on the development of cervical cancer and its preventive measures. While in tutorials, their concerns, myths and misconception about HPV vaccine will be discussed and clarified. Lastly, a booklet contains cervical cancer-related and HPV vaccination information will be distributed.

Results: The project will be put forward in April 2019. Participants' knowledge, health beliefs and intention to have HPV vaccine will be assessed before and after the project. The detailed results will be discussed during presentation.

Conclusion: It is anticipated that both Chinese and South Asian students' health awareness about cervical cancer and its prevention, will be elevated and eventually increase the use of it.

D30 An exploration of the scope, facilitators and barriers influencing nurses' practice on implementation of family centered care for hospitalized children in developing countries: An integrative review

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Background: Family centered care (FCC) entails that families should be involved in caring for their hospitalized children. Evidences suggest that FCC increases parental and nurses' satisfaction, reduces both length of stay and stress for hospitalized children. However, previous reviews regarding FCC implementation focused on developed countries only. The objectives of this integrative review are to report literature on the scope of FCC practice, facilitators and barriers on the implementation of FCC for hospitalized children in developing countries to provide the basis for future research.

Methods: An integrative review was conducted guided by the framework of Whitemore and Knafl (2005). A search of articles from 2008 to 2018 in PubMed, Medline, CINAHL Complete, EMBASE, Psych Info, and Cochrane Library was performed. The methodological quality of included studies was assessed using the Joanna Briggs Institute (JBI) Appraisal Tools and methodological quality assessment scores ranged from 50% to 80%.

Results: The search yielded 3,701 articles. 11 articles from developing countries met the inclusion criteria and were included for qualitative analysis. Four studies were randomized controlled trials, five were quantitative descriptive studies, one quasi-experimental whereas another was a qualitative study. Three themes emerged namely: scope of FCC implementation, facilitators influencing implementation of FCC and barriers affecting implementation of FCC.

Conclusion: Although FCC is implemented in pediatric settings in developing countries, it is largely work in progress. Both facilitators and barriers exist, however, current studies lack methodological comprehensiveness such as lack of use of FCC guiding concepts, and research designs that can provide adequate understanding of the scope of FCC implementation, its facilitators and barriers, and their actual impact on FCC. Research methodologies such as mixed method designs are needed to examine the impact of facilitators and barriers on FCC in developing countries because their real impact may be more prominent than reported in this review.

Concurrent Session IV: 6. Knowledge translation and communication of evidence

D31 A modified dignity therapy program to alleviate psychosocial distress among cancer patient receiving chemotherapy: A feasibility study

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Background: Loss of dignity or worries about loss of dignity in cancer patients receiving chemotherapy is associated with the wish to hasten death, higher level of depression and lower level of spiritual well-being. A Modified Dignity Therapy Program (MDTP) was developed based on the Medical Research Council Framework to alleviate psychosocial distress among this population. It comprises a communication intervention with patient and his/her family members, and a life memoir generated from the communication and returned to the patient. This study aims to determine the feasibility and acceptability of the program.

Methods: Twelve cancer patients receiving chemotherapy and their significant family members were randomly allocated to an intervention or placebo control group. Patients' dignity, depression and spiritual well-being were evaluated at baseline and after the intervention. Differences between groups after the intervention was compared by means of independent t-test. Semi-structured individual interviews with patients and family members after the intervention were performed. Qualitative data was analyzed using content analysis with an inductive approach.

Results: A total of 13 eligible patients were approached and 12 agreed to participate in the study (response rate was 92.3%). Nine patients and their family members completed the program with a completion rate of 75%. No significant difference was found in terms of dignity, depression and spiritual well-being between the groups. All the participants reported to be satisfied with the intervention and willing to recommend to others. The perceived benefits involved alleviation of psychosocial distress, improvement in family relationship rehabilitation confidence. Suggestions for program improvement included amendment of the communication guide and life memoir design.

Conclusion: The MDTP is highly feasible and acceptable for cancer patients receiving chemotherapy. A full-scale study with the amendment of communication guide and life memoir design is warrant to evaluate the effectiveness of the program.

D32 Effect of Information and communication technology program on anxiety of coronary artery bypass graft (CABG) patients' caregivers during patients' admission in intensive care unit

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D33 The effectiveness of a smartphone-enhanced nurse-facilitated intervention on blood pressure and self-care in Chinese people with hypertension

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Background: Self-care plays an important role in hypertension management. However, people with hypertension are generally dissatisfied and not motivated to maintain self-care activities. Electronic health such as smartphone application facilitated by health professionals can be a promising alternative for improving self-management of hypertension.

Methods: A randomised controlled trial with repeated-measures, parallel group design was conducted. A total of 210 patients randomly allocated to either a smartphone-enhanced nurse-facilitated intervention, or usual care only (control) group (n=105 per group), for 6 weeks. The intervention group used the smartphone application, which consisted of health education, individualised goal setting and action planning, health logs for recording blood pressure and lifestyle, and automated weekly health report generated from the application. Research nurses tracked patients' performance and provide six individualised weekly sessions to patients including smartphone application usage training, self-management education and consultation. The level of blood pressure (primary outcome) and patients' self-care measured by a validated Chinese version of Hypertension Self-care Profile were collected at baseline, 6-week and 12-week after starting intervention. Generalized Estimating Equation model was used to examine the study hypotheses on patient outcomes.

Results: 191 patients (91%) completed the study and 98 of 105 (93%) completed the intervention. The mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) of patients were 150.59±11.08 and 93.25±7.11 mmHg, respectively. Compared to the control group at 12 weeks, the intervention group has significant reduction of SBP ($\beta = -11.07$, $p < 0.001$) and DBP ($\beta = -7.50$, $p < 0.001$), and significant improvements in self-care behaviour ($\beta = 7.77$, $p < 0.001$), motivation ($\beta = 6.61$, $p < 0.001$), and self-efficacy ($\beta = 6.74$, $p < 0.001$) at 12-week.

Conclusion: The smartphone-enhanced, nurse-facilitated self-management programme was found to be effective to improve self-care and motivation of illness management in Chinese people with hypertension. Study examined the long term effects of the programme is warrant.

D34 The assessment of clinical readiness to evidence-based practice of gestational diabetes mellitus management among obstetric nurses

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Objective: To evaluate the readiness of evidence-based practice in obstetric nurses, identify the potential barriers during the later evidence-based practice, design related translation tactics, and promote knowledge translation into clinical practice.

Methods: Between January and March of 2018, we recruited obstetric nurses from four hospitals in Shanghai and applied the Clinical Readiness to Evidence-Based Nursing Assessment (CREBNA), to evaluate the status of readiness to evidence-based practice and knowledge and attitude status of gestational diabetes mellitus management among obstetric nurses and assess the barriers of evidence-based practice for obstetric nurses. Also, we applied univariate analysis and multiple regression to identify significant factors of readiness.

Results: The score of CREBNA was 136.09±17.90 (84.8%), and the score of Evidence, Context, and Facilitation were 51.36±7.78 (82.0%), 40.33±5.44 (87.0%), 44.40±6.52 (86.0%). According to the result of regression, obstetric nurses from different hospital, with different age, professional title, and GDM knowledge and attitude level had different score of CREBNA.

Conclusion: The percentage score of readiness in obstetric nurses was 84.75, which was good enough for later evidence-based practice. According to results of the survey, the abilities of evidence development and translation among obstetric nurses are limited, the evidence-based practice in obstetric ward is supported by nursing managers and nursing team, and facilitators of individual level and system level in obstetrics are not enough.

D35 Knowledge, attitudes and self-reported behaviors toward antimicrobial stewardship regulations in China: A web-based survey among doctors

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Background: Antimicrobial prescription rates in China are reported to be markedly higher than the global average level. The stewardship regulations for antimicrobial management in clinical practice issued in 2012 was known as the most stringent stewardship regulations ever implemented in China. Our study aims to investigate the knowledge, attitudes and behaviors of clinicians toward the antimicrobial stewardship regulations.

Methods: The survey was carried out in March 2017. Doctors practicing in China mainland are the target respondents. A snowball sampling method was adopted. Participants were reached by sending a web link (web-based questionnaire with 31 brief questions) via the mobile phone application WeChat and emails. The invitations to participate in the survey were sent to clinicians' WeChat groups and emails. Differences in experiences, feelings, concerns, and countermeasures of doctors toward implementation of the antimicrobial stewardship were compared between 2012 and 2016. We also set three questions to test the doctors' basic knowledge of prescribing antimicrobials.

Results: 807 doctors completed the questionnaire. Doctors had a mean age of 39 years. We set three questions to test the doctors' basic knowledge of prescribing antimicrobial, only 46.8% got all of them correct. 21.1% of doctors declared that the antimicrobial regulations were unacceptable or hard to accept in 2012, and this percentage decreased to 10.9% in 2016. More than 65% doctors were often or always concerned with the prognosis of patients who would have been prescribed antimicrobials before the stewardship. 32% doctors prescribed restricted antimicrobials or suggested patient self-medication with restricted antimicrobials to address concerns in 2012, and this number decreased to 22.6% in 2016.

Conclusion: Attitudes and behaviors of clinicians toward the stewardship positively changed during the past five years. Knowledge about proper use of antimicrobials was still lacking. Although decreased, restricted antimicrobials were still used to address concerns for prognosis of patients.

Poster Programme

23 May 2019 (Thursday)

A01 Psychometric evaluation of the Urdu version of Powe Fatalism Inventory

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Background: Cancer fatalism is one of the important factors affecting Pakistani women's action to screening. Understanding their perception of cancer fatalism could inform the development of relevant strategies to promote screening uptake. The aim of the study is to translate the Powe Fatalism Inventory (PFI) from English to Urdu and to examine the psychometric properties of the Urdu version of the Powe Fatalism Inventory (PFI-U).

Methods: The Powe Fatalism Inventory was adopted to assess Pakistani women's perception of cancer fatalism in cervical cancer. PFI was translated from English to Urdu language using forward and backward translation by independent bilingual translators. The back translated English version was compared to original version to ensure semantic and conceptual equivalence. The psychometric properties of PFI-U was tested with a convenience sample of 263 Pakistani women aged 21 or above without history of cervical cancer in the community. Reliability of the instrument was assessed by internal consistency using Cronbach's alpha and test-retest reliability using Cohen's kappa. Confirmatory factor analysis was used to assess the construct validity.

Results: The Urdu version of Powe Fatalism Inventory had demonstrated a high internal consistency (Cronbach's alpha: 0.87) and substantial to almost perfect agreement in test-retest reliability (Cohen's kappa: 0.61-0.87). Confirmatory factor analysis had revealed the one-factor model fairly fit the sample (RMSEA: 0.1, χ^2/df : 3.67; NNFI: 0.96; CFI: 0.96). The factor loadings of all items ranged from 0.53 to 0.83 and were all statistically significant.

Conclusion: The Powe Fatalism Inventory is a reliable and valid instrument to measure cancer fatalism. It can be used in community to assess Pakistani women's perception of cancer fatalism in cervical cancer.

A02 Opportunities and challenges in interdisciplinary gerontology education

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Background: In order to meet the complex health and social needs of older persons, graduates from the baccalaureate gerontology programme are expected to demonstrate competency in care coordination, planning of care and delivery of evidence-based interventions that are integrated and sustainable. The traditional teaching activities offered by interdisciplinary health and social care providers in separate occasions in the curriculum are limited in its ability to equip students with teamwork skills and to understand the dynamic, difficulties and challenges associated with care coordination, planning and the delivery of integrated community-based interventions. The objectives of this study are to (1) explore the meaning of interprofessional collaborative practice among aged care providers; (2) explore the facilitators of and barriers to interprofessional collaborative practice; and (3) examine the opportunities and challenges in interdisciplinary gerontology education.

Methods and Results: Sixteen aged care providers including two community nurses, four social workers, two doctors, two pharmacists, two physiotherapists, two occupational therapists and two graduates from the baccalaureate gerontology programme were invited to participate in individual semi-structured, in-depth interviews. All tape-recorded interviews were transcribed verbatim. The respondents shared common beliefs that interprofessional collaborative practice boost sustainability of interventions and enhance person-centered coordinated care. Lack of knowledge about healthcare professions' scope of practice, lack of training in interprofessional collaboration, professional culture and stereotypes, and liability issues are major barriers to interprofessional collaborative practice. Using technology and innovative teaching and learning strategies facilitate interprofessional socialisation. Engaging students earlier in the curriculum regarding shared decision-making and effective group communication processes facilitate interprofessional collaborative practice.

Discussions: It was proposed case-based studies combined with meaningful discussions should be utilised to equip students with knowledge of care providers' roles and teamwork skills. The findings inform the development of means to further enhance students' capability to achieve the learning outcomes in interprofessional collaborative practice.

A03 Effects of high-intensity interval training on body mass index, cardiovascular risk factors and perceived sleep quality among overweight or obese Chinese postmenopausal women in Hong Kong: A research proposal
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Background: Cardiovascular disease (CVD) is the leading cause of death globally. Postmenopausal women (PMW) are at higher risk for CVD, especially those who are overweight. Sleep disturbance, a common problem among PMW, may also increase CVD risk. The benefits of exercise to cardiovascular health is well-known. Lack of time is the most common barrier to physical activity. High-intensity interval training (HIIT) is an alternative exercise approach that consumes more energy with less time. It has been shown to modify CVD risk factors in both general and clinical populations, including overweight adults. However, the existing knowledge about the effects of HIIT among PMW is very limited due to scarcity of research evidence.

Objective: This study aims to compare the effects of home-based HIIT with usual care on body mass index, cardiovascular risk factors (blood pressure, blood lipids and glucose, Framingham risk score) and sleep quality among overweight / obese postmenopausal women.

Study Design: A mixed method design in which a 2-arm randomized controlled trial (RCT) with repeated measures followed by a qualitative process evaluation will be adopted. A sample of 124 overweight or obese Chinese PMW aged 45-65 will be recruited from the community. Women in the intervention group will perform a 30-minute training protocol consisting of 10 sets of 1-minute high-intensity aerobic exercise interspersed by 1-minute low-intensity exercise 3 times per week for 3 months. Outcomes will be measured at baseline, post-intervention (3 months) and 6-month follow-up. A semi-structured interview with a purposive sample of participants with varied responses to intervention will be conducted after the RCT.

Significance: Study findings will enrich existing knowledge about the effects of HIIT on cardiovascular health among PMW. It will also inform about the practicability of implementing HIIT at home and provide evidence-based reference for recommending HIIT to busy PMW for cardiovascular health promotion.

A04 Tai Chi is better than brisk walking on reducing cardiovascular risk factors: A randomized controlled trial
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Background: Physical inactivity is one of the major modifiable lifestyle risk factors associated with cardiovascular disease (CVD). Tai Chi is safe and popular among older adults; yet direct comparisons between Tai Chi and brisk walking on reducing CVD risk factors are lacking.

Methods: This was a three-arm parallel randomized controlled trial. A total of 246 adults (mean age = 64.4±9.8 years, 45.5% men) with hypertension and have two but no more than three CVD risk factors (i.e., smoker, diabetic, dyslipidemia, or overweight) were randomly assigned to either Tai Chi (n = 82), brisk walking (n = 82), or control (n = 82) groups. The Tai Chi group attended Tai Chi training twice/week for 3 months. Both the Tai Chi and brisk walking groups were encouraged home-based practice for 150 minutes/week for 9 months. The primary outcome was blood pressure (BP). The secondary outcomes were fasting blood sugar (FBS), glycated hemoglobin (HbA1c), blood lipid profiles, body mass index, waist circumference and perceived stress. Data were collected at baseline, 3-month, 6-month and 9-month. Generalized estimating equation models were employed to compare the outcome changes over time between the groups.

Results: Tai Chi significantly lowered the BP (systolic -13.33 mmHg; diastolic -6.45 mmHg), FBS (-0.72 mmol/L), HbA1c (-0.39%), and perceived stress (-3.22 score) at 9 months, compared with the control group. Pairwise comparisons indicated significantly greater reductions in BP (systolic -12.46 mmHg; diastolic -3.20), FBS (-1.27 mmol/L), HbA1c (-0.56%), and perceived stress (-2.32 score) in the Tai Chi group, compared with the brisk walking group. No significant changes in the other CVD risk indicators over time between the groups were observed.

Conclusion: Tai Chi is better than brisk walking in reducing several CVD risk factors and it can be recommended as a viable exercise to build a healthy lifestyle free of CVD.

