



# THE CEYLON MEDICAL JOURNAL

ESTABLISHED 1887

Volume 69, S, June 2024

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**The Sri Lanka Medical Association**

**137<sup>th</sup> Anniversary International Medical Congress**

**Abstracts**

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# **Sri Lanka Medical Association**

## **137th Anniversary International**

### **Medical Congress**

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## ABSTRACTS OF ORAL PRESENTATIONS

### Free Paper Sessions 1 - 17th August 2024, 02.30 – 03.30 pm (Hall B)

#### OP 01

#### **Prevalence, patterns, expenditures and associated factors of current alcohol use among male security personnel from the Sri Lanka army**

Jayasinghe LV<sup>1</sup>, Semage SN<sup>2</sup>, Prathapan S<sup>3</sup>

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**Introduction and Objectives:** Military personnel consistently demonstrate higher prevalence of alcohol use compared to the general population. This can unfavourably affect their health. This study describes the prevalence, patterns, expenditures and associated factors of current alcohol use among male military personnel in the Sri Lanka Army.

**Method:** A cross sectional study was conducted among male army personnel in active service (n=1337) using multistage sampling. A self-administered questionnaire and an interviewer-administered alcohol use disorders identification test was used. The chi-square test and chi-square test for trend was done in the analysis of associated factors.

**Results:** The prevalence of current drinkers (past 30 days) was 66.9% (95% CI= 64.3-69.5). Of the current drinkers, 66.4% were into binge drinking. Of them, 53.2% binge drink once a month. The current drinkers had 5.0 median units of alcohol on a typical day, 85.6% consumed beer, 66.7% have ever thought/attempted to quit. The median age of first alcohol consumption was 18 years. The total median personal expenditure for alcohol among current drinkers in the past one month was Rs. 2600.00. There were statistically significant associations between current drinking and number of children (p=0.004), service arm (p=0.001), trend of years worked away from home (p=0.042), trend of total military service (p=0.009), combat exposure (p=0.006), risk behaviours (p=0.001), productivity losses (p=0.028), multiple sexual partners (p=0.027), smoking tobacco use (p=0.001) and mental distress (p=0.004).

**Conclusions:** The high prevalence rates of alcohol use of the subjects in this study warrants immediate advocacy to the highest level of command of the Sri Lanka Army for support to implement sustainable, evidence-based, alcohol usage prevention programmes.

## OP 02

### Subculture and violence: a qualitative study in a Sri Lankan Technical College

Rathnayake N<sup>1</sup>, Abhayasinghe K<sup>2,3</sup>, Silva JD<sup>4</sup>, and Guruge GND<sup>1,3</sup>

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<sup>2</sup>*Department of Nursing and Midwifery, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka*

<sup>3</sup>*Institute for Research and Development in Health and Social Care, Battaramulla, Sri Lanka*

<sup>4</sup>*Department of Psychiatry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

**Introduction and Objectives:** Youth who belong to violent subcultures are at a higher risk of both offending and victimizing violence. There is a gap in research to explore the role of subcultures in tertiary educational institutes in Sri Lanka concerning violence among students. This study aimed to explore the role of subculture in developing violence in a Sri Lankan technical college.

**Methods:** This was a descriptive qualitative study conducted in a technical college in the Central Province of Sri Lanka. A total of 06 focus group discussions with 54 students and 07 key informant interviews with staff members were conducted. They were audio-recorded, transcribed, and analyzed using the thematic analysis method.

**Results:** The theme ‘role of subculture’ emerged and it was a major driving force of violence in college. Three sub-themes emerged; responsibility, pressure, and power. Participants perceived it as a ‘responsibility’ to continue violence (e.g. ragging) to maintain subculture. The ‘pressure’ described the need to comply with subculture-associated violence and the non-alignment with it has led to conflicts. The ‘power’ was related to seniority, gender, and the geographic location of students. Seniors expect juniors to obey them, if not, seniors have used violence to control their behaviour. Females mentioned that males have greater power and some normalized that males could control behaviours of females. The local students seemed to use violence against others which is accepted in subculture.

**Conclusions:** The subculture plays a prominent role in developing violence in the selected technical college. Thus, addressing it should be an inherent component of violence prevention activities.



### OP 03

#### Cardiovascular mortality of 40–70-year-olds in Sri Lanka from 1980 -2010: a birth cohort-age analysis

De Silva DTH<sup>1</sup>, De Alwis EDSM<sup>1</sup>, De Mel DM<sup>1</sup>, De Silva AHD<sup>1</sup>, Munasinghe TU<sup>2</sup>, Wickremasinghe AR<sup>2</sup>

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<sup>2</sup>*Department of Public Health, Faculty of Medicine, University of Kelaniya, Sri Lanka*

**Introduction and Objectives:** Cardiovascular diseases (CVDs) are a leading cause of death globally. In Sri Lanka, CVDs contribute to over 34% of deaths and is increasing. The objective of this study was to compare cardiovascular mortality of 40–70-year-old Sri Lankans from 1980-2010 by birth cohorts and sex.

**Method:** A comparative retrospective study was done using secondary data of cardiovascular deaths due to ischaemic heart disease (IHD), hypertensive disease (HHD) and cerebrovascular disease (CeVD) among 40- 70 year old Sri Lankans from 1980-2010. Data were extracted from the WHO mortality database. Population data were extracted from UN database. The comparison of mortality data was done by birth cohorts and by sex.

**Results:** Mortality due to IHD increased with age but decreased with birth cohorts with time (range 3.7-390 per 100,000 population). There was a spike in the IHD mortality rates in both age groups and birth cohorts in 2000. Deaths due to HHD markedly increased after 55 years. However, the mortality decreased in the younger cohorts (range 2.8-204,81 per 100,000 population). CeVD mortality linearly increased with age (range 3.3-153.3 per 100,000 population); birth cohorts of 1926-1930 and 1931-1935 had a spike in mortality among 60-64 and 65-69 age groups, respectively. Changes were seen among both males and females, mortality rates being higher in males.

**Conclusions:** All cardiovascular mortality rates increase with age and are higher in males than in females. Age specific cardiovascular mortality rates are lower in the younger birth cohorts. The increase in cardiovascular deaths in Sri Lanka is due to the ageing population.

## OP 04

### An economic evaluation of establishing day surgery for non-acute hernia repair in Sri Lanka

Gamage AU<sup>1</sup>, de Silva A<sup>2</sup>, Higashi H<sup>3</sup>, Attygalle D<sup>4</sup>, Sridharan S<sup>5</sup>, Senanayake L<sup>6</sup>, Dias R<sup>7</sup>,  
Dissanayake DMCD<sup>8</sup>, Kim H<sup>9</sup>

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<sup>3</sup>*World Bank, India*

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<sup>8</sup>*Provincial General Hospital, Badulla*

<sup>9</sup>*Centre for Applied Health Economics, Griffith University, Australia*

**Background/Objectives:** Annually, about 40,000 hernia surgeries are performed in public hospitals in Sri Lanka, with approximately 2.5–7.7% requiring emergency repairs.

**Objectives:** This study reports a cost analysis of implementing day-care surgeries to improve system efficiency for publicly funded patients undergoing non-acute hernia repair in Sri Lanka.

**Methods:** A linked decision tree model was developed and populated and validated using secondary data sources to represent the pathway probabilities and costs. Cost data was taken from the Medical Supplies Division, hospitals, and laboratories. Hospital costs per-day were based on WHO-CHOICE model that were inflation adjusted to 2022 value. The model assumed that 60% of the hernia patients presented to the out-patient-department, 39% were referred from private clinics, and 1% of hernia repairs occur as inward transfers or emergencies. Of the hernia repairs that were conducted, 95% were assumed to be uncomplicated cases, and the most common complication encountered was urine retention accounting for 95% of the complications.

**Results:** In a cohort of 1000 patients, 2055 overnight in-hospital stays can be moved into an observational centre. Total cost for non-acute hernia repair at a public hospital was estimated to be LKR 171.0 million and the proposed implementation of day surgical procedure for non-acute hernia repair was estimated to be LKR 155.7 million. Savings from establishing a day-care unit will amount to approximately LKR 15 million (approximately USD 40 thousand) per 1000 patients. Results were sensitive to length of stay and proportion of complications.

**Conclusions:** There can be cost savings if the hernia repair can be done as a day surgery and transferred to an observational centre which would reduce the duration of hospital stay.

## OP 05

### Oral hygiene awareness among school children in the Minuwangoda educational zone, Gampaha District, Sri Lanka

Hiranga HAJ<sup>1</sup>, Wasana PWD<sup>1</sup>, Gunawardena S<sup>2</sup>

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**Introduction and Objectives:** Oral health reflects overall well-being and is crucial for quality of life. Poor dental health can greatly affect health. Behaviors related to dental health are key for optimal oral hygiene, and raising awareness about them can improve oral health outcomes. This study aims to assess the knowledge, attitudes, and practices regarding oral hygiene among schoolchildren in the Minuwangoda educational zone, Gampaha district.

**Method:** A cross-sectional descriptive survey was conducted in March 2024, involving 384 students selected from schools in the Minuwangoda educational zone. Participants completed a pre-tested, self-structured questionnaire comprising 37 questions. Data analysis was performed using GraphPad Prism version 10.2.2. The association between variables was assessed using Fisher's test, with  $p < 0.05$  considered statistically significant.

**Results:** Among the study population, 90.36% were aware that consuming sweets is harmful to dental and oral health. The mean attitude value was 3.925, indicating agreement (range: 3.41-4.20). Interestingly, 79.69% of students believed that visiting the dentist was necessary only when experiencing dental pain. Additionally, 43.49% reported brushing their teeth twice a day, with the majority (55.99%) strongly believing that brushing teeth twice a day contributes to better oral health. The overall attitude towards oral health was significantly affected by age ( $p = 0.0349$ ) but not by gender, religion, or school ( $p > 0.05$ ).

**Conclusions:** This study's findings suggest that schoolchildren have satisfactory knowledge and attitudes regarding oral hygiene. However, there is a need to emphasize the importance of regular visits to Dental Clinics for maintaining optimal oral health.

## OP 06

### Serum ferritin as an early predictor of dengue infection progressing to dengue haemorrhagic fever

Mettananda KCD<sup>1</sup>, Perera K<sup>1</sup>, Rooshan N<sup>1</sup>, Nayanajith M<sup>1</sup>, Thewage A<sup>2</sup>, Premaratne BAHR<sup>3</sup>, Dassanayake AS<sup>1</sup>, Pathmeswaran AP<sup>4</sup>, Mettananda DSG<sup>2</sup>

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<sup>4</sup>*Department of Public Health, Faculty of Medicine, University of Kelaniya, Ragama, Sri Lanka*

**Introduction and Objectives:** Early prediction of dengue infection progressing to dengue haemorrhagic fever is important to make clinical decisions on triage, admission to hospitals and management. We aimed to study the role of serum ferritin as an early predictor of disease progression to dengue haemorrhagic fever (DHF) in dengue patients.

**Methods:** An observational study was conducted recruiting patients with NS1 antigen confirmed dengue infection admitted to four hospitals in the Gampaha district of the Western province, Sri Lanka, from March 2022 to June 2023. DHF was defined based on evidence of fluid leakage according to the 2011 WHO guidelines. The association of daily measured serum ferritin level to the development of DHF was assessed using logistic regression and predictive performances were determined using receiver operating characteristic (ROC) curves.

**Results:** A total of 209 patients; 117 adults (male 54.7%, mean age 39.0 SD 14.6 years) and 92 children (male 58.7%, mean age 8.1 SD 4.2 years) were recruited. Fifty-one (43.6%) adults and 19(20.7%) children progressed to DHF. Raised serum ferritin on day-3( $p<0.001$ ), day-4( $p<0.001$ ), and day-5( $p=0.005$ ) were significantly associated with DHF in a univariate analysis. Maximum serum ferritin on day-3 or 4  $>535$  ng/mL (Sensitivity 0.78; Specificity 0.62) was predictive of dengue infection progressing to DHF. Maximum ferritin on day-3 or day-4 of over 535 ng/mL was significantly associated with DHF with an odds ratio (OR) of 4.85 ( $P<0.001$ ) in multivariate logistic regression.

**Conclusions:** Raised serum ferritin on days 3-4 was associated with DHF. Adults and children with serum ferritin  $>535$  ng/mL on day-3 or 4 of dengue infection were five times more likely to progress to DHF.

## OP 07

### **Audit and clinician satisfaction survey on the composite rapid Tuberculosis (TB) diagnostic service**

Senanayake NP<sup>1</sup>, Herath HDB<sup>2</sup>, Rifhan AS<sup>1</sup>, Shanthilatha RP<sup>2</sup>, Pallewatte NC<sup>2</sup>, Cader M<sup>2</sup>, Rajapakshe OBW<sup>2</sup>, Herath HMP<sup>3</sup>, Bandara RMMS<sup>2</sup>, Bolonne BE<sup>2</sup>, Galagedara WD<sup>2</sup>, Jayasekara H<sup>2</sup>, Karawgoda A<sup>1</sup>, Mahathanthila WDTA<sup>1</sup>, Jayalatharachchi HR<sup>1</sup>, Senevirathna SMP<sup>1</sup>, Perera GMM<sup>1</sup>, Jayarathna TDSS<sup>1</sup>, Dassanayake DMMU<sup>1</sup>, Mahendrarathne BMCM<sup>1</sup>, Dilshan AS<sup>1</sup>, Kanchu AMA<sup>1</sup>, Perera J<sup>1</sup>

<sup>1</sup>*Faculty of Medicine, University of Colombo, Sri Lanka*

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**Introduction and Objectives:** A Composite Rapid TB Diagnostic Service was established at the Faculty of Medicine, Colombo with the National-Programme for Tuberculosis-Control & Chest-Diseases. The objective of this study was to analyze the clinician satisfaction with our TB diagnostic service.

**Methods:** Study was conducted from May-2021 to April-2024. All the samples(sputum,sterile-fluids, tissue-biopsies) received from suspected TB patients were analyzed free-of-charge, using GeneXpert (Xpert MTB/RIF assay), ZN-smear-microscopy and culture (Lowenstein-Jensen-media). A survey was conducted using a data-collection-form for clinician satisfaction with the TB diagnostic service.

**Results:** A total of 7457, 2330 and 1821 samples received from the Colombo group of Hospitals were tested using TB GeneXpert, ZN-smear-microscopy and culture respectively. Of the 7457 samples 794 (10.65%) were TB GeneXpert positive. Of the 2330 samples 154 (6.61%) were ZN-smear-microscopy positive. Of the 1821 samples 168 (9.23%) were culture positive.

Three-hundred & eight clinicians participated in the survey and consultants, house-officers, postgraduate-trainees and medical-officers accounted for 56(18.2%), 129(41.8%), 94(30.6%) & 26(8.4%) respectively.

TB-GeneXpert WhatsApp reports were received in one-day & two-days by 174(56.5%) & 117(38%) respectively. ZN-smear-microscopy WhatsApp reports were received in one-day & two-days by 147(47.4%) & 136(44.2%) respectively. TB culture reports were received in 6-8 weeks in 285(92.6%). Receipt of a soft-copy via WhatsApp, immediate notification of Rifampicin-resistance & receipt of a hard-copy was reported by 292(94.8%), 189(93.8%) & 282(91.6%) respectively.

The clarity, completeness, accuracy & overall-satisfaction were excellent/good in 100%, 99.7%, 100% and 100% respectively.

**Conclusions:** All the clinicians expressed great satisfaction regarding the composite rapid TB diagnostic service at the Faculty of Medicine, Colombo.

## OP 08

### Age-stratified dengue virus seroprevalence in urban and semi-urban areas and relative infection rates

Perera L<sup>1</sup>, Jeewandara KC<sup>1</sup>, Pannila PMB<sup>1</sup>, Gomes L<sup>1</sup>, Karunananda MV<sup>1</sup>, Bary FF<sup>1</sup>, Ramu ST<sup>1</sup>, Danasekara S<sup>1</sup>, Ogg GS<sup>2</sup>, Gathsaurie NM<sup>1</sup>

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**Introduction and Objectives:** Colombo district has reported the highest number of dengue cases over time, indicating high transmission rates. In order to characterize the differences transmission over time, we conducted age stratified dengue seroprevalence studies in Colombo in 2022 and compared with our previous data from years 2013.

**Method:** Individuals aged 5 to 80 were recruited from the Colombo municipality area (urban=763) and Boralesgamuwa (sub-urban=216) and dengue seropositivity assessed by an IgG in-house ELISA. The in-house ELISA was developed by validating it with the focal reduction neutralization assay (FRNT) in 76 Individuals. The seroprevalence rates in 2022 were compared with 2013 to see differences over time.

**Results:** With the in-house IgG ELISA, 13/17 individuals had evidence of a monotypic infection, 35/35 multi-typic infection by FRNT tested positive with an AUC of 0.87. The overall seropositivity rates for the urban area (94.88%) and for the sub-urban area (96.29%) were similar. The seropositivity rates in children aged  $\leq 16$  years were 82.17% and 97.94% in those  $>16$  years of age with the age stratified seroprevalence increasing with age in both the urban and sub-urban areas ( $p=0.01$ , Pearson's  $R=0.73$ ). In comparison to age stratified seroprevalence rates in 2013, there was a significant rise of seroprevalence rates among children aged  $<7$  ( $p=0.01$ ), 8-10 ( $p=0.01$ ), 11-13 ( $p=0.01$ ), and 14-16 ( $p=0.02$ ) age groups in 2022.

**Conclusions:** Our in-house dengue IgG ELISA gave comparable results to the FRNT. The age stratified seroprevalence had increased in Colombo over a decade, indicating possible higher transmission rates.

## OP 09

### Evolution of antibody responses to SARS-CoV-2, its variants and other Sarbecoviruses over time in Colombo, Sri Lanka

Bary FF<sup>1</sup>, Karunananda MV<sup>1</sup>, Jeewandara KC<sup>1</sup>, Danasekara S<sup>1</sup>, Dasanthi N<sup>1</sup>, Gunaratne A<sup>1</sup>, Rizan FRM<sup>1</sup>, Perera L<sup>1</sup>, Nimsha T<sup>1</sup>, Tan T<sup>2</sup>, Townsend A<sup>2</sup>, Ogg GS<sup>2</sup>, Malavige GN<sup>1</sup>

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**Introduction and Objectives:** The immunity within the population to SARS-CoV-2 and wider sub-genus Sarbecovirus is likely to determine virus evolution and the potential of future outbreaks. To determine the evolution immunity to these viruses overtime, we proceeded to determine the antibody responses to SARS-CoV-2, its recent variants and other Sarbecoviruses, in individuals in the Colombo Municipality Council from 2020 to 2023.

