

PROCEEDINGS *of* MPS-NATIONAL PHARMACISTS CONVENTION 2023

28th-30th July 2023

Venue: Dorsett Grand Hotel, Subang Jaya

**Theme: Pharmacists In The Evolving Integrated
Healthcare Landscape: Navigating Change And
Driving Quality In Primary Care**

Editors

CHUA SIEW SIANG

MOHD ZULKEFELI

RENUKHA SELLAPPANS

SYIREEN ALWI

NAHLAH ELKUDSSIAH ISMAIL

LEOW YEOW MING

MAI CHUN WAI

CHAN SIOK YEE



CONTENTS

ORAL PRESENTATIONS

NPC20230002

Perception and Readiness of Community Pharmacists regarding Online Healthcare Services
Namitrah A/P Kuppan, Mariani Ahmad Nizaruddin and Shaharuddin Abdul Rashid

NPC20230004

Assessing the Impact of an Educational Workshop on Antibiotic Use and Resistance Among Secondary School Students
Hui Yin Yow, Jasmine Shi Qi Leong, Priya Madhavan, Sharina Hamzah

NPC20230006

Compliance of Private Healthcare Facilities Towards the Supply of Diphenhydramine Cough Syrup in Malaysia
Hui Shean Wong, Diana, Ai Hsin Tan, Aimi Binti Zulkifli, Muhammad Helmi Bin Ismail, Shing Chyi Loo, Mohd Azaruddin Bin Azis

NPC20230009

3D Printed Transdermal Microneedles: A Painless Approach for the Personalized Treatment of Osteoporosis
Md Jasim Uddin¹, and Dennis Douroumis^{2,3}

NPC20230012

Questionnaire Validation on Knowledge and Perception of Prescribers on Generics and Biosimilars in Oncology
Sui Ling Janet Tan, Nik Nuradlina Binti Nik Adnan

POSTER PRESENTATIONS

NPC20230001

Assessment of Attitudes, Perceptions and Readiness of Community Pharmacists towards Online Health Services for Minor Ailments in Malaysia
Chloe Chua Chee Fern, Shaharuddin bin Abdul Rashid and Mariani Ahmad Nizaru

NPC20230003

Exploring the Willingness of Pharmacy and Medical Students to be Engaged in Community Service Projects
Ke Wei Tan, Yoon Fong Hoo

NPC20230005

Netnography Research: Public Attitudes About Covid-19 Vaccine in Malaysia
Wen Syuen Chay, Jim Chai

NPC20230007

Positive Mental Health Among the Malaysian Population and Their Sociodemographic Correlates
Amutha Selvaraj, Jamunarani Appalasamy, Dinesh Sangarran Ramachandram, Daniyalakshmi Rajamohan, Lip How Tung, Vhithyaa Subakaran

NPC20230008

Telepharmacy: Malaysian public perception and willingness
Azlina binti Ahmad, Mahmathi Karuppannan, Shubashini Gnanasan

NPC20230010

Türkiye Earthquake: Sharing of a Military Pharmacist's Experiences and Roles in Malaysian Field Hospital in Adiyaman, Türkiye
Muhammad Amir Ehsan Zamri, Mohd Adlan Adnan, A Halim Basari, Amran Amir Hamzah, Mohamed Haizar Haron

NPC20230011

Pharmacy predesigned medication labels of High Alert Medication (HAM) injections to prevent medication errors in hospitalized patients
Nursyafiqah Binti Moideen

NPC20230013

Views, Barriers and Facilitators of Healthcare Professionals and Patients Regarding Trastuzumab Biosimilar Use in the Treatment of HER2+ Breast Cancer
Yin Yen Wong, Pauline Siew Mei Lai, Wan Zamaniah Wan Ishak, Renly Lim

NPC20230014

An Overview of the Antimicrobial Stewardship Programme in Penang Adventist Hospital and Measures Taken to Overcome Challenges in Year 2022
Zhi Xin Oo, Ann Nee Cheah

NPC20230002

Perception and Readiness of Community Pharmacists regarding Online Healthcare Services

