



# International Social Pharmacy Workshop

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## P100

### Perception of Covid-19 vaccine in Malaysia: A social media qualitative research

**Dr Jim Chai<sup>1</sup>**

<sup>1</sup>University of Nottingham, Semenyih, Malaysia

**Introduction.** Social media platforms such as Facebook provide a data-rich opportunity to conduct qualitative research looking into social phenomenon. About 86 percent of the Malaysian population are active social media users, and Facebook is the most dominant social media player in the social media landscape. Many active Facebook users frequently create or commenting on posts, which these user-generated textual data can be used as source for qualitative data. Analysis of the comments related to COVID-19 vaccine on Facebook during the COVID-19 pandemic could provide valuable insight into the Malaysian opinions and beliefs on the vaccination programme. In hope to develop theory to identify the barriers and facilitators for COVID-19 vaccine.

**Aims.** To explore Malaysian public perception towards COVID-19 vaccine and gain an understanding of public sentiment toward vaccination programme in Malaysia.

**Methods.** This qualitative research collecting data derives from public Facebook pages of popular news publishers in Malaysia. Relational themes contain in Facebook posts and associated comments were identified and collected using manual extraction. Extracted comments undergone 2 degree of coding: primary coding into facilitator, barrier, or neutral categories. This data further being analysed using content analysis approach to identify common themes. Constant comparison technique was employed during this process to generate common themes.

**Results.** Preliminary data suggested the main barrier was how the information about Covid-19 vaccine being broadcast to the nation. Hope, is the main facilitators for most people to get vaccinated which many Facebook users hope life will go back to normal as soon as possible.

**Discussion.** Fake news and unreliable sources are spreading on social media especially hindered people toward Covid-19 vaccination. Timely, public-friendly information release from one single, trustworth government platform could have been removed the worries and concern from the public.

1. Franz D, Marsh HE, Chen JI, Teo AR. Using facebook for qualitative research: A brief primer. *J Med Internet Res.* 2019;21(8).
2. THE SECRETARIAT OF THE SPECIAL COMMITTEE FOR ENSURING ACCESS TO COVID-19 VACCINE SUPPLY. COVID-19 PROGRAMME. THE SECRETARIAT OF THE SPECIAL COMMITTEE FOR ENSURING ACCESS TO COVID-19 VACCINE SUPPLY; 2021.

## P101

### The educational requirements to support community pharmacy staff to deliver minor ailment services - A modified Delphi study

**Dr Mariyam Aly<sup>1</sup>**, Dr Carl Schneider<sup>2</sup>, Assoc Prof Maria Sukkar<sup>1</sup>, Dr Cherie Lucas

<sup>1</sup>University of Technology Sydney, Sydney, Australia, <sup>2</sup>University of Sydney, Australia

**Introduction.** Minor ailment services (MASs) are increasingly being integrated into healthcare policies to improve patient care. These services encourage people to treat minor ailment conditions using a structured protocol-based approach. MAS delivery may involve many different community pharmacy staff, including pharmacists and medicines counter assistants (MCAs). However, there is limited information regarding the education and training processes.

**Aims.** To determine consensus amongst stakeholders regarding the educational needs of community pharmacy staff.

**Methods.** A modified three round Delphi process was conducted to obtain the views of stakeholders on MAS education and training for community pharmacy staff. One hundred and thirty-three diverse MAS stakeholders across Australia were invited to participate; including community pharmacists, intern pharmacists, MCAs, academics, General Medical Practitioners (GPs) and individuals affiliated with professional pharmacy organisations. Expert panellists completed two online questionnaires ranking their opinions using the 5-point Likert-type scale. A subsequent videoconference was conducted to present the results to expert panellists and discuss items that did not achieve consensus in the previous rounds. Consensus was defined as a  $\geq 80\%$  panel agreement.

**Results.** Representation from all stakeholders was included in all three rounds (including community pharmacists, intern pharmacists, MCAs, academics, GPs and professional organisations). Forty participants completed round 1, thirty participants completed round 2 and thirteen participants completed round 3. Consensus was achieved regarding the activities that require training, the role of pharmacists and non-professional staff in MAS delivery and general learning and assessment strategies for all community pharmacy staff.

**Discussion.** All stakeholders highlighted that community pharmacists play a central role in MAS delivery with non-professional staff having a defined scope of practice in MAS delivery. Non-professional staff are critical in supporting pharmacists in engaging patients to MASs and conducting administrative/clerical aspects. Ongoing training is beneficial to maintain individual expertise and account for changes in legal frameworks, regulatory changes and standards. It offers individuals an opportunity to enhance their skills according to their learning needs and improve service delivery. Individual preference for training media varied, however a majority of stakeholders indicated a preference for interactive discussion and workshop-based learning activities to enhance their professional education in a group environment by receiving immediate feedback, peer coaching and learning opportunities.

## P102

### How to validate questionnaires for pharmacy practice? Preferred method with the 13-STARS as an illustrative example

BSc Sabine Caloz<sup>1</sup>, Prof Laura J Sahn<sup>2</sup>, lic. phil. Michael Mittag<sup>1</sup>, Prof Samuel Allemann<sup>1</sup>, [Dr Isabelle Arnet<sup>1</sup>](#)

<sup>1</sup>University of Basel, Switzerland, <sup>2</sup>School of Pharmacy, University College Cork, Ireland

**Introduction.** Many questionnaires for pharmacy practice have been published in the scientific literature. However, the use of differing validation methods can negatively impact upon the reliable use of the instruments. The 13-STARS (13-items Screening Tool for Adherence to medicineS) was developed as self-report questionnaire to detect patients with potential non-adherent behavior. It aims to be easy to use by patients, easy to interpret by pharmacists and is currently being validated.

**Aims.** We aimed (i) to define the main steps needed to validate questionnaires for pharmacy practice; (ii) to determine the corresponding statistical analysis methods and (iii) to adopt this validation method for the 13-STARS.

**Methods.** Tests used to validate questionnaires for pharmacy practice were retrieved from published literature through a pragmatic search. Corresponding statistical analyses were reviewed by a statistician.

**Results.** Most questionnaires use variables that are not readily available through traditional sources of information in pharmacies. They typically investigate medication adherence; attitudes and beliefs; quality of life, and satisfaction. We identified seven statistical tests used to check validity and three for reliability. Validity of the 13-STARS will be obtained with patients taking three or more medicines for at least 3 months, who will be recruited in community pharmacists. For construct validity, two validated items asking the patient for reported adherence in the past 2 weeks will be added to the questionnaire. Content validity will be obtained from the pharmacists who will evaluate relevance and clarity of the items.