**Method:** Antibody responses to two recent omicron variants (BA.2.75, XBB.1.5) and four Sarbecoviruses (SARS-CoV-1, Khosta-2, RaTG13, WIVI) were assessed using the Hemagglutination test (HAT), in individuals aged 5 to 80 years. Assays were carried out in serum samples randomly selected from 2020 (n=381), 2022 (n=432) and 2023 (n=382).

**Results:** Positivity rates for the SARS-CoV-2 omicron variants and other Sarbecoviruses was <15% in 2020 in all age groups. The positivity rates in >15 years of age rose to >75% for RaTG13, >62% for SARS-CoV-1, >37% to WIVI, >52% to Khosta-2, >69% to BA.2.75 and >15% to XBB.1.5 in 2022. Individuals >15 years of age had significantly higher antibody levels to all variants than those <15 years of age, except for the XBB.1.5 variant. The antibody responses to all variants, except XBB.1.5 significantly reduced in all age groups from 2022 to 2023. In 2023, in those who were >15 years old, <30% had antibody titres associated with neutralization, to XBB.1.5, SARS-CoV-1, WIVI, Khosta-2 and BA.2.75.

**Conclusions:** Adults had higher antibody titres and positivity rates, possibly due to cross reactive antibodies formed following vaccination, which have significantly declined from 2022 to 2023.

## OP 10

### Detection of toxoplasmosis in end-stage renal patients and renal transplant recipients using PCR and Nested-PCR tests targeting B1 gene: the first study in Sri Lanka

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**Introduction and objectives:** Toxoplasmosis in immunocompromised patients causes mortalities. Serology used for toxoplasmosis detection in the public sector gives indeterminate results. The objective of this study was to assess the proportion of toxoplasmosis among end-stage renal patients and renal transplant recipients and validate serology with PCR-based techniques.

**Method:** With ethics approval and patient consent, data were collected using an interviewer-administered questionnaire. Blood samples from 228 end-stage renal patients and 114 renal transplant recipients admitted to the National Institute for Nephrology Dialysis & Transplantation, Maligawatta from May-2022 to July-2023 were tested using IgM and IgG ELISA and PCR to amplify the B1 gene followed by confirmatory nested-PCR.

**Results:** The study group (n=342) comprised 232 (67.8%) males and 110 (32.2%) females with a mean age of 51.2 (SD = 12.2). Among them, 28/342 (8.2%) were positive by PCR and Nested-PCR each. Among the positives, 21 were IgM negative and IgG positive, four IgM positive and IgG negative, two both IgM and IgG positive, one IgM negative and IgG borderline. Among 228 end-stage renal patients, 33 and 89 had serological evidence of acute and past infection respectively and 22 were PCR and Nested-PCR positive. Among the 114 renal transplant recipients, 31 and 34 had serological evidence of acute and past infection respectively and six were positive for both PCR and Nested-PCR.

**Conclusion:** The proportion of toxoplasmosis among end-stage renal patients and renal transplant recipients is 8.2%. Serology does not produce conclusive results and thus use of a PCR-based test is recommended.



## OP 11

### Development and validation of a cardiovascular risk prediction model for Sri Lankans

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**Introduction and Objectives:** Sri Lankans lack a specific cardiovascular (CV) risk prediction model, thus relying on WHO risk charts for Southeast Asia. We aimed to develop a Sri Lankan-specific CV risk prediction model using machine learning (ML) on data from a population-based cohort followed for 10 years. Validation was conducted on an external cohort.

**Methods:** The cohort consisted of 2596 individuals between 40-65 years of age in 2007, who were followed up for 10-years. Of them, 179 developed hard CV diseases (CVD) by 2017. We developed three CV risk prediction models (model 1, 2, and 3) using ML. We evaluated their performance against WHO risk charts via ROC curves. Model 3, named "SLCVD score," integrating age, sex, smoking status, systolic blood pressure, diabetes history, and total cholesterol, emerged as the most effective for primary care. An online tool was developed to compute SLCVD scores, validated in an external hospital-based cohort of 358 patients who presented with incident CVDs or bystanders aged 40–74 years admitted to Colombo North Teaching Hospital from January 2019 through August 2020.

**Results:** Model 1, 2, SLCVD score and the WHO risk charts predicted 173, 162, 169 and 10 of 179 observed events and the area under the ROC (AUC) were 0.98, 0.98, 0.98 and 0.52 respectively. During external validation, the SLCVD score and WHO risk charts predicted 56 and 18 respectively of 119 total events and AUCs were 0.64 and 0.54 respectively.

**Conclusions:** SLCVD score is the first and only CV risk prediction model specific for Sri Lankans. It predicts the 10-year risk of developing a hard CVD in Sri Lankans. SLCVD score was more effective in predicting Sri Lankans at high CV risk than WHO risk charts.

## OP 12

### Do comorbidities increase the risk of developing bronchiectasis? First evidence from Sri Lanka

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**Introduction and Objectives:** Bronchiectasis is a chronic respiratory disease with complex aetiology and the exact cause for developing bronchiectasis remains somewhat uncertain. Multiple risk factors have been identified globally, however, they lack scientific evidence for definitive causation. The aim of this study was to determine the comorbidity-related risk factors for bronchiectasis among patients attending respiratory clinics in government healthcare institutions in the Colombo District, Sri Lanka.

**Method:** A clinic-based unmatched case-control study was performed. The study setting included Central Chest Clinic Colombo, Colombo South Teaching Hospital and Sri Jayawardenapura General Hospital. A case was defined as a newly diagnosed bronchiectasis patient who was diagnosed clinically and radiologically and a control was other respiratory patients, who did not have a clinical or a radiologically confirmed diagnosis of bronchiectasis. The cases-to-control ratio was 1:1. The number of cases and control was 123. An interviewer-administered questionnaire was the study instrument. The risk factors were identified by performing multivariate logistic regression analysis

**Results:** Among cases 42 were having coronary vascular diseases (CVDs), 18 were having rheumatoid arthritis (RA), 78 were having other respiratory diseases and 47 were having a history of pulmonary TB. The comorbidity-related risk factors found to be significantly associated with bronchiectasis were having CVDs (aOR=2.12; 95%CI=1.08-4.16), having RA (aOR=3.28; 95%CI=1.02-10.51), having other chronic respiratory diseases (aOR=3.19; 95%CI= 1.76-5.80), history of Pulmonary TB (aOR=3.47; 95%CI=1.66-7.73), after adjusting for confounders.

**Conclusions:** The comorbidity-related risk factors have been identified therefore communicating these findings among healthcare providers is paramount, to consider bronchiectasis in their differential diagnosis.

## OP 13

### Effect of iron deficiency anemia on HbA1c levels in a cohort of patients with Type 2 diabetes mellitus in a tertiary care hospital

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**Introduction and Objectives:** Studies have reported that HbA1c levels can be changed by iron deficiency (ID), which is the commonest nutritional anaemia globally.

This study was aimed at determining the effect of iron deficiency anaemia (IDA) on HbA1c levels in a cohort of patients with type 2 diabetes mellitus (T2DM), attending a tertiary care hospital in Sri Lanka.

**Methods:** A retrospective analytical study was performed for a period of 6 months from January 2021. Laboratory records of 281 adult T2DM patients, both anaemic(n=135) with Hb <12g/dl in females and <13g/dl males and transferrin saturation of <16%, as well as a non-anaemic(n=146) group with Hb>12g/dl in females and >13g/dl in males, were analyzed. Other types of anaemia or hemoglobinopathies were excluded from the study based on their clinical history evaluation. Data were analyzed using (SPSS) version 20, descriptive statistical methods, Pearson's Correlation test with p-values, independent sample t-test, one-way analysis of variance (ANOVA) and the Chi-Square test.

**Results:** Of the total of 281 patients diagnosed with T2DM, 150 were female, and 131 were male, and age range of 22 to 96 years. The mean  $\pm$  standard deviation (SD) values for HbA1c in both anaemic and non-anaemic groups were  $7.4 \pm 2.2\%$  g/dL and  $7.3 \pm 2.36\%$  g/dL, respectively. No significant relationship was observed between the two groups (p=0.889).

There was no significant correlation observed between HbA1c levels with serum iron (p-value = 0.617), total Iron Binding Capacity (TIBC) (p-value = 0.340) and transferrin saturation (p-value = 0.168).

**Conclusions:** The study reveals, HbA1c in T2DM patients with and without IDA show no significant difference. Therefore, HbA1c could be reliably used in monitoring patients with T2DM and IDA.

## OP 14

### Is the presence of Gilbert's syndrome protective in patients with metabolic dysfunction-associated steatotic liver disease (MASLD)?

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**Introduction and Objectives:** Gilbert's syndrome (GS); a genetic disorder, is known to cause high levels of bilirubin in the blood. Although typically harmless and symptom-free, this condition has been linked to various liver-related issues because of its impact on bilirubin metabolism. The escalating prevalence of metabolic dysfunction-associated steatotic liver disease (MASLD) is now a global health issue, with recent research suggesting a possible association between GS and diverse liver diseases. The objective of this study was to investigate whether the presence of GS influences the prognosis of patients diagnosed with MASLD.

**Method:** A retrospective cohort study was conducted at Nawaloka Hospital, Colombo. Accurate measures were implemented to acquire relevant anthropometric, biochemical, and sociodemographic parameters. Liver fibrosis was assessed using Fibroscan®502 performed by an experienced, single operator. The data collected was then analyzed using SPSS 28.

**Results:** Among the 111 patients, 25 (22.5%) exhibited high bilirubin levels (above 1mg/dl). Patients with high bilirubin levels showed a median (IQR) liver stiffness of 7.4 (5.9–12.6) kPa, whereas those with low bilirubin levels it was of 8.1 (5.4–12.2) kPa. In the high bilirubin group, 4 (16%) had liver stiffness exceeding 15kPa and 3 (12%) had liver stiffness surpassing 20kPa. Conversely, in the low bilirubin group, 15 (17.4%) had liver stiffness above 15kPa and 8 (9.3%) had liver stiffness above 20kPa. However, there is no association between liver stiffness and total bilirubin ( $p=0.50$ ).

**Conclusions:** In our limited cohort, the presence of GS did not seem to adversely affect MASLD patients. However, larger studies are needed to confirm this finding.

## OP 15

### Effects of exercise on Quality of Life (QoL) of adults with Type 2 Diabetes Mellitus (T2DM) and the barriers and facilitators to exercise adoption and adherence: Sri Lanka Diabetes Aerobic and Resistance Training Study (SLDARTS)

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**Introduction and Objectives:** Diabetes has long-term effects on Quality of Life (QoL) and exercise training is integral in its management. We studied effects of exercise in QoL of adults with Type 2 Diabetes Mellitus (T2DM) and the barriers and facilitators for exercise adoption and adherence.

**Method:** A randomized controlled trial recruited 86 sedentary Sri Lankans (aged 35-65 years) with T2DM into Aerobic Training (AT, n=28), Resistance Training (RT, n= 28) and Control (CN, n=30) groups for 12 weeks of supervised exercise training intervention, 2 days/week. Pre and post intervention QoL was assessed using 36-Item Short Form Health Survey questionnaire (SF-36). In-Depth Interviews (IDIs) (n=31) qualitatively assessed reasons for exercise adoption and adherence.

Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, Colombo.

**Results:** QoL increased in all 8 scales of SF-36 for both AT and RT. RT improved in physical functioning, role limitations due to physical and emotional health, emotional wellbeing and pain with medium effect sizes. AT improved in physical functioning, emotional wellbeing, social functioning and general health, with medium-large effect sizes. CN improved in 5 scales with small effect sizes.

Qualitative data indicated positive belief towards the 'prescriber', significantly improving adoption. Facilitators for adherence were positive feedback, improved self-efficacy and performance mastery. Barriers were family events, work commitment and gymnasium accessibility.

**Conclusions:** Study reveals QoL improvement via supervised aerobic and resistance training for T2DM management and highlights the need for personalized exercise prescriptions based on cognitive behavioral constructs to improve adoption and adherence.

## OP 16

### Characteristics of patients with PFO in young patients with ESUS and association with stroke recurrence

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**Introduction and Objectives:** Patent foramen ovale (PFO)–associated strokes comprise approximately 10% of ischaemic strokes in young adults. We aimed to describe and compare characteristics of pathogenic PFO and non-pathogenic PFO in a well-defined young Embolic Stroke of Undetermined Source (ESUS) population.

**Methods:** Young ESUS study, prospectively enrolled 535 consecutive patients 50-years and younger with ESUS from 10/2017 to 10/2019 in 41 stroke centers in 13 countries and followed up for a median duration of 18 months. Pathogenic PFO were defined by PASCAL score.

**Results:** 535 patients were enrolled (mean age 40.4(SD 7.3) years, 238 (44%) female). Of the 354 participants that had Trans Thoracic Echocardiogram (TTE) with bubble study, 177(50%) had PFO identified and of the 226 that had a Trans Oesophageal Echocardiogram (TOE) 113(50%) had a PFO identified. PFO by TTE or TOE were identified in 195 (36%). When comparing to the non-PFO group, participants with a PFO had less traditional vascular risk factors (hypertension, diabetes mellitus, hyperlipidemia) and a lower BMI. Large shunt was present in 41 and atrial septal aneurysm in 33 of those with TOE. 161(86%) patients had possible 112 (57%) or probable 49 (22%) PFO related stroke. Having a pathogenic PFO did not predict stroke recurrence.

**Conclusions:** In this young ESUS cohort the prevalence of PFO was high. The prevalence rate is likely an underestimation due to underutilization of TOE and TTE with bubble studies. Pathogenic PFO was not a predictor of recurrence, and this could be due to the relatively shorter length of followup and/or the relatively lower risk of recurrence via PFO.

## OP 17

### Quality of life assessment in rheumatoid arthritis patients attending the Department of Rheumatology and Rehabilitation at National Hospital of Sri Lanka

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**Introduction and Objectives:** Rheumatoid arthritis (RA) is a chronic autoimmune inflammatory disorder affecting approximately 23 million individuals worldwide. This study measured the quality of life (QOL) among RA patients and identified influencing factors. It assessed physical, psychological, social, and economic impacts of RA, and examined the effectiveness of rehabilitation programs.

**Methods:** The study was conducted at the Department of Rheumatology and Rehabilitation at the National Hospital of Sri Lanka (NHSL), employed a descriptive cross-sectional design. Data from 356 RA patients were collected using a modified WHOQOL-BREF questionnaire in Sinhala and Tamil. Analysis utilized SPSS version 27 software and Pearson's correlation test and independent sample t-test were used to test for significance ( $P < 0.05$ ).

**Results:** The study population included a total of 356 patients (87% females), with the mean age among the study population recorded as 60 years (IQR=19-83). Gender differences in environmental health domain scores were noted ( $p=0.007$ ), with males scoring higher (26.09 vs 24.34). Age negatively correlated with psychological health ( $p=0.001$ ,  $r=0.031$ ) and environmental health ( $p=0.035$ ,  $r=0.018$ ). No correlation was found between clinic period and the domains of QOL. Both education and income proved to significantly impact psychological ( $p=0.006$ ), environmental ( $p<0.001$ ), and overall QOL health domains ( $p<0.001$ ), with better education (tertiary education – university level) and higher income ( $\geq 20000$  LKR) associated with better QOL.

**Conclusions:** This study explored the multifactorial influences on the QOL among RA patients. Key factors affecting QOL include gender, with males scoring higher in the environmental health domain; age, negatively correlates with psychological and environmental health domains; education level, with higher education associated with better QOL; and monthly income, influencing access to medications, and supportive aids

## OP 18

### **Efficacy and safety of deferoxamine, deferasirox, and Deferiprone triple iron chelator combination therapy for transfusion-dependent $\beta$ -thalassaemia with very high iron overload: a randomised controlled clinical trial**

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**Introduction and Objectives:** Many patients with transfusion-dependent thalassaemia die prematurely due to transfusion-related iron overload. We evaluated the efficacy and safety of triple combination treatment with deferoxamine, deferasirox and deferiprone over dual combination of deferoxamine and deferasirox in patients with transfusion-dependent thalassaemia

**Method:** This open-labelled, randomised, controlled clinical trial was conducted at Thalassaemia Centre of Colombo North Teaching Hospital. Patients with transfusion-dependent thalassaemia with very high serum ferritin ( $>3500\text{ng/mL}$ ) were randomised 2:1 into intervention and control arms. Intervention arm received oral deferasirox, oral deferiprone and subcutaneous deferoxamine for six months, whilst control arm received deferasirox and deferoxamine. Reduction in serum ferritin was the primary outcome measure. Ethical approval was obtained from University of Kelaniya Ethics Committee (P/06/02/2023), and the study is registered in the Sri Lanka Clinical Trials Registry (SLCTR/2023/010).

**Results:** Twenty-three patients were randomised (intervention-15, control-8). Mean serum ferritin at randomisation was  $6012 (\pm 2090)\text{ng/mL}$  and  $5616 (\pm 2300)\text{ng/mL}$  in intervention and control arms ( $p=0.68$ ) respectively. One patient died (unrelated reasons) and 6 defaulted (all in intervention arm) due to development of arthralgia which resolved after stopping deferiprone. Of the patients completed the trial, all ( $n=8$ ) patients in the intervention arm showed a reduction in serum ferritin compared to 5/8 (62.5%) in the control arm. The mean change of serum ferritin in the intervention arm was  $-1048 \pm 824\text{ng/mL}$  compared to  $+82 \pm 1588\text{ng/mL}$  in the control arm.

**Conclusions:** Triple combination therapy with deferasirox, deferiprone and deferoxamine shows higher efficacy in reducing ferritin in patients with transfusion-dependent thalassaemia. However, deferiprone was not tolerated by 6/15 patients due to severe but reversible arthropathy.



## OP 19

### Surveillance of antibiotic usage in a Private Hospital , Colombo, Sri Lanka

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**Introduction and Objectives:** Antibiotics are the most frequently used medications in most healthcare settings worldwide. Irrational use of antibiotics is one of the leading causes of Antimicrobial resistance (AMR).

The objective of this study is to see the adherence to antibiotic policy on redlight antibiotics and antibiotic guidelines by prescribers.