Namitrah A/P Kuppan, Mariani Ahmad Nizaruddin and Shaharuddin Abdul Rashid

Faculty of Pharmacy, University of Cyberjaya (UoC), Cyberjaya Selangor, Malaysia.
Email: namitrahkuppan@gmail.com

Background and Objective: Community pharmacists as primary healthcare provider has extended their services over the years especially during COVID 19 pandemic. Delivery of online healthcare services by community pharmacists encompasses the use of technologies and telecommunication systems to administer healthcare services to patients remotely. This service is widely implemented in developed countries and termed as telepharmacy which has gained wide recognition among their citizens. However, such service has not been widely implemented among community pharmacies in Malaysia. The study aimed to assess the perception and readiness of community pharmacists regarding online healthcare services. **Method:** This study was a cross sectional survey using an online self-administered questionnaire, conducted among community pharmacists in Malaysia, through convenience sampling for a 3-month period between November 2022 and January 2023. **Results and Discussion:** A total of 105 community pharmacists answered this survey. A majority of community pharmacists had moderately positive perception but high level of readiness. This study reported a statistically significant association between the perception score of community pharmacists regarding online healthcare services and working experience. Community pharmacists who had worked for 10 years or more had high perception regarding online healthcare services. A positive and very strong correlation between perception and readiness of community pharmacists regarding online healthcare services was observed. **Conclusion:** Community pharmacists in Malaysia are ready for the implementation of online healthcare services. This study serves as evidence to policy makers on the feasibility of implementing online healthcare services by community pharmacists.

NPC20230004

Assessing the Impact of an Educational Workshop on Antibiotic Use and Resistance Among Secondary School Students

Hui Yin Yow^{1,2}, Jasmine Shi Qi Leong², Priya Madhavan³, Sharina Hamzah²

¹Department of Pharmaceutical Life Sciences, Faculty of Pharmacy, Universiti Malaya, 50603 Kuala Lumpur, Malaysia

²School of Pharmacy, Faculty of Health and Medical Sciences, Taylor's University, 47500 Subang Jaya, Malaysia

³School of Medicine, Faculty of Health and Medical Sciences, Taylor's University, 47500 Subang Jaya, Malaysia
Email: huiyin.yow@um.edu.my

Background and Objectives: Antimicrobial resistance poses a significant worldwide public health risk and it is attributed to inadequate knowledge on antibiotic use. It is alarming that awareness, knowledge and practice (AKP) on antibiotic resistance among students and young adults are poor in many countries, including Malaysia. Therefore, this study aimed to investigate the AKP on antibiotic use and resistance and evaluate the impact of a pilot educational workshop titled 'Antibiotic Use and Antimicrobial Resistance' which was adapted from the e-Bug programme by Public Health England among secondary school students. **Method:** A cross-sectional study was conducted through universal sampling using a self-administered questionnaire among Form 4 Science students from Sekolah Menengah Jenis Kebangsaan (SMJK) Yok Bin, Melaka. A validated questionnaire on three main domains: awareness, knowledge and practice towards antibiotic use and resistance was administered before and after the online workshop. **Results and Discussion:** A total of 65 students participated in the study, resulting in a 100% response rate. More than half of the respondents were male (56.9%) and the majority were residing in urban areas (78.5%) and had never attended antibiotic related-workshop, webinar or seminar (98.5%). Prior to the workshop, most respondents exhibited a median positive practice score of 67% (Interquartile range (IQR): 37.5). However, their median scores for awareness and knowledge were moderate (60%, IQR: 25; 50%, IQR: 17, respectively). Nonetheless, there was a significant improvement in both awareness (80%, IQR: 20, $p < 0.001$) and knowledge (100%, IQR: 0, $p < 0.001$) immediately after the workshop. The awareness level before intervention was significantly higher for respondents with a history of recent use of antibiotics ($p = 0.020$) or those who frequently take antibiotics ($p = 0.005$). **Conclusion:** This study emphasized the potential benefits of the educational

workshop for secondary school students, demonstrating promising outcomes in terms of enhancing their awareness and knowledge regarding antibiotic usage and resistance.