**A05 Telehealth self-management programmes for community-dwelling stroke survivors and their caregivers:
An integrative review**

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Background: Recent decades have seen significant development in the use of telehealth or information technologies to support stroke survivors' rehabilitation. Telehealth stroke self-management programmes delivered over a distance have the potential to support self-management among community-dwelling stroke survivors and their caregivers, when compared with conventional face-to-face programmes.

Purpose: The objectives of this review are to (1) identify the telehealth self-management programmes components and their mechanisms, and (2) synthesise existing evidence regarding barriers and solutions when developing and implementing these programmes.

Methods: A search of the terms 'stroke' AND 'self-management' AND 'tele-health' were made in MEDLINE, EMBASE, CINAHL, PsycINFO and Cochrane Central Register of Controlled Trial from inception to February 2019. Empirical and theoretical research studies were included if they used telehealth technologies in delivering a self-management intervention for stroke survivors and/or caregivers. Data appraisal was performed using the Effective Public Health Practice Project Quality Assessment Tool and Critical Appraisal Skills Programme Qualitative Research Checklist. Data extraction was completed using the Cochrane Data Extraction Form.

Results: Twelve studies were included in the review. Five studies displayed high methodological quality. Findings suggest that telehealth self-management programmes delivered via telephone or videophone calls were beneficial and feasible to both stroke survivors and caregivers. Those programmes with four or more self-management core components led to better clinical outcomes. Barriers include participants' concern about privacy such as group self-management interventions, and lack of on-site support on the usage of new technologies such as video conferencing. Solutions suggested include supplementing with face-to-face appointments with healthcare professionals and caregivers' involvement.

Conclusion: The review identified approaches to deliver telehealth self-management programmes for stroke survivors and their caregivers. Further research to test the application of these approaches is required to inform the development of evidence-based telehealth interventions for quality community stroke care.

A06 Effectiveness of whole-body vibration intervention on improving the body compositions, physical fitness, and health statuses of older adults with sarcopenia

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Note: The authors decided to withdraw their abstract for presentation.

A07 Effectiveness of whole-body vibration training and individual nursing intervention on physical fitness of prefrail elderly

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Note: The authors decided to withdraw their abstract for presentation.

A08 From evidence to practice: Does it work to reduce the non-attendance of first pre-dialysis education?

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Background: Timely initiation of dialysis is vital to chronic kidney disease stage 5 (CKD5) patients. Literatures reviewed that unplanned urgent initiation of dialysis was associated with poorer outcomes and early pre-dialysis education enhanced greater likelihood of elective dialysis. Pre-dialysis education is referred by renal physician when patients are approaching CKD5 and carried out in renal nurse clinic in Hong Kong. However, the average non-attendance rate of the new appointment in five renal nurse clinics under Hospital Authority (HA) was undesirable with 15.28% (n=288) from May 2017 to July 2017. Therefore, evidence-based practice (EBP) was applied to decrease the non-attendance of new appointment in these clinics.

Methods: Applying the John Hopkins Nursing Evidence-based Practice (Practice question, Evidence, Translation) Model, a new phone reminder service was implemented from July 2018 to September 2018 in these five renal nurse clinics. The clerks of the involved clinics called patients attending the first pre-dialysis education one week before appointment. Maximum three calls within two days were delivered. If the patients could not be contacted, voice messages were left to their message boxes if available. Changing of appointment was allowed upon patient's request. The content of the reminder was standardized by a script and the compliance of the clerk was audited by a renal nurse with a standard audit tool.

Results: Collectively 267 patients were booked for first pre-dialysis education during the intervention period in five renal nurse clinics. 24 patients requested changing appointment. 15 patients defaulted, the average non-attendance decreased from baseline 15.28% to 5.29% which was statistically significant (p=0.001).

Conclusion: The judicious use of current best evidence to reduce the non-attendance rate of first pre-dialysis education in out-patient setting may be effective to reduce the possible risk of unplanned urgent dialysis to safeguard our patients.

A09 Unstructured play for cultivating children's physical, social and emotional wellbeing: A systematic review

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Background: Play is a complex and crucial aspect of early physical, social and emotional development. Importantly, evidence suggests that unstructured outdoor play facilitates children's executive function, increases social skills and physical activity, and reduces childhood obesity, bullying and mental health problems. Opportunities for outdoor unstructured play are increasingly limited putting at risk these benefits. This review aimed to assess the feasibility and efficacy (impact) of active unstructured outdoor play in improving children's physical and psychosocial wellbeing.

Methods: We conducted an extensive review of the peer-review literature with the population consisting of preschoolers and young children under the age of 7 years old in thirty-five bibliographic databases and Google Scholar. Quality appraisal of included studies were independently assessed and described.

Results: The search identified 154 articles; of the 15 eligible full-text papers, 10 met the review criteria, reporting ten interventional studies. Samples ranged from 20 to 161 participants. The interventions carried out 1-3 sessions per week from 6 weeks to 12 months, duration from 10 minutes to 70.8 minutes in hospital room and grass field settings. Due to the heterogeneity of the study design and methods, the included studies did not report meta-analysis.

Conclusion: There was no consensus on the definitions of unstructured play and quality of play. All the interventions to facilitate quality of play in the included studies reported a positive impact of the children's physical activity level, social engagement and emotional wellbeing. We conclude that our review with some recommendations in developing play policy within the school curriculum and assisting future research in this promising field.

A10 Feasibility and acceptability of a SWELE program with mindfulness to promote children's physical, social and emotional wellbeing: Mixed methods pilot study

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Background: For the obesity epidemic, it has been found that children of today are no longer play the way children used to play in the old days. Children's free time to play dropped as they engage in more structured activities and sedentary behaviors. The consequences of the children "no longer play" should be taken seriously because it affects the children's psycho-social wellbeing beyond the problem of obesity. This can lead to the rise of anxiety, depression, lower concentration and self-control among children. Mindfulness training may help children deal with anxiety and mental-health difficulties. While promising, there is no conclusive evidence of the effects of mindfulness-based intervention in children's psychosocial wellbeing. This feasibility and acceptability study aim to investigate a pilot project on Supporting Wellness in Early Learning Environments (SWELE) program which combines loose parts of play and mindfulness-based training to support kindergarten children's physical, emotional and social wellbeing during their school transitions.

Methods: A mixed methods approach includes a three SWELE session per week for a 2-week quasi-experimental study with pre- and post-tests measurement and focus group discussions to assess participants' acceptability of SWELE. Pre/post-test measures assessed child's physical activity level with pedometer, happiness scale, emotional well-being score, social interactive competency, and test of playfulness. Focus group discussions conducted regarding children's, teachers' and parents' perceptions of the acceptability including benefits and limitation of SWELE program.

Results: Forty K2 children, aged 4-5 years old, recruited from two kindergartens and were convenience assigned as intervention (n=20) and comparison groups (n=20) with baseline mean (SD): age 4.5 years. The SWELE program improved children's physical, social and emotional changes over a 2-week pilot period. The SWELE program had a positive effect on the children's happiness and emotional scores, anxiety score had been reduced and increased in playfulness score in the intervention group. No significant effects were found in the comparison group. Participants reported an enjoyable, sociable and pleasurable intervention experiences.

Conclusions: Participants reported a high level of intervention acceptability. High retention and positive outcomes at 2 weeks provide encouraging indications of the feasibility and potential effectiveness of the intervention. A definitive trial of this intervention is warranted.

A11 Hydroxyethyl starch for fluid resuscitation in critically and non-critically ill patients: An overview of systematic review

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Note: The authors decided to withdraw their abstract for presentation.

A12 Predictors of good outcomes of an anti-drug abuse program

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Background: Substance abuse is a global health and social challenge which adversely affect up to 0.9% of Gross Domestic Product of developed countries. Vigorous interventions have been developed to tackle the increasing trends on abusing psychotropic substances with different responses of the participants. In order to better inform resource allocation, this study aims to examine the predictors of good participants' outcomes of an anti-drug abuse program, 'Tap the hidden, Tap your talent' for the hidden Chinese drug abusers.

Methods: This anti-drug abuse program aims to provide addiction treatment service was sponsored by Beat Drugs Fund of Hong Kong SAR. A total of 216 hidden drug abusers, who were new to mental health services, participated in the program (8/2015 – 7/2018). Good outcomes of the program was classified by the Christy Inventory of Substance Misuse Services (score ≤ 6). Sociodemographic characteristics and substance misuse information included history of voluntary/involuntary detox and the type of substances being misused was collected. Psychotic and depressive symptoms, as well as motivation to change was measured by validated instruments. Logistic regression model was used to examine the predictors of good outcomes.

Results: The prevalence of good outcome was 23.6% and 60.9% before and after the program respectively. Being female, living with family and without previous history of involuntary detox were the non-modifiable predictors of post-intervention good outcomes ($p < 0.05$), whereas lower depression levels and higher motivation to change were modifiable predictors of post-intervention good outcomes. After adjusting for the non-modifiable variables and depressive level, higher motivation to change was significantly associated with higher odds of having good outcomes (OR=1.296, $p < 0.05$).

Conclusion: Male with low motivation and depressive symptoms have intensify risk to have poor outcome of anti-drug abuse program. Future anti-drug intervention needs to be tailored for this vulnerable group.

A13 Factors influencing health behaviors of university students: A literature review

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Background: Physical inactivity, low fruit and vegetable (F&V) intake and alcohol use, being three of the 10 leading risk behaviours of mortality, are also common among university students globally. The transition to university is a critical period for health habit formation. Thus, this review aims to identify the current evidences on the factors influencing physical activity, F&V consumption and alcohol consumption among university students by using the socio-ecological model.

Methods: An electronic database search of Ovid Medline, EMBASE and PsychINFO was conducted by using title, abstract, keyword and MeSH-headings. In addition, the reference lists of all included articles were screened to identify potential studies.

Results: A total of 14 eligible articles (2010 – 2018) were identified. All studies were conducted in Western countries. Based on socio-ecological model, factors affecting health behaviour were categorized into intrapersonal, interpersonal, socio-economic and environmental perspectives. Higher self-awareness of health recommendation (k=4), living away from family (k=3) and better family participation/relationship (k=7) are the common intrapersonal and interpersonal factors that promote physical activity and intake of F&V, as well as reduce alcohol consumption. Moreover, longer hours on work and electronic devices and lack of facilities were the environmental factors associated with higher degree of physical inactivity (k=5). Higher socio-economic status and habit of having breakfast were associated with more F&V intakes (k=3). Negative emotions and being non-religious were the intrapersonal factors associated with greater alcohol consumption (k=3).

Conclusion: The findings of this review suggests that factors influencing health behaviours of university students were multi-factorial. More longitudinal studies are warranted for examining the interaction between intrapersonal, interpersonal, environmental and social-economic factors on influencing the health behaviours.

A14 Effectiveness of preventive interventions for middle-aged men with high cardio-metabolic risks on improving healthy lifestyle behaviour: A literature review

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Background: As testosterone level tails off in men since the age of 40, visceral fat accumulates along with sedentary life, attributing to much increasing risks of cardio-metabolic diseases in association with central obesity, insulin resistance, metabolic syndrome, and depression. Consequently, men with reducing testosterone in middle age are more prone to cardio-metabolic diseases. Acknowledging lifestyle behaviours are modifiable risk factors, this literature review examined the effects of preventive interventions for lifestyle behaviour of middle-aged men in reducing their cardio-metabolic risks.

Methods: Ovid Medline, PsycInfo and Embase were searched for all randomised controlled trial, systematic reviews and meta-analysis in recent 15 years. The scope of preventive interventions is extended from lifestyle modifications, self-management, motivational interviewing, and cognitive behavioural therapy.

Results: 5 RCT studies were found eligible and included. The mean age of participants was 58.8 years (SD=10.8). Studies showed that theory-based interventions on lifestyle behaviour delivered either in individual or group format markedly improved body composition in terms of body weight and BMI, smoking status and depression condition. One result revealed that at 3-month post-intervention, preventive intervention reduced 1.32kg body weight (P=0.007), 0.47 BMI (P=0.009) and 2.2 points in the depression subscale of Hospital Anxiety and Depression Scale (P<0.001). In another study, result showed that the number of participants quit smoking was increased (P=0.033) at 12-month post-intervention. However, due to a variety of theories used, it is inconclusive to reveal which type of theory-based intervention yields a better result in reducing cardio-metabolic risks.

Conclusion: This review of five RCTs indicates that theory-based interventions for lifestyle behaviour of middle-aged men posed benefits on reducing cardio-metabolic risks. Due to limited studies found, more research in these middle-age males is warranted to understand gender-specific health promotion programme for improving healthy lifestyle and engagement in prevention of cardio-metabolic diseases.

A15 Nasal prong or mask, which one is an appropriate nasal interface for preterm infants receiving non-invasive ventilation?

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Background: Use of non-invasive ventilation (NIV) for preterm infants with respiratory distress is on an upward trend in Hong Kong (50% in 2015 and 58% in 2018). The nasal interface available for these infants includes nasal prongs and nasal masks. However, there is no standardised guideline to guide the choice of various nasal interfaces. Thus, an integrated literature review is performed with the aims to determine the efficacy of the NIV delivered via either nasal prongs or nasal masks; and to identify the type of NIV interfaces that causes nasal injury during its application.

Methods: Literature search from seven databases were conducted. Terms related to the PICO were used to match subject heading and keyword search. Eligible studies were appraised using the Johns Hopkins evidence appraisal tool.

Results: A total of five systematic reviews, seven randomised controlled trials, and one cohort studies were identified. Studies showed that short binasal prongs were effective in reducing the rate of re-intubation (RR 0.59, CI: 0.41, 0.85). No significant differences regarding efficacy of NIV were found between infants using nasal prongs and nasal masks. Some studies revealed nasal trauma was associated with the use of nasal prongs and nasal prongs caused more severe nasal injuries when compared with nasal masks. However, several studies found the incidence of nasal injury associated with nasal prongs and nasal masks were similar.

Conclusion: Evidence showed that both short binasal prongs and nasal masks are appropriate interface for preterm infants receiving NIV. However, the incidence of nasal injury arisen with increasingly use of the NIV in the neonatal intensive care units. It is imperative to develop an evidence-based guideline in care of preterm infant receiving NIV to reduce the incidence and risks factors for nasal injury associated with NIV.

A16 Development of an evidence-based clinical practice guideline for preterm infants receiving non-invasive ventilation

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Background: Non-invasive ventilation is the mainstay of treatment for preterm infants with respiratory distress. The incidence of nasal injury resulting from the use of nasal prongs or masks was rising and ranged from 11% to 67%. In Hong Kong, no evidence-based clinical practice guideline for caring preterm infants receiving non-invasive ventilation is available. It triggers the development of a guideline with the aims to reduce the nasal injury and promote comfort of these infants.

Methods: The Iowa Model was adopted as the theoretical framework to guide the guideline development process. A workgroup of multidisciplinary healthcare providers was formed. Literature search from eight databases was performed to identify literature of diverse methodologies, in which evidence was appraised by The Johns Hopkins University's evidence appraisal tool.

Results: A total of six systematic reviews, seven randomised clinical trials, one quasi-experimental study, two cohort studies, and two clinical guidelines were identified. The recommended practices include 1) use either short binasal prongs or masks (level IB-C, IIB) with right size (level IIIB); 2) frequent skin assessment (level IIIB); 3) use of protective skin layer (level IB-C, IIIB); 4) regular alternating the nasal prongs with nasal masks (level IIIB); 5) positioning (level IIIB); 6) supportive cares including lubricate the prongs with saline before putting into the nares (level IIIB), gently massage the pressure areas without the use of any ointment (level IIIB), avoid unnecessary nasal suction (level IIIB), and provide adequate humidification to the ventilation circuit (level IIIB).

Conclusion: We will implement the clinical practice guideline in a twenty-three-bed neonatal intensive care unit. Further revision of the guideline will be performed upon the findings from a before and after study which aims to examine the effects of the guideline on pain level, sleep duration and incidence of skin injury among preterm infants receiving non-invasive ventilation.

A17 An evidence-based nurse-led parental eczema education programme for Chinese parents of children with eczema: A research proposal

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Background: Eczema is the most common skin problem, affecting children worldwide and in Hong Kong. Children with eczema and their parents suffer from severe physical and psychological disturbance. Evidence suggests that providing education for these parents was an effective measure to enhance proper eczema management. However, there are no structural eczema education programme in Hong Kong. The aim of this study is to evaluate the effectiveness of a nurse-led education programme for Chinese parents of children with eczema.