**Method:** Data collection was done every Monday for six months period .All in-patients who are on antibiotics on the day of surveillance were taken for the study. The data gathered were -Type of Antibiotic/s given, indication, dose, route and frequency of the prescribed antibiotic , Whether the antibiotic was prescribed based on biomarkers and whether the antibiotic was started empirically or based on microbiological evidence or given as prophylaxis.

**Results:** Most frequently used oral antibiotic is Co-amoxiclav followed by Ciprofloxacin and the most frequently used intravenous antibiotic is Meropenem followed by cefuroxime. Amikacin was also used for nebulization of patients. Out of red light antibiotics, linezolid was the most frequently used antibiotic. 60% of antibiotics were used as empirical treatment followed by prophylaxis therapy(29%). Only 11% were given as targeted therapy.

**Conclusions:** This study has revealed IV meropenem is used more commonly than other types of IV antibiotics. This shows a poor guideline compliance among prescribers. Use of red line antibiotics should be monitored to minimize the use of them. As majority of antibiotics are prescribed empirically, prescribers need to do microbiological sampling before starting antibiotics and deescalate accordingly and minimize the development of AMR and to improve patient outcomes.

## OP 20

### Use of venous thromboembolism prophylaxis in critical care settings in a tertiary care hospital in Sri Lanka

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**Introduction and Objectives:** Hospital-acquired venous thromboembolism (VTE) is a leading cause of mortality and morbidity. Limited literature exists in the Sri Lankan context. This study examines documented practices of VTE risk assessment, high-risk categories and use of VTE prophylaxis in intensive care units (ICU) at National Hospital of Sri Lanka (NHSL).

**Method:** The study was conducted in selected ICUs from June to July 2023. Patient records were reviewed using a standardised data-extraction sheet, and the data was analyzed with SPSS-24 using descriptive statistics.

**Results:** Of the 145 patients, 51.7% were male, with ages 18-84 years and an average ICU stay of 11.46 days. The patients were from neurological(31%), medical(34.5%), and surgical(34.5%) ICUs. Among the 81 patients with documented weight, the mean weight was 63.9 kg ( $\pm 13.2$ ). VTE scores ranged from 0-14, with a mean score of 8.15 ( $\pm 3.1$ ). For VTE prophylaxis, 28.2%(n=41) received only pharmacological treatments, 44.8%(n=65) received only mechanical methods, and 25.5%(n=37) received a combination. Patients receiving pharmacological methods were on low molecular weight heparin, with doses ranging from 20-180 mg/day. Those receiving mechanical methods used DVT pumps. None had previously diagnosed hematological disorders. VTE risk hadn't been assessed in any patient on ICU admission or within 24 hours.

**Conclusions:** The sample closely reflects the general adult population in terms of age and sex distribution. Inadequate VTE risk assessment upon admission and within 24 hours is of serious concern, as early risk identification is crucial. High mean VTE score suggests a moderately high VTE risk. Most patients received mechanical VTE prophylaxis.

## OP 21

### The knowledge, attitudes, and other factors associated with medication adherence among type 2 diabetes mellitus patients in primary care clinic settings

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**Introduction and Objectives:** Type 2 Diabetes Mellitus (T2DM) is a growing public health concern in developing countries like Sri Lanka. Promoting medication adherence is crucial in disease management, particularly in primary care settings where most newly diagnosed patients are treated. This study assessed the knowledge, attitudes, and factors associated with medication adherence among T2DM patients in primary care clinics.

**Methods:** A descriptive cross-sectional study was conducted at a primary care clinic among 120 diabetes patients. Data were collected using an interviewer-administered questionnaire. Scoring systems were used to assess knowledge, attitudes, and medication adherence. The association of factors with medication adherence was determined by chi-square test ( $p < 0.05$ ). Pearson correlation test was used to test for correlation.

**Results:** The majority of participants had good knowledge (50.8%) and positive attitudes (86.7%) towards medication adherence, with 62.5% demonstrating satisfactory adherence levels. A weak negative correlation ( $r = -0.355$ ,  $p = 0.01$ ) was found between mean fasting blood sugar and medication adherence. Male sex ( $p=0.031$ ), being employed ( $p=0.001$ ), regular clinic attendance ( $p=0.028$ ), good knowledge ( $p=0.027$ ), and positive attitude toward medication adherence ( $p=0.027$ ) were significantly associated with satisfactory medication adherence. Transport costs and medication availability showed no significant associations.

**Conclusions:** This study revealed that most participants had a good knowledge and positive attitude toward medication adherence. Patients with good knowledge and positive attitudes demonstrated a significant association with satisfactory medication adherence. Male patients, those who were employed, and those who attended the clinic regularly satisfactorily adhered to medication.

**Values and preferences of current and bereaved caregivers of patients with advanced cancer in Sri Lanka**

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**Introduction and Objectives:** To deliver effective palliative care, it is necessary to understand the values of caregivers. As part of a larger study on preferences in advanced cancer in Sri Lanka, this study explored what matters to caregivers of patients with advanced cancer in Sri Lanka.

**Method:** Exploratory semi-structured in-person interviews were conducted with current caregivers (CC, n=7) at the National Cancer Hospital, Maharagama. Bereaved caregivers (BC, n=8) were interviewed over the telephone. Interviews were recorded and transcribed. Thematic analysis was performed.

**Results:** Among CCs, there was an experience of being overwhelmed, confused and helpless while attempting to balance the practicalities of caring with understanding complex medical issues, financial struggles, the hope of a cure and concurrent grief for the impending loss of the patient. A need for information was apparent, for the family to prepare for the patient's death. CCs appeared 'stuck in limbo', awaiting death as a release from suffering for everyone. Among BCs, there was difficulty in accepting the death of the patient and complicated grief. This was often attributed to a lack of information regarding the patient's disease, clinical course and prognosis, leading to regrets about missed opportunities, and a loss of trust in the healthcare profession. Among CCs and BCs, it was important to do their best for the patient and respect the patient's wishes.

**Conclusions:** Provision of medical information was required to enable best caregiving, thereby allowing caregivers to prepare for the patient's death and honour the patient's wishes as far as possible.

## OP 23

### Quality of Life of women diagnosed with breast cancer : a qualitative study in a tertiary care Hospital in North Central Province of Sri Lanka

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**Introduction and Objectives:** Breast cancer is the most prevalent cancer among women worldwide, including Sri Lanka. Quality of life (QoL) of women is significantly affected with the diagnosis of breast cancer. The general objective of this study is to explore the QoL of women diagnosed with breast cancer in a tertiary care hospital in North Central Province of Sri Lanka.

**Methods:** Qualitative study with a phenomenological approach was conducted. Twelve participants currently being treated at Teaching Hospital - Anuradhapura were selected using purposive sampling achieving the theoretical saturation of data. In-depth interviews were transcribed, translated and thematically analyzed.

**Results:** Four major domains and thirteen themes were identified. Domains defining the QoL of women with breast cancer are physical, psychological, socio-economic experiences and spirituality. 'Physical experiences' domain encompasses physiological disturbances and appearance concerns. 'Psychological experiences' domain includes reactions and adjustments to diagnosis and treatment, self-destructive notions, plans and wishes for future and coping strategies. Themes of 'Socio-economic experiences' comprises intimate relationships, family roles and responsibilities, interpersonal relationships within clinical settings, social relationships and financial strains. 'Spirituality' domain includes the ideations on religion and existential issues.

**Conclusions:** The study provides insights into the QoL of women with breast cancer, highlighting interconnected themes across the domains. A holistic approach is mandatory to enhance their QoL, prioritizing psychological support and welfare. These multifaceted needs are required to be addressed by the healthcare providers in order to effectively support breast cancer survivors.

## OP 24

### Comparison of pathological features between young ( $\leq 40$ years) and older ( $>40$ years) women with breast carcinoma at a tertiary care centre in Sri Lanka.

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**Introduction and Objectives:** Studies investigating features of breast carcinoma (BCa) in young women in Sri Lanka are limited. We describe and compare the pathological characteristics of BCa in women  $\leq 40$  and  $>40$  years in a cohort of Sri Lankan women.

**Method:** This descriptive cross-sectional study includes BCa (wide local excisions and mastectomies) reported at the National Hospital of Sri Lanka from 2014 to 2018. Clinical details, invasive tumour size, tumour T stage and lymph node status were extracted from histopathology reports. The hematoxylin and eosin-stained slides and immunohistochemistry slides of all cases were retrieved and reviewed to determine tumour type, Nottingham grade(NG), presence of lympho-vascular invasion (LVSI), perineural invasion, ductal carcinoma in-situ (DCIS), lobular carcinoma in-situ (LCIS), lobular cancerization, stromal percentage, nature of the stroma, percentage of necrosis, tumour infiltrating lymphocytes, hormone receptor and HER 2 status and Ki67 index. Mann-Whitney, Pearson's chi-square and Fisher exact tests were used to statistically compare the pathological features between both age groups using SPSS 23.0

**Results:** Data was collected from 411 patients (99  $\leq 40$  years; 312  $> 40$  years). Aggressive pathological features (high NG, LVSI, high grade DCIS, lobular cancerization, Ki 67 index  $>14\%$ , triple negativity and high Nottingham prognostic index (NPI) ) were more frequent in the  $\leq 40$ -year age group. There was a statically significant association between the younger age category and low stromal percentage ( $p=0.007$ ), high grade DCIS ( $p=0.001$ ), lobular cancerization ( $p<0.001$ ) and poorer NPI ( $p= 0.04$ ).

**Conclusions:** BCa in young women in Sri Lanka showed aggressive pathological characteristics and was associated with poor prognostic indicators.

## OP 25

### The impact of economic crisis on the provision of care for paediatric patients with epilepsy: observations from a tertiary healthcare facility in Sri Lanka

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**Introduction and Objectives:** 2021 economic crisis in Sri Lanka, affected the free health care system. Children with chronic diseases such as epilepsy requiring daily medication and follow up were vulnerable and this study evaluated the impact of the care given to children with epilepsy during the crisis

**Method:** A mixed method study was conducted with a qualitative arm conducted with a focus group discussion with 30 caregivers and data analyzed using thematic analysis, together with a quantitative arm conducted with a random sample of 120 caregivers using an interviewer administered questionnaire. The study was undertaken at the Teaching Hospital Kurunegala.

**Results:** Four major themes were identified. They were financial difficulties faced by the caregivers, unavailability of medications, compliance, and social aspects. However, marked resilience was seen as one parent commented “I have even gone hungry to somehow buy medications that my child needs.” 52% depended only on free health services for treatment. Compliance with clinic visits was 90.5% prior to the crisis. This did not significantly change during the crisis. Compliance with medication was also seen to be good prior to and during the economic crisis (89.5% and 88.4%). Seizure control was seen in almost equal percentages (48% and 42 %) prior to and during the economic crisis. 90% faced problems due to reduced daily wages, lost jobs, and with difficulties in caring for other children.

**Conclusions:** No significant difference in compliance to medication, clinic visits and occurrence of break-through seizures was seen due to the crisis. Care givers faced significant financial burdens and social issues, but continued care for the child was not significantly compromised.

## OP 26

### Dietary diversity of school mid-day meals of 8–12-year-old school children in Sri Lanka

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**Introduction and Objectives:** The recent economic crisis in Sri Lanka has reduced food affordability and accessibility, potentially affecting the quality of the diets of children. Dietary diversity predicts dietary quality and there is limited evidence on the diversity of children's school meals. This study aims to describe the dietary diversity of school mid-day meals of 8-12-year-old children in Sri Lanka.

**Method:** A descriptive study was conducted in an island-wide sample of 27 schools selected through multilevel cluster sampling to represent school types (1AB, 1C and 2) in the nine provinces. Mid-day meals were observed and photographed with parental consent. Content analysis was conducted using the consensus approach with experts in Nutrition and Public Health. Sri Lankan Food Based Dietary Guidelines (2021) were used to calculate the Dietary Diversity Score (DDS). DDS was classified as inadequate ( $\leq 3$ ), medium (4-5) and high (6-10). Associations were determined using the Chi-square test.

**Results:** In 562 school mid-day meals of Grade 4 (n=286, 50.9 %) and 7 (n=276, 49.1%) photographed from August to December 2023, mean DDS was  $3.79 \pm 1.38$ . Dietary diversity was medium among 280 (49.8%) and inadequate among 235 (41.8%). The highest mean DDS was from the Central Province ( $4.26 \pm 1.2$ ) while the lowest was from the Eastern Province ( $2.89 \pm 1.01$ ). The number of colours per meal varied from 1- 6). There is a significant association between the number of colours in a meal and the DDS at 0.05 or 5% level of significance.

**Conclusions:** Dietary diversity among Sri Lankan children is medium to inadequate. Nutritional interventions to improve diets in children should focus more on dietary diversity.



## OP 27

### Lifestyle risk factors and allergic diseases in Sri Lankan children

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**Introduction and Objectives:** Asthma, Allergic Rhinitis and Eczema impose an increasing burden on children in Sri Lanka. However, there is a lack of islandwide data that may reveal modifiable lifestyle risk factors which we aimed to investigate.

**Methods:** A stratified, multi-stage cluster sampling approach was used to recruit 5043 schoolchildren aged 10-19 from 9 districts, representative of the 9 provinces in Sri Lanka. Demographic and clinical data were collected using the International Survey on Allergies and Asthma in Childhood (ISAAC) questionnaire for children.

**Results:** Children with Asthma were significantly more likely to have consumed paracetamol once a month or yearly compared to children without asthma (OR: 1.66, 95% CI: 1.24-2.27). This was also seen for Allergic Rhinitis (OR: 2.27, 95% CI: 1.69-3.12) but not for Eczema.

Children with Allergic Rhinitis were significantly more likely to have lived on a street along which lorries pass through frequently, than children without the disease (OR: 1.27, 95% CI: 1.03-1.56). A significant difference was not observed for Asthma and Eczema.

Children with Asthma were significantly more likely to be engaged in vigorous physical activity than children without asthma (OR: 1.41, 95% CI: 1.14-1.73). This was also noted for Allergic Rhinitis (OR: 1.21, 95% CI: 1.00-1.47) but not Eczema.

**Conclusions:** The likelihood of developing Asthma appears to increase with paracetamol use and engagement in vigorous exercise while the risk of getting Allergic Rhinitis seems to increase with air pollution and vigorous exercise. Further confirmation involving differing levels of exposure to the risk factors is suggested.

## OP 28

### **Challenges and Experiences Faced by Parents of Children with Attention Deficit Hyperactivity Disorder (ADHD); A Qualitative Study at Colombo North Teaching Hospital (CNTH) and ‘Ayati’ National Centre for Children with Disabilities.**

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**Introduction and Objectives:** ADHD, characterised by persistent inattention, hyperactivity, and impulsivity, extends its impact beyond the child, profoundly affecting family dynamics. Parents of children with ADHD often face the challenge of managing problematic behaviours, navigating complex treatment options, and confronting social stigma. This can lead to increased stress, feelings of isolation, and potential family dysfunction. This study explores the unique experiences faced by parents of ADHD children attending child psychiatric clinics in CNTH and Ayati.

**Methods:** This descriptive qualitative study recruited parents of children (aged 4-12 years) diagnosed with ADHD according to DSM5 criteria. Participants were purposely recruited, and data were collected through semi-structured telephone interviews until saturation (N=18). Interviews were audio-recorded, transcribed, and analysed using thematic analysis. Data collection occurred from November 2022 to January 2023.

**Results:** Six themes emerged: life-threatening and challenging behaviour, parental challenges and emotional stress, social stigma, financial burden, limited access to education and healthcare, and positive coping strategies. This further unveiled a spectrum of challenges in handling children's behaviour, ranging from difficulties in managing life-threatening situations to an inability to follow parental instructions, leading to disruption of family functioning, significantly impacting maternal well-being.

**Conclusions:** Parenting a child with ADHD can be stressful due to behavioural challenges and social stigma. Parents often report feeling overwhelmed and isolated. Satisfaction with healthcare services often surpasses that with education. The lack of paternal insight is a limitation of this study. In conclusion, recognising the challenges inherent to parenting a child with ADHD and developing a support system would improve effective care.

## OP 29

### **Antenatal anxiety: A study of the prevalence and selected risk factors among antenatal women in a Government Hospital in the Colombo District of Sri Lanka**

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**Introduction and Objectives:** Pregnancy is a challenging period for both the physical and mental health of a woman, increasing her vulnerability to mental health conditions during this period. Antenatal anxiety is one such overlooked condition which can result in adverse outcomes to both mother and child, as well as to the larger society. This study assessed the proportion of antenatal anxiety and factors associated with it among pregnant women attending antenatal clinics at a government hospital in the Colombo district of Sri Lanka.

**Methods:** A descriptive cross-sectional study was conducted among 122 systematically sampled pregnant women. Data collection was carried out using two interviewer-administered pre-validated questionnaires to assess their level of anxiety (Perinatal Anxiety Screening Scale/PASS) and their level of coping. Another questionnaire was used to collect information on selected socio-demographic, family-related, pregnancy-related (related to both current and previous pregnancies) and health-related factors of the participants.

**Results:** The participants' age ranged from 18- to 39-years (mean age=27.2 years). Most of the women were multigravida (54.9%). Among the participants, antenatal anxiety was observed in 42.6%, with 37.7% falling into the mild to moderate anxiety category, while only 4.9% exhibited severe symptoms. Among the correlates studied for association with antenatal anxiety, only maternal age, educational level, pregnancy-related medical conditions, younger age of partner, and the women's choice of coping skills showed a statistically significant association.

**Conclusions:** The study revealed that antenatal anxiety among pregnant women is considerably high. Yet, as it could be challenged as a methodological artefact, we recommend further studies to explore the issue of antenatal anxiety by including qualitative and mixed method studies among women with the lived experience and also among clinicians about the appropriateness of the anxiety scales available.