NPC20230006

Compliance of Private Healthcare Facilities Towards the Supply of Diphenhydramine Cough Syrup in Malaysia

Hui Shean Wong¹, Diana, Ai Hsin Tan¹, Aimi Binti Zulkifli¹, Muhammad Helmi Bin Ismail², Shing Chyi Loo³, Mohd Azaruddin Bin Azis¹

¹ Pharmacy Enforcement Division, Pharmaceutical Services Programme, Ministry of Health Malaysia, 46200 Petaling Jaya, Selangor.

² Pharmacy Enforcement Branch (PEB), Selangor State Health Department, 40100 Shah Alam, Selangor.

³ Pharmacy Enforcement Branch (PEB), Sarawak State Health Department, 93050 Kuching, Sarawak.

Email: dianatan@moh.gov.my

Background and Objectives: Diphenhydramine Cough Syrup (DCS) is classified as a Group C Poison in the Poisons Act 1952 which can be sold or supplied only by registered/licensed healthcare providers. There has been a 43% increase in the seizure of DCS and kratom by enforcement agencies in Malaysia from 2019 to 2021. This study aimed to determine the compliance rate of private healthcare facilities towards the supply of DCS to the public in Malaysia as well as to identify common offences that were detected by the Pharmacy Enforcement Branch (PEB) during the controlled substance operation. **Method:** A retrospective observational study of the controlled substance operation reports conducted by the PEB in private healthcare facilities which include clinics and pharmacies throughout Malaysia from 2019 to 2021. The record on compliance and the types of offences were extracted and tabulated using a data collection form. **Results and Discussion:** Controlled substance operations were conducted on 156 private healthcare facilities from 2019 to 2021 in which 87.8% (n=137) of the healthcare facilities were found to be non-compliant towards the supply of DCS. Meanwhile, the top three common offences observed were no recording of the sales of DCS in the prescription book (26.5%), the sales of DCS not as a dispensed medicine/not for treatment purposes (25.2%) and no labelling on the DCS (20.6%). **Conclusion:** This study revealed that the majority of private healthcare facilities inspected during controlled substance operation were non-compliant towards the supply of DCS in Malaysia whereby the most common offence

found was the sales of DCS not recorded in the prescription book. Hence, raising awareness among healthcare providers and public-private collaboration could be taken to deter non-compliance towards the supply of DCS. Therefore, there is a need for a comprehensive approach that involves multiple stakeholders, including healthcare providers, policymakers, and community organizations.

NPC20230009

3D Printed Transdermal Microneedles: A Painless Approach for the Personalized Treatment of Osteoporosis

Md Jasim Uddin¹, and Dennis Douroumis^{2,3}

¹Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Malaya, 50603 Kuala Lumpur, Malaysia

²School of Science, Faculty of Engineering & Science, University of Greenwich at Medway, Kent ME4 4TB, United Kingdom

³Center for Innovation in Process Engineering & Research, University of Greenwich at Medway, Kent ME4 4TB, United Kingdom

Email: j.uddin@um.edu.my

Background and Objectives: 3-Dimensional (3D) Microneedle (MN) is an advanced drug delivery strategy for delivering drugs (for examples, small molecules and macromolecules) to the skin. The main objective of this study as to determine the effectiveness of 3D printed microneedles (3DMNs) as the future treatment strategy for the treatment of chronic osteoporosis. It is a major concern for patients over the age of 50 and hence the treatment strategies should be catered to provide optimum possible patient compliance, efficacy and safety. 3DMNs are a promising alternative to the existing treatment strategies as it is painless, non-invasive, quick, easy to apply and cost-effective hence, can be utilized for mass production (Scale up) commercially. **Method:** Denosumab, a human monoclonal antibody (Denosis 60@; 147 kDa) was used as a model compound. 3DMNs patches were designed and fabricated using the stereolithographic technique of 3D printing. The ability of the 3DMNs to deliver denosumab through the dorsal skin of Swiss albino female mice was examined using Franz diffusion cells in vitro. Approximately 90% of the total amount delivered was detected in the receptor compartment in 1 h. 3DMNs fabricated by 3D printing were also employed to treat osteoporosis in osteoporotic female mice in vivo. During the six-month uninterrupted in vivo studies, the serum concentrations of critical bone minerals were monitored for six months to assess recovery. **Results and Discussion:** It was found that the denosumab administered by the 3D

52

printed microneedles induced an enhanced therapeutic effect in restoring bone-related minerals, compared to subcutaneous injections. **Conclusion:** The findings of this study suggest that 3D printed microneedles can efficiently replace typical needles in the clinical setting, with the dynamic to improve treatment outcomes as well as patient compliance.