**Discussion.** In addition to applying the tests for validity and reliability, two choices must be made. First, either to use a multiple regression approach or a series of bivariate correlations. We opted for bivariate correlations because the results are independent of other variables and thus, give a clearer picture. Second, how to avoid the risk for occasional false significances when applying multiple computations on a relatively small dataset. Three options exist: a) include a large number of subjects (literature advises 10 times the number of variables measured); b) measure only few variables; or c) interpret the results prudently. We opted for prudent interpretation because a large sample size is uneconomical when the construct of the questionnaire is unambiguous and a clear pattern of the results can be expected. Further, occasional erroneous results should not affect the outcome as a whole.

## P103

### Definition of services provided in community pharmacies - preliminary consensus from international experts

[Selina Barbat<sup>1</sup>](#), Pascal C. Baumgartner<sup>1</sup>, Prof em. Kurt E. Hersberger<sup>1</sup>, Prof Samuel Allemann<sup>1</sup>, [Dr Isabelle Arnet<sup>1</sup>](#)

<sup>1</sup>Pharmaceutical Care Research Group, University of Basel, Klingelbergstrasse 50, Switzerland

**Introduction.** Community pharmacists are no longer only dispensing medicines but have been moving towards more patient-centered activities. This new role in patient health needs new professional services in all care settings. There are various terms in literature from very detailed “cognitive pharmacist-led services” to broader “medication management services”. With a unique definition for “services” provided in the pharmacy, the evolution of the profession could be monitored and the comparison between countries should be facilitated.

**Aim.** The goal is to establish an internationally recognized definition for “services” provided in community pharmacies.

**Methods.** A two-step procedure was selected: (1) Drafts of a definition were generated during a world-café like workshop with international participants at the 8<sup>th</sup> Pharmaceutical Care Network Europe (PCNE) Symposium 2022 in Lisbon (Portugal); (2) a poll was created and sent to 164 PCNE members asking them to select the preferred definition and term.

**Results.** Six definitions and three terms were proposed by the 11 workshop participants for the poll. By March 18, 2022, a total of 90 (55%) pharmacists answered the poll. The participants preferred the definition: “Any standardized and structured services provided by pharmacists to individuals (e.g. patients or health professionals) in order to optimize health” (51.1%) and the term: “Pharmacist-led services” (53.3%). In addition, 24 comments were given with various suggestions for improvement.

**Discussion.** We were able to enrol pharmacists from Europe, but also other countries such as Australia. Specific terms and definitions exist already in many countries. This might explain the moderate consensus. A further poll will be started that will take the comments provided into consideration.

## P104

### Exploring Muslims' health-related behaviours in Portugal: any impact on quotidian community pharmacy practice?

Mrs Aisha Omar<sup>1</sup>, Mrs Grishma Dramce<sup>1</sup>, Dr Dragana Latic<sup>2</sup>, **Prof Afonso Cavaco<sup>1</sup>**

<sup>1</sup>Faculty of Pharmacy, University Of Lisbon, Lisboa, Portugal, <sup>2</sup>Faculty of Pharmacy, University of Belgrade, Belgrade, Serbia

**Introduction.** Muslims are a growing community in European countries. General health habits, including therapy-related behaviours, have been described though implications to pharmacy practice might vary with the local dominant culture and setting [1].

**Aims.** To explore Muslims' overall health and medication-related practices and implications for culturally competent community pharmacy practice in Portugal.

**Methods.** A descriptive cross-sectional survey was administered to a convenient sample of 100 participants at Lisbon Central Mosque, Portugal. Demographics, dietary, Traditional Arabic and Islamic Medicine (TAIM) and religious practices were examined, including health conditions and conventional biomedical treatments.

**Results.** Participants' reported ailments (26%) were aligned with prevalent conditions in the general population. Ill-health participants were significantly associated with TAIM and Islamic dictates ( $p < 0.05$ ), particularly Zam-Zam water and milk thistle usage.

**Discussion.** Participants' orientation to dietary options and Qur'an restrictions were confirmed regarding forbidden substances present in medications, raising issues on therapy adherence for some oral dosage forms [2]. TAIM and religious beliefs supplement illness recovery and health improvement instead of replacing conventional healthcare, suggesting the integration of a religious minority within the dominant culture. Anyhow, Portuguese community pharmacists should not neglect religious specificities if seamless care is to be delivered, enhancing professionals' skills with multicultural patients.

1. Dix S. Religious plurality within a catholic tradition: A study of the Portuguese capital, Lisbon, and a brief comparison with Mainland Portugal. *Religion*. 2009;39(2):182–193.

2. Ali E, Sultana S, Hamid SBA, Hossain M, Yehya WA, Kader A, et al. Gelatin controversies in food, pharmaceuticals, and personal care products: Authentication methods, current status, and future challenges. *Crit Rev Food Sci Nutr*. 2018;58(9):1495–1511.

## P105

### Perioperative bridging anticoagulation in patients receiving oral anticoagulants (OACs) undergoing elective surgery/procedures at King Chulalongkorn Memorial Hospital (KCMH), Thailand

**Miss Tasigan Chaemchoi<sup>1</sup>**, Mr Sarawut Siwamogsatham<sup>2</sup>

<sup>1</sup>Department of Pharmacy, King Chulalongkorn Memorial Hospital, Bangkok, Thailand, <sup>2</sup>Chula Clinical Research Center, Faculty of medicine, Chulalongkorn university, Bangkok, Thailand

**Introduction.** Recommendations on perioperative bridging (PB) by substitution of OACs with heparin before and after surgery/procedures are vague.

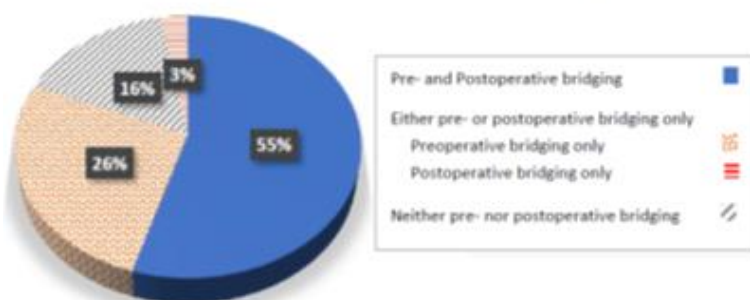
**Aims.** To study patterns of PB during OACs interruption, perioperative systemic thromboembolic events and bleeding complications in real world practice.

**Methods.** We retrospectively reviewed KCMH medical record of patients receiving OACs undergoing elective surgery/procedures during January 2017 – July 2019. Patterns of PB, incidence of perioperative thromboembolism within index admissions and perioperative bleeding complications require medical attention were assessed. Univariate analysis was used to analyse associated factors with outcomes.