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- PP 063**      **Knowledge, attitudes and practices regarding hypertension among Sri Lankan adults: an online community survey**  
Silva KMS, Manchanayake MM, Swarnamali H, Liyanage SU, Ranasinghe P
- PP 064**      **Prevalence of advanced liver fibrosis among Sri Lankans with type 2 diabetes and non-alcoholic fatty liver disease: a cross-sectional study**  
Mettananda KCD, Egodage T, Dantanarayana C, Fernando R, Ranaweera L, Siriwardana SASR, Ranawaka C, Kottahachchi D, Pathmeswaran A, Dassanayake AS, De Silva HJ
- PP 065**      **Public awareness on risk factors for kidney disease: a study from Kandy District, Sri Lanka**  
Abeysekera RA, Tennakoon TMWV, Palliyaguru SN, Gamage ND, Gunawardana AGD, Dassanayake DMBGLM, Perera AYP, Hemakeerthi VC, Ranathunga APDT, Warnasooriya WMSN, Senevirathne DMSH, Rafsanjani F, Farah FB, Bandara GMM
- PP 066**      **Prevalence of hypertension, its risk factors and associations among sanitary workers in the Colombo Municipal Council area**  
Pathirana IPSLM, Panditharathne CV, Perera ADD, Perera VV

- PP 067**      **Reach and engagement of Non-Communicable Diseases (NCD) prevention content on facebook in Sri Lanka**  
Wanasinghe T, Abeykoon A, Athauda LK, Chandratilake M, Kasturiratne A
- PP 068**      **A rare case of cerebral oedema following anaphylaxis to IV Co-amoxiclav in a District General Hospital in Sri Lanka**  
Madhusanka RBD, Ratnayake RMDAL, Wanigaratne T, Chandana UDS
- PP 069**      **Insights into chronic pain management: a retrospective audit on demographics, pain characteristics, and treatment strategies in a pain management unit at a Tertiary Care Hospital in Sri Lanka**  
Herath A, Ekanayake N, Ratnayake A, Nanayakkara PSK, Abeysundara AB, Sandaru GLG
- PP 070**      **Translation, cross-cultural adaptation, and validation of the Duke Activity Status Index (DASI) to Sinhala language**  
Ranasinghe C, Kariyawasam K, Liyanage J, Walpita Y, Rajasinghe U, Abayadeera A, Chandrasinghe P, Gunasekara M, Kumarage S, De Silva M, Ranathunga K, Deen K, Ismail H
- PP 071**      **Clinico-Epidemiological profile of stroke patients attending Teaching Hospital Peradeniya**  
Abeykoon S, Madhusanka RBD, Hettiarachchi SM, Dissanayake DMSL, Dharmaratne SD, Pathirage LPMMK, Kularatne SAM
- PP 073**      **Prevalence and associated factors of osteoarthritis among hospital women attendants in national hospital Sri Lanka.**  
Jesla MSF, Jayawardana DGSKL
- PP 074**      **Factors leading to delayed presentation of inflammatory arthritis to specialty care in a Sri Lankan population: lessons learnt for improvement of care**  
Sun SS, De Silva BR, Prematilake TG, Warnasooriya WMSN, Dandeniya CL
- PP 075**      **Effectiveness of school-based sexual and reproductive health education programs in reducing adolescent pregnancies in Medical Officer of Health area Egodaunya from 2021 to 2023**  
Withanage SJW, Lakshima WDS, Kalubowila KC, Gajanayake C, Karunanayake A
- PP 076**      **Dimensions and factors affecting sleep health, and its association with Body Mass Index among Grade 10 students in Rathnapura Educational Division**  
Senevirathna RRWL, Navaratna WMSNK
- PP 077**      **Association of knowledge, attitudes, and practices related to STDs among non-medical undergraduates at a state university in Sri Lanka**  
Piyarathna SS, Samarasekara GCD, Rajakaruna RMND, Withanawasam TI, Gamage AU
- PP 078**      **Unveiling drug abuse through eyes of close associates: a qualitative exploration of insights among non-drug using associates in a sub-urban community in Anuradhapura District, Sri Lanka**

Abeysekara SDAM, Ambagahawaththa PGCN, Amarasinghe AAPN, Amarasinghe AAPSV, Anupama DMN, Abeywickrama LCAT, Gunasekara SD, Warnasekara YPJN

**PP 079 Health literacy and healthcare-seeking behaviour among selected garment factory workers in Ratmalana Medical Officer of Health Area, Sri Lanka**

Dharmarathne LL, Dilhara KN, Gamlath BGRYA, Gunasekara GKSR, Hamid FFA, Hapuarachchi AT, Rathnayake AJIS<sup>1</sup>, Gamage AU<sup>1</sup>

**PP 080 Assessment of knowledge, attitudes and practices on the management of dandruff among undergraduates of the Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka**

Gayathri SIV, Silva NDD, Napagoda MT

#### Poster Presentation Sessions 4

**PP 081 Knowledge, attitudes and associated factors on the preschool meal programme among preschool teachers in the Colombo Municipal Council (CMC) area, Sri Lanka**

Abeysinghe WSP, Ahmed F, Lee J, Magodarathna L, Weerasekara Y, Dissanayaka GS, Liyanage A

**PP 082 Utilisation pattern of micronutrient supplements and associated factors among pregnant women attending antenatal clinics in Wattala MOH area**

Weerasinghe WMAKA, Welikala GA, Wickramasinghe NJKA, Yasasmini KEMN, Walpita WDYN

**PP 083 Knowledge, attitudes and practices of food handlers on food safety in a selected MOH area in the Colombo District**

Wickramasuriya PCS, Wijayaesekara WWMMD, Wijekoon DSR, Wijenayaka GD, Walpita YN

**PP 084 Development of a model diet and behavioral change plan to prevent hypovitaminosis D among Sri Lankan students in Belarus: a case report**

Arunasalam L, S Mahawithanage S

**PP 085 Effect of excessive iodine consumption on metabolic and ovulatory disorders in young females of child-bearing age.**

Hewage N, Wijesekara U, Perera R

**PP 086 Dietary behaviors, physical activity and their correlates among young adult trainees aged 18 to 30 years attending the National Youth Center (NYC), Maharagama**

Hallaj A, Athukorala KM, Wickramasekara MHM

**PP 087 Determining the effect of seminal plasma supplementation on sperm motility in males with Asthenozoospermia: a systematic literature review**

Willathgamuwa ND, Nissanka NMTA, Dinasha WDM, Nammunige MK, Thennakoon HP, Rodrigo N, Logenthiran PV

- PP 088**      **Isolation, enrichment, and characterization of syncytiotrophoblast-derived extracellular vesicles from ex vivo dual lobe placental perfusion**  
Logenthiran PV, Vatish, M
- PP 089**      **The effects of sperm cell driven microbots on male infertility**  
Anthony CRH, Hettiarachchige Done AS, Henyaka HMAM, Perera KOH, Alwis MS, Panagoda POK, Rodrigo NS, Logenthiran PV, Wijesekara KB
- PP 090**      **Cross-cultural adaptation and validation of the Sinhala version of the Female Sexual Function Index (FSFI) among adult patients in a tertiary-care gynaecological unit in Sri Lanka: findings from Exploratory Factor Analysis (EFA)**  
Gnanarathne S<sup>1,2</sup>, Alwis I<sup>3</sup>, Karunarathna BSL<sup>1</sup>, Kariyawasam AM<sup>1</sup>
- PP 091**      **Gray platelet syndrome: a rare cause of thrombocytopenia in pregnancy**  
WijesiriwardhanaYS, Amaradivakara PW, Gamage V
- PP 093**      **Sensorineural hearing loss in patients with hyperlipidemia at a tertiary healthcare center in Sri Lanka**  
Hansani RPGK, DE Silva MDK, Rupasinghe RAPJKMSR
- PP 094**      **Development of 1 kHz low pass filtered speech test in Sinhala to assess auditory closure ability in young adults: a pilot study**  
Pathirana RPMM, Jayasena BN, Jayathilake CL
- PP 095**      **Prevalence and factors associated with dietary supplement use among athletes in University of Colombo**  
Tharsikan S, Tharmmathasan S, Thathsarani JAA, Thilakarathna RIK, Chandrathilaka KRM
- PP 096**      **Relationship between Cumberland ankle instability tool score with postural stability, strength and balance among university athletes with and without ankle instability**  
Jayalath LR, Senanayake NWWPGKS, Ranathunga RAMD, Pathirana CHH
- PP 097**      **Study on surgical antibiotic prophylaxis in a private hospital, in Sri Lanka**  
Fernando TDS, Chandrasiri P, Wijeyanthi GGD
- PP 098**      **Anatomy of inferior mesenteric artery: a cadaveric study**  
Abesuriya V, Hewawardhane S
- PP 099**      **Penile entrapment with a steel ring removed using an angle grinder: a case report**  
Bandara GBKD, Nabil MNM, Bandara DMSM
- PP 100**      **Variations of the cystic artery and its surgical relevance**  
Jayarathna MJS, Ekanayake EMKB, Rajapakshe HNK, Hilma MTF, Vadysinghe AV, Udupihille J, Amaratunga HA
- PP 101**      **Access delays to essential surgical care among post-operative patients in selected hospitals in Colombo District**  
Wijayasinghe HWMJC, Tissera HAKN, Rathnasiri IMRK, Hansani WHS, Rishikeshan T, Wijesinghe K, Prathapan S

- PP 102**      **Prognostic significance of lymphovascular invasion in colorectal cancer patients: A retrospective study by a specialized colorectal cancer center in Sri Lanka**  
Nanayakkara NGPM, Rahumath MCR, Ediriweera DS, Mahendra BAGG, Hewavisenthi SJDeS, Kumarage SK, Chandrasinghe PC
- PP 104**      **The clinical significance of bacterial biofilms in cutaneous leishmaniasis wounds**  
Jayasena Kaluarachchi TD, Campbell PM, Brown H, Munasinghe A, Wickremasinghe R, Ranasinghe PHKIS, Yasewardene S, de Silva H, McBain AJ, Weerasekera MM
- PP 105**      **Characteristics of Plasmodium ovale malaria infections patients reported in Sri Lanka from 2013 to 2023**  
Chulasiri P, Seneviratne S, Senarathne S, Fernando D, Aluthweera C, Mendis K, Wijewardena T, Wickremasinghe AR
- PP 106**      **Severe Malaria cases in Sri Lanka from 2013 To 2023**  
Seneviratne S, Chulasiri P, Senarathne S, Fernando D, Thenuwara N, Aluthweera C, Wickremasinghe AR, Fernandopulle R, Wijesundera A, Mendis K
- PP 107**      **Knowledge, attitudes and practices about Leishmaniasis among community people in Tangalle and Beliatta**  
Kavippiriyah K, Linthuya K, Sampath BDTB, Sanathani JAD
- PP 108**      **Clinico-epidemiology of tarantula (Poecilotheria spp.) bites in Sri Lanka**  
Rathnayaka RMMKN, Ranathunga PEAN
- PP 109**      **Ratnapura snakebite cohort: one year experience**  
Rathnayaka RMMKN, Ranathunga PEAN, Madalagama UMCS

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- PP 110**      **Multidrug resistance in Neisseria gonorrhoeae: identification of functionally important residues in the MtrE efflux channel**  
Karunarathna WLS, Edwards MJ, Bavro V
- PP 111**      **Antibiotic sensitivity pattern of uropathogens in hospitalized patients with a positive urine culture at Teaching Hospital Jaffna**  
Thilukshikka K, Anuruddha AN, Spelman Croos MV, Erandi R, Pravina S, Kumar R, Balagobi B, Rajanthi R, Ambalavanar V
- PP 112**      **Antimicrobial resistance (AMR) pollution of ground water sources in Gampaha District**  
Jinadasa RJSA, Badanasinghe CN, Pathirage SC
- PP 113**      **Temporal trends and demographic variations in Varicella Zoster Virus (VZV) seroprevalence across urban and rural communities in Kandy District, Sri Lanka**  
Kariyawasam K, Iqbal BN, Tilakaratne N, Noordeen F, Tennakoon S

- PP 114**      **A clinical audit of COVID-19 patient experience in the intermediate care centre at Pambaimadu, Vavuniya, Sri Lanka**  
Prasanth S, Nilakshan JM
- PP 116**      **Study of work-life balance of postgraduate trainees attached to tertiary care units in Sri Lanka**  
Maddumabandara HRKK, Rajaratnam A, Ellepola KD, Samaratunge KADNP, Bowattage S
- PP 117**      **Perceived stress levels and the factors causing stress among medical students in the Faculty of Medicine, University of Ruhuna**  
Sundararajah K, Sudusinghe ISV, Sumanasekara PK, Suraweera ASR, Tennakoon TMMN, Jayawardene AJPM
- PP 118**      **Exploring the usage, practices and perceptions in relation to social media among the first and fourth year medical students at University of Peradeniya**  
Balasooriya BMYM, Bandara HMDNR, Ariyaratne WGAM, Monisha B, Bandara HMAI
- PP 119**      **Knowledge, attitudes and willingness of patients in select medical specialty wards at National Hospital of Sri Lanka regarding medical students and their involvement in patient care**  
Ashrif AAA, Anusan V, Anisha JJ, Anoshigan A, Weeraratne CL
- PP 120**      **The relationship between downtime activities and empathy among third year Sri Lankan medical students**  
Caldera RKDDS, Bandara HMCI, Bandara AMDA, Bandara UPNNT, Banneheke BMGD, Chandratilake MN
- PP 121**      **Screen time utilization among medical undergraduates and its impact on academic performance: a study at the University of Kelaniya, Sri Lanka**  
Peiris MJR, Peiris PKK, Peiris PRC, Perera GDT, Perera GNS
- PP 122**      **Attitudes and practices of volunteerism in working under challenging circumstances of medical students in a tertiary care hospital in Sri Lanka**  
Edirisinghe PAS, Thivaharan Y, Vas MHA, Vidanage VIU, Wanapura WDDS, Wanniarachchi WTT, WarnakuIasooriya WUT
- PP 123**      **The abusive nature of love relationships and its impact on academic stress among medical students**  
Rusiru PAB, Rathnayake NRRW, Rathnayake RMDP, Rathnayake RMMR, Rathnayake US, Rishfa MM, Chandratilake MN
- PP 124**      **Involving senior students to influence new medical undergraduates during the orientation programme**  
Jayawardene AJPM, Wijesekara WADMS, Bodinayake CK
- PP 125**      **Peer assessment in teaching pharmacology for medical undergraduates: student perceptions**  
Seneviratne HMTW, Idirisinghe IAWW

- PP 126**      **Student perception & efficacy of simulation-based history taking as a part of early clinical exposure: a qualitative study from a Sri Lankan Medical Faculty**  
Wariyapperuma UM, Samarasekara RPN, Dinupa KDT, Jayasena MDC, Chamika MO
- PP 127**      **Students usage of artificial intelligence for undergraduate medical education: the Ruhuna Experience**  
Senanayake SMTN, Jayawardene AJPM, Wijesekara WADMS, Bodinayake CK
- PP 128**      **Hepatic tuberculosis mimicking hepatic metastases of a lymphoma – a rare case diagnosed with laparoscopy**  
Senanayake D, Maduwantha P, Wimalasena G, Kodithuwakku U, Subasinghe D
- PP 129**      **Single vs multi tract access for supine mini PCNL for complex and staghorn calculi: outcome analysis**  
Gampolage TD, Wickramsekera C, Manikkage Y, Weerasekara WMHBB, Ratnayake SM, Widanapathirana JS, Gurusinghe CM, Kumaradasa PMJK, Pilimatalawwe C, Seneviratne N
- PP 130**      **Complete ureter replacement with an untapered isoperistalsis ileal loop in a Sri Lankan Tertiary Care Center**  
Samarasinghe RN, Wijewardena M
- PP 131**      **Novel use of atrial septal defect (ASD) closure device for treatment of post esophagectomy leak: a case report with long term follow up**  
Wimalasena TBGH, Senanayake D, Fernandopulle N
- PP 132**      **Phenotypic species identification and antifungal susceptibility of oral candida albicans in patients with oral lichen planus**  
Raasiya MRF, Piyarathne NS, Jayasinghe RD
- PP 133**      **Association between oral brush cytology and incisional biopsy findings in a cohort of clinically diagnosed patients with oral cancers and oral potentially malignant disorders**  
Chamathka PVR, Abeyasinghe WAMUL, Piyarathne N, Jayasinghe RD
- PP 135**      **The reliability of large language model generated patient information on liver disease**  
Niriella MA, Premaratna PT, Senanayake SM, Kodisinghe SK, Dassanayake SUB, Dassanayake AS, de Silva HJ
- PP 136**      **Perceptions on teaching sexual health in secondary schools among science and health science teachers in the Rathnapura district**  
Makulgolla MDHKD, Madiwila MGCN, Madhushankha DMA, Madushanka WDS, Mahathanthila WDNI, Peiris EGY, Wickramasinghe PMTB
- PP 137**      **Perceptions regarding sexual and reproductive health among expectant mothers and their partners during the antenatal period in Katana Medical Officer of Health area**  
Manishka HAS, Abeygunasekara TUW, Nanayakkara PM

**PP 138**      **Knowledge and practices on self-medication of antibiotics among medical students of a selected university in Sri Lanka**  
Sandakumari GVN, Wettasinghe I, Vidanapathirana H, Dulanga GAN, Ganhewa GE

**PP 139**      **Perceived barriers towards practicing occupational safety measures among informal sector and small-scale welders in the District of Colombo**  
Hathamuna AI, Goonewardena CSE, Suraweera IK



## ABSTRACTS OF ORAL PRESENTATIONS

### Poster Presentation Sessions 1 - 16th August 2024, Afternoon 02.15 pm – 04.15 pm (Hall C)

#### PP 001

#### Workload of medical officers and health sector expenditure in Sri Lanka from 1990 to 2019

Aarewatte IC<sup>1</sup>, Abeygunawardane BM<sup>1</sup>, Abeyrathna WAING<sup>1</sup>, Ahamad MAA<sup>1</sup>, Wickremasinghe AR<sup>1</sup>

<sup>1</sup>*Faculty of Medicine, University of Kelaniya, Sri Lanka*

**Introduction and Objectives:** Healthcare expenditure has been rising over the last few decades in Sri Lanka where the private sector contributes to more than 50% outpatient care and about 15% of inpatient care. The rest primarily being financed by the public sector. The objective of this study was to determine the workload of medical officers in the government health sector and to analyse the health expenditure trends in Sri Lanka from 1990 to 2019.

**Methods:** Health expenditure data and number of doctors and patients (both inward and outpatients) at government hospitals were obtained from Annual Health Bulletins published by the Ministry of Health (from 1990-2019). The consumer price index and mid-year population data were extracted from the World Bank database. Data on medical officers' salaries were collected from salary ledgers and gazettes (from 2006-2019). Expenditures were converted to 2010 constant rupees. Doctor-patient encounters were estimated and data were analysed for a correlation with the health expenditure.