NPC20230012

Questionnaire Validation on Knowledge and Perception of Prescribers on Generics and Biosimilars in Oncology

Sui Ling Janet Tan¹, Nik Nuradlina Binti Nik Adnan²

¹Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Malaya, 50603 Kuala Lumpur, Malaysia.

²National Cancer Institute, 62250 Putrajaya, Malaysia.

Email: janet.tan@um.edu.my

Background and Objectives: The integration of biosimilars and generics in oncology has the potential to considerably enhance the sustainability of cancer care. Nonetheless, their utilization is often constrained due to safety concerns and inadequate knowledge surrounding them. Thus, this study aimed to validate the questionnaire and explore the prescribers' knowledge and perception of generic and biosimilar oncology drugs. **Method:** A 25-item questionnaire was developed and reviewed by five experts, consisting of lecturers and pharmacists. These experts assessed the questionnaire for relevance, simplicity and clarity using a 4-point Likert rating scale. The questionnaire's validity was pilot tested among 16 prescribers in the National Cancer Institute. Internal consistency of the questionnaire was evaluated using Cronbach's alpha coefficient. **Results and Discussion:** All items in the questionnaire scored ≥ 0.8 in terms of relevance, simplicity and clarity. The scale-based content validity scored more than 0.93, which is above the acceptable limit of ≥ 0.90 . The pilot study showed satisfactory internal consistency ($\alpha = 0.75$). Among the respondents, 56% were male and 87.5% were 30-40 years old. Overall findings on the knowledge showed that only 40% of the prescribers were able to correctly differentiate between generics and biosimilars while only 30% identified generics as small molecules with simple structures. Half (50%) of the prescribers felt uncomfortable with prescribing generics, perceiving them to have more side effects than innovators. Similarly, 70% of them were uncomfortable with

prescribing biosimilars, with 88% believed that they have more side effects than innovators. **Conclusion:** The questionnaire was successfully validated with good internal consistency. Most of the prescribers still hold negative perceptions and concerns for both generics and biosimilars in oncology. Therefore, there is a substantial need for further education and reassurance among the prescribers to promote the use of generics and biosimilars.

NPC20230001

Assessment of Attitudes, Perceptions and Readiness of Community Pharmacists towards Online Health Services for Minor Ailments in Malaysia

Chloe Chua Chee Fern, Shaharuddin Abdul Rashid and Mariani Ahmad Nizaru

Faculty of Pharmacy, University of Cyberjaya (UoC), Cyberjaya, Selangor, Malaysia.

Email: chloechua0303@gmail.com

Background and Objectives: Community pharmacist is the most accessible healthcare providers who plays a vital role in managing minor ailments. Developed countries implemented minor ailment management through an online platform as traditional offline health services have been transformed into online health services due to COVID-19. Nevertheless, there is limited study in Malaysia that explored the practice of community pharmacists in providing online health services for minor ailment management. The aim of the study was to assess the attitudes, perceptions and readiness of community pharmacists towards online health services for minor ailments in Malaysia. **Methodology:** This cross-sectional study was conducted online in which questionnaire was distributed to pharmacists working at community pharmacies from September 2022 till December 2022. **Results and discussion:** 71 community pharmacists were involved in this study. Majority of the community pharmacists agreed to 7-attitude, 10-perception and 9-readiness items. This study reported that only working year as community pharmacist and their perception and readiness scores towards online health services for minor ailments showed statistically significant association. Community pharmacists who worked less than 1 year, had the most favourable perceptions and were the most ready towards online health services for minor ailments compared to those

working 2–10 years and more than 10 years. Such observation could be attributed to community pharmacists with fewer working years were normally younger and they were more comfortable with technology and digital services. **Conclusion:** Community pharmacists have positive attitudes and perceptions towards minor ailments management through an online platform. Also, they are ready to provide online health services for minor ailments.