Methods: This will be a single-blind parallel-group randomised controlled trial with a follow-up measurement at 3 months. One hundred thirty-six child-parent dyad will be recruited at a paediatric outpatient clinic of a regional hospital using convenience sampling. The child participants will undergo standard medical treatment. The parent participants of the intervention group will receive a 20-minute one-to-one teaching session and follow by two 10-minute videos demonstrating eczema care and relaxation exercise. The topics cover evidence-based eczema management including measures to reduce the symptoms and decrease the frequency of flares. A newly designed educational booklet will be used to reinforce learning. Parent participants will also be invited to join an online sharing forum with WhatsApp reminders.

Results: This study is in progress and 50% of the target sample have been recruited. Outcomes measures include the disease severity of the child, parental self-efficacy in carrying out eczema treatment, treatment adherence and quality of life of families with eczematous children. Descriptive statistics will be calculated for baseline demographic data. Chi-square tests or independent t-tests will be used as appropriate. Generalised estimating equation model will be employed to compare between-group differences.

Conclusion: This is the first structured programme to guide nurses to provide evidence-based eczema education in a consistent approach to clarify misled information of the parents in Hong Kong.

A18 Effective approach to prevent postoperative delirium in hip fracture patients: An integrative review

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Background: Geriatric patients with hip fracture are becoming one of the major health care burdens on hospital. Postoperative delirium (POD) is one of the most common complications experienced by patients after hip fracture surgery. The incidence rate of POD in hip fracture patients was 64.4% as reported in one previous study. It is imperative to identify effective interventions against POD development in hip fracture patients.

Methods: Literature search strategies were developed using medical subject heading (MESH) and text words in abstracts related to preventive interventions for postoperative delirium in hip fracture patients. The search was filtered to available full texts, published data between 2000 and 2017 inclusive, and in English. An extensive search of electronic databases including British Nursing Index, Embase, Medline, PubMed including life science journals and online books, PsycINFO, Cochrane Library, and ScienceDirect was conducted. Each literature was read carefully and appraised critically using the Critical Appraisal Skills Programme (CASP).

Results: A total of seven articles including 1 randomized control trial (RCT), 1 control trial, 1 systematic review (SR) and 4 cohort studies using a prospective pre-and-post-test design met the inclusion criteria out of 2,219 articles and enacted the basis of the integrative review. Comprehensive geriatric assessment (CGA) using a team-based model, and multifactorial intervention program were identified as the effective approach to prevent hip fracture patients from developing POD. Other strategies such as recommendation list, staff and patient/family education, and timely detection to the symptoms of delirium development were regarded as a significant component to prevent POD.

Conclusion: The evidence suggested that CGA using a team-based model, and multifactorial intervention program together with other strategies may be of significant approach to prevent POD.

A19 Attitudes of school principals towards cardiopulmonary resuscitation training in Hong Kong secondary schools: A cross sectional study

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Background: Bystander cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) use can significantly reduce out-of-hospital cardiac arrest mortality. Currently, CPR knowledge in the Hong Kong public remains low. In other countries, introduction of compulsory CPR teaching in schools has demonstrated a significant subsequent increase in bystander CPR rates.

Methods: Between December 2017 and March 2018, a cross-sectional survey of secondary school principals was conducted. All secondary schools in Hong Kong, except for special schools and tutoring schools, were invited to participate. The 20-question survey assessed general information about the school, acceptability of different strategies that encourage CPR training, and if resuscitation training was offered at the school. If training was offered, details of the duration, instructors, type of skills, and barriers to teaching were gathered. If resuscitation training was not offered, questions on reasons for not providing teaching were answered. The aim of this study is to explore the barriers and school principal attitudes towards in-school CPR and AED training in order to better inform future policies.

Results: A total of 128 questionnaires were received. 108 (96.4%) secondary school principals were interested in promoting resuscitation training to students. 76 (69.1%) principals agreed that resuscitation training should be compulsory. However, only 37 (30.8%) secondary schools currently offer CPR teaching. The main reasons for not offering training include lack of time (28.7%), resources (15.4%), and 'it was not mandatory in school curriculum' (14.9%). The most effective strategy to encourage secondary schools to implement a training program is to increase funding for training and equipment (27.4%).

Conclusion: Knowledge of perceived barriers will enable the development of a novel strategy to encourage secondary schools to implement compulsory CPR and AED training.

A20 Evidence-based exercise program guidelines for patients with cancer-related fatigue

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Background: Cancer related fatigue (CRF) is a common problem among cancer patients and is associated with impoverished quality of life and hence increasing health expenditure. Previous studies showed that exercise could help in reducing CRF and improving quality of life. Despite its effectiveness, there is lack of evidence-based exercise program for managing CRF among cancer patients in Hong Kong. The purpose of this evidence-based exercise program guideline is to assist CRF patients to manage their CRF accordingly.

Methods: A systematic literature review was performed in February 2018 using four databases (Embase, Ovid Medline, Ovid Nursing, PsycINFO). Studies were assessed against the inclusion criteria. The quality of the identified studies was assessed by two independent reviewers. The level of evidence was assessed by using Effective Public Health Practice Project (EPHPP). The **Results** were summarized and synthesized in narrative forms. The findings thus far suggested exercise was effective in managing CRF.

Results: In the exercise program guideline, it includes three suggestions. 1) Tailor-made exercise plan by using Borg scale 2) 12 week weekly 70-120 minutes mild-moderate aerobic exercise 3) Self-monitoring the progress by using exercise diary

Conclusion: The exercise program guidelines in reducing CRF had demonstrated its effectiveness among cancer patients with CRF in previous studies. Patients with CRF can perform exercise independently and safely according to the guidelines. Hence, it can reduce their CRF level and improve their quality of life. With the increasing cancer trend and high prevalence rate of CRF, it is worthwhile to develop evidence-based exercise program guidelines for CRF patients in Asian countries.

A21 Comparison of randomized controlled trials and guideline recommendations of oral Chinese patent medicine for acute lower respiratory tract infections in adults

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Background: Chinese patent medicines (CPMs) are widely used for acute lower respiratory tract infections (ALRTIs) in China (60% market share). We aimed to compare recommendations on the use of oral CPM for ALRTIs from clinical practice guidelines (CPGs) with existing evidence of randomized controlled trials (RCTs) to inform practice.

Methods: A systematic review on RCTs and a systematic review of current guidelines on orally taken CPMs for ALRTIs were performed. Seven databases were searched from their inception till September 2016 for RCTs testing CPMs for ALRTIs (excluding pneumonia). Two authors independently screened each study, extracted data, and assessed risk of bias of included trials. Meta-analysis was conducted when appropriate. CPGs for ALRTIs containing CPM recommendations were identified. The quality of evidence of the RCTs and the guidelines was assessed with GRADE and AGREE II respectively. The consistency of the evidence base in RCTs and the guideline recommendations were then compared.

Results: We identified 29 RCTs (5093 patients) on 42 CPMs for ALRTIs. 37 CPMs have only one trial each. 5 CPMs have two trials each, but no similar comparisons. Each meta-analysis was only with small sample size and very low certainty. For the six guidelines identified, 29 CPMs were recommended. Four of them were identified both in the RCTs and in CPGs. 93% (27/29) of the recommendations of CPMs in CPGs were not based on RCT evidence. 95% (40/42) of the CPMs identified from this systematic review of RCTs were not mentioned in the CPGs. Both RCTs and CPGs were generally low quality.

Conclusion: Evidence base of CPMs for ALRTIs was very weak. CPGs were not evidence-based. Massive use of CPM for ALRTIs was neither based on scientific evidence nor guidelines. There is an urgent call for good quality research to inform massive clinical use.

A22 The effects of early mobilisation programmes on preventing delirium in intensive care units: A literature review

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Background: Early mobilisation aims at mobilising the patients in the first 72 hours after intensive care unit (ICU) admission through performing passive range of motion exercise, sitting at the edge of the bed, transferring from the bed to a chair and early ambulation. Yet little is known about the effects of early mobilisation on preventing delirium in ICU. This review aimed to critically appraise and summarise the effects of early mobilisation on preventing delirium and identify the facilitators and barriers to implement it in ICU settings.

Methods: Eight English and two Chinese databases were searched from their inception to November 2018 using keywords including "delirium", "early mobilisation", and "intensive care unit". Studies were included if they examined the effects of early mobilisation programmes in ICU patients. The outcomes included delirium incidence, delirium duration and mortality. The Joanna Briggs Institute Critical Appraisal Checklists were used to assess the methodological quality.

Results: Three randomised controlled trials (RCTs) and one clinical control trial (CCT) involving 530 participants were included. Two RCTs found early mobilisation programmes significantly reduced the delirium incidence and delirium duration. One RCT and CCT study reported early mobilisation programmes did not significantly improve mortality. The identified facilitators were involving a multidisciplinary team in the planning of programmes, providing customised education to patients and family members, and using a closed loop communication strategy and a mobilisation algorithm. The barriers were lack of a mobilisation team, limited resources, and shortage of nursing staff.

Conclusions: Early mobilisation has the potential on reducing delirium incidence and delirium duration. Evidence suggests involving a multidisciplinary team and shortage of nursing staff are the major facilitators and barriers to implement early mobilisation to prevent delirium.

A23 Educational programmes for patients with indwelling urinary catheter to reduce catheter-associated complications, improve psychological outcomes and increase self-efficacy on catheter management: A critical review

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Background: People living with a urinary catheter in the community are persistently affected by catheter-associated complications. They also report to have many negative psychological effects, including increased anxiety level, non-acceptance to the catheter and feeling of embarrassment. With sufficient information on catheter care, the users can manage their catheters and health conditions better. Therefore, enhancing patient knowledge by provision of educational programme on self-management of urinary catheter is recommended. This review aims to develop an evidence-based educational programme for urinary catheter patients with the identification of its effective design.

Methods: A comprehensive search was carried out in the databases of British Nursing Index, CINAHL Complete, Pubmed, Embase and Ovid (MEDLINE) to identify relevant articles. The combinations of the keywords 'patient education', 'urinary catheter' and 'self-management' were used. A total of 4,651 potentially relevant articles were identified from the search strategy. After examining their titles and abstracts, manual search of the studies' references lists and bibliographies, full-texts screening for eligibility, and appraisal on methodological quality, a total of five studies were included in the review.

Results: Of the five included studies, the educational programme for patients with indwelling catheters definitely reduces catheter-associated complications, improves patients' psychological outcomes and increases their self-efficacy on catheter management. The essential components of effective educational programme are written information on catheter management with educational video, demonstration of catheter care technique and consultation with nurse. The programme could be provided by nurse. It could consist of two sessions with each lasting one hour and could be provided to patients after urinary catheter insertion and before discharge home.

Conclusion: An effective educational programme has a positive impact on indwelling catheter users, both psychologically and physically. It is time to develop an evidence-based standardized educational programme on catheter care in routine clinical practice.

A24 Methods of gastric tube placement verification in neonates, infants and children - A systematic review and meta-analysis

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Background: Gastric tubes are commonly used in hospitalized neonates, infants and children to provide nutrition and medication, or for decompression of the gastrointestinal tract. Though multiple methods have been used in clinical practice to verify gastric tube position, the diagnostic performance of these methods has not yet been evaluated. This systematic review was to evaluate diagnostic performance of multiple methods for gastric tube placement verification in neonates, infants and children to enable nurses to make an informed decision about benefits of the various methods.

Methods: A systematic review using the methods outlined in the Cochrane Handbook for Reviews of Diagnostic Test Accuracy was conducted. Eight databases were searched. Studies on neonates, infants and children in which researchers compared different methods for gastric tube placement verification with X-ray reference standard were eligible in the review.

Results: Eight studies involving 911 participants that evaluated nine index tests for gastric tube placement verification were included. Most studies were of moderate methodological quality and most index tests were assessed in small individual studies. pH testing with cutoff values ≤ 6 for gastric tube position confirmation was the only index test subjected to meta-analysis, with the summary sensitivity and specificity being 0.77 (95% CI 0.56 to 0.90) and 0.42 (95%CI 0.16 to 0.73). Other tests for gastric tube placement verification showed great variations in sensitivities and specificities.

Conclusions: pH ≤ 6 is not sufficiently accurate to be recommended for gastric tube placement verification in neonates, infants and children. Diagnostic performance of pH ≤ 4 , pH ≤ 5 and other index tests in gastric tube placement verification cannot be determined due to the paucity of data and methodological variations in studies. Clinical practice related to the diagnostic tests used will continue to be dictated by local preferences and cost factors, until stronger evidence becomes available.

A25 Non-pharmacological interventions for self-management in patients with non-alcoholic fatty liver disease: A systematic review

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Background/Aim: Non-pharmacological interventions (NPI) that correct unhealthy lifestyles and dietary habits are also recommended for patients with non-alcoholic fatty liver disease (NAFLD). The aim of this review to evaluate the current studies reporting NPI for patients with NAFLD.

Methods: We searched for randomized controlled trials of NPI for NAFLD published since 2008, identified from electronic databases: PubMed; CINAHL; EMBASE; Cochrane Library. Two reviewers independently extract data and assessed risk of bias (ROB) using Cochrane Collaboration's tool. We analyzed data using p -value of differences between groups.

Results: A total of 94 studies identified, 36 studies assessed for eligibility, and 13 studies were used for final review. The overall ROB in the included studies was unclear, as a result of performance bias and detection bias. NPI of the studies were categorized into three types: exercise; dietitian-led lifestyle modification; Supplements. Each intervention were delivered individually and to groups. To report for effect of interventions, studies identified primarily focused on liver enzyme and body mass index (BMI). Mixed findings were reported for effect of interventions (exercise, supplements) on ALT/AST and BMI. Lifestyle modification interventions appears to be effective in improving ALT (not AST) and BMI in patient with NAFLD.

Conclusions: This review shows that there is insufficient evidence to draw overall conclusions regarding the NPI for NAFLD. This reflects heterogeneity between studies and small sample size. Therefore, well-designed randomized controlled trials using common protocol for patients with NAFLD should be conducted in the future.

A26 The perspectives of healthcare students towards end-of-life issues: A literature review

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Background: End of life care has become increasingly vital in the recent few decades given the shift in the constituents of population to an aged one. Rising needs of knowledge among frontline medical professionals and heightened focus on related subjects in undergraduate education are what accompanied. The current literature review examines on the adequacy of knowledge, attitude and skills possessed by undergraduates in the context of end-of-life care, and the associated factors that contribute to the outcomes.

Methods: Search was conducted on Ovid MEDLINE(R), Embase and PsycINFO using the terms 'end of life care', 'terminal care', 'advance directives', 'advance care planning', 'DNACPR', 'preparedness', 'readiness', 'knowledge', 'attitude', 'practice', 'skill*', 'student*' and 'undergraduate*'. Inclusion criteria consisting of: (1) cross-sectional studies; (2) healthcare undergraduates as subjects; (3) knowledge, attitude or skills about EOL issues being address; (4) published in English; (5) and published within 15 years; are applied. Studies other than cross-sectional studies were excluded. 5 relevant studies were included.

Results: All of the included studies focus on medical students. There is an insufficiency of knowledge in end-of-life issues among undergraduates, with the proportion of respondents reporting incompetence in related knowledge ranging from 32% to 89%. Attitude towards the issue is homogenous, with 53% to 79% of respondents supporting end-of-life care. Skills of undergraduates is heterogeneous, with 85% British respondents claiming to possess related experience in related clinical scenario, and a lower rates in other respondents, with the Hong Kong figure standing at 0.5% and American at 25%.

Conclusion: The current literature identified a potential area of future effort, namely the preparedness of undergraduates from nursing and allied health specialties in related aspects. Insufficiency of end-of-life education in the undergraduate level has been identified, likely calling for implementation of a more structural training.

A27 Effectiveness of peer-led programs in patients with a mental disorder: A systematic review

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Background: Schizophrenia is a disabling brain disease that requires long-term treatment, but nearly half of patients do not recover from it. Appropriate treatment strategies, such as peer-led programs, can help patients who are in the same situation face disease adversity and achieve recovery. However, the effectiveness of peer-led programs remains unclear. Therefore, we aim to systematically review the effectiveness of peer-led programs in patients with a mental disorder.