**Results:** The patients per doctor encounters decreased from 18,183 to 7,061 (61% decrease). The annual health expenditure increased from 37 billion in 1990 to 168 billion 2010 constant LKR (per-capita health expenditure increased by 72%). Healthcare expenditure in 2010 constant LKR increased in all components of expenditure including recurrent, capital and expenditure on medical supplies. The basic salary of specialists decreased from 1990 to 2019; there was a slight increase among grade medical officers (pensionable, non-pensionable, cost of living and the 5% allowances were included).

**Conclusions:** Patient per doctor encounters decrease by 61%. Healthcare expenditure increased by 61% 2010 constant LKR. There was a negative correlation between doctor-patient encounters and health care expenditure.

## PP 002

### Assessment of service quality in child nutrition services: a case study in the Nuwaraeliya District, Sri Lanka

Kariyawasam HKMP<sup>1</sup>, Wijesinghe WMCM<sup>2</sup>, Kariyawasam HKPP<sup>3</sup>, Silva L<sup>4</sup>

<sup>1</sup>*Postgraduate Institute of Medicine (PGIM), University of Colombo, Sri Lanka*

<sup>2</sup>*Teaching Hospital, Peradeniya, Sri Lanka*

<sup>3</sup>*Faculty of Technology, University of Colombo, Sri Lanka*

<sup>4</sup>*Eastern University, Sri Lanka*

**Introduction and Objectives:** The present study aims to evaluate the service quality of nutrition services delivered to children under five years in the Nuwaraeliya district using the SERVQUAL model which is extensively used to assess the functional quality of service provision.

**Methods:** A descriptive cross-sectional study was carried out, including 20 PHM areas (6 MOH divisions) in Nuwara Eliya district. Multistage cluster sampling was used to identify 600 clients (mothers/guardians). They were interviewed on their expectations and perceptions separately using a 29-item scale (Cronbach's alpha 0.884, 0.917 respectively) based on the SERVQUAL primary dimensions of Tangibles, Reliability, Responsiveness, Assurance, and Empathy. Mean scores for the 29 items were calculated separately for expectations and perceptions. Client-perceived quality scores (perception–expectation) were calculated for each item and primary dimension. A paired t-test assessed the statistical significance between expectations and perceptions for each item. Data was analyzed using EPI-Info and SPSS V26 (2018).

**Results:** Except for the neat appearance (uniform) of staff and the distance to the weighing posts, all other items yielded a negative perceived quality score. Except for respect and dignity towards clients and distance to weighing posts, the other 27-items had a significant difference ( $p < 0.05$ ) between the level of expectation and the clients' perception. The maximum mean gap score was observed for Tangibles (Mean=-0.79, SD=0.71) and Reliability (Mean=-0.40, SD=0.68).

**Conclusions:** The identified negative service quality gaps indicate that clients' expectations are unfulfilled during service delivery. Positively catering to the identified gaps will improve effective service delivery, service quality and thus better outcomes for child nutrition services in the district.

PP 003

## Health expenditure in Sri Lanka: a tricenarian time series analysis (1990-2023)

Nadarasa G<sup>1</sup>, Rajakaruna UATD<sup>1</sup>, Dharmaratne SD<sup>2</sup>

<sup>1</sup>*Faculty of Medicine, University of Peradeniya, Sri Lanka*

<sup>2</sup>*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka*

**Introduction and Objectives:** Sri Lanka's healthcare system has witnessed significant evolution over the past three decades, with health expenditure being a critical aspect of its development. This study aims to analyze the trends in health expenditure in Sri Lanka from 1990 to 2023, using comprehensive data from various reputable sources.

**Methods:** Data from reputable sources, including the Sri Lanka Ministry of Health's Annual Health Bulletin, the World Health Organization Global Health Expenditure database, and Our World in Data, were tabulated using Google Sheets. Various visualization techniques, such as line charts, stacked column charts, density plots, and trend lines, were used to analyze health expenditure trends across dimensions like current expenditure, financing mechanisms, expenditure by function and providers, provincial disparities, primary care spending, and healthcare outcomes.

**Results:** The analysis revealed dynamic trends in Sri Lanka's current health expenditure (CHE) to gross domestic product (GDP) ratio from 1990 (3.1%) to 2023 (4.3%), reflecting economic and policy shifts. Both public (48%) and private sectors (52%) significantly financed healthcare. Resource allocation priorities evolved, reflecting changing healthcare needs. Disparities in CHE were evident across provinces (Northern: Rs. 16 billion and Western: Rs. 208 billion), highlighting equity challenges. Primary care spending patterns and healthcare outcomes offered insights into system effectiveness.

**Conclusions:** Understanding the nuanced trends in health expenditure is vital for policymakers to gain valuable insights. These insights can inform discussions on resource allocation and ways to enhance healthcare accessibility, quality, and equity for the Sri Lankan population.

PP 004

**Health related physical fitness among type 2 diabetes mellitus patients in General Sir John Kotelawala Defence University Hospital: a case control study**

Munasinghe MADD<sup>1</sup>, Thilakarathna LACK<sup>1</sup>, Kalansooriya CJ<sup>1</sup>, Jayasekara MMPT<sup>1</sup>, Dabare HPM<sup>2</sup>

<sup>1</sup> *Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka*

<sup>2</sup> *Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka*

**Introduction and Objectives:** Assessing health-related physical fitness (HRPF) is critical for evaluating the overall health of individuals with Type 2 Diabetes Mellitus (T2DM). This study aims to compare HRPF between T2DM patients and age-gender matched non-T2DM controls.

**Methods:** A case-control study included 202 participants (101 T2DM patients and 101 non-T2DM controls) aged 18 to 65. HRPF parameters; cardiorespiratory endurance (CRE) was measured with the six-minute walk test, flexibility using the sit-and-reach test, muscle strength and endurance using the 30-second sit-to-stand test, and body composition by the body mass index. The data was analysed using the Statistical Package for the Social Sciences version 25.0.

**Results:** The study group had a mean age of  $48.3 \pm 7.7$  years, with 54.5% females in the T2DM group and 60.4% in controls. The median duration of T2DM diagnosis was 5 years, with an interquartile range of 5 years. T2DM patients had significantly lower HRPF characteristics than healthy controls, including CRE ( $386.8 \pm 64.7$ m vs  $445.2 \pm 63.0$ m,  $p < 0.05$ ), flexibility ( $14.2 \pm 2.81$ cm vs  $14.9 \pm 2.3$ cm,  $p < 0.05$ ), muscle strength and endurance ( $11.1 \pm 2.5$  reps/30s vs  $13.0 \pm 1.4$  reps/30s,  $p < 0.05$ ). T2DM patients exhibited a greater body composition ( $24.4 \pm 2.9$  kg/m<sup>2</sup> vs  $23.7 \pm 2.2$  kg/m<sup>2</sup>,  $p > 0.05$ ), although the difference was not significant.

**Conclusions:** T2DM patients demonstrated lower HRPF compared to age and gender -matched controls highlighting the importance of promoting HRPF among T2DM patients.

PP 005

**Consumer behaviour, knowledge and perceived adverse effects of skin whitening creams among young adults between the ages of 18 to 30 years attending selected skin clinics in the Colombo district**

Habeeb FA<sup>1</sup>, Athukorala KM<sup>2</sup>, Bandara GMWR<sup>1</sup>

<sup>1</sup>*Management and Science University (MSU), Malaysia*

<sup>2</sup>*Ministry of Health, Sri Lanka*

**Introduction and Objectives:** Studies have highlighted the widespread use of skin whitening products in Sri Lanka, emphasizing their dangers, cultural influences, and regulatory challenges. It underscored an urgent need for stricter regulations, increased awareness, and involvement of dermatologists to address the health risks associated with these products.

**Methods:** A descriptive cross-sectional study was conducted in the Colombo District of Sri Lanka among young adults aged 18-30 years who attend skin clinics, focusing on their behaviour, outcomes, and knowledge and perception of skin whitening products through a self-administered questionnaire.

**Results:** The study involved 132 young adults in Sri Lanka using skin whitening products, the majority were females aged 18-30 years, primarily Sinhalese. Participants mostly applied products on their faces, sourced information from the internet, and were generally satisfied, despite 48.5% experiencing skin problems post-usage notably acne. Knowledge of adverse effects was evenly distributed, and while there were no significant associations between socio-demographics and knowledge except for marital status, those checking ingredients had a lower likelihood of facing skin problems post-usage. Female users, driven by societal and media pressures, extensively use multiple products based on friend recommendations. Despite high satisfaction with products, notable adverse effects raise safety concerns.

**Conclusions:** The strong societal push for lighter skin among young adults necessitate immediate public health efforts and interventions to educate on the dangers of unregulated skin whitening. Future research needs to delve into the socioeconomics, psychological impact, media influence, and cultural perspectives. Effective interventions should combat biases and endorse diverse beauty standards.

PP 006

**Perception of medical professional attire (students/doctors) before and after the corona virus disease pandemic among patients, students and doctors from the North Colombo Teaching Hospital**

Edirisinghe PAS<sup>1</sup>, Naslun MLF<sup>2</sup>, Nazeeha MMF<sup>2</sup>, Nethmini NPR<sup>2</sup>, Nirmani KAD<sup>2</sup>, Nisansani TA<sup>2</sup>

<sup>1</sup>*Department of Forensic Medicine, Faculty of Medicine, University of Kelaniya, Sri Lanka*

<sup>2</sup>*Faculty of Medicine, University of Kelaniya, Sri Lanka*

**Introduction and Objectives:** Doctor-patient relationship has an impact on health outcomes. Medical professional attire is a form of nonverbal communication that influences this relationship. Prior to COVID-19, formal attire with or without white-coats were widely used among medical professionals in Sri Lanka. The pandemic resulted in the shift of formal wear to scrubs not only among hospital doctors but medical students too. This study was undertaken to explore the attitude towards medical attire following COVID-19, among doctors, medical students and patients in a tertiary care hospital. We additionally aimed to explore socio-cultural perceptions of medical attire and its effect on gender.

**Methods:** A qualitative study, including focused group discussions (FGD) and interviews was conducted using semi-structured interview guides. The participants included patients, medical students and doctors including lecturers. All FGDs and interviews were audio-recorded and transcribed. The transcribed data was analysed using codes based on research objectives.

**Results:** Almost all the participants agreed that medical attire worn at clinical setting should be more comfortable, decent, proper and professional. The colour codes for different categories of medical professionals were considered as a better move. Some medical students did not consider the scrub suit as an infection control method. Some patients opted white coats while others prioritized scrubs. Harassment and cultural challenges have influenced attire choices especially for female doctors. Clear guidelines were appreciated to maintain professionalism by medical professionals.

**Conclusions:** Medical attire at clinical setting need to be comfortable, decent and professional. Clear guidelines are needed including infection prevention.

PP 007

**A rare presentation of recurrent liver abscess in a child with Papillon-Lefèvre syndrome: a series of two cases**

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**Introduction and Objectives:** Papillon-Lefèvre syndrome (PLS) is an extremely rare autosomal recessive disorder affecting about 1-4 per million people. Cathepsin C enzyme activity (CTSC gene) is deficient due to cathepsin C gene mutation. Characteristic features are palmoplantar hyperkeratosis, loss of deciduous and permanent teeth and increased susceptibility to infections. Symptoms typically start before the age of 4 years. Liver abscess is a rare manifestation.

**Methods:** Here we present two cases of PLS of brother and sister in the same family.

**Case Results:** A boy with a history of recurrent liver abscesses was initially managed surgically from the age of 2 years and 6 months. He was referred for further evaluation at the age of 6 years when presenting with palmoplantar hyperkeratosis and loss of primary teeth in addition to a liver abscess. Aspiration isolated *Staphylococcus aureus* on two occasions. Initially prophylactic penicillin was given on discharge, and the boy remained infection free for more than a year, but the abscess recurred once prophylaxis was discontinued. Later, his 12 year old sister presented with a skin infection and was found to also have hyperkeratosis and loss of teeth. She first developed a liver abscess at the age of 13 years, from which *Staphylococcus aureus* and *E coli*. were isolated. Clinical suspicion of PLS was genetically confirmed in both siblings, with identification of pathogenic variants (c.205C>T(p.Gln69\*) and (c.226del(p.Asp76Metfs\*21)) in the CTSC gene associated with autosomal recessive PLS.

**Conclusions:** Pyogenic liver abscess is rarely associated with PLS and our case series reports two children of the same family with this presentation. Antibiotic prophylaxis was helpful in preventing recurrent infections in these children. Early identification and treatment may improve the outcome of patients with Papillon-Lefèvre syndrome.

PP 009

**Knowledge, attitudes and concerns on childhood immunization in the post-COVID era among Sinhala speaking mothers in Anuradhapura, Sri Lanka: a qualitative study**

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**Introduction and Objectives:** Active involvement of mothers is crucial for successful childhood immunisation. This study aimed to explore the knowledge, attitudes, concerns and positive and negative factors on childhood immunisation among Sinhala-speaking mothers of children under 14 years in Anuradhapura.

**Methods:** In-depth interviews were conducted among mothers of children admitted to Teaching Hospital Anuradhapura using a semi-structured interviewer guide. Convenience sampling was adopted, and participants were recruited until data saturation. Interviews were audio recorded, transcribed, thematically analysed and interpreted in English.

**Results:** Twenty participant mothers (median age, 33 years; median parity, 2) participated.

The participants knew the role of vaccines, post-vaccine complications, their management at home and sources of accurate information.

They had concerns regarding vaccines, driven by recent media reports of poor-quality drugs.

*“...I saw some news[television] on vaccines getting allergic to babies ..... After that I was concerned”*(educated up to grade 11; parity, 2)

Their attitudes regarding COVID-19 vaccines have not affected their attitudes toward childhood vaccines.

*“It would have been better if I had not taken the vaccine [COVID-19 vaccines] .... There is no doubt in those [childhood vaccination]”* (educated up to grade 11; parity, 3)

*“It’s a must to vaccinate the child. So, we are doing it with our own will...”* (Mother of one, a teacher by profession)

Relationship of mother with the Public Health Midwives (PHM) plays a crucial role in gaining this trust.

*“.... When Midwife Miss informs us to come for vaccination, we must go there for vaccination...”* (educated up to grade 13; parity, 3)

**Conclusions:** Despite concerns, mothers viewed childhood vaccination as a must. PHM plays a significant role in gaining and maintaining this trust.



## PP 010

### **ABO Haemolytic Disease of Newborn (HDN): influence of blood group and maternal haemolysin titre at University Hospital, General Sir John Kotelawala Defence University, Sri Lanka**

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**Introduction and Objectives:** HDN due to IgG Anti A/B is relatively severe in Asian ethnicities. Aim is to analyze blood groups, haemolytic screen and haemolysin titre among case series of HDN due to ABO incompatibility.

**Methods:** Records of ABO, Rh D type, Direct Antiglobulin Test (DAT), elusion studies and maternal haemolysin titre were analyzed in 22 affected babies from January 2022 to January 2024.

**Results:** Number of babies with blood group A, B and AB was 15, 5 and 2 respectively. Mother - baby blood group incompatibilities were O-A – 15, O-B – 5, A-B – 0, O-AB (due to Anti A) – 1 and A-AB (due to Anti B) – 1. Highest number of affected babies were from group A born to group O mothers. Day one, mean bilirubin was 23.8 mg/dl. Reticulocyte count was > 6% in 10 babies. DAT was positive and corresponding antibody was eluted in 6 babies. Out of 16 DAT negative babies, elusion was positive in 5. Anti A titre was  $\geq 512$  in 14 (66.6%) group O mothers. Nine of them (43%) had IgG anti A titre of >1024. One group O mother had 1:2048 titre of IgG anti B. Triple or quadruple phototherapy was received by 17 babies (77.2%). None received transfusions.

**Conclusions:** Group A, B and AB babies born to group O and A mothers are at risk of ABO HDN. Severity is dependent on the titre of IgG Anti A/B present in the mother. Analysis of a greater number of babies is recommended to find the significance in between antibody titre and haemolysis.

## PP 011

### Knowledge and attitudes on Thalassemia and practice of pre-marital Thalassemia screening among newly-married couples in Kurunegala Medical Officer of Health area, Sri Lanka

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**Introduction and Objectives:** Thalassemia is a burdensome inherited disease for the health sector of Sri Lanka and patients' families due to high cost of illness. Thus, this study is aimed at describing factors associated with knowledge and attitudes on thalassemia and practice of pre-marital screening as a preventive measure among newly-married couples in Kurunegala Medical Officer of Health (MOH) area.

**Methods:** A cross-sectional descriptive study was conducted recruiting 216 participants (108 couples) from Kurunegala MOH area who had registered their marriage between April - October 2022 using multi-stage random sampling. An interviewer-based questionnaire was administered and their scores for knowledge and attitudes were analysed statistically corresponding to associated factors and their current practice of screening at a confident interval of 95%.

**Results:** A significantly poor level of knowledge among those who haven't screened was elicited ( $p < 0.05$ ). Risk factors elucidating a significant inadequacy of knowledge were age  $< 21$  years, ethnicity Tamil, religion Hinduism, education level below passing A/Ls and economic status of monthly income  $< \text{Rs. } 30,000$  ( $p < 0.05$ ). Regarding attitudes, majority (85.7%,  $n=185$ ) believed in the importance of pre-marital screening. Most (62.9%,  $n=136$ ) showed a positive attitude towards alternative options available for a high-risk couple to have children. However, 25.0% ( $n=54$ ) showed a certain stigma towards thalassemia. as for practices, only 55.1% ( $n=119$ ) of the participants had undergone pre-marital screening.

**Conclusions:** Although Kurunegala is a highly prevalent area for thalassemia, practice of pre-marital screening remains unsatisfactory, owing to poor knowledge and attitudes of some risk groups. Thus, launching awareness programmes, especially targeting them is recommended.

## PP 012

### Knowledge and attitudes regarding sexually transmitted diseases among adolescents in the Kesbewa educational division

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**Introduction and Objectives:** Sexually Transmitted Diseases (STDs) are health burden in Sri Lanka. Since, adolescents are most vulnerable age group this study aimed to describe the knowledge and attitudes regarding STDs among adolescents, in Kesbewa educational division, Sri Lanka.

**Method:** This descriptive cross-sectional study was conducted in selected government schools in Kesbewa educational division. The sample consisted of 445 adolescents age ranged from 15 to 19 years. Pretested self-administered questionnaire (47 questions under 4 sections) was used. Data was analyzed using SPSS version 25 software. Overall knowledge level was classified as poor (1-19 marks), average (20-34) and good (35-54). Ethical approval was obtained from the Ethical Review Committee, Faculty of Medicine of KDU.