NPC20230003

Exploring the Willingness of Pharmacy and Medical Students to be Engaged in Community Service Projects

Ke Wei Tan, Yoon Fong Hoo

School of Pharmacy, Faculty of Health and Medical Sciences, Taylor's University, 47500, Subang Jaya, Selangor, Malaysia.
Email: kewei98@gmail.com

Background and Objectives: Service learning has been recognized by The Malaysia Education Blueprint 2015-2025 as a valuable approach that addresses real community needs, while simultaneously equipping students with skills necessary for future workplace. This study aimed to explore the willingness of medical and pharmacy undergraduate students to be engaged in community service projects (CSP) and to determine their perception regarding incorporation of community service into their curriculum. **Method:** An online quantitative cross-sectional survey using convenience and snowball sampling methods. All medical and pharmacy undergraduates of a local private university, aged 18 years and above were invited to participate. Informed consent was obtained. A questionnaire with 35 closed-ended items was validated to ensure its reliability. The variations in willingness to be engaged in CSP and the perception of incorporating community service into curriculum were assessed using the Chi-square, Mann-Whitney and Kruskal-Wallis tests. Factors associated with willingness were determined through multivariate regression. A p -value <0.05 was considered statistically significant. **Results and Discussion:** A total of 300 responses were collected, which gave a response rate of 49.8% (300/603). The majority of participants (71.7%) were willing to be engaged in CSP. Significant predictors of willingness were participants' attitude towards CSP ($p<0.001$), duration participants would like to be engaged in CSP ($p=0.012$), past experience ($p=0.046$) and the preferred working mode ($p=0.004$). However, subjective norms and perceived behavioural control did not exhibit significant

predictive effects. Career and professional development opportunities were identified as the strongest motivating factor (87.3%), while time constraints were identified as the main barrier to community service engagement (83.0%).

Conclusion: Universities should consider the factors that influence students' willingness to be engaged in CSP, key motivating factors, barriers and issues perceived by students to ensure effective CSP implementation. Institutional involvement and support are vital for successful incorporation of community service into the curriculum.

NPC20230005

Netnography Research: Public Attitudes About Covid-19 Vaccine in Malaysia

Wen Syuen Chay, Jim Chai

School of Pharmacy, The University of Nottingham Malaysia, 43500 Semenyih, Selangor, Malaysia
Email: Jim.chai@nottingham.edu.my

Background and Objectives: The Covid-19 pandemic has prompted scientists and researchers worldwide to establish safe and effective vaccines to contain the outbreak. However, there was hesitation from the public when Malaysian government attempted to roll out the vaccination. This qualitative research used a netnography approach to explore Malaysian attitudes towards Covid-19 vaccines during the pandemic. The main objective is to identify the hindrances and facilitators of Covid-19 vaccines. **Method:** Public comments about Covid-19 vaccines were collected from posts published by the Malaysian news publisher "Bernama" on its Facebook page between 2020 and 2021. These comments were analysed using content analysis and were initially categorised into positive and negative towards Covid-19 vaccines. Then, these positive and negative opinions were further categorised into common themes. **Results and Discussion:** Collected data showed more negative than positive comments. Those who commented positively supported the production, importation, and distribution of Covid-19 vaccines in Malaysia. They also encouraged booster vaccination and believed vaccination of children was necessary to achieve herd immunity. People who refused to be vaccinated due to political hindrances also believed that the government was conducting experiments on citizens. They were also sceptical about the safety and efficacy of the vaccines following persevering deaths in intensive care patients who contracted Covid-19. Some parents opposed the government mandating vaccinations for children because the side effects of the vaccines were

54

unknown. **Conclusion:** Malaysians remained sceptical of Covid-19 vaccination, mainly due to the lack of accurate information on vaccine development, transparent plans for vaccination programs, and proper channels to obtain information about the disease and vaccination. Therefore, it is crucial to understand this phenomenon and take prior measures to reduce hesitancy toward vaccinations, such as raising awareness about vaccinations in early childhood education, public health campaigns, and developing a national platform to disseminate health information to public.