**Results.** Total 106 eligible patients receiving OACs (92% warfarin and 8% non-vitamin K antagonist oral anticoagulants; NOACs) as indications of atrial fibrillation 52% (mean CHA<sub>2</sub>DS<sub>2</sub>-Vasc score =  $4.5 \pm 2.1$ ), prosthetic heart valve 16%, history of systemic thromboembolism 15% and others, underwent elective surgery/procedures were enrolled. During OACs interruption, therapeutic dose low molecular weight heparin (LMWH) e.g. enoxaparin 1 mg/kg bid or prophylactic dose LMWH e.g. enoxaparin  $\leq 40$  mg bid or unfractionated heparin (UFH) was an option for bridging. Patterns of bridging include 1) Both pre- and postoperative intervals in 58 patients (55%) 2) Either pre- or postoperative interval in 31 patients (29%) and 3) Neither pre- nor postoperative interval in 17 patients (16%). Among all patients receiving NOACs, heparin bridging was omitted. Of whom received both pre- and postoperative bridging, bridging patterns consist of therapeutic dose LMWH, prophylactic dose LMWH, UFH and others in 48 patients (83%), 5 patients (9%), 2 patients (3%) and 3 patients (5%), respectively. No thromboembolism was reported. Bleeding complications occurred by 10% associated with postoperative bridging compared with no postoperative bridging (16% vs. 2%,  $P = 0.023$ ).

**Discussion.** Variation in patterns of PB during OACs interruption was observed in practice. Although, thromboembolism did not occur, heparin bridging appeared to increase risk of bleeding. Standardized bridging protocol is warranted.

Patterns of perioperative bridging





## P106

### Severe hypoglycemia-related emergency department visit in type 2 diabetes patients treated with insulin at King Chulalongkorn Memorial Hospital, Thailand

Ms Supparat Chanprasert<sup>1</sup>, Ms Bussaba Trakarnsanga<sup>1</sup>, Dr Thiti Snaboon<sup>2</sup>

<sup>1</sup>Department of Pharmacy, King Chulalongkorn Memorial Hospital, Bangkok, Thailand, <sup>2</sup>Department of Medicine, Faculty of Medicine, Chulalongkorn university, Bangkok, Thailand

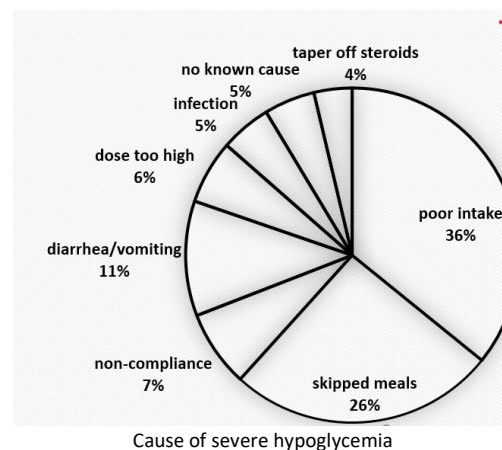
**Introduction.** Severe hypoglycemia in diabetes patients is associated with higher mortality. However, the incidence and causes of severe hypoglycemia-related emergency department (ED) visits in Type 2 diabetes Thai patients treated with insulin are limited.

**Method.** All of type 2 diabetes patients treated with insulin who had at least one occurrence of severe hypoglycemia-related ED visits defined as hypoglycemia treated with 50% dextrose solution at ED during 1 January – 31 December 2021 were included. Patient characteristics and causes of severe hypoglycemia were retrospectively reviewed from hospital electronic medical record.

**Results.** A total of 62 severe hypoglycemia patient visits were treated at ED (median age 75 [65,80], 50% female). The severe hypoglycemia rate was 14.8 per 1,000 patient-year. Of those, short- and ultrashort-acting, intermediate-acting, long- and ultralong-acting and premixed insulin were used in 7.5%, 3%, 12% and 77.5% of the patients, respectively. Causes of severe hypoglycemia were poor oral intake 36%, skipping a meal 26%, diarrhea/vomiting 11%, noncompliance 7%, dose of insulin too high 6%, infection 5%, taper dose of steroids 4% and unknown 5%.

**Discussion.** The incidence rate of severe hypoglycemia-related ED visit in type 2 diabetes patients treated with insulin was 14.8 per 1,000 patient-year.

Continuation on the same dose of insulin during the sick days (poor intake, diarrhea/vomiting, infection) accounted for at least 50% of severe hypoglycemia occurrences. Therefore, patient/care giver counselling to monitor blood sugar more frequently and carefully adjust insulin dose as healthcare provider instructed during “the sick days” should avoid severe hypoglycemia associated with insulin.



## P107

### Conversations about cannabis: the supply process

Ms Katherine Cheng, Dr Joanna Harnett, Dr Sharon Davis, Prof Lorraine Smith

<sup>1</sup>School of Pharmacy, Faculty of Medicine and Health, The University of Sydney, Camperdown, Australia

**Introduction.** The supply of medicinal cannabis (MC) is a topic of rising global interest for the management of a range of health conditions. Australia was one of the first countries in the world to legislate the supply of MC as a pharmaceutical product in 2016. Further in 2021, easier patient access to MC through pharmacies was enabled by the Therapeutics Goods Administration’s scheduling change to low-dose cannabidiol. However, very little is known regarding the perspectives of those involved in MC supply who are affected by these legislative changes.

**Aim.** To investigate the perspectives of key stakeholders in the supply of MC to Australian patients.

**Methods.** Purposive and snowball sampling were used to recruit MC stakeholders involved in the supply chain from plant cultivation to dispensing. In-depth semi-structured interviews were conducted, followed by a single focus group to critically appraise the interview findings. All sessions were conducted via Zoom or telephone, audio-recorded and transcribed. Findings were coded then mapped into themes.

**Results.** Thirteen participants were interviewed and the focus group comprised eight participants. Two major themes emerged from the data analysis: (1) The supply chain pathway is complex and time-consuming; (2) Supply lines adversely affect healthcare professional practice. These findings were complemented by six recommendations emerging from the focus group discussions to improve current policy and practice.

**Discussion.** Australia’s MC supply process is a fragmented, complex and underdeveloped area. Domestic production and registration of MC products are constrained by time-consuming protocols. With the supply of unregistered MC products from overseas, there is ambivalence amongst healthcare professionals towards authorizing the supply, as well as uncertainty regarding products’ safety and efficacy, and increased processes for prescribing and dispensing. These insights may assist other jurisdictions in developing policy around MC supply.

## P108

### Online teaching smoking cessation to the fourth-year pharmacy students during the COVID-19 pandemic

Dr Dujrudee Chinwong<sup>1</sup>, **Surarong Chinwong<sup>1</sup>**

<sup>1</sup>Faculty of Pharmacy, Chiang Mai University, Chiang Mai, Thailand

**Introduction.** The COVID-19 pandemic has influenced the move to online education including the smoking cessation course provided to pharmacy students.

**Aims.** The purpose of this study was to report on a virtual online course on teaching smoking cessation to the fourth-year pharmacy students during the COVID-19 pandemic.