**Results:** Out of 445 participants, the majority were female (62.2%). Out of all, 97.5% lived with their parents. The majority heard about STDs (94.16%). And 54.2% had participated in educational programs about STDs. 28.73%, used multiple resources to gain knowledge. The commonest resource of knowledge was lecturers among 37.1% males, and 31% females. The majority had poor knowledge (n = 196, 44%), average knowledge (n = 186, 41.8%) and good knowledge (n = 63, 14.2%) and mean score was  $21.72 \pm 10.75$ . Mean score for the attitudes of males and females respectively,  $34.01 \pm 7.2$  and  $36.21 \pm 7.8$  showed a significant difference between two groups. Internet usage students use devices as mobile phones, laptops, tablets and desktop computers to surf internet (21.79%) were associated factor to gain knowledge and attitude.

**Conclusion:** Based on the findings of the study, most students had heard about sexually transmitted diseases. Participated in educational programs about sexual transmitted diseases, multiple resources used to gain knowledge of sexual transmitted diseases, internet usage, devices as mobile phones, laptops, tablets use to surf internet, purposes of using internet other than educational activities were associated factors for the knowledge and attitudes regarding sexually transmitted diseases among adolescents. Most participants had poor knowledge while a relatively small proportion had good knowledge. The female students had good knowledge regarding sexually transmitted diseases more than male students. The majority of grade ten students scored in the poor knowledge group. For grade twelve students, the majority scored in the average knowledge group. Attitude level of female students were higher than the male students regarding sexually transmitted diseases. The main finding of this study has shown the critical importance of bridging the gap of knowledge and attitudes regarding sexually transmitted diseases among adolescents.

## PP 013

### Prevalence of respiratory pathogens causing community-acquired Pneumonia during rainy season and its antibiotic sensitivity at a Tertiary Hospital in Northern Sri Lanka

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**Introduction and Objectives:** Community-acquired pneumonia (CAP) is a significant global health issue with diverse aetiologies and seasonal patterns. Identifying prevalent respiratory pathogens and their antibiotic susceptibility is crucial for effective antibiotic stewardship. This study examines CAP cases in Northern Srilankan tertiary hospital during the rainy seasons, aiming to isolate common bacterial pathogens and improve antibiotic prescribing practices to combat over-prescription, antibiotic resistance and enhance patient outcomes while reducing healthcare cost.

**Methods:** A prospective longitudinal study observed patients aged 16 and above admitted to Teaching hospital, Jaffna, with presumptive diagnosis of CAP from November 2022 to February 2023. Confirmation of the diagnosis and management were guided by experts in haematology, biochemistry, radiology and microbiology. Data analysis utilised SPSS for Windows, version 12.0. A.

**Results:** Of 283 patients meeting CAP criteria, 55.5% were males and 44.5% females, with peak admission in December (44.5%). Gram staining was positive in 97.9% cases, with 33.9% gram-positive and 64% gram-negative bacteria. Coliforms were the primary pathogens (41.3%), predominantly *Pseudomonas* (18%) and *Acinetobacter* (4.2%), with minimal detection of *Hemophilus* (0.4%) and *Staphylococcus aureus* (0.7%). A quarter of sputum samples were discarded. Five blood cultures confirmed bacteraemia, primarily with coliforms, one each with *Acinetobacter* and *Staphylococcus*. Pathogens exhibited limited sensitivity to first-line antibiotics but responded to second-line options.

**Conclusions:** Contrary to the national trends, Coliforms rather than *Pneumococcus*, were the leading cause of CAP and it responded to second-line antibiotics. However, sensitivity to first-line antibiotics was limited. Further research employing advanced microbiological tools is necessary for a comprehensive understanding of local prevalence and treatment options.

## PP 014

### Assessment of the quality of life and treatment adherence of the COPD patients attending to the chest clinic at National Hospital for respiratory diseases in Walisara

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**Introduction and Objectives:** A significant proportion of the population suffers from Chronic obstructive pulmonary disease (COPD). As this is not curable, proper control is necessary to maintain a good quality of life (QOL). This study aimed to evaluate QOL among COPD patients.

**Methods:** This was conducted at the National Hospital for Respiratory Diseases in Walisara from June to November 2023. This descriptive cross-sectional study was conducted with randomly selected participants using an interviewer-administered questionnaire including SF 36 and MMAS-8.

**Results:** There were 144 patients, with a 61.8% being male. The average age was 59.97(SD±10.08) years. The majority (65.3%) had completed secondary education (up to grade 10) and 56.9% were employed. A significant proportion (60.4%) reported a monthly income of less than 50000 LKR. The analysis revealed few correlations between QOL indicators and monthly income level. Monthly income had a significant correlation with QOL related to pain ( $p = 0.027$ ), QOL concerning general health ( $p = 0.002$ ), QOL regarding social activity ( $p = 0.048$ ) and energy levels and fatigue ( $p = 0.0002$ ). However, there was no correlation between employment status, marital status, treatment adherence and gender with QOL. According to the MMAS-8 scale, 50% reported low adherence, 35% reported medium adherence, and 15% had high adherence to the medical treatment.

**Conclusions:** There is significant association between monthly income and multiple aspects of quality of life. Notably, higher monthly income levels appear to correlate positively with better QOL. These results, if further validated, could potentially inform policy and intervention strategies to improve COPD management.

## PP 017

### Prevalence of latent tuberculosis infection in chronic kidney disease patients receiving dialysis at the Nephrology unit, National Hospital of Sri Lanka

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**Introduction and Objectives:** Chronic kidney disease (CKD) is a significant risk factor for the development of tuberculosis (TB), particularly in patients undergoing transplantation and receiving immunosuppressant therapy. In such individuals, there is an increased risk of developing TB if they have latent tuberculosis infection (LTBI). This study aims to determine the prevalence and risk factors associated with LTBI among CKD patients receiving dialysis at the Nephrology unit of the National Hospital of Sri Lanka (NHSL). The tuberculin skin test (TST) has traditionally been used for LTBI detection, but interferon-gamma release assays (IGRAs) offer improved specificity and convenience.

**Methods:** A cross-sectional study included 54 CKD patients undergoing dialysis at the Nephrology unit, NHSL, selected through simple random sampling. Data on demographics, clinical information, was collected and LTBI status was assessed by IGRA. Chi-square analysis identified associated risk factors.

**Results:** Among 54 subjects, 59.3% were male, mostly aged 45-65 years, and from Colombo. LTBI prevalence by IGRA was 18.5%, with 79.6% negative and 1.9% indeterminate results. None had a contact history, while two had past TB treatments over 10 years ago. Six were on immunosuppressant therapy while 5 of them had undergone renal transplant. Females showed a higher LTBI likelihood ( $p=0.037$ ), but no significant associations were found with smoking, comorbidities, immunosuppressants, or age.

**Conclusions:** The study reveals a 18.5% LTBI prevalence among CKD patients, emphasizing the need for screening for LTBI among the CKD patients. IGRA's higher specificity and convenience make it an effective tool for screening CKD patients undergoing dialysis.

## PP 018

### Addressing gender disparities related to morbidity, mortality due to selected noncommunicable diseases in Sri Lanka

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**Introduction and Objectives:** Assessing gender disparities can highlight the need for targeted interventions to promote gender equality and improve overall outcomes.

The objective were to identify gender disparities in relation to morbidity and mortality due to cardiovascular diseases(CVDs), selected chronic respiratory diseases(CRDs), diabetes-mellitus(DM), and selected carcinomas(CA) in Sri Lanka, during 2019.

**Methods:** Morbidity and mortality data obtained from Registrar Generals (RG) and the Indoor Morbidity and Mortality Register(IMMR) for 2019 were analysed. A total of 146,397 deaths from RG and 14,955,720 admissions from the IMMR were analysed. Life expectancy data by age and gender was obtained using life tables published for Sri Lanka.

**Results:** Considering proportional-mortality rates(PMR), CVDs contributed to the highest number of deaths and men had a higher(2%)PMR from CVDs. Females had higher PMR due to DM. There was a slightly higher percentage of admissions for CRDs for males compared to females(3.4% versus 2.8%). Morbidity rates for CVDs were more or less similar for both groups (4.3% vs. 4.1%). Considering DM, a slightly higher female morbidity rate was observed compared to men. Males have a higher burden of mortality in terms of years of life lost(YLL) due to CVD, CRDs, and CAs than females in Sri Lanka. Regarding DM, females have a 3.2% higher burden regarding YLL. When considering the YLLs, it can be seen that CVDs were responsible for nearly one-fifth of all premature deaths in the country.

**Conclusions:** Since gender disparity in NCD morbidity and mortality can be observed, it is crucial to identify the reasons behind these observed disparities.

## PP 019

### Perception of body-image among undergraduates in selected faculties of a state university in Sri Lanka

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**Introduction and Objectives:** Perception of body-image, the way individuals see or feel about their own physical appearance, can influence one's mental well-being, self-esteem and lifestyle. We aimed to describe the perception of body-image among undergraduates of a state university in Sri Lanka.

**Methods:** A descriptive cross-sectional study was conducted among 389 undergraduates from the Faculties of Applied Sciences, Medicine, Management and Arts of the University of Sri Jayewardenepura. Data was collected through a validated, self-administered questionnaire. Perception on body-image, mental well-being and self-esteem were assessed using the Body-Focused Shame and Guilt Scale (minimum 0, maximum 88, cut-off 37), WHO-5 well-being index (minimum 0, maximum 100, cut-off 40) and the Rosenberg self-esteem scale (minimum 10, maximum 40, cut-off 28) respectively. Associations were determined by using chi-squared test, considering  $p < 0.05$  (level of significance).

**Results:** Majority of the participants were females ( $n=270$ , 69.4%). Median age was 23 years (IQR=4). Males had a more positive body-image perception (70.6%) than females (55.6%,  $P=0.005$ ). Majority of the undergraduates ( $n=242$ , 62.2%) had a body mass index (BMI) within normal range. Amongst the participants, 65.3% reported being subjected to body-shaming. A negative perception on their body-image was seen in 39.8% of the participants. Amongst them, 69.0% had poor mental well-being ( $p=0.005$ ) and 72.3% had a poor self-esteem ( $p=0.004$ ). Arts undergraduates displayed a highest influence due to body-image perception while medical undergraduates displayed the least.

**Conclusions:** Negative perception on body image is a hidden problem among undergraduates in Sri Lanka. The association of body image perception with gender, mental well-being and self-esteem is significant.



## PP 020

### **Culturally adapting a questionnaire to assess healthcare providers' readiness, training, and practices in gender based violence (GBV) services in Sri Lanka.**

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**Introduction and Objectives:** Healthcare providers (HCP) have an essential role in preventing gender-based violence (GBV) by identifying victims, providing first-line support, and referring them to care centres. The Provider Intervention Measure (PIM) is a questionnaire that assesses HCPs' readiness, training and practice in identifying and responding to cases of GBV in UK General Practices. This study aimed to culturally adapt the PIM questionnaire to Sinhala and Tamil languages.

**Methods:** The cultural adaptation process was conducted, involving seven steps: 1. Modification 2. Forward translation and synthesis 3. Back translation and synthesis 4. Review by an expert committee 5. Pre-testing and cognitive interviews 6. Second review by an expert committee, 7. Test-retest reliability using Intraclass Correlation Coefficient (ICC). Pre-testing and cognitive interviews were conducted with 10 participants each for the Sinhala and Tamil languages in Colombo and Trincomalee. The interviews were then analysed using the framework method.

**Results:** Several changes were made during each step of the process to achieve a Sinhala and Tamil version that is acceptable, understandable, and still capable of measuring HCP readiness, training, and practices comparable to the original English version. Out of 31 questions analysed for ICC test-retest reliability in the Sinhala and Tamil questionnaires, 12 items in Sinhala and 16 items in Tamil were excellent, 15 items in Sinhala and 11 items in Tamil were good, and four in each were moderate. All questions in both languages had at least moderate reliability.

**Conclusions:** The Sinhala and Tamil versions of the PIM questionnaire are valid, reliable, acceptable and relevant for healthcare workers in Sri Lanka.

## PP 021

### **Improving Gender-Based Violence services by Public Health Midwives in Sri Lanka: a mixed methods Study**

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**Introduction and Objectives:** Public Health Midwives (PHMs) in Sri Lanka are expected to identify women experiencing gender-based violence (GBV) in the community, provide support, and refer them to Mithuru Piyasa (MP), hospital-based gender-based violence care centres. However, the referral rate from the PHMs is alarmingly low (<10%). Therefore, further investigation is required to ensure the programme's effectiveness. My research aimed to assess the reasons for low detection and referrals of GBV survivors by PHMs in community health care settings in the current GBV programme.

**Methods:** An explanatory sequential mixed-method study was conducted. The study involved an initial phase of quantitative data collection from 803 PHMs followed by semi-structured qualitative interviews with 12 PHMs. The survey and interview data were integrated and analysed.

**Results:** Although over three-quarters of PHMs attended GBV training in their lifetime, they were trained using different methods and trainers. Moreover, many received training a long time ago and could not recall any of the training content. Only a third were trained by the Family Health Bureau. Most PHMs expressed their willingness and readiness to help GBV victims, but only one-sixth had identified and referred GBV victims. The majority were not aware of the existing GBV or the existence of MP GBV care centres.

**Conclusions:** 1.Ensure that all PHMs receive comprehensive training on GBV, including available support services, with regular refresher training. 2. Strengthen MP services and establish coordination between PHMs and MP. 3.Strengthen monitoring and evaluation mechanisms for GBV services by PHMs at institutional and regional levels.

## PP 022

### **Knowledge, attitude, and their association with practices related to the prevention of Diabetic Foot among 30-70 years patients with Type 2 diabetes mellitus, attending the diabetic clinic at Teaching Hospital Kalutara**

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**Introduction and Objectives:** Type 2 diabetes mellitus (T2DM) represents a global crisis that mounts to serious complications such as amputations. However, these complications are largely preventable with appropriate foot care, knowledge, and attitudes. The main objective of the study was to evaluate the level of knowledge, attitudes, and practices (KAP) and to explore the associations between, knowledge and attitudes against practice. Additionally, evaluation of the strength of association between the socio-demographic factors against the KAP variables separately was an objective.

**Methods:** A descriptive cross-sectional study was conducted at the diabetic clinic of TH Kalutara, Sri Lanka, between May and July 2023, with 430 patients having T2DM within the age range of 30-70. Using systematic sampling the appropriate sample was selected. After providing the information sheet with a verbal apprise, the informed written consent was obtained. Data was obtained using an interviewer-administered questionnaire and was analysed using IBM SPSS and a scoring system. Cut-offs were determined, and Pearson chi-square was used to calculate the strength of associations.

**Results:** Of the participants, 61.4% demonstrated ‘good knowledge’, and 52.1% displayed ‘good attitudes’ while, 52.1% of the patients practised unsatisfactory foot care. Statistical analysis revealed statistically significant associations between both variables of knowledge ( $p < 0.05$ ,  $\chi^2 = 12.076$ ) and attitudes ( $p < 0.05$ ,  $\chi^2 = 8.056$ ) against practices. Among the socio-demographic factors, age and occupation were significantly associated with attitude ( $p < 0.05$ ), while ethnicity was associated with knowledge ( $p < 0.05$ ) and educational qualifications with all three variables ( $p < 0.05$ ). Practices were associated with multiple factors.

**Conclusions:** This study has described the knowledge, attitudes, their association with practices, and the association between them and the socio-demographic factors among the patients attending the diabetic clinic of TH Kalutara. It also underscores the influence of socio-demographic factors on these aspects.

## PP 023

### Community-based trial assessing mosquito shield™ efficacy against Aedes-borne viruses: Community engagement for greater impact

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**Introduction and Objectives:** This report demonstrates how high retention rates can be maintained in a community-based cluster-randomized placebo-controlled trial through effective community engagement and involvement. The trial assesses the efficacy of Mosquito Shield™, a spatial repellent, against Aedes-borne viruses in the dengue-endemic Gampaha district, Sri Lanka.

**Methods:** This double-blinded trial is designed to evaluate the efficacy of Mosquito Shield™, a passive indoor emanator. The trial is conducted across 30 clusters where 15 receive the active compound and 15 receive a placebo. A total of 4161 children aged  $\geq 4$ -16 years were enrolled, along with 2444 households where these children reside. The efficacy of the repellent will be monitored via dengue seroconversion among the enrolled children, with initial and two annual follow-up blood draws. Additionally, monthly adult mosquito surveys are conducted using Prokopack aspirators to assess the density of Aedes aegypti, and febrile surveillance is carried out to monitor dengue incidence.

**Results:** Conducting this community trial poses challenges in maintaining participant retention due to intervention novelty, inconvenience, and social misconceptions. However, through robust community engagement strategies like culturally tailored approaches, community outreach, transparent communication, empowering community leaders, and utilizing ground-level healthcare providers, a remarkable 98% retention rate was achieved. This success was observed in both longitudinal cohort participants (4060 out of 4161 participants) and households (2385 out of 2444 households) after nine months.

**Conclusions:** This study emphasizes the importance of community engagement in maintaining a high participant retention rate. High retention rates are vital for maintaining trial integrity, reflecting participant trust and cooperation, and enhancing the study's relevance and generalizability.

## PP 024

### Prevalence and associations of uncontrolled hypertension, stroke and cardiac morbidity among hypertensive patients in the National Hospital of Sri Lanka

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**Introduction and Objectives:** Hypertension is a leading cause of cardio- and cerebro-vascular mortality. Blood pressure control (BPC) leads to better clinical outcomes in patients with hypertension. We therefore aimed to determine correlates of BPC, stroke, and coronary artery disease (CAD)/ heart failure (HF) among patients with diagnosed hypertension attending medical clinics of the National Hospital of Sri Lanka.

**Methods:** A cross-sectional study was done from July-December 2023. An interviewer-administered questionnaire captured socio-demographic, morbidity, and medication details from records. Blood pressure (BP) measurements were taken following standard guidelines with OMRON-X7 BP monitors. Multivariate logistic regression was used to identify significant associations ( $p < 0.05$ ).