NPC20230007

Positive Mental Health Among the Malaysian Population and Their Sociodemographic Correlates

Amutha Selvaraj, Jamunarani Appalasamy, Dinesh Sangarran Ramachandram, Daniyalakshmi Rajamohan, Lip How Tung, Vhithyaa Subakaran

School of Pharmacy, Monash University, Jalan Lagoon Selatan, 47500 Bandar Sunway, Selangor.
Email: Amutha.Selvaraj@monash.edu

Background and Objectives: Young adults in Malaysia aged between 20 to 40 years old have the most mental health issues as reported in 2015. Studies investigating mental health status among young working adult population in Malaysia are lacking. This study aimed to measure the mental health status and wellbeing of young working adults in Malaysia and its correlation with the sociodemographic factors. **Method:** A cross-sectional observational survey was conducted using the Positive Mental Health (PMH) instrument in all states of Malaysia. **Results and Discussion:** A total of 410 Malaysian young adults completed the questionnaire. The Malaysian young adult population generally showed an average higher PMH score, 4.16 out of 6. The younger population aged 20 to 24 years old showed lower PMH scores compared to the older age group. Participants from Indian ethnicity, Hindu, married participants, higher income and adults working in the government sector had relatively higher total PMH scores. All sociodemographic factors studied except gender and residing state showed statistical significant association with the total PMH scores ($P < 0.05$). Spirituality was the most prominent domain which showed significance across all sociodemographic factors, probably due to spirituality being the key resource to help facilitate positive growth mentally. Participants prioritize emotional support,

interpersonal skills and spirituality which contribute to a higher psychological wellbeing. **Conclusion:** Young adults working in Malaysia have an average high PMH score and the sociodemographic factors studied were found to correlate with their positive mental health.

NPC20230008

Telepharmacy: Malaysian public perception and willingness

Azlina binti Ahmad¹, Mahmathi Karuppannan², Shubashini Gnanasan²

¹School of Pharmacy, KPJ University, Persiaran Seriemas Utama, Kota Seriemas, 71800 Nilai, Negeri Sembilan ²Faculty of Pharmacy, Universiti Teknologi MARA, Puncak Alam Campus, Selangor, Malaysia
Email: acuazlina@gmail.com

Background and Objectives: Telepharmacy has emerged as a good solution with cost savings and provides wider coverage. This study aimed to assess Malaysian public perception and willingness towards telepharmacy **Method:** A cross-sectional survey involving the Malaysian public was conducted using a validated questionnaire. Information regarding participants' demographic as well as perception and willingness towards telepharmacy were collected. **Results and Discussion:** A total of 387 Malaysian public participated in this study with 40.6 % who have heard about telepharmacy service and 8.8 % have used the service. In addition, 13.7% preferred to use an online/app-based tool, 8.0% preferred to have a consultation over the phone and 3.9% preferred a video visit for pharmacist consultation. However, 55% still chose in-person visits to the pharmacy. A majority of the public (88.1%) agreed that telepharmacy services helped to save time and energy with a total mean of 4.41 (SD=0.77). The public believed that telepharmacy would enable consultation to be done much faster (Mean=4.32, SD=0.82). Of the participants, 53.5% showed less positive perception and 55.6% showed less willingness towards the implementation of telepharmacy. From the demographic characteristics, there was no association with the participants' perception and willingness regarding telepharmacy. **Conclusion:** Most participants have less positive perceptions towards telepharmacy. More strategies are required to attract more users of telepharmacy and improve their perception.