Methods: This review was conducted in September 2018 using five electronic databases (Cochrane, PubMed, CINAL, Airiti Library, Taiwan Periodical Literature System) to identify evidence. The terms used for the search were “mental disorder,” “schizophrenia,” “peer (group),” “peer-led.” The evidence search process was conducted by two researchers. The inclusion criteria were RCTs published less than 10 years ago; 860 articles were retrieved. The exclusion criteria were duplicate and inconsistent literature (economic issues or medical conditions); 10 potentially relevant articles were retrieved. Finally, we used JBI appraisal tool to confirm that the quality level of the articles have reached 70%.

Results: We included six RCTs involving a total of 1,449 participants. The primary characteristic of peer-led programs was its group format in community settings. The interveners were recovered patients who were trained to discuss recovery plans, crisis management, self-management, or stigma coping strategies with patients who did not recover. Each session lasted for 1–4 hours and was conducted twice a week, with the total number of sessions ranging from 2 to 13. Peer-led programs can significantly improve the recovery, self-management knowledge, self-efficacy, and hope of patients. Moreover, it significantly reduces the hospitalization rate, stigma, and psychotic symptoms.

Conclusion: Peer-led programs can effectively aid in the recovery of patients with mental illness. In the future, training interveners and developing peer-led auxiliary care programs are suggested, which will help patients obtain diversified resources.

A28 Effects of negative pressure wound therapy for treating open fracture of limb: A systematic review

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Background: Open fracture wounds are puncture wounds where both the skin and underlying tissues are damaged. Surgical intervention is commonly used to clean the wound and debride devitalized tissue. A daily dressing using 0.9% sodium chloride or 0.05% chlorhexidine solution is commonly applied in clinical practice. Nonetheless, prolonged hospitalization due to long healing time for wound closing and infection is often reported. Among the various types of treatments, negative pressure wound therapy (NPWT) is one of the most widely used in treating different types of wounds. The following review will explore the effects of NPWT on open wounds with limb fracture.

Methods: Research for this review was performed based on text search in the abstracts of literature related to NPWT on open wounds of limb fracture. All available full texts and data published between 2010 and 2019 (both years inclusive), in English, were in scope. Extensive research via electronic databases including ProQuest, Embase, Medline, PubMed, PsycINFO, Cochrane Library, and ScienceDirect was conducted. Each literature was thoroughly reviewed and critically evaluated using the Johns Hopkins Nursing Evidence-based Practice appraisal tool and Cochrane tool.

Results: A total of nine articles including five randomized control trials (RCT) and four systematic reviews (SR) met the inclusion criteria out of 1,847 articles, which provided the basis for the present systematic review. Moderate uncertainty evidence supported the effect of NPWT on shortening wound healing and lowering infection rate. However, it is difficult to compare the results across the selected studies due to different suction force, modes of suction, and different Gustilo types of fracture.

Conclusion: The evidence suggests that NPWT can have beneficial effect on wound healing in open fracture when compared to conventional standard wound care. A high quality of RCT is warranted and other adverse events of using NPWT may need to be further studied.

A29 The effects of multimedia education interventions for children with asthma and their families: An integrative review

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Background: Childhood asthma is a major clinical concern worldwide. Many interventions for asthma control have been suggested, such as the use of inhaled corticosteroid, vitamin D supplement, physical exercise, and mite-impermeable bedcovers. However, these studies provided inconsistent results. In 2012, a systematic review reported that providing children with asthma client-centered care is an effective intervention for reducing the number of unscheduled doctor visits. Client-centered care includes written treatment plans and individual client-level tailored education. The purpose of this integrative review is to present the best available research evidence regarding the effects of multimedia educational interventions for children with asthma and their families.

Methodology: A keyword search was conducted in July 2017, limited to papers published from 2000 onwards and using the key terms “childhood,” “wheeze,” “early onset asthma,” “quality of life,” “readmission,” “satisfaction,” “self-management,” “steroid phobia,” and “education.” The databases Ovid MEDLINE(R), Ovid Nursing Database, EMBASE, Joanna Briggs Institute EBP Database, ProQuest and Google Scholar were searched. The inclusion criteria were limited to studies with participants from 0 to 17 years old; studies on multimedia educational interventions for asthma management; and studies where the outcome measures were unscheduled doctor visits, hospitalisation, and days of asthma symptoms. The study used medicine or special medical devices as intervention were excluded.

Results: The search found 342 titles, from which 14 potentially relevant studies were identified. After a quality rating was conducted, 9 studies were selected for review. **Results** indicate that 20 min of game-based computerised training session and 30 min of nursing consultation session with a family-centered care approach are effective interventions for asthma control.

Conclusion: Published trials indicate that a family-centered multimedia educational program is effective in reducing the number of unscheduled doctor visits and enhancing the knowledge on asthma and its management of children with asthma and their families.

A30 Oxygen therapy for acute myocardial infarction: Is it good or bad? A meta-analysis and systematic review

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Background: Although it's a common and regular method to supply oxygen to patients who are suspected with acute myocardial infarction (AMI), concerns have been raised of oxygen inhalation in patients with AMI who have normal oxygen saturation.

Methods: This paper aimed to review the efficacy and safety of oxygen therapy in patients with suspected or confirmed AMI. We searched relative articles in PubMed, Cochrane and Web of Science from inception to March 2018. Quality of studies was assessed according to Cochrane Collaboration guidance. Randomized controlled trials (RCTs) estimated clinical results of oxygen therapy and air to patients with AMI were included. Major outcomes include all-cause mortality, cardiac mortality, pain, arrhythmias, recurrent myocardial infarction (ReMI), the infarct size of myocardium, and the left ventricle ejection fraction (LVEF).

Results: 7 trials (n=7986 patients) were included (4082 patients and 3904 patients in oxygen and air group respectively). There was no significant differences between 2 groups in all-cause mortality [RR0.99,95%CI (0.81,1.20),p=0.89], cardiac mortality [RR0.78,95%CI(0.32,1.87),p=0.57], pain [RR0.89,95%CI(0.67,1.16),p=0.38], arrhythmias [RR1.20, 95%CI (0.84,1.71),p=0.31],infarct size [RR1.31, 95%CI (-2.03,4.65) ,p=0.44] and LVEF [RR-0.31 ,95%CI (-1.70,1.09),p=0.67], the recurrence of myocardial infarction at 6-month follow-up was significant between the two groups[RR2.33, 95% CI(1.18,4.62), p=0.02].

Conclusion: Oxygen inhalation did not benefit patients with AMI, it might increase the recurrence of myocardial infarction at 6-month follow-up. More strict and precise RCTs are needed to identify the efficacy of oxygen use in patients with AMI in normoxia.

A31 A review of stress faced by university students through stories and the ways adopted by students to cope with stress

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Background: In recent years, there is an upsurge in the number of student committing suicide, which arouse public concern. Undoubtedly, university students face various stress, which may menace students mentally and physically. This shed lights that the general public should pay more attention and implement appropriate strategies to help students to cope with stress.

Methods: This review aimed to understand the cause of students' stress in the Chinese University of Hong Kong (CUHK) through the stories students shared and the ways students adopted to cope with stress. A social media platform, CUHK records, used by students in CUHK to record their daily stories was accessed to obtain stories shared by students. The stories were reviewed by three reviewers independently in January 2019 and data were extracted from these stories. Findings were then summarised and synthesised narratively.

Results: Over 140 stories were reviewed and 50 stories were relevant to the topic of interest. Most of the stories were written by university year two students and most of the authors were female. The main causes of stress were related to academic performance, inter-personal relationships and social-related issues. The stress had resulted in adverse outcomes such as emotional disturbance, decreased self-confidence, felt perplexed and would like to escape from studies. Various ways were adopted by students to cope with stress. Most students chose to manage by their own first such as changing their perspectives to face the problems positively and actively, developing new hobbies and going for travel. Some students also sought help from counselling service, teachers and classmates.

Conclusion: University students experience a high level of stress due to different causes. Different ways are adopted by students to cope with their stress, both by their own and help from others. The University may allocate more resources and counselling services to help students to cope with stress.

A32 The effectiveness of applying augmentative and alternative communication intervention on psychological well-being and communication satisfaction among conscious but speechless patients in intensive care units: A literature review

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Background: Usage of sedation is minimized in the current practice of intensive care unit. Thus, patients with artificial airways become unable to speak but conscious. Research evidences showed that patients who cannot express their feelings or demands verbally could lead to severe negative psychological consequences, such as anxiety and depression. While effective communication between nurses and patients is important for patient care, this review aims to identify the current evidence of the effects of aided augmentative and alternative communication (AAC) strategies on psychological well-being and communication satisfaction among conscious by speechless patients.

Methods: Electronic databases, Medline, Embase, Pubmed, CINAHL, Cochrane Library, HyRead, and Wanfang Data were searched for eligible studies in recent 10 years.

Results: A total of 6 eligible articles (1997-2017) were identified which included randomized controlled trials (k = 3) and quasi-experimental studies (k = 3). The included studies were conducted in Western countries (k = 4) and China (k = 2). Two types of aided AAC strategies, communication boards/picture charts (k = 4) and electronic communication devices (k = 2), were identified. All studies showed that aided AAC strategies could significantly reduce psychological distress, anxiety and frustration, and enhance satisfaction of the participants (p<0.05). Though the high-technology features of aided AAC including voice output, touch-sensitive screen or eye-ball tracking might facilitate communication, yet patents' conscious level and their limb power could be barriers of using these aided AAC.

Conclusion: This review findings suggested the use of aided AAC could reduce the psychological distress among patients who are conscious but speechless. Further studies with more vigorous study design as well as comparing different modalities of aided AAC is suggested.

A33 Predictive accuracy of pressure injury for older adults in long-term care facilities: A systematic review and meta-analysis

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Note: The authors decided to withdraw their abstract for presentation.

A34 Hair cortisol as a biological marker of maternal prenatal stress: Systematic review

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Background: Recently, as a biological marker of maternal prenatal stress, hair cortisol along with saliva, blood or urine cortisol have received attention. There is a need for the validity of measuring hair cortisol concentrations as a biomarker of maternal prenatal chronic stress among healthy and high risk pregnant women. This study was to confirm the correlation between hair cortisol and perceived stress level of pregnant women over 18 years of age.

Methods: In this study of systematic review, we searched PubMed, Cochrane Library, EMBASE, CINAHL, RISS, KISS, and NDSL without specifying a date range. We used the following search strings combining the relevant medical subject headings (MeSH) with additional key/text words: (1) pregnancy, high-risk pregnancy, unwanted, pregnancy, unplanned pregnancy, twin pregnancy, triplet pregnancy, quadruplet pregnancy, quintuplet pregnancy, pregnant, gravidity; (2) hair cortisol, cortisol, hydrocortisone, hydrocortisone; and (3) psychological stress, physiological stress, stress. Four of 3,639 studies met the inclusion criteria. We conducted quality assessment by three independent reviewers using STROBE (strengthening the reporting of observational studies in epidemiology).

Results: The correlation between hair cortisol and perceived stress level was confirmed only in one study. There was only one study of hair washing, shampoo, conditioner, and hair structure that could affect hair samples. Hair samples were different in length and methods of storage and laboratory analysis.

Conclusion: It was difficult to confirm the relationship between perceived stress and hair cortisol in pregnant based on the current evidence. Studies on hair cortisol should need the regulated and standardized methods for collection, storage and analysis of hair cortisol samples.

A35 A network meta-analysis of the effect of 13 interventions on dysphagia in stroke patients

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Background: To evaluate the effectiveness of 13 interventions in patients with stroke dysphagia using network meta-analysis.

Methods: Randomized controlled trials of cluster nursing and stroke-associated pneumonia in Pubmed, Cochrane Library, web of science, Embase, China Biomedical Literature Database, CNKI and Wanfang Database were collected. Two researchers independently screened the literature, extracted data, and evaluated the quality included studies, network Meta-analysis was conducted using for eligible studies by GeMTC and Stata.

Results: A total of 46 studies and 13 interventions were included. The total effective rate and VFSS scores showed statistically significant difference in swallowing training, neuromuscular electrical stimulation combined swallowing training, neuromuscular electrical stimulation, electroacupuncture combined with swallowing rehabilitation training, electromyography biofeedback therapy combined swallowing training, acupuncture and conventional nursing. Among the effective indicators of stroke dysphagia rehabilitation, electroacupuncture combined with swallowing training was the best; in terms of VFSS score, neuromuscular electrical stimulation combined with swallowing training was the best.

Conclusion: According to the efficiency and VFSS scores, the probability of the two sorts of the results of the index, comprehensive analysis, electro-acupuncture combined with swallowing training or neuromuscular electrical stimulation combined swallowing training to become the best intervention program is most likely. As electroacupuncture combined with swallowing training is more economical, it is recommended to use, and it is recommended that according to the characteristics of the patient's condition to choose the appropriate intervention program.

A36 The prevalence of suicidal ideation among the Chinese elderly: A meta-analysis

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Background: Suicide is one of the major public safety problems around the world. Nearly 800,000 people worldwide commit suicide each year, and the Chinese account for 100,000 of them. The elderly, in particular, are the largest group of suicides. Suicidal ideation is the prelude to committing suicide, and if we can identify elderly suicidal ideations in time, so as to taking effective measures to prevent their suicidal behavior. In this, present study intends to explore the incidence of suicidal ideation of the elderly in China through meta-analysis, and provides the theory base for the prevention of suicide among the elderly.

Methods: PubMed, Web of Science, Elsevier, Cochrane Library, China National Knowledge Infrastructure, Wanfang Data, China biomedical literature service system and Chongqing VIP were searched for from inception to June. 2018 for studies investigating the prevalence of suicidal ideation among Chinese elderly. After study selection according to inclusion and exclusion criterion, data extraction and quality assessment, meta-analysis was conducted using Stata 14.0 software.

Results: A total of 18 studies with 54162 participants were included, the individual-study incidence of suicidal ideation ranged from 1% to 26.01%, with significant between-study heterogeneity detected ($I^2=99.2\%$, $P<0.001$), and the pooled incidence by random-effects model was 9.90% with 95%CI of 6.96% to 13.25%. The subgroup analysis showed that there was a significant difference in the incidence of suicidal ideation among the Chinese elderly ($P<0.001$). Univariate revealed that sample size and region were related to heterogeneity ($P<0.05$).

Conclusion: The prevalence of suicidal thoughts among the Chinese elderly is relatively high, and there is a need to take relevant measures to intervene the physical and mental problems of the elderly, so as to reduce the occurrence of suicide.

A37 Improve quality of integrated healthcare by applying Rainbow Model of integrated care: An integrated literature review

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Background: Today's healthcare needs are becoming increasingly complicated, with rising demands for healthcare services and inadequate supply of services due to fragmentation in the provision of services. Addressing these pressures through care integration is a strategy that can help improve overall effectiveness, patient experience and sustainability.

Methods: An integrated literature review was conducted to identify the key features that could be used to organise integrated care. Databases include CINAHL, ProQuest, Medline were searched for articles published during the period from January 2013 to December 2018. This led to final selection of 22 papers for this integrative review. Whitmore & Knafelz (2005) Five-stage systemic approach incorporated to frame this integrative review.

Results: Rainbow model of care is a multi-level care model that serves as the core of the integrating health care system. The Rainbow Model of Integrated Care provides conceptual clarity by combining the concept of primary care and integrated care and is considered useful for understanding the complexity of integrated care. Person-centred care is found to be one of the aspects of the micro-level from the Rainbow model. It emphasises the current trend of health care system switching from disease-centred towards person-centred. Triple Aim framework is a systemic assessment tools that will help to ensure the adapting process will be monitored and evaluated.

Conclusions: Substantially, the Rainbow model of integrated care provides a step-wise roadmap for health care systems striving to improve the quality of integrated care in a systematic manner. While people can relate to the integrated health care concept, health-care providers and policy makers must embark towards this cultural shift in practice, and systems must be willing to adopt and create innovative models that are conducive to providing incentives to support.

A38 Education programme for chronic obstructive pulmonary disease caregivers and patients to reduce caregivers stress and hospital readmissions: A literature review

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Background: COPD caregivers experience enormous stress from unmet information and psychosocial needs. When stress becomes intolerable and feel helpless to manage patient exacerbation, caregivers have no choice but to send patients to hospital as a way of stress-relieve and role-shifting to healthcare providers. Caregiver stress not only affects caregivers themselves, but also increases hospital readmissions of patients. Little has been covered on information and psychosocial needs of COPD caregivers and ways to support them. The aim of this literature review is to solicit information to develop an evidence-based education programme for COPD caregivers and patients to reduce caregiver stress and hospital readmission respectively.