**Method.** Participants were 122 fourth-year pharmacy students. The smoking cessation course utilized three strategies: self-learning including talking with smokers, lecture (3-hour), and practice (3-hour). All classroom-activities were done via the zoom application. The lecture covered smoking cessation counselling technique including behaviour and drugs therapy. The practice session included the following: viewing a video demonstrating how to quit smoking by a healthcare provider, role play of smoking cessation with friends. Then students were divided into three groups and assigned to three stations and rotated all stations, including 1 – having an experience to chew a nicotine gum on their own, 2 – group counselling for smoking cessation with a roleplay smoker, and 3 – sharing with friends their experience talking to a smoker using the 5 A's approach. Finally, all smoking cessation activities were discussed. Students' satisfaction was measured using a questionnaire with a Likert scale ranging from 1 to 5 (1=least satisfaction to 5=most satisfaction).

**Results.** 106 students (87%) responded to the questionnaire. Students expressed high satisfaction with the lecture and practice sections, scoring 4.7±0.5 (from 5.0 score) for the lecture section, 4.6±0.5 for lecture time, 3.9±0.9 for the video section, 4.6±0.6 for a roleplay with friends, 4.9±0.3 for the nicotine gum experience, 4.7±.5 for the roleplay with a simulation smoker, and 4.7 ± 0.5 for sharing experience with friends. The total level of satisfaction with smoking cessation practices was 4.7 ± 0.4.

**Discussion.** This is the first time of the online smoking cessation education offered to pharmacy students, and the students were very satisfied.

## P109

### Smartphone behaviors and addiction among pharmacy students in northern Thailand

**Dr Dujrudee Chinwong**, Natthachai Jaiwong<sup>1</sup>, Surarong Chinwong<sup>1</sup>, Pattarapan Sukwuttichai<sup>1</sup>, Nuntaporn Klinjun<sup>2</sup>

<sup>1</sup>Faculty of Pharmacy, Chiang Mai University, Chiang Mai, Thailand, <sup>2</sup>School of Nursing, Walailak University, Thailand

**Introduction.** In Thailand, smartphone addiction is a problem among university students.

**Aims.** This study aimed to determine smartphone behaviors and smartphone addiction among pharmacy students enrolled in a university in northern Thailand.

**Methods.** The study was a cross-sectional study. The data were gathered via an online questionnaire that asked for demographic information, smartphone behaviors, and assessed smartphone addiction using the Thai Smartphone Addiction Scale-Short Version (THAI-SAS-SV). The THAI-SAS-SV measures smartphone addiction by asking ten questions on a Likert scale ranging from 1 to 6 (strongly disagree to strongly agree). The term "smartphone" was used in this study to refer to both smartphones and tablets. Between January and February 2021, an online questionnaire was distributed to pharmacy students.

**Results.** The analysis included 281 pharmacy students, 70% of whom were female, with a mean age of 21.1 ± 2.0 years, 16 percent from year 1, 27 percent from year 2, 11 percent from year 3, 27 percent from year 4, and 19 percent from year 5. Half of the students reported experiencing insomnia, while 40% reported experiencing anxiety. The top three reasons for using smartphone were for social networking (e.g., Facebook, Instagram) (93%), online education (90%), and entertainment (e.g., YouTube) (90%). From Monday to Friday, they spent an average of 7.5 ± 3.1 hours on their smartphone, and 8.1 ± 3.1 hours on holidays, Saturday and Sunday. Approximately 60% of students spent less than 20 AUD monthly on their smartphone bills. According to the THAI-SAS-SV, 49 percent of pharmacy students were addicted to smartphones. Students who received high expenditure from parents and high monthly spending on smartphone bills were significantly associated with smartphone addiction ( $p < 0.05$ ).

**Discussion.** Half of pharmacy students were addicted to smartphone, and they used them for social connection, education and entertainment.

## P110

### The role of pharmacists in optimizing therapy among elderly patients with neurological conditions – a preliminary study

**Mrs Edyta Czepielewska<sup>1</sup>**, Anna Wojcieszek, Anna Dworakowska, Magdalena Makarewicz-Wujec, Małgorzata Kozłowska-Wojciechowska  
<sup>1</sup>Medical University of Warsaw, Poland

**Introduction.** The number of people aged 65 years and older in Poland has been consistently increasing over the past decades. Ageing is often associated with multiple comorbidities, including neurological disorders, as well as polypharmacy, which is associated with an increased risk of drug-related problems (DRPs).

**Aims.** This study aimed to identify and categorize DRPs in elderly patients with particular focus on neurological drugs, and to develop recommendations to optimize therapy in these patients.

**Methods.** The study was performed in 2019 and 2020 in Poland, among individuals attending a senior day-care centre aged 65 years and older, with at least 1 neurological condition. All subjects consented to take part in the survey. Medication use reviews were conducted to identify DRPs. The number and type of DRPs were categorized according to the PCNE Classification for Drug-Related Problems V9.1. Recommendations in writing were prepared for every patient concerning adherence and health-related issues.

**Results.** The study revealed extensive use of drugs among elderly individuals in Poland, which may result in DRPs. 35 elderly subjects with neurological conditions completed the study. The average age was 77.9 years, and the average number of comorbidities was 5.5, including 1.6 neurological conditions. The mean number of medicinal products used per subject was 12.7, including 1.9 neurological drugs. A total of 293 DRPs were identified, 94 DRPs was associated with the use of neurological drugs. The most common DRPs were related to treatment safety. Based on the findings, 370 recommendations were compiled, 116 concerned neurological issues to optimize drug therapy for patients.

**Discussion.** The prevalence of DRPs among the studied elderly with neurological conditions in Poland was high. There is no uniform pharmaceutical care model for elderly patients with multiple comorbidities, including neurological conditions. It should be noted that pharmacists can significantly contribute to optimizing therapy in these groups of patients.