NPC20230010

Türkiye Earthquake: Sharing of a Military Pharmacist's Experiences and Roles in Malaysian Field Hospital in Adıyaman, Türkiye

Muhammad Amir Ehsan Zamri¹, Mohd Adlan Adnan², A Halim Basari², Amran Amir Hamzah³, Mohamed Haizar Haron¹

¹ Institute of Aviation Medicine (IAM), Subang, Malaysia

² Malaysian Armed Forces Health Services, Kuala Lumpur, Malaysia

³ 94 Armed Forces Hospital Terendak, Malacca, Malaysia

Email: amirehsanzamri@gmail.com

Background and Objectives: On 6 February 2023, an earthquake with an amplitude of 7.8 on the Richter scale struck southern and central Türkiye and also northern and western Syria, decimating the city of Adıyaman. A military pharmacist and two pharmacist assistants were part of the 110 medical and logistic personnel from the Malaysian Armed Forces who were deployed to set up and run a level 3 field hospital in Çelikhkan, Adıyaman. Over the course of six weeks of operation, Malaysian Field Hospital (MFH) treated a total of 2,415 patients. The general objective of this case was to report and share pharmacist experiences and roles in providing pharmaceutical care and managing Pharmaceutical and Medical Logistics (PharmaMedLog) in MFH. **Method:** This is a retrospective observational case report by a military pharmacist who had been deployed for six weeks to support MFH operation. Prescriptions from both inpatient and outpatient departments were collected, analysed and the data documented. **Results and Discussion:** The findings indicated a significant increase in the utilization of painkillers and antibiotic medications for trauma-related injuries and hygiene-related diseases. The requirement of pharmaceutical support in the mission depends on the nature of the disaster, geographical location, climate and socioeconomic status. Pharmacists are trained to provide PharmaMedLog which is vital prior to any medical mission deployment. **Conclusion:** Pharmacists play a critical role to perform the PharmaMedLog support in accomplishing the mission objectives during Human Assistance and Disaster Relief (HADR) operations.

NPC20230011

Pharmacy predesigned medication labels of High Alert Medication (HAM) injections to prevent medication errors in hospitalized patients

Nursyafiqah Binti Moideen

KPJ Maharani Specialist Hospital, Johor, Malaysia

Email: n.fiqah@kpjmaharani.com

Objective: To evaluate the effectiveness of Pharmacy predesigned medication labelling of high alert medication (HAM) injections in reducing medication errors in the preparation and administration stages of prescribed medications in hospitalized patients. **Methods:** This is a pre and post intervention study. Pre-intervention group: HAM injections administered from 1st January to 30th April 2022, using traditional labelling (adhesive label without preparation and administration instructions on it). Every ward had a hard copy of Medication Dilution & Administration reference. Post-intervention group: HAM injections administered from 1st May to 30th September 2022, using Pharmacy predesigned labelling (adhesive label with pre-set data of preparation and administration notes on it). Outcome of near miss preparation and administration errors were recorded and analysed. **Results and Discussion:** In the pre-intervention group, 516 doses of HAM were administered to 187 patients. There were 27 and 6 near missed errors related to preparations and administrations recorded, respectively. The near missed error rate was 52.33 per 1000 in preparations and 11.62 per 1000 in administrations. The post-intervention group of 544 doses and comprised of 213 patients with similar routes of administration recorded 5 near missed errors in preparations and zero in administrations. The error rate were 9.19 per 1,000 in preparations and zero per 1000 for administrations. Patients receiving HAM injections who did not use predesigned labelling had 5.69 times higher risk of medication errors related to preparations than those who had used predesigned labels. The adults in medical ward had the highest probability of medication errors related to preparations and administrations compared to patients in Intensive Care Unit (ICU). **Conclusions:** The use of Pharmacy predesigned labelling for HAM injections reduced medication errors especially in the last two phases of preparation and administration.