Methods: A systematic search was conducted in multiple electronic bibliographic databases, including PubMed, Cochrane Library, Medline, PsycINFO and EMBASE. Searching keywords included Chronic Obstructive Pulmonary Disease, COPD, Chronic Obstructive Airway Disease, COAD, lung disease, caregiver, caregiver education, family-based and education, readmission, rehospitalization, carer stress and caregiver stress.

Results: Six randomised controlled trials were reviewed. The quality of these studies was rated as high to low. Best practice was synthesised from these studies. Support for caregivers to bridge the transition from hospital to home was emphasized. Studies showed that a key element of an effective education programme was active involvement and empowerment of caregivers in COPD management. After receiving education, caregivers were able to take an active role on COPD management, coping strategies, exercise training, and so on. Adequate strength of an education programme to promote effectiveness of information delivery can be achieved by providing an eight-week education programme with four sessions scheduled 90 minutes each. In addition, education materials should be of caregivers' interest.

Conclusion: Current education on COPD management only focuses on patients, caregivers' involvement is usually neglected. This literature review suggests an evidence-based approach to provide a structured education programme to support COPD caregivers.

A39 Reducing length of stay with vitamin D: A systematic review

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Background: Recent studies have also identified the role of vitamin D in the defence against infections. Association of vitamin D deficiency and sepsis is also well documented in the literature. Low vitamin D level is associated with poor clinical outcomes. This systematic review evaluates the effectiveness and validity of using vitamin D as treatment for sepsis or infection.

Methods: Our study reviewed all randomized controlled trials with patients of all ages with suspected or confirmed infection, sepsis or septic shock up until 2018. PRISMA guidelines were followed. Cochrane Central of Controlled trials, EMBASE, and OVID MEDLINE® are searched with the OVID interface. WHO International Clinical Trial Registry Platform, Web of Science, ClinicalTrials.gov were also searched.

Results: Literature search performed in July 2018 reviewed 669 studies. After duplicated studies were excluded, 650 titles and abstract were screened, 628 studies were excluded and 22 full-text were assessed. Four relevant studies were isolated, and only two studies had data on hospital length of stay, our primary outcome. We attempted to obtain additional data from authors of studies with no hospital LOS study with no avail. We considered these two studies to be high quality and low overall risk of bias.

Conclusion: Although the quality of the studies reviewed were good, the small number of the studies, small number of patients (a total of 184 patients) included and difference in patient cohort (age group, ethnicity, mortality rate, disease severity) made it impossible to draw any conclusions. This study highlights the need of a larger interventional study.

A40 A literature review on the effects of postpartum massage on relieving back pain, sleep disturbance and anxiety for postpartum women

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Background: Back pain, sleep disturbance and anxiety were the most common stressors postpartum women and impacted their body and mind. This literature review aimed to explore the use and effects of massage as a mean of intervention on relieving back pain, sleep disturbance and anxiety for postpartum women to promote physical and psychological well-being.

Methods: A comprehensive search of published literature from six electronic databases was conducted. Keywords search included postpartum women, postpartum, anxiety, postpartum anxiety, postpartum depression, massage, back massage, reflexology, sleep, sleep quality, insomnia, low back pain, pelvic pain, and postpartum day. Studies adopted a randomized controlled trial design with the outcome of interests as back pain level, sleeping quality and anxiety level were reviewed.

Results: Seven studies related to postpartum massage (Back massage, n=4; Body massage, n=1; and Reflexology, n=2) were identified. Findings revealed a significant positive effect of massage therapy across all studies. The massage was all delivered by certified nursing massage therapist or reflexologist in Hospitals, O&G clinics or Postpartum centers. The duration and dosage of the massage therapy ranged from 20 to 30 minutes once per day to once per week, for 2-3 consecutive days, and for 5 days after delivery up to 6 weeks postpartum. Outcomes were measured by Pain visual analog scale, Pittsburgh Sleep Quality Index and State Trait anxiety inventory.

Conclusion: Back massage was one of the most effective approach to relieve back pain, improve sleeping quality and reduce the level of anxiety in the postpartum period. However, the types and procedures varied and lacked a standardized program in practice. Therefore, it seems there is a need to develop a structured postpartum massage intervention so as to promote a holistic and effective approach among the use of massage therapy in postpartum period.

A41 Promotion of adherence to continuous positive airway pressure therapy to patients with obstructive sleep apnea: A literature review

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Background: OSA is strongly associated with cardiovascular diseases, hypertension and cerebrovascular diseases. It also increases morbidity and mortality and increases the risk of traumatic accidents which may cause deaths and injuries. CPAP is the most common and effective therapy of OSA. Although CPAP therapy is crucial to improve OSA, CPAP remains low. In Hong Kong, there were only one fifth of the newly diagnosed OSA patients accepted CPAP therapy. The resources and the nursing interventions on promoting CPAP adherence for OSA patients are insufficient. This literature review aimed to identify the available evidence in education components and strategies to develop an evidence-based education programme to promote CPAP adherence for patients with OSA.

Methods: A systemic literature search was conducted in four electronic databases, including Embase, Ovid MEDLINE, PsycINFO and PubMed. The keywords used in the literature search were sleep apnea, obstructive sleep apnea, OSA, sleep apnea, obstructive sleep apnea, CPAP, home, discharge, education, education program, adherence, compliance, usage, and improve.

Results: Six randomized controlled trials and one controlled clinical trial were reviewed. The quality of these studies were rated as strong. Evidence-based practices were identified in the literature review of these seven selected studies with significant results of improving CPAP adherence. Four essential components in an education program include a 3-5-minute educational video, written information, 20-30-minute face-to-face educational session, two telephone interviews at around 1st and 4th week after CPAP initiated. In addition, the information provided should be including OSA, CPAP therapy, maintaining healthy lifestyle with motivational enhancement and negative message framing strategies.

Conclusion: The existing nursing interventions are insufficient on promoting CPAP adherence. The literature review provides an evidence-based approach to provide a comprehensive view of updated and effective education components and strategies for nurse to promote the CPAP adherence in OSA patient.

A42 Systematic review on effectiveness of education programme on enhancement of fluid compliance in end stage renal disease patient receiving renal replacement therapy

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Background: Peritoneal dialysis (PD) or haemodialysis (HD) required patients to take an active role in their fluid compliance in order to prevent unpredictable progression of the disease and complications such as fluid overload. However, non-fluid compliance is common among this patient group which leads to increase body weight and blood pressure, fluid overload and repeated hospitalization. To enhance their fluid compliance, education programmes were organised for this population. This review aimed to examine the effectiveness of education programme on improving HD and PD patient's fluid compliance by evaluating their self-efficacy, body weight and blood pressure.

Methods: A systematic literature search was conducted in March 2018 and five electronic databases were used (EBM Reviews – ACP Journal Club, Embase 1910 to Present, Ovid Nursing Database, Ovid MEDLINE(R) and PubMed). The identified works to be studied were selected by two reviewers independently according to predefined inclusion and exclusion criteria. The quality of studies was also appraised independently by two reviewers. The findings are summarized and synthesized narratively.

Results: A total of seven studies fulfilled the inclusion criteria. Three of them were randomized controlled trials while the remaining were quasi-experimental studies. The findings showed that education programme had positive impact in reducing body weight and improving self-efficacy. No significant change was showed in blood pressure. The characteristics of the programme included: knowledge transfer, multi-disciplinary teaching, individual and group consultation and took place in a community setting.

Conclusion: Education programmes were supported to be effective in managing body weight and enhancing patients' self-efficacy in fluid compliance. Although, there were no significant change in blood pressure control, it is desirable to continue the education programmes among this population while continuing to refine the content.

A43 Hong Kong nurses' perceptions and practices of post-treatment cancer survivorship care, and perceived barriers to its implementation

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Background: With the ever growing number of cancer survivors and many of their needs are not met by current healthcare system, cancer survivorship care is becoming more challenging. Nurses play a vital role in managing follow-up care and education to cancer survivors, however, their perspectives towards survivorship care and existing practices are not well understood.

Methods: A cross-sectional survey was conducted between August 2015 and July 2016 in Hong Kong. Nurses who were providing care to patients with cancer were recruited using a convenience sampling method. The questionnaire was used to collect background characteristics of participants, assess their perceptions of responsibility and frequency of providing survivorship care, and examine factors that impeding its implementation.

Results: Eighty-one eligible subjects completed the questionnaire. Interestingly, they reported comparatively high levels of perceived responsibility (mean ranged 60.3 -76.1) but low levels in provision of such care (mean ranged 28.9 -49.4) in four survivorship care domains outlined in Institute of Medicine report, where all the domain scores were rescaled to have a possible range of 0 to 100. For instances, though majority of participants (95.1%) considered that discussed or managed survivors' pain as their responsibility, most of them (91.4%) rarely or never performed it. Multiple barriers to implementation of survivorship care were also identified including lack of time (79.0%), educational resources (59.2%) and knowledge/ skills (54.3%). Only participants with specialist training in cancer care had significantly higher levels of perceived responsibility in providing intervention for physical and psychological consequences ($p=0.033$) and coordination of care ($p=0.026$) while their expertise caused no difference to the frequency of care provision.

Conclusion: It was the first local study on Hong Kong nurses' perceptions on survivorship care and barriers that impeded its implementation. This study offered insights into strategies necessary to improve quality of cancer survivorship care. Those findings of this study should be allowed for future service planning, allocation of resources and research studies.

A44 A continuous quality improvement project to enhance Total Parenteral Nutrition Care (TPN) in ICU

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Note: The authors decided to withdraw their abstract for presentation.

24 May 2019 (Friday)

B01 Effectiveness of nutrition education programme promoting balanced diet among university nursing students – Intervention development

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Background: Nurses and nursing students are associated with unhealthy dietary habit due to shift work and long working hours. Eating followed by sleeping is associated with weight gain. Nurses are equipped with health knowledge, however, which is not transformed into behaviour. Upon nursing professionalization, a significant proportion of nurses are university trained. A review was done to identify successful components of nutrition education programme promoting dietary behaviour change among university students in randomized controlled trials (RCTs).

Methods: An intervention protocol was developed based on an integrative review and expert opinion. Searching was conducted in April 2017 from EMBASE, Ovid Medline, PsycINFO, CINAHL Complete, PubMed, Dissertation & thesis @ Chinese University of Hong Kong, China Journal Net and Wan Fang Data. The searching used key terms “young adult”, “nutrition education”, “diet modification”. Quality evaluation by EPPHP rating was weak due to lack of blinding because of educational intervention.

Results: There were 9 included studies published from 2001 to 2016. Study duration ranged from 15 days to 16 months, completion rates 7.5% to 96%. A double-blinded RCT was developed based on health action process approach (HAPA) which serves as a bridge that translates knowledge to behaviour. A two-hour nutrition education programme was developed using F2F teaching to enhance action self-efficacy (SE), coping SE and recovery SE. Image assisted food record was used to reduce burdensome of data collection. Incentives was used to minimize drop-out rate. Outcomes will be measured by change of nutrition self-efficacy and change of dietary habit. Data collection will be done before intervention (T0), one week (T1), one month (T2), three months (T3) and six months (T4) after intervention.

Conclusion: Intervention to promote dietary behaviour change was developed based on systemically retrieved evidence and expert opinion. The study was started since December 2018 and is in progress.

B02 Trends in concept analysis in nursing science in Korea

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Background: Conceptual analysis is the work identifying proper attributes, clarifying the meaning of ambiguous concepts, and making accurate definitions, which promotes the development of nursing concepts. Concept analysis in nursing are increasing in Korea. However, trends of the concept analysis studies are rarely identified. The purpose of this study is to identify trends and methods of the concept analysis study in nursing in Korea for improving correct understanding of nursing concepts.

Methods: Electronic searches were conducted in the Research Information Sharing Service (RISS) databases using ‘Nursing’, ‘Concept analysis’, ‘Concept development’, ‘Concept clarification’ as keywords. After removing duplicate studies, the retrieved literature was gradually reviewed and selected according to the inclusion criteria. The final 216 studies were selected and analyzed using descriptive statistics.

Results: Analysis on nursing concept was first appeared in 1988 and used hybrid model. Of total 216 studies, 59 studies (27.3%) were conducted between 1991 and 2000. Studies on concept analysis increased gradually between 2011 and 2018 for which the number of studies reached to 86 (39.8%). Of total 216 studies, 139 studies (64.7%) used Walker & Avant’s method, among which 105 studies (75.5%) applied all the steps recommended while other applied partially. Hybrid model was used for 47 studies (21.9%), among which 3 studies (6.4%) did not describe definitions in the final stage and 15 studies (31.9%) did not describe empirical indicators. The concept of ‘Spirituality’ and ‘Fatigue’ were most frequently analyzed, and ‘Competence’ and ‘Empowerment’ were also widely explored.

Conclusion: Walker & Avant’s method was most commonly used, and hybrid model and evolutionary method were also applied frequently. There were no studies using the method of concept derivation or concept synthesis. Some studies used literature review or methods developed by themselves. It is needed to apply a suitable method for concept analysis for developing nursing concepts.

B03 Visual analysis of collaborative nursing literature in China

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Background: Visual analysis of collaborative nursing related literature provides ideas for collaborative nursing research in China.

Methods: In September 2018, the literatures of collaborative care journals included in China Knowledge Network (CNKI) database, Wanfang database and CBM database were searched and screened. Excel was used to establish periodic reports of journals and organizations, using Ucinet software and BICOMB software. The Netdraw software generates a co-linear network map of authors, publishers, research areas, and keywords.

Results: A total of 991 articles were retrieved. There is less cooperation between authors in the field and less close cooperation between institutions. The distribution of organizations is ranked first (eight) in Central South China University, followed by Shengjing Hospital affiliated to China Medical University (7); the journals published in the literature are mainly contemporary nurses; the links between provinces and cities are not close; "Quality", "self-care", "chronic obstructive pulmonary disease", "nursing", "satisfaction", "treatment adherence", "anxiety", "depression", and "hemodialysis" are high-frequency words that reveal Field research hotspots.

Conclusion: At present, the focus of collaborative nursing research is not concentrated. It is necessary to strengthen cooperation between inter-regional institutions and individuals and scientific research groups, pay attention to research hotspots in this field, and improve research quality. It is necessary to strengthen cooperation between inter-regional institutions and individuals and scientific research groups, pay attention to research hotspots in this field, and improve research quality.

B04 Experiences of health care workers regarding the use of the evidence-based guideline for nursing home's infection control in Korea (ENIK) in long-term care facilities: Facilitators vs barriers

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Background: Long-term care facilities (LTCFs) have different infection control system compared to hospital. Most residents of LTCFs are seniors and have age-related dysfunctions. They are highly sensitive and vulnerable to healthcare-associated infections (HAI). The prevention and control of infections (PCI) in residents of LTCFs is difficult and important. LTCFs usually have poor personnel and/or environmental resources. Consequently, the Evidence-Based Guideline for Nursing Home's Infection Control in Korea (ENIK) and standards of practice used for PCI in a LTCF. The aim of this study was to identify HCWs' perceived facilitators and barriers for use of the ENIK in a LTCF.

Methods: The study adopted a qualitative design through focus group interviews. The study comprised 28 HCWs in five focus groups.

Results: The majority of the HCWs was positive about the use of the ENIK and about PCI effectiveness on the ENIK. Several barriers and facilitators to the use of the ENIK in LTCFs. Facilitators of using the ENIK were identified 1) applying algorithms for prevention and early recognition of infection, 2) the use of hand hygiene products and 3) an institutional safety culture to reduce HAI through an infection control professional. However, they indicated that frequent resignation of HCWs might be barrier. Likewise, they raised doubts about continued applicability of the ENIK due to its policy or financial inadequate administrative support.

Conclusions: Overall, the acceptability and usability of the ENIK was high. But there were several barriers ranging from practical human resource management issues to organizational and environmental obstacles. Therefore, continuous HCWs training and monitoring of HAIs should be provided to enable an institutional safety culture through the ENIK. And, successful application of the ENIK requires intensive, long-term and multifaceted support at the public policy level.

B05 Knowledge and performance of infection control among nursing home staffs in South Korea

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Background: As the population of the elderly increases rapidly, the nursing homes are also increasing. However, little research has been examined the knowledge and performance of infection control for staffs in nursing home. Therefore, the aims of this study was to investigate infection control knowledge and performance for nursing home staffs.