## P111

### Prevalence and associated factors of potentially inappropriate medications among older people: A cross sectional study at King Chulalongkorn Memorial Hospital

**Miss Annie Paisansirikul<sup>1</sup>**, Miss Armeena Ketprayoon<sup>1</sup>, Miss Wannee Ittiwattanaku<sup>1</sup>, Mr Aisawan Petchlorlian<sup>2,3</sup>

<sup>1</sup>Pharmacy Department, King Chulalongkorn Memorial Hospital, The Thai Red Cross Society, Pathum Wan District, Thailand, <sup>2</sup>Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Pathum Wan District, Thailand, <sup>3</sup>Geriatric Excellence Center, King Chulalongkorn Memorial Hospital, The Thai Red Cross Society, Pathum Wan District, Thailand

**Introduction.** Potentially inappropriate medications (PIMs) use causes avoidable adverse drug events in older people.

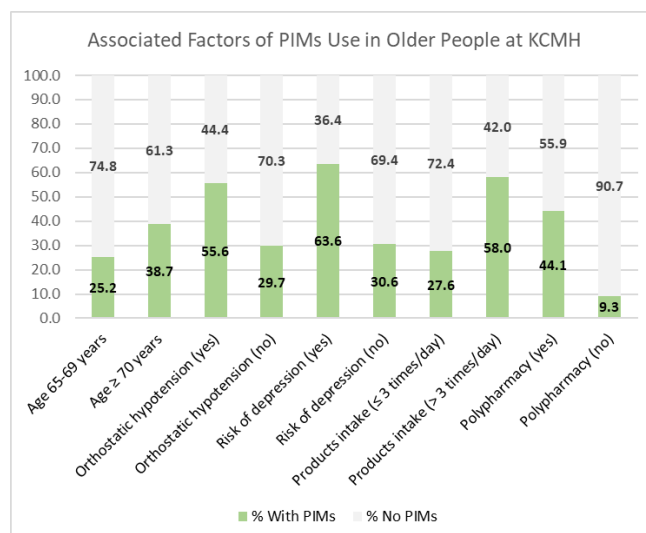
**Aims.** To evaluate the prevalence of, and factors related to, PIMs in older, Thai urban residents.

**Methods.** A cross-sectional study, involving 387 participants ( $\geq 65$  years), whose first-time health screening took place at the Geriatric Excellence Center, King Chulalongkorn Memorial Hospital (KCMH), Bangkok between May and October 2019. Participants were interviewed and assessed for PIMs by clinical pharmacists.

**Results.** 53.2% (206) of the participants were 65-69 years old and 77.5% (300) of the participants were women. The prevalence of PIMs use according to the STOPP (2015) and Beers (2019) criteria was 22.5% and 27.6%, respectively. The top three PIMs classes according to the STOPP instrument were: (i) benzodiazepines (28.9% of total PIMs), (ii) muscle relaxants (7.4%), nonsteroidal anti-inflammatory drugs (7.4%), and (iii) antithrombotic agents (6.6%). The top three PIMs classes according to the Beers instrument were: (i) benzodiazepines (23.5% of total PIMs), (ii) antithrombotic agents (16.8%), and (iii) thiazides (12.1%). Multivariate analysis found that, the following were significantly associated with PIMs:

(a) with the older participants ( $\geq 70$  years) (OR 1.62, 95% CI 1.00-2.61), (b) having orthostatic hypotension (OR 3.84, 95% CI 1.50-9.81), (c) having a risk of depression (OR 4.63, 95% CI 1.10-19.52), (d) more frequent intakes of products ( $> 3$  times per day) (OR 2.12, 95% CI 1.10-4.07), and (e) polypharmacy (took  $\geq 5$  health products) (OR 6.95, 95% CI 3.61-13.38).

**Discussion.** The prevalence of PIMs use in older Thai urban residents seen at KCMH in Bangkok was high. Polypharmacy, older age, orthostatic hypotension, risk of depression, and frequent intake of health products were significantly related to PIMs use. The aims of the pharmaceutical care service to reduce polypharmacy should be implemented, resulting in increased safety for this population



## P112

### The role of burnout in mediating the anxiety and work engagement relationship

**Dr Jason Perepelkin<sup>1</sup>**, Dr Grant Alexander Wilson

<sup>1</sup>University of Saskatchewan, Saskatoon, Canada

**Introduction.** Pandemic-related pressures and responsibilities increase the likelihood of burnout for all health care professionals. The consequences of burnout are significant, as it has been linked to high anxiety, increased turnover, decreased employee morale, higher absenteeism, and lower quality of service. To date, most research explores burnout's relationship with these variables in isolation.

**Aims.** This study explored the anxiety, burnout, and employee engagement relationship among pharmacists during the global COVID-19 pandemic.

**Methods.** Pharmacists in the Canadian province of Saskatchewan completed an online questionnaire that asked questions related to their levels of anxiety, burnout, and work engagement among other control variables. The relationships among the variables were explored via SPSS and the moderation and mediation PROCESS macro.

**Results.** The findings suggest that burnout fully mediates the anxiety and employee engagement relationship, suggesting that anxiety alone is not enough to reduce employee engagement. The results confirm burnout's relationship with anxiety and lack of engagement and provide a more specific understanding of burnout's antecedents and consequences, offering important insight for academics and practitioners.

**Discussion.** Due to the positive implications of eliminating burnout and the importance of employee engagement to organizational performance, pharmacy managers should seek to reduce workplace stress to avoid burnout and disengagement.

## P113

### Social determinants predicting the knowledge, attitudes, and practices of women towards Zika virus infection

**Assoc Prof Kingston Rajiah<sup>1</sup>**, Dr Mari Kannan Maharajan<sup>2</sup>, Prof Jo-Ann Singco Belotindos<sup>3</sup>, Prof Marilou Salindato Basa<sup>4</sup>

<sup>1</sup>GITAM School of Pharmacy, Hyderabad, India, <sup>2</sup>International Medical University, Kuala Lumpur, Malaysia, <sup>3</sup>Southwestern University, Cebu, Philippines, <sup>4</sup>Southwestern University, Cebu, Philippines

**Introduction.** The severity of Zika virus infection has an impact on health, economy, and social well-being, especially in pregnant women. The World Health Organization (WHO) advocates generating evidence through research to strengthen guidance and action plans to minimise the spread of Zika virus infection and limit the impact its complications

**Aim.** To identify the predicting factors that contribute to knowledge, attitude, and practices towards Zika virus infection among the women population in the Philippines.

**Methods.** A cross-sectional study was conducted among women aged 18 to 45 years of age in Cebu, Philippines. A minimum sample size of 374 was calculated using Raosoft software; power 80%, distribution of response 50%, with 95% confidence interval, and a 5 % margin of error. A total of 702 women was approached and finally, 516 completed the survey. Spearman rank correlation test was used to determine the linear relationship

between each independent variable and the dependent variable. Cohen's correlation coefficient was evaluated to determine the strength of the effect size. Multiple correlations and regression analysis were undertaken to identify the independent variables that have an effect on the dependent variable.

**Results.** R<sup>2</sup> value was 62.8% explained variable in model 1, and 83.9% explained variable in model 2 as there was a further decrease in knowledge, attitudes, and practice with significant R<sup>2</sup> change of 21.1% variable. The education-elementary level was the best predictor with the standardized coefficient beta value of -.399.