**Results:** Among 600 consecutively sampled patients, 54.8% had uncontrolled hypertension. 6.7% had grade 3 hypertension. Stroke and CAD/HF were reported in 16.5% and 60.5% respectively. Although females (57.2%) had poorer BPC, stroke and CAD/HF were higher among males. The duration of hypertension (mean= $8.78y \pm 7.46$ ) correlated with CAD/HF, although age (mean= $64.31y \pm 9.41$ ) did not. On average, patients spent 23.2% of their income for medicines, and the unemployed majority (52.2%) were more likely to have uncontrolled hypertension. 38.7% of patients received  $\pm 3$  anti-hypertensives, but this was not associated with better BPC or lower rates of stroke/CAD/HF. However, the use of diuretics, especially spironolactone correlated with better BPC. Treatment resistant hypertension (TRH) seen in 10.7% correlated with higher CAD/HF. Family history of hypertension reported by 58.3% was not associated with TRH, stroke, or CAD/HF.

**Conclusions:** BPC was generally unsatisfactory, while stroke and CAD/HF were highly prevalent. High presence of uncontrolled hypertension indicates the need for optimized anti-hypertensive regimes and patient education to improve treatment adherence.

## PP 025

### Characteristics and etiology of acute chest pain of patients admitted to Colombo South Teaching Hospital

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**Introduction and Objectives:** Chest pain is a prevalent complaint among patients with cardiac and non-cardiac conditions. Despite the apprehension of cardiac pathology, only a minority of patients presenting with chest pain (11%-39%) are diagnosed with acute coronary syndrome (ACS). The study aimed to describe the causes and varying characteristics of acute chest pain in patients admitted to a tertiary care hospital.

**Methods:** A cross-sectional study was conducted at the University Medical Unit of Colombo South Teaching Hospital (CSTH), from February to July 2021, among 405 patients admitted with chest pain.

**Results:** Definite causes for chest pain were ACS (n=183, 43.6%) , musculoskeletal (MSK) pain (n=101, 24%), and gastroesophageal reflux disease (GORD) (n=59, 14%). 55.7% of ACS patients and 20.3% of non-ACS patients reported tightening-type pain (p<0.001) which was also the most common type of chest pain (n=150, 35.7%) while 10% of non-ACS patients reported pleuritic type pain (p<0.001). Majority of patients (n=235, 56.0%) experienced central chest pain, followed by left-sided pain (n=120, 28.6%). The commonest type of chest pain was central type among ACS patients (n=116, 63.4%, p=0.007), and right-sided (n=40, 16.9%) or epigastric pain (n=23, 9.7%, p<0.05) among non-ACS patients. Glyceryl trinitrate tablets notably eased ACS pain (24.0%, p<0.001), while non-ACS patients relied more on analgesics (9.7%, p=0.005).

**Conclusions:** ACS is the primary cause of chest pain with tightening central pain being most common, with MSK and GORD as common contributors and pleuritic type pain is common in non-ACS patients.

## PP 026

### Chest pain characteristics in acute coronary syndrome: a comparative study in elderly vs younger patients

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**Introduction and Objectives:** The elderly tend to present with atypical symptoms of acute coronary syndrome (ACS). This study aimed to identify differences in clinical features among elderly (age > 65 years) and younger patients with ACS.

**Methods:** The study was conducted at a tertiary care hospital from February to July 2021. Of 420 patients presenting with chest pain, 183 participants were diagnosed with ACS. Data was collected through an interviewer-administered questionnaire.

**Results:** The mean age was 55.7 years. Of the participants diagnosed with ACS, 79 were elderly (age >65 years) and 104 were of the younger group. Among the elderly, 49.4% experienced a tightening-type pain, followed by 27.8% reporting a burning-type discomfort, while in younger group it was 60.6% and 14.4% respectively. No mechanical or stabbing-type pain was reported in either group. 65.8% of elderly vs 61.5% of young group had central chest pain. Left-sided chest pain was less common in elderly (24.1% vs 31.7% in young). Both groups reported comparable excessive sweating. (46.8% vs 58.7% among the younger population) and had similar radiation patterns including to the neck, left jaw, left shoulder, and left arm. In the elderly, 65.4% had chest pain lasting less than 4 hours vs 70.2% in the young and 19% of young and 19.2% of elderly had chest pain exceeding 12 hours.. These differences were not statistically significant.

**Conclusions:** Elderly and younger patients diagnosed with ACS showed similar chest pain characteristics (type, site associated autonomic symptom, and duration of pain).

**PP 027**

**Clinical presentation of chest pain in ACS: exploring gender disparities**

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**Introduction and Objectives:** In Acute Coronary Syndrome (ACS) women experience more atypical symptoms such as fatigue, shortness of breath, and nausea, compared to men who usually present with classic symptoms like chest pain or discomfort. This study explored if there were any gender differences in ACS symptoms in a tertiary care hospital in Sri Lanka.

**Methods:** This study was conducted at a tertiary care hospital in Sri Lanka spanning from February to July 2021, 420 patients were admitted with chest pain. Data was collected by an interviewer-administered questionnaire.

**Results:** Of the 420 participants, 215 (51.2%), were females. Regardless of gender, the predominant type of chest pain in ACS was tightening type (females 49% and males 53%), with burning and pricking type pain comparable across both sexes. Chest discomfort (females 50% and males 66% feeling central chest pain), autonomic symptoms (excessive sweating in females 45.3% and males 6.8% ), radiation patterns (20.9% in females and 24.7% males to the neck), and alleviating factors like the use of GTN (females 18.6% and males 28.9%), yielded comparable results between male and female cohorts. Of females, 47.7%, and 38.1% of males exhibited typical manifestations, with a comparable atypical presentation across genders. The differences observed were not statistically significant.

**Conclusions:** Contrary to most studies showing females present with atypical characteristics, this study shows men and women with ACS present with similar comparable symptoms.



## PP 028

### Evaluation of coronary artery bypass graft patency by computed tomography coronary angiography

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**Introduction and Objectives:** Computed tomography coronary angiography (CTCA) is performed after coronary artery bypass graft (CABG) surgery to assess graft patency with minimal invasion.

**Methods:** All CTCAs were done using 64-row MDC. Out of 1334 patients who underwent CTCA, 60 of them had it for post CABG coronary and graft evaluation.

**Results:** The mean age was  $63.41 \pm 8.17$  years, 16 (25.39%) were women, 32 (53.3%) had hypertension and 27 (45%) had diabetes and dyslipidaemia each. The mean duration from CABG to angiography was 10.96 years. A total of 202 grafts in 60 patients were evaluated, with a median of 3.36 grafts per patient. Majority 111 (54.9%) were venous grafts. Sixty (29.7%) were left internal mammary artery (LIMA), 10 (4.9%) were right internal mammary artery (RIMA) and 21 (10.3%) grafts were from radial artery. Out of 56 affected grafts, 53 grafts (26.2%) were occluded and 3 (1.48%) were stenosed. Thirteen percent (12/91) of all arterial and 39.63% (44/111) of all venous grafts were affected ( $P < 0.0005$ ). Most grafts were anastomosed to the left anterior descending (58/202, 28.71%) artery, whilst grafts supplying the right coronary (24/45, 53.3%) were predominantly diseased than grafts to the circumflex (1/5, 20%) or left anterior descending (LAD) (7/58, 12.0%) arteries.

**Conclusions:** CTCA can be used to evaluate bypass graft patency non-invasively and grafts to LAD has the highest patency rates.

## PP 029

### **The relationship between cardiovascular endurance, BMI, and quality of life of post myocardial infarction patients who are not undergoing a cardiac rehabilitation program**

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**Introduction and Objectives:** Myocardial infarction (MI) is a critical public health threat in modern times. The patients after an acute MI, often experience low Cardiovascular Endurance(CVE) and present with lower Health-Related Quality of Life (HRQOL) compared to the general population. This study investigated the relationship between CVE, and HRQOL in post-MI patients, who haven't undergone a supervised Cardiac Rehabilitation (CR) program.

**Methods:** Non-ST-Elevated Myocardial Infarction (NSTEMI) patients who haven't undergone a CR program participated in this longitudinal study. The CVE and HRQOL were obtained using the 6-Minute Walk Test(6MWT), and Short Form 36 Questionnaire(SF-36). Patients were assessed twice, the Initial Assessment(IA) and 2 months after IA (2IA).

**Results:** Seventy patients participated in the study. According to the Pearson correlation coefficient, there was no significant correlation between CVE and HRQOL, both in IA and 2IA. A statistically significant positive correlation was observed between the Physical Component Summary (PCS) and Mental Component Summary (MCS) of HRQOL ( $p < 0.05$ ). Paired sample t-test presented that there are no significant differences in means of CVE and HRQOL of IA and 2IA. Additionally, neither age nor gender had a significant influence on differences in means of CVE and HRQOL in IA and 2IA according to the independent sample t-test results.

**Conclusions:** The participants did not exhibit significant correlations or significant differences in means between CVE and HRQOL, in IA and 2IA. No significant differences of CVE and HRQOL were identified when stratified by age and gender. A statistically significant positive correlation was observed between the PCS and MCS of HRQOL.

## PP 030

### Association of perceived stress and depression in type 2 diabetes mellitus: a cross sectional study at the National Hospital of Sri Lanka

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**Introduction and Objectives:** Type 2 diabetes mellitus (T2DM) leads to metabolic complications. Concerns regarding complications may lead to adverse psychological responses in patients. We assessed the prevalence of depression in T2DM and ascertained the association between perceived stress and severity of depression.

**Methods:** An observational, descriptive, cross-sectional study was conducted in a General Medicine clinic, National Hospital of Sri Lanka, Colombo. T2DM patients were recruited via consecutive sampling (n=321). Validated Sinhalese versions of the Sheldon-Cohen Perceived Stress Scale (S-PSS-10) and Patient Health Questionnaire-9 (S-PHQ-9) were used to assess perceived stress and severity of depression. Mean scores were compared using Pearson-correlation between the S-PSS-10 and S-PHQ-9 ( $p < 0.05$ ). Prevalence odds ratio was calculated using SPSS 26.0.

**Results:** There were 62% females and mean age was  $58.4 \pm 10.2$  years. Perceived stress levels were: Low in 5%, Moderate 53%, High 42%. Severity of depression levels were: Normal in 26%, Mild 45%, Moderate 22%, Moderate-severe 6% and Severe 1%. A significant correlation was present for the mean scores of S-PSS-10 and S-PHQ-9:  $r=0.65$  ( $p < 0.01$ , two-tailed). Among those with high perceived stress, 44% had S-PHQ-9 scores of  $\geq 10$ , indicating major depressive disorder (MDD). A significant association was reported from Chi-square test between high perceived stress and MDD (odds ratio of 10.28).

**Conclusions:** In T2DM, patients with high-perceived-stress face a 10.28-fold increase in the risk of developing MDD. Our findings suggest that perceived stress is an early reliable indicator of depression. Investigations on vulnerability to stress during this chronic illness needs to be conducted. Future research and interventions on stress and depression would facilitate improved management and prognosis in T2DM.

## PP 031

### Depression, anxiety, stress and associated factors among navy personnel at the Naval Base, Welisara

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**Introduction and Objectives:** Depression, anxiety, and stress among military personnel are globally recognized issues, yet Sri Lankan evidence, particularly among navy personnel, is scarce. Given the crucial role of mental health in marine and coastal security operations, understanding the mental wellness of Sri Lankan Navy is vital. This study aimed to describe the socio-demographic characteristics, prevalence, and associated factors of depression, anxiety, and stress among navy personnel at the Welisara naval base.

**Methods:** A descriptive cross-sectional study with an analytical component was conducted among 128 navy personnel selected via simple random sampling. A self-administered questionnaire with the Depression Anxiety Stress Scale (DASS)-21 was used to assess depression, anxiety, stress and other factors. Ethics approval was obtained from Colombo Medical Faculty Ethics Review Committee. SPSS software was used for data analysis. Standard scoring for DASS-21 was used. Associated factors were determined using independent samples t-test.

**Results:** Results: The response rate was 91.4%(n=128), with the majority being male (84.4%) and Sinhalese (100%). It was found that 35.9%(n=128) of the respondents were depressed, 34.4% (n=128) were anxious and 29.7%(n=128) were stressed. Poor partner support (p<0.01), poor partner communication (p<0.01), high economic burden (p<0.01), low level of education (p<0.01), poor colleague support (p<0.01), stringent deadlines (p<0.01), undue senior pressure (p<0.01), high work impact on daily life (p<0.01) and workplace harassment (p<0.01) were significantly associated with depression, anxiety and stress.

**Conclusions:** Nearly 1/3rd of personal at the Welisara naval base reported features of depression, anxiety and stress. Poor partner support and communication, high economic burden, poor colleague support, stringent deadlines, undue senior pressure, high work impact on daily life and workplace harassment were associated with depression, anxiety and stress.

PP 032

**Depression, anxiety and stress among patients with diabetes attending the Base Hospital Panadura, Sri Lanka**

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**Introduction and Objectives:** One of the major challenges for medicine in the 21st century is management of comorbidities. The correlation of depression, anxiety and stress (DAS) with Diabetes Mellitus (DM) is an example of mental and physical comorbidity. In Sri Lanka, research focusing on the psychological aspect of diabetes is limited. The aim of this study was to assess depression, anxiety and stress levels and their associated factors among patients with diabetes attending the Base Hospital Panadura, Sri Lanka.

**Methods:** A descriptive cross-sectional study was conducted among patients with DM using a self-administered questionnaire designed to collect socio-demographic data, clinical data, and assess DAS using DASS-21 (Depression, Anxiety and Stress Scale - 21 items). Statistical analysis was performed using SPSS.

**Results:** A total of 462 patients with DM were recruited by consecutive sampling. The prevalence of DAS among patients with DM was 63.9%, 70.3% and 52.4%, respectively. Depression was significantly associated with gender ( $p < 0.001$ ), age ( $p = 0.020$ ), level of education ( $p < 0.001$ ), duration of DM ( $p < 0.001$ ), monthly income ( $p < 0.001$ ), and presence of comorbidities ( $p < 0.001$ ). Anxiety was significantly associated with gender ( $p < 0.001$ ), marital status ( $p < 0.001$ ), duration of DM ( $p < 0.001$ ) and presence of comorbidities ( $p < 0.001$ ). Stress was significantly associated with gender ( $p = 0.001$ ), duration of DM ( $p = 0.037$ ) and presence of comorbidities ( $p = 0.001$ ).

**Conclusions:** Patients with DM report alarming levels of DAS, associated with many factors. Routine screening of all patients with DM using the DASS-21 questionnaire, employment of health education programs and enhancing awareness among healthcare providers about the psychological complications among patients with DM is recommended.

PP 033

**Emotional reactions of Sri Lankan patients to the diagnosis of Type 2 Diabetes Mellitus: a qualitative study**

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**Introduction and Objectives:** Adapting to a new lifestyle following a diagnosis of Type 2 diabetes mellitus (T2DM) may be stressful for people. We explored the experiences of T2DM patients to understand the emotional reactions of Sri Lankan patients to the diagnosis and management of T2DM over time.

**Methods:** A qualitative study was carried out at Colombo South Teaching Hospital among 18 male and 17 female participants (between 36 and 58 years) diagnosed with T2DM. In-depth interviews were conducted to explore their emotional reactions following diagnosis. Framework analysis using Kübler-Ross grief cycle (KRGCC) guided data analysis.

**Results:** The participants' initial behavioural or emotional reactions to the diagnosis were mainly negative. Discordance, shock, denial, and refusal to seek medical advice were commonly reported initial reactions. During the adaptation process, some participants experienced anger towards their illness and themselves, while many experienced distress. Emotional and behavioural reactions among participants were in line with the five stages of the KRGCC - denial, anger, bargaining, depression, and acceptance, although not everyone went through all stages of it. Most participants appeared to accept their condition; however, the onset of the acceptance stage differed among them.

**Conclusions:** The behavioural and emotional reactions of people in the Sri Lankan context to the diagnosis of and following adaptation to T2DM are comparable to the emotional reactions of people experiencing grief and are in line with the five stages of grief of the KRGCC model.

## PP 034

### Medical burden in Clozapine clinic attendees, Colombo South Teaching Hospital, Sri Lanka

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**Introduction and Objectives:** Clozapine users have a higher prevalence of medical comorbidities due to schizophrenia itself and clozapine related adverse effects. The study explores the medical burden in clozapine users and related management practices of clozapine clinic.

**Methods:** A descriptive cross-sectional study was conducted in clozapine clinic, professorial psychiatry unit, Colombo South Teaching Hospital; January-April 2024. Data was gathered from 58 clozapine users with an interviewer-administered semi-structured questionnaire and clinic records.

**Results:** Majority (n=33,56%) had a diagnosis of medical co-morbidity: dyslipidemia; (n=18,31%), diabetes mellitus; (n=9,15.5%), hypertension; (n=3,5.2%). 22 (37.9%) were overweight, 6 (10.3%) were obese. Mean BMI was 23.04 kg/m<sup>2</sup>. Majority was unaware of metabolic risks with clozapine: weight gain;(n=43, 74.1%), diabetes mellitus;(n=45, 77.6%), dyslipidemia;(n=45, 77.6%). Mean clozapine doses prescribed were: 305.43 mg for non-smoking males (n=23), 408.33 mg for smoking males (n=3), 282.81 mg for non-smoking females (n=32). 38 (65.5%) were co-prescribed psychotropic medication; antidepressant in 18 (31.0%), oral typical antipsychotic in 10 (17.3%), atypical antipsychotic in 5 (8.6%), long-acting injectable typical antipsychotic in 3 (5.2%), sodium valproate in 14 (24.1%), Lithium carbonate in 4 (6.9%). Average clozapine user spends Rs.2537.07 for healthcare/month and Rs.555.69 per clinic visit. Metabolic screening practices in the clinic within past 6 months were substandard. Only 11 (18.9%) had serum lipid profile test, 19 (32.7%) had weight measured, 22 (37.9%) had blood pressure measured and 32 (55.2%) had FBS/ HBA1c tested. For 27 (81.8%) patients, medication for medical illnesses was issued by Clozapine clinic without liaison with medical specialty.

**Conclusions:** Study emphasizes the substandard screening/medical management for co-morbidities in clozapine users and need of re-evaluating co-prescription of psychotropics with clozapine.

## PP 035

### Knowledge, experience and attitudes of patients on long acting injectable antipsychotics in a Tertiary care hospital in Sri Lanka

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**Introduction and Objectives:** Long-acting injectable antipsychotics (LAIs) are regarded as an important alternative to oral medication in improving treatment adherence and overall patient outcomes for patients with psychotic illnesses. Understanding patients' preferences for long-acting injectable (LAI) could help reduce potential barriers to LAI use. The aims of this study was to investigate the knowledge, experience and attitudes of patients on Long-acting injectable antipsychotics (LAIs).