Methods: This study is a descriptive survey study. The participants were 77 persons (mean age = 52.2 yrs., women = 96.1%, caregiver = 75.3%) who agreed to participate in the study in December 2017 in one Korean nursing home. Data were collected through structured self-report questionnaires to identify infection control knowledge and performance. The knowledge of infection prevention standard care tool is composed of 29 items, and had an index of content validation of 1.0. The performance of infection control tool consists of 35 items, and had a Cronbach's α of .96. Data was analyzed by SPSS using Mann-Whitney U test, Kruskal-Wallis H test, and multiple regression analysis.

Results: The results of this study were as followings: 1) The mean score for infection control knowledge was 20.01, the middle level of score, knowledge was significantly different according to the general characteristics of occupation ($X^2=17.64$, $p=.001$), education ($r=0.31$, $p=.003$), career ($r=0.24$, $p=.017$). 2) The mean scores for infection control performance was 118.58, the middle level of score, performance was associated with the gender ($U=31.00$, $p=.038$), occupation ($X^2=28.83$, $p<.001$), married state ($X^2=15.01$, $p=.002$), age ($r=0.65$, $p<.001$), education ($r=-.44$, $p<.001$). 3) Of the 7 sub-concepts of knowledge, the mean score of cough etiquette and resident placement were high. 4) Among the 5 sub-concepts of performance, the mean scores of personal hygiene, urinary tract infection control were high.

Conclusion: It is important to develop standardized infection control guidelines and education programs for nursing home staffs based on their knowledge and performance of infection control.

B06 To develop an evidence-based training programme for improving infection control knowledge and skills related to multi-drug resistance organisms transmission during enteral feeding among hospital nurses

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Background: Patients with enteral feeding tube will increase MDRO colonization and can cause a wide range of healthcare-associate infections (CDC, 2017). Repeated spreading MDROs have been reported in one regional hospital. In 2016-17, there were 451 MDRO patients needed cohort in designated ward, of which about 31% with enteral feeding tube in-situ. Besides, nursing practice on infection control measures of enteral feeding procedure various among staff within department. The environment around these patients can be easily contaminated during enteral feeding procedure. It triggers to develop an evidenced-based training programme to enhance nurses' infection control knowledge and compliance.

Methods: This study is used Iowa model as theoretical framework to implementation of evidence-based practice. After clinical problems identified, literature reviews were searched from five databases for major content of infection control training program and strategies with related search terms. The selected studies were used Effective Public Health Practice Project Tool for Quality Appraisal.

Results: Total eight literature reviews were identified. From the recruited studies, one rated as strong and seven rated as moderate. There have five cohort studies and three quasi-experimental pre & posttest control design. From literature reviews, Anne et al. (2006) stated that enteral feeding hub is a reservoir for transmissible enteric bacteria. Some studies highlighted contamination risk at delivery set, connection site of feeding tube and stethoscope. Thean et al. (2013) mentioned commonly used equipment and immediate patient environment will also increase MDRO environment contamination rate. Poor hand hygiene of health care workers can facilitate MDRO spread. Besides, one strong study mentioned significant improvement in infection control knowledge and practice after evidence-based training program.

Conclusion: An evidence-based training program is needed to implement for prevent MDRO transmission. Assessment tools will be further developed to evaluate study outcomes such as knowledge level, compliance and staff satisfaction rate.

B07 Effects of a self-care management programme for type 2 adult diabetic patients with poor glyceimic control in Hong Kong general outpatient clinics – A research proposal

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Background: Type 2 Diabetes Mellitus (T2DM) is a chronic disease. In Hong Kong, there are 1 in 10 adults has T2DM. Glycemic control is an important strategy for the management of T2DM, patients require to follow a variety of self-care management behaviors in achieving optimal control. Poor glyceimic control may induce long term complication and increased mortality rate. Failure to achieve optimal glyceimic control in T2DM are well documented worldwide.

Methods: To examine the evidence on effective self-care management intervention for T2DM adult patients towards glyceimic control in primary health care setting. To design a self-care management intervention for T2DM adult patients and to determine the effectiveness of those intervention towards glyceimic control, in addition to the usual care. For phase 1 of study, an integrative review will be performed to examine the published evidence and to identify the key components on self-care management intervention for T2DM adult patients in primary health care setting. For phase 2 of study, a research study will be designed; glyceimic control will be as the primary outcome.

Results: Phase 1 – Six electronic database was searched including British Nursing Index; CINAHL Complete; Cochrane Library; Medline; PsycINFO and PubMed. There were total 6 papers for charting. Key findings were identified as follows, (1) most subjects were in western countries with poor glyceimic control; (2) most interventions were in group format with multiple behavioral actions education embraced with subsequent follow up; (3) patient centered care and interactive components were included; and (4) chronic care model was widely adopted. Phase 2 – a two-arm parallel single-blinded randomized controlled trial in primary health care setting (four general outpatient clinics of one cluster on Hong Kong Hospital Authority) will be designed. This is a 6 weeks programme with 2 group interventions and 2 phone follow ups as led by nurse. Those self-care management intervention will be guided by the results of integrative review; theoretical framework and international guideline.

Conclusion: There is no randomized controlled trial to address self-care management program for T2DM adult patients with poor glyceimic control in Hong Kong general outpatient clinic. Hope this study could provide a model of care to integrate with the existing services by group base approach led by nurse for those poor glyceimic control patients in primary health care setting.

B08 Effectiveness of a model of care in a tertiary hospital in Saudi Arabia

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Note: The authors decided to withdraw their abstract for presentation.

B09 The effectiveness of nurse-led self-management education on glycemetic control in adults with type 2 diabetes

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Background: In response to worldwide high prevalence of diabetes mellitus, its life-threatening complications and limited healthcare resources, this literature review was to identify the key components and optimal time points to deliver self-management education for diabetes sufferers to inform better quality of nursing practice.

Methods: Electronic databases of MEDLINE, EMBASE, CINAHL, and Cochrane Library were searched (up to 31 Dec 2018) to find RCTs in English language, using key words: diabetes mellitus, nurse led clinic, education/intervention/therapy, and glycemetic control. A total of 305 records were identified and preliminary eligible (through abstract and title screening); 4 additional records from references and google searching. After reading full texts, nine records met all review criteria and with valid methodology and results were included for review.

Results: In the 5 RCTs and 4 SRs, there were individual and group formats of interventions, or combined both. Educational interventions with duration of 1-6 months and contact hours more than 10 hours were more effective to improve glycemetic control or HbA1c. Early consultation by diabetes nurses were useful to have better glycemetic control. Significantly greater effects on knowledge and metabolic control were found in those interventions with booster sessions such as extra sessions or telephone calls. Team-based interventions were associated with significant positive changes in glycemetic control than those with a solo intervener. Most reviewed articles suggested that self-management programs are more beneficial to people in coping with and learning behavioral skills in managing their diabetes and resulted in reduced duration of hospitalization and thus cost-saving.

Conclusion: There was a wide variety of formats, contents and durations of educational interventions and methodological quality. The role of diabetes specialist nurses should be expanded to deliver timely consultation for diabetes self-management education. Further research is needed to investigate the effects of pre-medical nursing consultation in improving patient outcomes, particularly in type-2 diabetes.

B10 The effectiveness of frailty unit on the clinical outcomes among geriatric patients in an acute hospital in Hong Kong: A quasi experimental study

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Background: Population aging increases the healthcare service demand, Hospital Authority (HA) required to face the challenge on managing the growing demand and ensure service safety and quality. There is an urgent need to devise an effective strategy to proactively identify frail geriatric patients and provide coordinated and timely care through a person-centred model of care. To address the service gap and take reference to other possible measures, a 6-bed Frailty Unit was set up at Emergency Medicine Ward (EMW).

Methods: A 12-month quasi-experimental study was conducted to examine the effects of the Unit on patient's outcomes. The unit offers 24-hour service. The team involves multi-disciplinary health care professional. A care pathway is established to guide the care planning and co-ordination during the whole patient journey during their stay in Frailty Unit and achieve a safe discharge. The unplanned readmission within 30 days & 90 days were captured. Patients' demographic and Quality of life (mQOLC-E) were collected to examine the effect of Frailty Unit on patient's outcomes.

Results: There was no significant difference in the prevalence of having unplanned readmission to QEH at 30-day and 90-day after discharge but there was significant difference in the prevalence of having unplanned re-attendance to A&E at 30-day ($p=0.02$) and 90-day ($p=0.02$) post discharge between the intervention and control groups. Intervention group was 79% and 75% lower at risk of having unplanned re-attendance to A&E at 30-day and 90-day follow up respectively than control group. There was no significant difference in frailty scale in the intervention group when compare with control group. There were significant difference in MBI between control and intervention group at 30 days ($p=0.02$) & 90 days ($p=0.001$). For mQOLC-E, interventions were effective in improving the overall outcomes in study group over 30 days and 90 days ($p < 0.001$).

Conclusion: Frail older persons are more susceptible to dramatic health deterioration due to the impaired homeostatic mechanism. Early identification of frail group and timely coordinated care can ensure their needs being addressed at effective and efficient manner. The Frailty Care Unit help to cope with the increasing healthcare demand of aging population and relieve the pressure on emergency service and hospital beds.

B11 To comfort always: A multidimensional quality improvement framework for maximising patient comfort in contemporary healthcare settings

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Background: Reducing unwarranted variability in care important for patient comfort is crucial to quality person-centred care. However, the concept of comfort is poorly defined. This research aimed to develop a multidimensional framework representing patients' perspectives of comfort to inform practice and quality initiatives in contemporary health care settings.

Methods: Two-stage qualitative descriptive study design. Findings from a synthesis of 62 studies informed data collection and analysis of semi-structured interviews exploring patients' perspectives of comfort in a cardiac surgical unit in New Zealand. Data were analysed using thematic analysis and framework method.

Results: Comfort is transient and multidimensional, defined by patients not just in terms of the absence of pain. A definition of comfort incorporating four underlying senses was developed to capture the essence of what comfort means to patients in inpatient healthcare settings. Factors influencing comfort were complex but underpinned by ten distinct themes, depicted in the Comfort Always Matters (CALM) framework. Themes occurred within four interrelated layers: patients' personal (and often private) self-comforting strategies; the unique role of family; staff actions and behaviours; and physical facilities and ambience in the clinical environment. Operational definitions informed by patient evidence outline important care for each theme.

Conclusion: These findings clarify a concept that is central to patient experience, but not necessarily promoted or monitored through patient experience initiatives. Findings appear applicable to many inpatient populations although underlying details of care are context specific. Healthcare leaders and clinicians can use the CALM framework to inform practice and quality initiatives aimed at maximising comfort and minimising distress associated with healthcare interactions in specific populations. Overall, these findings are a significant step towards defining and evaluating patients' perspectives on comfort for the purposes of research, practice and quality improvement related to person-centred care.

B12 Incidence of and risk factors for infections in a nursing home in South Korea

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Background: Healthcare-associated infections (HAIs) are one of the threats to the safety and health of residents in nursing homes. Surveillance for HAIs is an essential activity to determine the endemic status and to develop an effective infection control program. The purpose of this study was to determine the incidence rates of and risk factors for infections in a nursing home in South Korea.

Methods: This study was a retrospective cross-sectional design. Participants were all residents (n=122) with informed consent in one nursing home at the survey period. Two registered nurses conducted retrospective surveillance using standardized sheets by reviewing charts during one month (November 2017). A pilot surveillance was conducted to ensure consistency between the reviewers. Surveillance definitions were based on the revised McGeer criteria. If all element met the specific infection criteria, it was a definite case. A probable case was a suspect case that met some element of the criteria due to lack of detailed records. Controls were residents with no evidence for infection. The risk factors were investigated and a case-control analysis was conducted to identify the relation with infections.

Results: The incidence rate of overall infection including definite and probable cases was 12.47 episodes per 1000 resident-days; 5 definite cases were identified and 40 residents had at least one probable infection. Case residents of respiratory tract infections had a lower level of cognitive function (MMSE) than controls group ($p=.021$). Having difficulty in swallowing (OR=2.45; 95% CI: 1.01-5.91) and having incontinence problem (OR=6.09; 95% CI: 1.34-27.76) were significantly associated with overall infection.

Conclusion: One third (36.9%) of residents in the nursing home had experienced at least one HAIs including suspected episodes during one month. Risk factors for infection should be assessed regularly and infection control practices are needed to mitigate the risk.

B13 The impact of conversation map tool on self-efficacy and diabetes-specific health related quality of life in Chinese people with type 2 diabetes

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Background: Conversation Map Tool TM (CMT) is an innovative method to empower patients with effective self-care to manage their chronic illness. The objectives of this study are exploring the impact of CMT and identify the most effective mode of delivery for type 2 diabetes in Hong Kong.

Methods: This randomized control trial recruited subjects with type 2 diabetes from a specialist out-patient clinic. The intervention group comprised of four CMT sessions with two post-intervention telephone follow-up sessions. The control group is a four-session didactic DM education. Outcome evaluation included the Diabetes Management Self-Efficacy Scale (DMSES), Diabetes Empowerment Scale-Short Form (DES), HbA1c, BW, and change in quality of life measured by the EuroQol Five Dimension Scale-5 level at baseline (T0), by the end of program (T1) and at two months thereafter (T2).

Results: Total 113 subjects, 54 in the intervention group and 59 in the control group were recruited. The results stated that CMT program had significant improvement in perceived self-efficacy in self-care management (158.1±22.4 vs 169.0±21.0 vs 169.3±20.7). Besides, both groups had showed statically significant deduction in HbA1c level from T0 to T2 (CMT: 8.8±1.7 vs 8.5±1.7, Control: 8.7±1.4 vs 8.2±1.2) and the magnitude of reduction was similar between both groups. On-going support and monitor were delivered by CMT facilitator in telephone follow-up sessions. By the end of study, more than 70% of them had reported goal attainment. It might contribute to the sustainable improvement in self-care management.

Conclusions: This study results outlined a detailed delineation of CMT program for promulgating this effective education tool in clinical practice. Also, it added further essential and timely information to the diabetes care protocol for type 2 diabetes in local health context.

B14 The development of educational interventions on cancer pain management for discharge adult cancer patients

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Background: Pain is one of the most prevalent and distressing symptoms in cancer. Nearly ninety percent of all oncology Chinese patients experienced moderate to severe pain. Studies showed that inadequate pain management was associated with poor medication adherence. Previous literature showed that educational intervention was effective in improving patients' pain intensity and their adherence to pain medication. With the application of evidence-based educational intervention in clinical practice, nurses can provide consistent education and care to patients and patients could gain benefits as good quality care are provided, and therefore, produce better patient outcomes.

Methods: The authors conducted a literature review to obtain the best evidence available for the development of educational interventions for cancer pain management to reduce cancer pain intensity and reinforce medication adherence. The critical appraisal checklist from the Joanna Briggs Institute (2016) for randomized controlled trials was used to evaluate the methodological quality of the included studies. The contents of educational intervention were developed based on the selected studies with high quality and their applicability to the cancer patients with cancer pain in Hong Kong.

Results: The educational intervention consists of 1) pre-intervention pain intensity and medication adherence assessment, 2) individualized face-to-face pain education intervention with the use of a booklet about pain management, 3) follow-up pain diary and weekly 10-minutes phone follow-up for eight weeks after discharge from hospital.

Conclusion: Evidence-based educational intervention allows nurses to offer consistent care to patients accordingly. Patients can follow the advice at home with confidence and hence control the pain well. The educational intervention also serves to assure patients that they are under consistent and reliable care.

B15 An understanding of factors associate with implementation of health technologies at the nurse managed community centers

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Note: The authors decided to withdraw their abstract for presentation.

B16 The construction of health education program for elderly hypertension patients based on the best practice guide LEARNS model

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Note: The authors decided to withdraw their abstract for presentation.

B17 A model for scaling up nurse education: Scoping, developing, implementing and leading on nurse education degree programmes

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Note: The authors decided to withdraw their abstract for presentation.

B18 Risk factors of arteriovenous fistula stenosis have percutaneous transluminal angioplasty again in hemodialysis patients

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Background: The incidence and prevalence of end stage renal disease (ESRD) in Taiwan are higher than in other countries. Annual medical expense on these patients are very high. The complications which caused by arteriovenous fistula stenosis not only lead decline in dialysis quality, but also increase medical expense, furthermore arteriovenous fistula reconstruction surgery also make patients and suffer great psychological pressure.