**Discussion.** Factors such as age, relationship status were the predictors affecting the knowledge, attitudes, and practices of women towards Zika virus infection. With sufficient awareness, the women in the Philippines are able to accept suitable individual protective measures to prevent the spread of this virus and to avoid complications.

|                              | Age 25-30 years | Age 31-35 years | Relationship-married | Relationship-living together | Education-elementary | Employment-Jobless | Monthly Income <200 | KAP score |
|------------------------------|-----------------|-----------------|----------------------|------------------------------|----------------------|--------------------|---------------------|-----------|
| Age 25-30 years              | 1               | -               | -.1                  | -                            | -                    | -                  | -                   | -         |
| Age 31-35 years              | 0.38            | 1               | -                    | -                            | -                    | -                  | -                   | -         |
| Relationship-married         | 0.43            | 0.44            | 1                    | -                            | -                    | -                  | -                   | -         |
| Relationship-living together | 0.47            | 0.49            | 0.41                 | 1                            | -                    | -                  | -                   | -         |
| Education-elementary         | 0.49            | 0.38            | 0.40                 | 0.38                         | 1                    | -                  | -                   | -         |
| Employment-Jobless           | 0.35            | 0.43            | 0.44                 | 0.37                         | 0.39                 | 1                  | -                   | -         |
| Monthly Income <200          | 0.41            | 0.48            | 0.48                 | 0.41                         | 0.35                 | 0.38               | 1                   | -         |
| KAP score                    | 0.49*           | 0.48*           | 0.59*                | 0.51*                        | -0.65*               | -0.42*             | -0.28*              | 1         |



## P114

### An interprofessional view of emotional intelligence: pharmacy and pharmacy technician students' sample

Pharm. Beyza Goktas<sup>1</sup>, **Dr Bilge Sozen-Sahne**<sup>2</sup>, Dr Elif Ulutas-Deniz<sup>3</sup>, Pharm. Leyla Yumrukaya<sup>2</sup>, Prof Selen Yegenoglu<sup>1</sup>

<sup>1</sup>Atatürk State Hospital, Sinop, Turkey, <sup>2</sup>Hacettepe University Faculty of Pharmacy, Ankara, Turkey, <sup>3</sup>Atatürk University Faculty of Pharmacy, Erzurum, Turkey

**Introduction.** The importance of emotional intelligence (EI), especially for health professionals, is known to determine professional success and dignity (1). Moreover, EI affects interprofessional interaction and therefore patient safety (2).

**Aims.** In this study, we aimed at determining whether there are interprofessional differences between pharmacy and pharmacy technician students at undergraduate level in terms of EI.

**Methods.** A survey that contains the "Schutte Self Report Emotional Intelligence Test (SSREIT- 33)" (3, 4) was applied to 499 students (365 pharmacy and 61 pharmacy technician students). Of these 499 surveys, 377 were included in statistical analysis. Besides giving descriptive statistics, independent t-test, ANOVA and explanatory factor analysis were conducted via IBM SPSS 23.

**Results.** There are no significant differences between students' gender, grade, reading habit and number of individuals in the family in terms of their SSREIT-33 scores ( $p>0,05$ ). However, the scores of pharmacy technician students are higher than pharmacy students ( $p<0,05$ ). Also, three factors (expression, regulation and utilization of emotion) were confirmed according to the original SSREIT-33 (KMO: 0,794).

**Discussion.** The results of the study show that key components of EI did not make a difference in this sample. However, the difference between professional groups is remarkable for these pharmacy and pharmacy technician students. This result reveals the necessity of carrying out future studies for the development of patient safety-oriented cooperation during professional education and increasing interprofessional interaction in terms of emotional intelligence.

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## P115

### Opinions of content producer pharmacists on ethical social media use

**Dr Bilge Sozen-Sahne**<sup>1</sup>, Dr Elif Ulutas-Deniz<sup>2</sup>, Ms Busra Akdag<sup>1</sup>, Ms Roya Hancer<sup>2</sup>, Pharm. Leyla Yumrukaya<sup>1</sup>, Prof Selen Yegenoglu<sup>1</sup>

<sup>1</sup>Hacettepe University Faculty of Pharmacy, Ankara, Turkey, <sup>2</sup>Atatürk University Faculty of Pharmacy, Erzurum, Turkey

**Introduction.** The frequent use of social media by pharmacists for professional content sharing brings along various ethical problems with its advantages such as fast communication and easy access (1).

**Aims.** In this study, we aimed to evaluate the views of pharmacists who produce professional content via Instagram in Turkey, where there is no ethical framework for pharmacists' use of social media currently.

**Methods.** One of the most used social media platforms is Instagram in Turkey. Thus, 15 Turkish Instagram user pharmacists who produce content about pharmacy and who have the largest number of followers, were determined and invited to an online semi- structured interview. Transcriptions were analysed thematically through Atlas.ti.

**Results.** Within the study, 7 content producer pharmacists were interviewed between February and March 2022. 6 of the participants are community pharmacists and 1 is only provides consultancy services on pharmacy-related issues. All the participants stated that they operated in this field to produce reliable content on health. As a result of the interviews, themes emerged under the headings of social media use in healthcare, elements related to content production and ethical issues.

**Discussion.** Social media contents on health practices raise awareness on various health-related issues besides its negative effects (2). However, as in various countries and institutions, there is no guideline to frame the use of social media by pharmacists in Turkey. This situation affects the adequate use of social media by pharmacists, which is limited by the laws of the country. It was emphasized by the participants that it is of great importance to determine the framework for pharmacists in order to prevent unethical contents produced by unauthorized persons. In addition, it is apparent that the awareness of pharmacists should be increased about posting ethically appropriate content in social media and its effects on public health.

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## P116

### Examining the opinions of health-related mobile phone application developers

Dr Elif Ulutas-Deniz<sup>1</sup>, **Dr Bilge Sozen-Sahne**<sup>2</sup>, Ms Betul Ates<sup>1</sup>, Ms Beyza Uygun<sup>2</sup>, Pharm. Leyla Yumrukaya<sup>2</sup>, Prof Selen Yegenoglu<sup>2</sup>  
<sup>1</sup>Atatürk University Faculty of Pharmacy, Erzurum, Turkey, <sup>2</sup>Hacettepe University Faculty of Pharmacy, Ankara, Turkey

**Introduction.** M-health applications are used by approximately 5 million people worldwide and these have positive effects in forming healthy lifestyle habits and increasing health awareness (1).

**Aims.** In this study, the followings are aimed: meeting with the developers of m-health applications, revealing their experiences and evaluations on this subject, determining the clues about how pharmacists can exist in this field.

**Methods.** It's known that mobile phone users mostly prefer Google Play Store and App Store to access applications (2). In Turkey, 15 m-health applications with the highest score were accessed. During this process "health", "medicine" and "pharmacy" keywords were used. The developers of those were invited to the study. Online semi-structured interviews were conducted with those who accepted. The interviews were analysed thematically through Atlas.ti.

**Results.** 8 developers took part in the interviews between February and March 2022. These people were from different professions, ranging from physician to English teacher, including pharmacist. Their applications were about various contents like reminders of drug use, healthy nutrition recommendations. As a result, application development reasons, development processes and the future of m-health.