NPC20230013

Views, Barriers and Facilitators of Healthcare Professionals and Patients Regarding Trastuzumab Biosimilar Use in the Treatment of HER2+ Breast Cancer

Yin Yen Wong^{1,2}, Pauline Siew Mei Lai^{2,3},
Wan Zamaniah Wan Ishak⁴ and Renly Lim⁵

¹Department of Pharmacy, University Malaya Medical Centre, 59100 Kuala Lumpur, Malaysia

²Department of Primary Care Medicine, Faculty of Medicine, University of Malaya 50603 Kuala Lumpur, Malaysia

³School of Medical and Life Sciences, Sunway University, 47500 Sunway City, Selangor, Malaysia

⁴Clinical Oncology Unit, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

⁵Quality Use of Medicines and Pharmacy Research Centre, UniSA Clinical and Health Sciences, University of South Australia, Adelaide 5000, Australia

Email: yywong@ummc.edu.my

Background and Objectives: Trastuzumab biosimilar was introduced to increase the accessibility and affordability for patients with HER2+ breast cancer. However, its uptake has been poor. Therefore, we aimed to explore the views, barriers, and facilitators of healthcare professionals and patients regarding the use of trastuzumab biosimilar in the treatment of HER2+ breast cancer in Malaysia. **Method:** A qualitative study was conducted at the University Malaya Medical Centre, Kuala Lumpur, Malaysia, from February to September 2020. Convenient sampling was used to recruit 20 healthcare professionals (doctors=6, pharmacists=8, nurses=6) and eight patients. In-depth interviews were conducted till data saturation was achieved and analyzed using Inductive Thematic Analysis. **Results and Discussion:** Three main themes emerged: (1) efficacy and side effects of biosimilar to reference product, (2) cost of biosimilar, and (3) decision-making on trastuzumab biosimilar use. While participants generally had a good understanding of trastuzumab biosimilar, some expressed concerns about its safety, efficacy, and side effects. Patients prioritized the product that offered the highest chance of "curing" their cancer, but factors such as cost-effectiveness, affordability, and accessibility also influenced their decision. Most doctors preferred to make the treatment decision for the patients, citing the patients' lack of knowledge and their own expertise. However, some participants advocated for shared decision-making between doctors and patients. **Conclusion:** Healthcare professionals and patients are willing to use trastuzumab biosimilars, but

they require further reassurance regarding safety, efficacy, and side effects. Cost was identified as a significant concern. The findings provide valuable insights for healthcare professionals, policymakers, and stakeholders in addressing challenges and promoting the adoption of biosimilars to improve patient outcomes and healthcare delivery.

NPC20230014

An Overview of the Antimicrobial Stewardship Programme in Penang Adventist Hospital and Measures Taken to Overcome Challenges in Year 2022

Zhi Xin Oo¹, Ann Nee Cheah²

¹Faculty of Pharmacy, University of Malaya, 50603 Kuala Lumpur, Malaysia.

²School of Pharmaceutical Sciences, Universiti Sains Malaysia, 11800 Penang, Malaysia.

Email: cheahannnee@pah.com.my

Objectives: Identify challenges in the implementation of Antimicrobial Stewardship (AMS) Programme in Penang Adventist Hospital (PAH) and review the effectiveness of measures undertaken to overcome the challenges. **Method:** From January to December 2022, AMS pharmacists collect data for 12 AMS-regulated antimicrobial agents, which were analysed monthly to determine compliance to hospital policy and the National Antibiotic Guideline (NAG). Where the compliance rate is unsatisfactory, challenges were identified followed by the proposal for temporary and long-term solutions, for which the outcomes were monitored continuously to determine effectiveness. **Results and Discussion:** Since the start of using the new Health Information System (HIS) in PAH, four main challenges were identified, namely the drastic drop in completion rates of AMS request forms, inability to track antimicrobial treatment day, lack of effective ways to communicate pharmacist's recommendation to prescribers, and also duplication of antimicrobial therapy. After setting up pop-up reminder and reinforcing AMS workflow, completion rates of the AMS request forms have increased but there is still room for improvement. Tracking of antimicrobial treatment day is still a challenge but with more AMS pharmacists, tracking has become better. Besides, pharmacists can effectively provide suggestions to prescribers pertaining to antimicrobial therapy through telephone calls and remarks in patients' electronic medication administration record (e-

MAR). Pharmacy Intervention Note is later incorporated into HIS as supplementary communication platform. Lastly, the proposed measure to include 'antimicrobial icon' for all antimicrobial agents for easy identification and prevent antimicrobial therapy duplication is still pending improvement from HIS. **Conclusion:** Continuous education and reinforcement of workflow is required for an effective AMS Programme.