Methods: 1. Subject: The patient in a dialysis center in a hospital in the north had restenosis and need for PTA again. 2. Exclude the use of temporary, permanent catheterized patients and irregular hemodialysis patients. 3. Correlation analysis and logical regression analysis using SPSS 22.0

Results: 1. Risk factors affecting the patient to have PTA again: blood flow rate, calcium concentration of dialysate, serum sodium level, platelet, arteriovenous fistula type, etc. 2. Dialysate with high calcium concentration has a great influence on vascular calcification, and people with co-disease such as diabetes, high blood pressure, or high sodium intake in diet may cause stenosis or obstruction of fistula.

Conclusion: The average years of use of autologous fistula is three. How to detect the abnormal function of fistula early and prescribe PTA treatment immediately to reduce the occurrence of fistula complications and the expenses of medical expenses. It is the goal of the whole dialysis care team.

B19 The implementation of visual instructional cards to improve patient compliance on bowel preparation for a colonoscopy

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Background: Digestive medicine centre has diverse patient population. Patients are asking for colonoscopy as it is important for screening colorectal cancer. Colorectal cancer is second leading cause of death in Hong Kong and third leading cause of death in the world. In order to have successful colonoscopy procedure, it depends on how bowel preparation of patient is and to follow strict diet restriction. According to the literature, many patients reported experiencing unpleasant, difficult and disruptive care during the bowel preparation process for a colonoscopy. Up to 25% of patients are not given adequate bowel preparation instructions. A visual educational leaflet may increase patient understanding of the procedure and improve bowel preparation. Currently, we provide written instructions for patients for patients who are undergoing colonoscopy procedures. The PICO question is: Does the implementation of visual instructional cards improve patient compliance on bowel preparation for a colonoscopy?

Methods: By obtaining the bowel preparation results from the endoscopy report. It divided into four parts: Good, fair, poor and not mentioned. With the support from Hong Kong Sanatorium and Hospital medical group doctors, four visual instructional cards were implemented with simple Chinese and English wordings. The four visual instructional cards are: how to take pico-prep, how to take klean-prep, the ready of the stool color for colonoscopy and the importance of a clean colon. These instructional cards were used in two centres: digestive medicine centre, gastroenterology and hepatology centre as a trail.

Results: Total 91 cases were reviewed and surprisingly found that 86% cases have good bowel preparation while there is no report without mention how the bowel preparation is. To compare with the same period with 127 cases reviewed by not using the visual instructional cards for bowel preparation education, there are only 37% cases have good bowel preparation and 27% cases did not mention the bowel preparation status. A questionnaire is distributed to both patients and nursing staff by asking how useful they found the visual instructional cards with 5 Likert-scale rating from 1 (not useful) to 5 (very useful). 54 patients replied with all the four images mean score over 4.5 and 14 nursing staff in three centres replied with all the four images mean score over 4.3. It shows that the four visual instructional cards are really useful for bowel preparation for colonoscopy to both patients with better understanding and staff for easy interpret.

Conclusion: In the future, the visual instructional cards can be used for both inpatient cases and outpatient cases. The cards can be used in other centres including OPD or the surgery centre where colonoscopies are frequently scheduled. To create visual instructional cards specific to post-operative care for better understanding and improve nursing education to patients.

B20 Social participation among older stroke survivors in residential care setting: A literature review

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Background: Participation is regarded as a pivotal outcome of rehabilitation among post-stroke survivors. It is known that participation restriction may arise through post-stroke conditions such as disability, cognitive problems and depression symptoms while it may increase with advancing age. However, the residential care setting, which may become the discharge destination of stroke survivors, may aggravate the problem as residents face loss of autonomy, isolation, and loneliness. Thus, this integrative review aims to identify and critically appraise the evidence related to social participation among older adults with stroke in residential care settings.

Methods: A comprehensive search was performed to review relevant articles from MEDLINE, CINAHL, Cochrane Central Register of Controlled Trials, EMBASE, and PsycINFO. Studies that were written in English and discussed the social participation of stroke survivors in residential facilities were included, whereas the year of publication is not limited.

Results: A total of 4 studies were included. Three quantitative studies reflected higher participation restriction and lower social interaction in stroke patients living in residential care facilities than those lived at homes. This could be explained by a lower state self-esteem, more depressive symptoms, loss of independence and segregated life from the family and community. It is also found that the social engagement may decline over time after stroke among residents. Meanwhile, one study revealed a contradictory result showing that facility-residing stroke survivors had better subjective quality of life, however, which may be due to its small study sample in one private and market-oriented nursing home of high quality, resulting in a bias.

Conclusion: Studies generally agreed that the social participation of facility-residing stroke survivors is relatively lower, while it may vary with the quality of the facility. Further studies are needed to explore relationship between environmental barriers and the arisen participation restriction among stroke survivors in residential care setting.

B21 Early recognition of depression in children

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Note: The authors decided to withdraw their abstract for presentation.

B22 Thirteen non-pharmacological interventions for increasing the quality of life in advanced cancer: A network meta-analysis

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Note: The authors decided to withdraw their abstract for presentation.

B23 Systematic review of factors affecting the quality of life in patients with gynecological malignancies

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Note: The authors decided to withdraw their abstract for presentation.

B24 The presence of dating and masturbation and their associated factors: Is discussing reproductive health between parent, teacher, and peers happened among Indonesian adolescent's girls?

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Note: The authors decided to withdraw their abstract for presentation.

B25 Reducing peripheral intravenous extravasation injuries: An experience of a local neonatal unit

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Background: Extravasation injury develops when intravenous fluid leaks into the surrounding tissue during intravenous therapy. It is an iatrogenic complication which may result in pain, skin necrosis, nerve damage, or permanent contracture. Neonates who are unable to verbalize pain, are particularly at risk. Due to the potential risks and harms of extravasation, an evidence-based clinical practice guideline was developed and implemented. Effectiveness of the intervention, implementation of the clinical practice guideline, was evaluated.

Methods: A controlled before-and-after study design was carried out. Baseline data before the intervention was collected including: (1) the rate of the neonatal extravasation injuries over a period of 143 days; and (2) nurses' knowledge and practice on prevention and management of neonatal extravasation injuries. The guideline was implemented after dissemination using multi-faceted training strategies. Post-intervention data on: (1) the rate of neonatal extravasation injuries was collected for 143 days immediately after the intervention; and (2) the knowledge and practice of same group of nurses on prevention and management of neonatal extravasation injuries were surveyed six months after the intervention.

Results: In pre-intervention (control) and post-intervention (intervention) groups, 104 and 109 neonates were recruited respectively. Independent *t*-test found no significant difference in demographic and clinical characteristics between two groups ($p > 0.05$). Rate of peripheral intravenous extravasation injuries per 1,000 days in control and intervention groups were 14.04 and 2.904 respectively. Logistic regression showed adjusted odds ratio of having injuries in post-intervention period was 0.2 (95% confidence interval: 0.05-0.74; $p = 0.016$). Fifty-three nurses completed the study. Paired *t*-test showed significant difference between mean scores in nurses' knowledge and practice before-and-after intervention ($p < 0.001$).

Conclusion: Implementation of an evidence-based clinical practice guideline significantly reduced rate of peripheral intravenous extravasation injuries. Nurses' knowledge and practice on prevention and management of neonatal extravasation injuries were significantly improved.

B26 The implementation of an integrated observation chart with newborn early warning signs (NEWS) to facilitate early observation of infants at risk of clinical deterioration

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Background: Different observation charts were used in Special Care Baby Unit (SCBU), Princess Margaret Hospital (PMH), with no reference range of significant clinical signs for screening at-risk infants. These affected early recognitions of infant's clinical deterioration and hindered effective team communication, taking appropriate interventions promptly. This study aimed to develop Integrated Observation Chart with Newborn Early Warning Signs (NEWS) chart for identifying infant's clinical deterioration for taking appropriate interventions in SCBU; and to evaluate its discrimination ability in screening infant for Neonatal Intensive Care Unit (NICU) admission.

Methods: A retrospective chart review diagnostic study was conducted in SCBU, PMH. All infants transferred from SCBU to NICU for step-up care and matched controls without NICU admission from February 2015 to January 2016 were recruited. A draft of NEWS was developed by an expert panel including neonatologist and neonatal nurses. Subjects were divided into training (70%) and testing set (30%) for chart modification and testing respectively. The modified versions were discussed by the panel to develop the finalized version of NEWS.

Results: One-hundred-and-eight infants were recruited (64 males, mean age: 0.79 ± 2.96 days), 36 were transferred to NICU. NEWS includes temperature, abdominal distention, cardiovascular, respiratory, neurological and physiological status. Three color zones indicate consultation urgency, where red showing the need of immediate consultation. The sensitivity and specificity were 80.6% (95%CI: 65.0%-90.3%) and 90.3% (95%CI: 81.3%-95.2%) respectively.

Conclusion: NEWS could facilitate early identification of infant's clinical deterioration and provide guidance for nurses to initiate appropriate intervention for improving patient outcome.

B27 Electroencephalographic biofeedback attention–neuromuscular training for improving reactive balance control in children with developmental coordination disorder: A randomised controlled trial

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B28 Attitude of nurses towards people with cognitive disorder

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Background: Studies showed that the average length of stay of the patients with dementia (PwD) in acute hospitals was longer than those without the condition. In order to face this increasing care demand of dementia patients, a taskforce was established in Kowloon Central Cluster in Feb 2017 to develop a cognitive disorder care bundle for in-patient settings. A survey was conducted before the cognitive disorder care training program to collect the views from nurses on caring for PwD so as to enhance the training contents.

Methods: This study aimed (1) To explore the attitude of nurses towards caring for people with cognitive disorder; (2) to understand nurses' perception on pain management for PwD; (3) to identify the training needs of nurses to facilitate the implementation of the care bundle. Survey using The Approaches to Dementia Questionnaire (ADQ) and a questionnaire on management and treatment of pain in PwD was completed by the participants before training for baseline assessment.

Results: 79 out of 93 participants (84.95%) completed the ADQ and the survey. The results of ADQ indicated positive attitudes of the respondents towards people with cognitive disorder as reflected by an overall mean score of 66.82, which was higher than the designed median of 57. Respondents were more positive in response to the Person-centred attitudes than the Hope attitudes. Nurses who practiced in primary or community care settings were shown to have a more positive Hope attitude towards people with cognitive disorder than those in convalescent setting ($p=0.009$). One might postulate that the people with cognitive disorder being cared for in primary or community settings would be more independent compared to those who required care in convalescent setting, thus influencing how nurses perceived hope for the future of these people. The attitude of the respondents towards people with cognitive disorder was unaffected by the hospital, rank, years of experience, education level and gender. Nurses who worked in convalescent setting were more likely than those who worked in acute setting to agree that the drug treatment of pain in PwD should follow a stepwise approach ($p = 0.009$). This reflected a need to strengthen the pain management training for PwD among acute care nurses. The 4-session Cognitive Disorder Care Training was designed with multidisciplinary input to cultivate positive attitude among nurses towards PwD so that the cognitive disorders care bundle could be conducted with higher satisfaction of both staff and patients.

B29 Psychosocial and mental health profile of adolescents in six Asia Pacific regions

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Background: To identify health profile of adolescents in East and South-East Asia, a multi-country collaboration force from China, Hong Kong, Taiwan, Japan, Philippines, and Thailand was established to conduct a research on adolescents' perceived quality of life, social support and overall mental health condition in each individual countries. Outcome of this study may inform early interventions for the development of adolescent health programs in Asia.

Methods: A cross-sectional study with a total of 21,359 participants aged 8-15 were recruited in Zhengzhou (n=6,401), Hong Kong (n=3,727), Taiwan (n=1,611), Japan (n=1,928), Manila (n=4,536), and Bangkok (n=3,156). Participants completed the Pediatric Quality of Life Questionnaire, Adolescent Lifestyle Questionnaire, Rosenberg Self-Esteem Scale, Strengths and Difficulties Questionnaire, Generalized Self-efficacy Scale, Multidimensional Scale of Perceived Social Support, Depression Anxiety Stress Scale, Pediatric Daytime Sleepiness Scale, and Child Anxiety Life Interference Scale.

Results: Results of Generalized Estimating Equation showed that among the six regions, participants from China had healthiest lifestyle, highest self-esteem, fewest behavioral problems, highest self-efficacy, and least daytime sleepiness, those from Hong Kong had least social support, those in Taiwan had least mental problems, those from Japan had highest quality of life, and received most social support, those from Thailand had most mental symptoms, and those from Philippines had poor quality of life, lowest self-esteem, most behavioral problems, lower most general self-efficacy, and daytime sleepiness.

Conclusion: Several demographic characteristics are associated with quality of life and psychosocial health conditions, which are commonly observed among adolescents. Identification of these associations can inform healthcare providers in planning early interventions for adolescent health based on new evidences in overall East and South-East Asia, and individual countries. This may facilitate to achieve the United Nation's Sustainable Development Goal on promoting healthy well-being and reducing diseases among adolescents. These associations among health and socio-demographic variables suggest future research and policy making.

B30 Examining the types of goals among stroke survivors after discharge from hospitals

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Background: Setting goals is one common strategy adopted in self-management interventions to enhance stroke survivors' self-efficacy via facilitating their accomplishment of particular health-related behaviours. However, there has been limited reports on survivors' own choice of goals. This study aimed to examine the types of goals established by community-dwelling stroke survivors.

Methods: A two-arm randomised controlled trial of 128 community-dwelling stroke survivors (mean age 67.46 years, SD 11.95) was conducted. Adults who had been discharged from the hospital due to having either an ischaemic or haemorrhagic stroke were recruited. Stroke participants (n=64) who were randomly allocated to the intervention group received usual care plus a 4-week stroke self-management programme. The participants were facilitated by a trained registered nurse to establish a priority goal of recovery and related action plans during the programme. The types of goals established by the participants were recorded and tabulated.

Results: Over 90% of the participants in the intervention group established a goal related to improving physical functions such as improved range of motion or strength of the affected limb, walking gait or tolerance, or fine motor function of the affected fingers. The remaining participants established a goal related to their functional recovery or social roles such as being able to perform self-care activities with reduced assistance from carers, perform household tasks, or return to work. Some participants were more hesitant to establish a goal commonly due to insufficient knowledge about goal setting, uncertainty in future or avoidance of disappointment in inability to achieve the goal.

Conclusion: Physical function related goal remained a priority for stroke survivors during the transition from the hospital to the community. Further examination of effective evidence-based interventions to enhance survivors' adoption of the goal-setting strategy in their longer-term recovery plan is needed to better address their interrelated physical and psychosocial challenges after stroke.

B31 Addressing the supportive care needs of older adults with cancer

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Background: Older adults with cancer generally have reduced ability in tolerating cancer-related symptoms and treatment side effects that result in drastic reduction in their quality of life (QOL). This renders them to be in high need of an effective supportive care, which would help increase patients' QOL and satisfaction to the treatment they are undergoing. A better understanding of the supportive care needs (SCN) of these older cancer patients would help enhance the effectiveness of supportive care delivered to these individuals. This presentation aims to provide a general overview of our current knowledge on the SCNs among older adults with cancer, and the previously reported interventions in addressing these SCNs.

Methods: An integrative review of the literature was conducted to examine relevant research studies that reported supportive care needs among older adults with cancer, and the supportive care interventions that effectively address these needs. Review findings are presented narratively.

Results: Physical and daily living needs, psychological needs and information needs are three of the most common SCNs among older adults with cancer, while lower sexuality needs and patient support and care needs were reported among these individuals. SCNs that are not met could exacerbate distress levels among these older patients. To address their unmet SCNs, a variety of supportive care intervention types can be implemented, including such mindfulness-based strategies as meditation and yoga interventions, physical activity interventions, patient activation interventions and e-health interventions. Mindfulness-based and physical activity-based strategies are effective in addressing physical and daily living needs and psychological needs. Patient activation and e-health interventions are suitable for addressing information and psychological needs.

Conclusions: The implementation of supportive care interventions aiming to reduce stress, increase physical activity and provide information desired by patients is effective in addressing the most prevalent domains of SCNs among older adults with cancer.

B32 The effect of an evidence-based infection prevention and control program on knowledge and self-reported performance of infection control for nursing home staffs

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Background: The number of older adults in nursing homes in Korea has increased due to the rapid aging phenomena and introduction of long-term care insurance system in 2008. It has become more important to improve the quality of care and health outcomes of nursing home residents. However, lack of knowledge of staffs, especially in terms of infection control, hinders the quality of nursing homes. Therefore, this study aimed to verify the effectiveness of the evidence-based infection prevention and control (IPC) program for nursing home staffs.