**Discussion.** M-health practices, which bring an innovative approach to health service delivery, are also important for pharmacy, which is an important stakeholder of the health sector (3). Increasing awareness of pharmacists about the practices, which is stated by the participants, will have even more important effects in future. In this context, it's necessary for pharmacists to be involved in m-health development processes, which will have a positive impact in terms of public health. Application development-related subjects in both undergraduate education curriculum and lifelong learning programs will contribute pharmacists' having a good command of software processes. Also it'll be helpful for pharmacists to work with different professional groups like software engineers and physicians.

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## P117

### Selective serotonin reuptake inhibitors and risk of breast cancer – The Norwegian Women and Cancer study

**Dr Marit Waaseth**<sup>1,3</sup>, Dr Tomas Log<sup>2,3</sup>

<sup>1</sup>Department of Pharmacy, Uit The Arctic University Of Norway, Tromsø, Norway, <sup>2</sup>Faculty of Nursing and Health Sciences, Nord University, Mo i Rana, Norway, <sup>3</sup>Northern Norway Regional Health Authority, Norway

**Introduction.** Breast cancer is the most common cancer among women and selective serotonin reuptake inhibitors (SSRIs) are frequently used among Norwegian women. Previous studies report somewhat conflicting results on a potential association between SSRI and breast cancer.

**Aims.** To investigate a potential association between use of SSRI and breast cancer.

**Methods.** This prospective record-linkage study coupled data on self-reported use of SSRI from the Norwegian Women and Cancer study (NOWAC) with data on breast cancer from the Cancer Registry of Norway. The study population included 113 363 women 46-68 years old at baseline (2003-2010), response rate 56%. After excluding prevalent cancer cases and participants with missing data, 74 879 were included in the analysis. Hazard ratios with 95% confidence intervals for variables potentially associated with breast cancer were estimated by multiple Cox proportional hazard regression. Covariates included age, current use of hormonal contraceptives, current use of postmenopausal hormone therapy (HT), maternal breast cancer, age at menarche, menopausal status, number of children, age at first birth, body mass index (BMI, kg/m<sup>2</sup>), alcohol consumption and tobacco smoking.

**Results.** Among 74 879 women, 1429 were diagnosed with breast cancer during follow-up. There were 78 cases (2.0%) of incident breast cancer among users of SSRI and 1351 cases (1.9%) among non-users, resulting in an HR of 1.04 (95% CI 0.82 – 1.31). Covariates associated with higher risk of breast cancer included HT use, premenopause, maternal breast cancer, increasing age, BMI, lower age at menarche and having 1-2 children after the age of 25.

**Discussion.** This large prospective record-linkage study found no association between self-reported use of SSRIs and breast cancer. This is in agreement with most of the other studies which have investigated this association.

## P118

### A qualitative meta-synthesis of medication experience of patients with chronic disease: The ABCDE model

**Miss Meng-Jung Wen**<sup>1</sup>, Miss Jo-Hsin Chen<sup>1,2</sup>, Miss Hui-Fang Cheng<sup>1</sup>, Miss Chia-Jung Wu<sup>1</sup>, Miss Shih-Han Lan<sup>1</sup>, Dr Elizabeth H. Chang<sup>1,2</sup>  
<sup>1</sup>Taipei Medical University, Taipei, Taiwan, <sup>2</sup>Wan Fang Hospital, Taipei, Taiwan

**Introduction.** Inadequate understanding of the antecedents regarding medication use from patients' perspectives hinders opportunities to implement patient-centered care. Developing a conceptual framework of medication experience across chronic conditions served as a promising tool to fulfill the gaps for clinicians to apply the concepts of medication experience to facilitate disease management.

**Aims.** To systematically synthesize the literature on the medication experience of patients with chronic disease and develop practical suggestions for clinicians during patient counseling.

**Methods.** We conducted a systematic literature search of PubMed, Embase, and CINAHL from January 2010 to September 2020. The search strategy was designed to cover systematic review articles with qualitative research regarding medication experience from patient's perspective. Study selection, quality assessment and data extraction were performed by 2 independent researchers.

**Results.** A total of 6,141 articles were identified from the search, and 65 met the inclusion and exclusion criteria. With five inter-related themes – Autonomy, Belief, Compromise, Difficulties and Everyday tasks, the ABCDE model conceptualized patients' holistic experience of medication use. An individual's perception of illness or medication dictates the other four serial phases in decision-making during patients' disease journey. Patients typically learned to manage chronic medication on a daily basis. Although experiencing challenges of physical, mental and social aspects, they found a middle ground to adhere to medication in a long term. To live with chronic conditions, patients eventually developed an acceptance of medication and took proactive roles in disease management.

**Discussion.** This meta-synthesis comprehensively illustrates the process of encountering medication issues from the patient's perspective. Healthcare providers could improve the quality of care by individualized action plans based on patients' stages of experience. Development of interventions based on this model is needed to enhance patient-centered care.

## P119

### Striving for a better balance: A phenomenological inquiry of patients with lung cancer using oral targeted therapy

**Miss Meng-Jung Wen**<sup>1</sup>, Dr Elizabeth H. Chang<sup>1</sup>

<sup>1</sup>Department of Clinical Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan

**Introduction.** Cancer patients taking oral antineoplastic medications may encounter problems including suboptimal adherence, physical and psychological burden during their treatment trajectory. Increased oncology pharmacy services yet high disparities between healthcare professionals and patient perceptions highlight the need of understanding patients' medication experiences.

**Aims.** To explore the meaning of taking oral targeted therapy in non-small cell lung cancer (NSCLC) patients and the perspectives about drug-related issues they experience in their daily life.

**Methods.** We purposively sampled NSCLC patients taking TKIs (Tyrosine Kinase Inhibitors), and conducted in-depth interviews in a medical center in Taiwan. A semi-structured interview guide and demographic questionnaires were used. Interviews were transcribed verbatim and theme analysis was applied. A phenomenological methodology guided by van Manen was adopted to explore the underlying meanings of lived experience.

**Results.** A total of 20 participants with a mean age of 68.2 years and duration of taking TKIs from 1 month to 5 years were interviewed. Four overarching themes emerged: Participants expressed emotional responses to the unexpected yet 'treatable' diagnosis, based on their intrinsic beliefs of the terminal disease. They walked along an unfamiliar trail while confronting physical and psychological challenges. Making compromises with treatment and social support helped them adapt to challenges. Experiences gained from the journey minimized death threats and helped them to 'return to normal'.

**Discussion.** This study reveals that patients waver between quality of life or life prolongation decisions to select their approaches to 'return to normal'. Healthcare professionals could better empathize with patients' loss of control and step in their shoes when making clinical decisions. This study also emphasizes the need of individualized communication plans for patients with varied treatment duration or knowledge. Tools may be developed to encourage patients to actively seek for help and facilitate patient-centered care.