Methods: This study was a quasi-experimental design with a one-group pre-test post-test survey. Participants were nurses, certified caregivers, social worker, and physical therapist in South Korea (baseline mean age and career = 52.2 yrs.; 76.4 yrs.). All participants provided consent prior to participating. The evidence-based IPC program was implemented from January to December 2018. The IPC program consisted of multimodal strategies including evidence-based guidelines (ENIK), education, monitoring and feedback, reminder, provision of products, rounding nurse, and champion. Knowledge and performance of infection control were evaluated before and after intervention using self-administered questionnaires. Data were analyzed using descriptive statistics and independent t-test.

Results: After the IPC program, participants showed significant improvements in the level of knowledge ($p = .003$) and performance ($p < .001$) of infection control. Of the 7 sub-concepts of knowledge, score of standard precaution, respiratory etiquette and resident placement were significantly increased. Regarding to performance, all five aspects of infection control performance—hand hygiene, personal hygiene, urinary bag and respiratory care and environmental control—have been improved.

Conclusion: The results suggest that the evidence-based IPC program could provide for nursing home staffs to improve level of knowledge and performance related to infection control.

B33 Causes and control measures of outbreaks in long-term care facilities: A systematic review

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Background: Outbreaks in long-term care facilities (LTCFs) can affect residents, healthcare workers, and visitors. It leads to severe adverse outcomes in residents in LTCFs. The unique nature of LTCFs such as grouped-living promotes the spread of communicable diseases among the population. Outbreak control measures should be rapidly initiated to prevent further transmission and ensure minimum impact. The purpose of this systematic review was to identify the epidemiology of outbreaks and what control measures were implemented in LTCFs for older adults.

Methods: We searched English articles published from 2007 to 2016 that reported outbreaks in LTCFs and examined risk factors for affected cases using case-control analysis from electronic databases (PubMed, EMBASE, CINAHL, and Cochrane CENTRAL). Studies were selected by reviewing the title, abstract, and full-text. Two reviewers extracted data such as outbreak pathogen, probable causes, and control measures. Quality assessment was conducted by two reviewers using the risk-of-bias assessment tool for non-randomized studies (RoBANS).

Results: Seventeen studies met the eligible criteria. The most common diseases of reported outbreaks were gastrointestinal infections (n=6) and blood-borne diseases (n=4). Pathogens of the outbreaks in LTCFs were hepatitis B virus (n=4), multi-drug resistant organism (n=2), rotavirus (n=2), group A Streptococcus (n=2), norovirus (n=2), and the others (n=6). The probable causes of outbreaks were reusable equipment, sharing device, inappropriate disinfection and person-to-person transmission in most studies. Four studies applied prophylaxis for residents and healthcare workers who were exposed to prevent them from getting sick. The most used measures were interventions for environment and equipment such as enhanced cleaning, disinfection, and improving the availability of products.

Conclusion: Outbreaks of blood-borne disease and gastroenteritis frequently occur in LTCFs with poor resources. This review may suggest that violations of the basic infection control principles and suboptimal standard precaution lead to outbreaks of infection in LTCFs.

B34 Psychometric properties of instruments assessing human papillomavirus vaccination acceptance, knowledge, and attitudes and beliefs

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Background: Epidemiological studies consistently reported high efficacy of the Human papillomavirus (HPV) vaccines at preventing HPV infection and the associated diseases. Previous studies examining the influencing factors for the low HPV vaccination uptake found parents' knowledge and attitudes towards HPV diseases and the HPV vaccine played the most crucial role in parents' and adolescent females' decision to receive the vaccination. Given the low HPV vaccination coverage among adolescent females, it is crucial to develop effective interventions to assist parents with decision-making to mitigate the risks of HPV infection-associated illness and complications. Numerous instruments have been developed to assess parents' acceptance of HPV vaccination, parents' and adolescents' attitudes and beliefs regarding HPV vaccination, and parents' and adolescents' knowledge about HPV and HPV vaccine. However, no Chinese version of these instruments is available to inform the development and evaluation of measures to improve vaccine acceptance and uptake among adolescents.

Methods and Results: The Carolina HPV Immunisation Attitudes and Beliefs Scale (CHIAS), modified CHIAS, HPV and Vaccination Knowledge Scales, and Precaution Adoption Process Model Stages Questionnaire were translated into Chinese and blind back-translated by independent bilingual nurses. The back-translated version was then compared with the source language version to identify any inconsistency and discrepancy. The translated version was further reviewed by a group of eight nurses and they were asked to rate the appropriateness of the translation on a 4-point Likert scale. The appropriateness of the translation was re-examined and amendments were made to items rated as inappropriate to improve clarity.

Discussion: The translated instruments will be validated with a group of 375 female secondary school students and 375 parents. Exploratory factor analysis will be used to examine the factor structures of the translated instruments and internal consistency will be calculated to determine the psychometric properties of these instruments.

B35 Effects of smartphone based videoconference on nursing home elderly's depression, loneliness and quality of life

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Background: Smartphones optimize the opportunities for interactions between residents and their families although, the effectiveness of this medium in enhancing elderly people's emotional status and quality of life remains unevaluated. The purpose of this quasi-experimental study was to evaluate the effectiveness of a smartphone-based videoconference program on nursing home residents' loneliness, depressive symptoms and quality of life.

Methods: The interventional group interacted with their family members using a smartphone and "LINE" application for 6 months. Residents were divided into interventional ($n=32$) and control ($n=30$) groups in seven nursing homes. Data were collected in face-to face interviews at four time points (baseline, 1 month, 3 months and 6 months after baseline). Data were analysed using the generalized estimating equation.

Results: After the intervention participants in the interventional group had significantly lower mean change in loneliness scores at 1 months ($-3.41, p<0.001$), 3 months ($-5.96, p<0.001$), and 6 months ($-7.50, p<0.001$); physical role ($\beta=36.49, p=0.01$), vitality ($\beta=13.11, p<0.001$) and pain score ($\beta=16.71, p=0.01$) at 6 months, respectively compared to baseline than those in the control group. The changes in mean depression score in the interventional group were not significantly different from those in the control group.

Conclusions: Smartphone-based videoconferencing effectively improved residents' loneliness, and long term effects on physiological health, vitality and pain. However, this smartphone-based communication had no significant effect on depressive symptoms. Future investigation might evaluate the effectiveness of different media based technologies in nursing home practice as well as their effectiveness within and between different age cohorts.

B36 Factors associated to provide sexual health care of nursing students in general hospital: An analytical cross-sectional study

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Background: The study aimed to examine the factors that influence the ability of sexual health nursing for caring patients in general hospital of nursing students.

Methods: This study relied on a cross-sectional analysis of data collected from nursing schools in Northern Taiwan in which 428 participants were recruited in the study. Data was gathered using a self-administered questionnaire which collected information on sociodemographic characteristics sexual self-concept, sexual health nursing care knowledge and skills, after which descriptive and inferential analyses were carried out.

Results: The results indicated that the total average score for sexual health care knowledge was 46.30(SD=5.1), with the average correct answer rate being 82%. This finding indicated that the nursing students possessed a moderate knowledge of sexual health nursing. Several variables (including whether the participant had executed sexual health care work, whether the participant had attended sexuality-related courses, the participant's sexual distress experiences, the participant's sexual self-concept, relating to sexual health nursing knowledge and experience level with sexual health care work) were able to effectively explain 66.3% of the variation in sexual health care proficiency ($F=140.80, p<.0001$), and work experience related to sexual health nursing ($\beta=.774, p<.0001$) was found to have the strongest influence on sexual health care proficiency.

Conclusion: This study showed that nursing students who perform sexual health care work need to participate and engage in practical care and accumulate experience, so as to develop their sexual health care competencies and establish a positive care attitude. Through a teaching strategy that incorporates sex-related courses and practical clinical learning, it should be possible to improve the ability of nurses to provide sexual health care and increase the overall quality of nursing care for patients.

B37 Development of a theory-based differentiated instruction model for evidence-based nursing course

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Background: Evidence-based nursing (EBN) improves care quality and patient safety. However, students often have difficulties and feel frustrated in learning research, let alone integrating and applying study results in practice. This ongoing study aims to design a theory-based Differentiated Instruction Model for EBN course and test its effectiveness on students' learning outcomes.

Methods: This is a preliminary analysis of a large longitudinal study. Participants are two-year junior college nursing students. Before designing the course, we interview students who had taken EBN course to understand their learning experience and suggestions to the course design. Students who plan to take the EBN course are interviewed to understand their expectations and learning needs. We constitute a faculty team and hold two-to-three-hour meeting routinely to discuss course curriculum, class activities, teaching materials and teaching strategies. Findings from students' interviews are discussed in meetings. Students' class engagement, value of teams, learning style and EBN learning attitude are measured using validated scales.

Results: The model includes in-class and out-of-class activities. Considering learning behaviors of the Digital Generation students, we provide lecture videos, online references and non-electronic materials before class begins. Students choose their preferred way to learn and apply knowledge learned in pre-class materials in class discussion. In each class, PowerPoint slides are used for lectures and colored working sheets with graphs are used for group discussions. Student outcomes are evaluated with group EBN project, final exam and class participation. Final exam contains only open-ended questions that students have to be familiar with their project to answer. Of 100 students, most of them preferred to learn in group and with auditory materials, activities and applied practices.

Conclusion: Teaching strategies based on students' learning style may promote students' learning interests. More studies are needed to test the developed model on different level of students or nurses.

B38 A literature review to evaluate the significance of enhancing genomic education among nurses in Hong Kong

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Note: The authors decided to withdraw their abstract for presentation.

B39 The effectiveness of self-management programme interventions in biomedical, psychosocial and behavioural outcomes in individuals with chronic kidney disease: A literature review

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Background: Self-management is crucial for individuals with chronic diseases to achieve better physical and mental well-being, and health related quality of life (HRQoL). Numerous self-management programmes have been proposed for individuals with chronic kidney disease (CKD). This review aimed to synthesize and present best available evidence on the effectiveness of self-management programmes in individuals with CKD.

Methods: Literature review of interventional and systematic reviews. Three English electronic databases were searched from their inceptions to March 2019. Studies investigating the effectiveness of various self-management programmes among adults with CKD were reviewed. Studies were excluded if they did not focus on participants' CKD and CKD-related outcomes. One reviewer independently selected studies according to pre-specified inclusion and exclusion criteria, extracted details of the included studies, and appraised the extracted data critically. Reviewer's supervisor was approached to double-check all included studies with reviewer. Narrative summaries were used.

Results: Six studies were included. Four of the included studies were interventional studies and two were systematic reviews. The critical analysis of the three studies on educational interventions showed significant decrease in blood pressure, and improvements in HRQoL, psychosocial function, CKD knowledge and self-efficacy. Two studies on self-management interventions demonstrated beneficial effects on increasing CKD knowledge and improved HRQoL but had inconsistencies on its effect on adherence to self-care management. One study on psychosocial interventions showed significant improvements in self-care ability and self-efficacy, and the total score of depression had significantly decreased. **Conclusions** on the effects of psychosocial interventions on depressive symptoms cannot be drawn as only one study measured the outcome.

Conclusion: Educational, self-management and psychosocial interventions are potentially effective options for individuals with CKD to improve biomedical, psychosocial and behavioural well-being. Further well-designed studies are needed to explore the optimal intervention design and to investigate the effectiveness of other self-management interventions.

B40 Effects of a community-based, nurse-led self-management education programme for colorectal cancer patients with stoma: A systematic review

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Background: Stoma, either permanent or temporary, deployed body image and the loss of normal bodily functions could bring adverse effects to a patient's physical, psychological and social health. Attaining self-efficacy is therefore critical in helping patients accept their physical changes and improve quality of life on their path to recovery. The advancement of surgical operations, patients tend to have shorter hospital stays. This results in shorter time for patients to receive stoma education and hands-on training of self-management techniques during hospitalization. Stoma education by healthcare professionals delivered at community level comes particularly important. Patients can acquire daily self-care skills, receive emotional support from peers and family support on the way. A well-designed education programme emphasizing on self-efficacy is thus highly recommended.

Methods: A systematic review was performed. Full texts and abstracts were examined through the advanced search of MeSH terms of stoma, colorectal cancer, patient education; and outcomes such as self-efficacy, quality of life and ostomy adjustment from six electronic databases including Cochrane Library, Embase, Medline, PsycINFO, ProQuest and PubMed between 1990 and 2019 (both years inclusive), in English. Each literature was fully reviewed and appraised by using the Effective Public Health Practice Project (EPHPP) quality assessment tool and Critical Appraisal System Programme (CASP) checklist.

Results: A total of nine articles consisting of seven randomized control trials (RCT) and two systematic reviews (SR) out of 394 articles met the inclusion criteria of the study. Weak-to-moderate ratings were scored for the selected articles. However, different intensity, education intervention and delivery method made it difficult to compare results across the selected studies.

Conclusion: Evidence suggests that a nurse-led, small group self-management stoma education programme with peer sharing and discussion is beneficial to colorectal cancer survivors in the community. Further study of high quality RCT is recommended to an evidenced-based self-management education programme that can improve patient care and outcomes.

B41 A nurse-led caregiver education program in stroke unit

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Background: Stroke is a major cause of disability in adults. Almost two-third of stroke survivors have residual neurological deficits after a stroke. Caregivers play a crucial role in the rehabilitation journey of stroke survivors. Yet, they are only passively involved in treatment and rehabilitation planning for stroke patients. Caregiving to stroke survivors can be challenging. Caregiving burden can be up to 50% among caregivers. Caregivers are at risk of anxiety and depression and it in turn reduces their quality of life. Addressing caregiver's need is of paramount importance as it further improves health outcomes of stroke survivors. Providing individualized carer training can reduce caregiving burden and improve psychosocial outcomes in both stroke survivors and caregivers. This study aimed to evaluate the effectiveness of an individualized carer training on caregiver burden, a nurse-led caregiver education program targeting patients discharging home was implemented in acute stroke unit.

Methods: This program aimed at developing a tailor-made and comprehensive caregiver training program with standardized education materials and carer assessment tools. A caregiver education kit with information on stroke and bedside nursing care for stroke survivors was formulated with nurse-led training sessions. Caregiving performances were evaluated with standardized return demonstration forms. Program evaluation in terms of carer satisfaction were performed via phone follow-ups or satisfaction surveys if caregivers refused phone follow-ups.

Results and conclusion: Eighteen pairs of stroke survivors and caregivers were recruited. Of these, 100% of caregivers achieved pass in all return demonstration items after the training. 77.8% of carers required one training session while 22.2% required two sessions. 50% of caregivers agreed for phone follow-up and others completed satisfaction survey. All caregivers agreed that they felt supported and became confident in taking care of stroke survivors. Satisfaction survey was also performed among nursing staff. All staff agreed that this program provided standardized and individualized training for caregivers. It promoted consistency in information delivery and carer assessment.

B42 Effect of exercise and psychosocial interventions on body image of breast cancer survivors: A literature review

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Background: This review aims to identify, summarize and critically appraise literature investigating the effect of exercise and psychosocial interventions on the body image of breast cancer survivors.

Methods: A comprehensive search was conducted to identify relevant articles from MEDLINE, PsycINFO, CINAHL and British Nursing Index. Inclusion criteria for the review were that the studies: (1) evaluate the effects of exercise or psychosocial intervention in breast cancer survivors, (2) written in the English Language and (3) were published from 2009 to 2019. Those that are focusing on health-related quality of life (HQoL) or solely on the change of QoL will be excluded.

Results: A total of nine studies were included in the review. In general, breast cancer survivors who received exercise or psychosocial intervention had improvement in body image, which leads to an enhanced quality of life. Among the two interventions, exercise seems to demonstrate more promising and significant effect on body image as it brings positive impacts on mental and physical well-being. Breast cancer survivors indicated that they prefer to have a professional and knowledgeable mentor to guide as well as to empower them throughout the intervention. As for psychosocial intervention, behavioral and cognitive behavioral therapies have been proven to be helpful for improving body image, and reduce patients' depression and anxiety, which then lead to an improvement in quality of life.

Conclusions: Breast cancer survivors generally reported to have poor body image. Exercise and psychosocial interventions demonstrate beneficial effects on body image, resulting in a better quality of life. Appropriate nursing interventions and therapies should be executed to fulfill the needs. Future studies in this area should also be conducted.

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ISBN 978-988-7-9566-4-8

This material/event is funded by the Professional Services Advancement Support Scheme of the Government of the Hong Kong Special Administrative Region.

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