## P120

### How long should an intervention be conducted? A systematic review of pharmacist-delivered interventions on lipid-lowering medications adherence

**Ms Niken Nur Widyakusuma<sup>1</sup>**, Mr Hafidh Dimas Syahputra<sup>1</sup>

<sup>1</sup>*Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta, Indonesia*

**Introduction.** Time perspective motivates medication adherence in patients. While various multifaceted pharmacist-delivered interventions targeting on medication adherence have been established, various results on their effectiveness also varied.

**Aims.** This study aimed to assess available pharmacist-delivered interventions targeting on lipid lowering medications adherence, particularly in the frequency and duration of the interventions.

**Methods.** A systematic search on Scopus, Sage Journals, and Cochrane Library between January 2011 and Dec 2021 was carried out for pharmacy interventions targeting on lipid lowering medication adherence. Critical appraisal was conducted using predefined tools.

**Results.** Seventeen randomized-controlled trials were included in the review with total 13890 patients aged 60 years old or older. The pharmacist-delivered interventions varied from educational strategies, behavioral strategies, and combinational strategies. The frequency of the intervention delivery was ranging from a one-time electronic reminder device delivery to 6-times motivational interview delivery. The evaluation to adherence was ranging from 7 days after the first-time delivery to 12 months after the latest time delivery.

**Discussion.** The nature of the interventions allowed assistance to patients in difference circumstances. All studies showed a smaller percentage of adherence in follow-up measurement when being compared to the previous measurements in a same study. A longer duration intervention, a more frequent intervention, and a close range-time between the intervention delivery to the adherence measurement did not guarantee a better adherence outcome. Medication adherence need to be evaluated qualitatively to deeper understand patients' perceptions on intervention delivered, and to help developing an intervention with a more sustainable effect.

## P121

### Household storage and disposal of medications: A source of potential health and environmental threats?

**Dr Yassin Al HARiri<sup>1</sup>**

<sup>1</sup>*Ajman University, Ajman, United Arab Emirates*

**Introduction.** Over recent years, there has been a worldwide focus on households' pharmaceutical storage and disposal practices. Improper medication disposal can be hazardous to the environment and storing expired and unused medications at homes raises the risk of accidental poisoning.

**Aims.** To explore the storage and disposal practices of households' medications among the population in the United Arab Emirates.

**Methods.** A descriptive, cross-sectional study with 221 households completed a pre-validated structured questionnaire. Data analysis was conducted using SPSS version 28.

**Results.** There was a total of 2652 medications identified, representing a total value of \$ 40000. Over the counter drugs accounted for 66.1% of households' medications. Out of the 2652 stored drugs in households, 76.4% were in their original packages, and 51.8% were considered with an adequate label. Most of the kept drugs were partially consumed (90.1%). Medications with valid expiration dates accounted for 54.5% of medications, 28.7% had no precise data about the expiry date, and 16.9% expired. The refrigerator and bedroom were the most common places for storing medicines. Of the respondents who had disposed medicines in past, 91.4% had done so inappropriately. Seventy-six percent of the respondents reported environmentally inappropriate disposal methods in their houses. Only 13.6% of the respondents returned unused medications to local pharmacies.

**Discussion.** A clearer guidance for how patients should store household medications is lacking. A significant portion of unwanted medications was discarded in ways that had the potential to harm the environment. These findings highlight the critical need for public education on the best practices for household medication storage and disposal.



## P122

### Quality of medicines in Sri Lanka: a retrospective review of safety alerts

**Mrs Tharmalinga Sharma Jegath Janani**<sup>1</sup>, Madumai Ketharam<sup>2</sup>, Kaumada Binoli Herath<sup>3</sup>, Senathiraja Sherley Shobia<sup>2</sup>

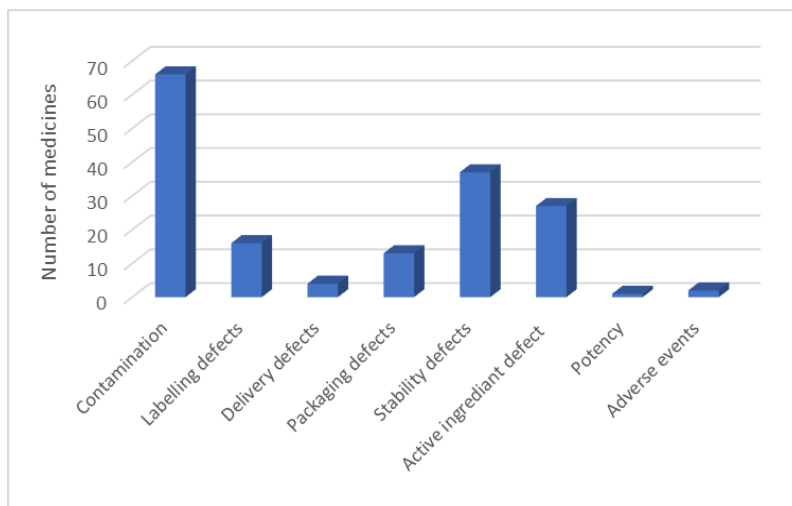
<sup>1</sup>University of Sri Jayawardenapura, Nugegoda, Sri Lanka, <sup>2</sup>National Medicine Regulatory Authority, Sri Lanka, <sup>3</sup>Institute for Research and Development in Health & Social Care, Sri Lanka

**Aims.** This study aims at investigating the extent of quality and safety of medicines in Sri Lanka.

**Methods.** A retrospective review was done for medicine recalls and withdrawal on documents conveying issues relating to defective (ie., substandard and falsified) medicines in the National Medicines Regulatory Authority (NMRA) website between 2019 and 2021.

**Results.** There were 166 defective medicines of which 104 were recalled and 62 were withheld. The three most frequently reported types of defects were contamination (66 incidents), stability issues (37 incidents) and active ingredient defects (27 incidents). All the foreign medicines recalled, were distributed across several authorized importers, market authorization holders and manufacturers, however, some of these were found to be repetitive in the same groups over others. Over 75% of the medicines recalled are of Indian origin and India does account for a large share of the total imported medicines in Sri Lanka. There were no marketing authorization holders for 16 medicines that were shown defects.

**Discussion.** The reporting of substandard medicines in Sri Lanka is on the rise. The launch and improvement of the NMRA's website created an important communication tool with health care professionals and the public. It is concerning that stability failure and active ingredient defects have the potential to affect the bioavailability of the active ingredients in the systemic circulation, and in turn, may lead to therapeutic failure eventually a threat to patient safety. Importers, market authorization holders and manufacturers should be held accountable for ensuring the accurate quality of medicine through increased awareness, education, and sanctions.



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