**Methods:** Anonymized data were collected from an interviewer administered questionnaire among patients with schizophrenia and other psychotic illnesses, attending psychiatric clinic in Colombo North Teaching Hospital. Descriptive statistics were used to process the data.

**Results:** A total of 102 patients were interviewed. Over two-thirds of the interviewees (69%) were not aware of the type of LAI they were on. Over half of the patients (52%) reported that they were not given information regarding LAI at the initiation. Nevertheless, 60% of patients were aware that LAI treatment was initiated due to poor compliance to oral medications. Majority of patients have not experienced side effects that affected activities of daily living (74%) and had favorable attitudes toward LAIs with respect to relapse prevention (71%) and impact on life (70%). Most of the patients reported that LAIs were not stigmatizing (83%) and were not related to constriction of autonomy (71%).

**Conclusions:** Patients had favorable experience and attitude on LAI with a gap in knowledge. Intervention such as psychoeducation of patients about LAI might enhance the acceptance of LAI usage.



## PP 036

### **Clinical audit on medical comorbidities in patients attending geriatric psychiatry clinics of the Colombo South Teaching Hospital (CSTH)**

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**Introduction and Objectives:** Sri Lanka faces urgent health challenges with the fastest growing elderly population in South Asia. Medical comorbidities in geriatric patients with psychiatric disorders represent one such formidable challenge.

**Methods:** Clinic records of follow up patients who attended geriatric psychiatry clinics of the University Psychiatry Unit and Ministry of Health (MOH) Psychiatry Unit of Colombo South Teaching Hospital (CSTH) during four weeks of March, 2024 were reviewed. Detection of already diagnosed chronic medical comorbidities during the first visit and their subsequent follow up were reviewed.

**Results:** Of 264 patients in both units (168 in the University Unit and 98 in MOH Unit), 100 patients (38%) had documented chronic medical conditions, such as diabetes mellitus, hypertension, dyslipidaemia, chronic kidney disease, ischaemic heart disease or strokes. 35 (35%) of them had medical follow up in the geriatric psychiatry clinic. Only 38 (14%) patients have had physical examinations on the first visit. A repeat physical examination during follow up had been done in 10 (4%) patients. The newly established MOH geriatric psychiatry unit utilised a printed document for the first visit and identified over 19% of patients with pre-existing chronic medical conditions at the first visit, compared to the University Psychiatry Unit, which did not utilise such a format.

**Conclusions:** A standard clinic document increased the detection of previously diagnosed chronic medical conditions in patients attending a geriatric psychiatry clinic. However, follow up should be improved to ensure continuity of care.

PP 037

## Clinical characteristics of patients attending a psycho-geriatric clinic of Colombo South Teaching Hospital, Sri Lanka

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**Introduction and Objectives:** Regular cognitive function assessments and medication reviews are important aspects of follow-ups of older patients. To explore the clinical characteristics along with diagnoses, cognitive functions, and pattern of medication prescriptions among patients attending a psycho-geriatric clinic of Colombo South Teaching Hospital (CSTH).

**Methods:** Observational cross-sectional study. Data of 273 patients who attended the clinic from November 2023 to April 2024 were analyzed along with the clinical characteristics. This information was gathered from the clinic records.

**Results:** Majority were females (57.5%). The most common diagnosis was depression (31.50%, n=86), followed by dementia (28.57%, n=78), schizophrenia (21.24%, n=58), and bipolar disorder (10.98%, n=30). When looking at first visits of dementia patients; mini-mental state examination (MMSE) was performed in 84.61% of participants, Montreal cognitive assessment (MOCA) in 21.79% and extended cognitive assessment in 25.64%. Repeat MMSE was performed in 8.97%. Among prescribed antidepressants, selective serotonin reuptake inhibitors (SSRIs) accounted for 43.7%, serotonin-norepinephrine reuptake inhibitors (SNRIs)- 22.4%, Mirtazapine-9.2%, tricyclic antidepressants (TCA)- 2.9%. Out of the antipsychotics prescribed, second-generation antipsychotics are 78.3% while first-generation antipsychotics- 9.8%. Depot antipsychotics were administered in 4.4%. Sodium valproate was prescribed in 74.1% and lithium in 22.%. Benzodiazepines were prescribed in 9.15%. Anti-dementia drugs were prescribed in 94.87% of dementia patients and donepezil ranked as the commonest (86.48%).

**Conclusions:** The findings of this study revealed a high prevalence of depression and dementia among older adults presenting to CSTH. Majority of dementia patients were not followed up with repeat MMSE which may impede treatment adjustments over time.

PP 038

**The potential of public health midwives for task-shifting to address perinatal depression in rural Sri Lanka**

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**Introduction and Objectives:** Perinatal depression (PND) is prevalent in Sri Lanka, yet most occurrences remain undetected and untreated. The inadequacy of trained mental healthcare professionals poses challenges in addressing this treatment gap. Task-shifting has been identified as a potential solution to the scarcity of mental healthcare professionals in low- and middle-income countries (LMICs). Thinking Healthy Programme (THP), a low-intensity task-shifted psychosocial intervention, has proven to be effective in addressing PND in other LMICs. Such interventions can be introduced to address the treatment gap for PND in Sri Lanka. Public Health Midwives (PHMs) deliver maternal and child healthcare in communities. This study explored multi-stakeholder perspectives about task-shifting PHMs to deliver THP in communities.

**Methods:** A qualitative study. The study settings were rural areas in the Anuradhapura and Colombo districts. Data were collected from seven categories of stakeholders, including women with lived experiences of PND. Purposive sampling was used. 90 in-depth interviews and 3 Focus group discussions were conducted. A framework analysis method was used for the data analysis.

**Results:** PHMs were identified as the most suitable delivery agents for THP delivery in rural areas. PHM's ease of access, high acceptability by communities, trustworthiness, and training in maternal and child health were considered facilitators for the proposed implementation. Some PHMs' heavy workload and negative personal attributes were identified as potential barriers.

**Conclusions:** PHMs can be task-shifted to address PND in rural areas of Sri Lanka. However, an implementation strategy should be designed considering the facilitators and barriers identified in this study.

## PP 039

### **Patient knowledge and practices on handling adverse effects of Clozapine, in Clozapine clinic, Colombo South Teaching Hospital, Sri Lanka.**

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**Introduction and Objectives:** Clozapine, although effective, has numerous significant adverse effects. This study explores the knowledge and practices of clozapine users on managing these.

**Methods:** A descriptive cross-sectional study conducted in clozapine clinic, professorial psychiatry unit, Colombo South Teaching Hospital; January-April 2024. Data was gathered from 58 clozapine users with an interviewer-administered semi-structured questionnaire and clinic records.

**Results:** Out of 58, 19 (32.75%) complained of troublesome drowsiness, 32 (55.2%) slept more than 10 hours/day. 27 (46.6%) would spend >5 hours sitting sedentary on a typical day. 13 (22.41%) complained of troublesome hypersalivation. 20 (34.4%) would place a towel to prevent soaking of pillow but cleaned the pillowcase/towel once in 8 days on average. 26 (44.82%) were on medication for hypersalivation. 45 (77.58%) had constipation; with reduced frequency/hard consistency. As measures to relieve constipation; 39 (67.2%) would take fruits/vegetables, 29 (50%) would increase water intake, 27 (46.5%) would receive western medication, 8 (13.8%) would increase physical activity, 7 (12.1%) would use traditional medication. Majority were unaware of metabolic risks with clozapine: weight gain;(n=43, 74.1%), diabetes mellitus;(n=45, 77.6%), dyslipidemia;(n=45, 77.6%). Only 3 (5.17%, male) smoked tobacco. 56 (96.5%) were unaware that smoking changes clozapine blood levels. 41 (70.7%) would always mention they are on clozapine when consulting other doctors. 51 (87.3%) were unaware of the reason for monthly FBC monitoring. Many were unaware of the correct procedure to follow if pills were missed 1 day (n=20,34.5%) and more than 2 days (n=56,96.5%).

**Conclusions:** Study highlights several gaps in knowledge and recommends implementing strategies to improve awareness of clinic attendees regarding clozapine related adverse effects, risks, and practices.

## PP 040

### Research protocol: identification of the test items of screening tool for specific learning disorders in primary school children in Sri Lanka

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**Introduction and Objectives:** Approximately 5 to 15% of children globally suffer from Specific learning disorders (SpLD), characterized by unexpected underperformance in reading, writing, and arithmetic. The affected children face academic challenges, and personal and social implications leading to poor quality of life. Early detection followed by early intervention is known to have promising outcomes. However, Sri Lanka currently has no screening tools or programs for identification the void is well-identified. The objective is to identify the test items for the SpLD screening tool for primary school children.

**Methods:** A desk review and in-depth interviews to identify the first pool of items followed by a Delphi survey for expert opinion for short-listing.

**Results:** This phase revealed 50 test items to identify SpLDs. First, 19 for arithmetic underperformance in number identification, sequential ordering, basic calculations (addition, subtraction, multiplication and division) as well as problem-solving and mathematical reasoning skills. Secondly, 17 items for reading difficulties in letter and word recognition, reading vocabulary, rate of reading and naming objects, comprehension reading fluency, text structure identification and literal comprehension and thirdly 14 items for identification of writing issues in drawing shapes and objects, clarity and organisation of writing, copying accurately, spelling and proper use of pronouns and modifiers.

**Conclusions:** Approximately 50 test items were identified for detecting SpLDs in primary children which will be refined through subsequent Delphi surveys to develop a screening tool for early identification of SpLDs in primary school children of grades one and two allowing early intervention and improved quality of life.

## PP 041

### Patient experience of quality of care: special reference to inward patients in National Eye Hospital in Sri Lanka

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**Introduction and Objectives:** Evaluation of healthcare provision is essential in the ongoing assessment and consequent quality improvement of medical services. However, healthcare systems have sought to achieve a balance in services that are not only clinically effective but are also judged by patients as acceptable and beneficial. National Eye Hospital services all patients with eye diseases and eye injuries. The objective was to determine the patient experience of quality of care at National Eye Hospital in Sri Lanka.

**Methods:** A descriptive cross-sectional study was conducted from the 3rd of October 2022 to the 31st of October 2022 among 427 samples of in-ward patients with visual impairment who were admitted to surgery at the National Eye Hospital. A systematic sampling technique was used to collect the sample. Quality of care was assessed through patient experience through an interviewer administered questionnaire.

**Results:** Among study participants, 77% (n=287) were more than 65 years old. The majority were female (60%, n=246). Most patients were (70%, n=287) admitted for "cataract Surgery." The highest patient "agreement" was observed under the dimension of "competency of the staff," and the least "agreement" was in the dimension of "sanitation of the unit." No statistically significant association ( $p>0.05$ ) was observed between patient experience, and type of illness and type of ward.

**Conclusions:** Patient experience was highest in terms of staff factors and lowest in terms of facilities provided by the institute. Improving the facilities of the National Eye Hospital is mandatory to improve the patient experience.

## PP 042

### What is a good death in South Asia? A systematic review and narrative synthesis

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**Introduction and Objectives:** Approximately 9.9 million people in South Asia live with serious health-related suffering. To deliver palliative care, it is important to understand what a 'good death' means to the relevant people. Such studies have mostly occurred in Western settings. This study aimed to increase understanding of what is considered a good death in South Asia.

**Methods:** A systematic review with narrative synthesis was conducted. The search was performed on eight databases ('good death' and 'South Asia'), an advanced Google search and bibliographies of selected texts. No date or language limits were applied. Empirical studies on a good death from the perspective of any adult stakeholder were included. Quality appraisal was performed.

**Results:** 25 studies were selected (10 quantitative, 14 qualitative and 1 mixed methods), from India (n=17), Pakistan (n=4), Sri Lanka (n=2), Bangladesh (n=1) and Bhutan (n=1).

Themes were: Mutual care and connection support continued sense of self; Freedom to choose-privilege or burden?; Opportunities in the last days; and After death matters. Contributing to others, receiving connection, complexities of choice, dying without pain while feeling safe with family present, last rites and what happens after death all influenced what a good death meant.

**Conclusions:** To the best of our knowledge, this is the first review of what a good death means in South Asia. Although the South Asian perspective has similarities with the Western perspective, we note important nuances around decision-making moderated by culture, religion, and poverty. Further research is needed in the areas of ethics and religion.

## PP 043

### Decolonising medicine in Sri Lanka: cases from palliative care

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**Introduction and Objectives:** The Western medical model of palliative care (PC) can differ from local sociocultural attitudes to death and dying. This could lead to inequitable outcomes in end-of-life settings. There are calls for PC to be decolonised, thereby promoting more culturally sensitive care that is acceptable and inclusive. How the health system in Sri Lanka could heed this call is rarely discussed. We explored end-of-life settings in PC that may benefit from a decolonising process.

**Methods:** Advanced cancer patients (n=12), caregivers (n=15) and healthcare workers (HCWs, n=22) were purposively sampled. Qualitative semi-structured exploratory interviews were conducted at the National Cancer Hospital, Maharagama to identify what held significance for them in end-of-life settings from cancer. The interviews were recorded, transcribed and coded. Thematic analysis was performed. Areas of conflict between the Western medical model of PC and local sociocultural attitudes to end-of-life were identified. Ethics approval was obtained.

**Results:** Four areas within PC that would benefit from adaptation to Sri Lankan culture were found: how to break bad news, using artificial nutrition and hydration, advanced care planning and the use of traditional medicine.

The Western medical model of PC was occasionally at odds with the wishes and beliefs of patients, families and HCWs themselves. These conflicts led to apprehension and frustration for HCWs, and a need to find their own solutions to reconcile these differences.

**Conclusions:** Decolonising PC in Sri Lanka could enable HCWs to deliver PC that is more acceptable and effective to patients, families and themselves.



## PP 044

### Evaluation of guidelines on transportation of a critically ill patient

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**Introduction and Objectives:** Transporting patients between institutions is a costly component in health care. Declaring standards to minimize morbidity and mortality is paramount as transfer related morbidity is approximately 68% in critically ill patients. Globally, patient transport guidelines (PTG) are growing by accommodating good practices on patient safety and efficiency. Sri Lanka holds burden of 83% morbidity during patient transfer and currently rely on a guideline issued in 2013. This study aims to evaluate the global PTG.

**Methods:** We reviewed PTGs since 1988 on PubMed, Google and Google Scholar by using single text words and combinations on guidelines for critically ill patient transport. The references of those articles were cross checked, and articles on inter facility transfers, aeromedical transfers and articles unrelated to transport were excluded

**Results:** By the analysis of fifteen guidelines, we identified eleven important aspects to be considered in a standard PTG. Among them 30% of PTGs have mentioned the standards of staff education and training and 33% included checklists which are important during a transfer in the critical period. 30% of PTGs have described about possible adverse effects and their management. Some US and European PTGs cover most of the aspects and the contents were comprehensively described.

**Conclusions:** Sri Lankan guideline has a scope to improve considering the time-tested good practices used around the world.

## PP 045

### Enhancing mobility for quadriplegic patients: A safe, eye movement-controlled wheelchair system

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**Introduction and Objectives:** Quadriplegic patients are completely bedridden and need assistance to move around within the permitted area. This project, ‘Eye-Wheels’ aimed at quadriplegic patients to significantly improve their independence and mobility by implementing an innovative eye-controlled wheelchair system while also addressing critical safety issues.

**Methods:** The ‘Eye-Wheels’ uses eye-tracking technology and artificial intelligence to translate the user's gaze and blinks into intuitive commands, offering an automatic solution and increasing independence. ‘Eye-Wheels’ functions through a combination of three strategies. Mainly, reliable eye-tracking hardware configuration is implemented for accurate and real-time user gaze detection. The eye pupil is detected using face detection algorithms and thresholding. Subsequently, a combination of image processing techniques including filtering, thresholding, and edge detection is applied to discern the direction of eyeball movement, thereby translating user commands effectively. Finally, these commands are translated into smooth and secure wheelchair operation by real-time wheelchair control. Safety is addressed using features such as ultrasonic obstacle detection, emergency stops implemented by certain blink patterns, and a manual override key. Together, these components help to reduce potential hazards and increase user confidence.

**Results:** Eye-Wheels is an automated wheelchair system developed by converting a manual wheelchair into an electric wheelchair. The integrated camera and safety system in Eye-Wheels contribute to better performance.

**Conclusions:** Eye-Wheels assures a revolution in wheelchair control for quadriplegic patients. Their freedom and quality of life can be greatly enhanced by providing a user-friendly and secure system.

**PP 046**

**An Audit on ‘knowledge, attitude and preference of end-of-life care in patients attending a medical clinic at Teaching Hospital, Jaffna’**

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**Introduction and Objectives:** End-of-life care is vital for ensuring comfort, support and dignity of terminal ill patients. This study aims to assess patients’ knowledge, attitudes and preferences on end-of-life care to aid healthcare providers in delivering appropriate, patient-centred and cost-effective health care.

**Methods:** A prospective cross-sectional audit was conducted at the Medical Outpatient Department of Teaching hospital, Jaffna. Data were collected through a self-administered questionnaire.

**Results:** This study focused on 100 patients aged 65 and above with the majority (69%) in the 65 -74 age group, predominantly females (61%). Surprisingly 81% of patients were already aware of the concept of end-of-life care, and a similar percentage believed that continuing treatment with no improvement was futile. 91% expressed willingness to discuss their end-of-care plan, and expected guidance from their doctors in decision-making, though only half of them were willing to make the decision on their own. Despite 93% expressing a preference for comfort care, two-thirds had not heard about palliative care, and a similar proportion expected acute resuscitation and ICU care when they become terminally ill.

**Conclusions:** This study highlights patients’ awareness, preference, and willingness regarding decision-making, emphasizing the importance of open communication between healthcare providers and patients. It underscores the need to bridge the gap between patients’ preference for comfort-focused care and their expectation for intensive intervention. Improving awareness and access to palliative care is essential to deliver patient-centred care aligned with patients’ values and preferences.

## PP 047

### Assessment of sleep problems and quality of life in children with cerebral palsy: a study from a tertiary care hospital in sri lanka

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**Introduction and Objectives:** Sleep problems in children with Cerebral Palsy (CP) have been increasingly recognized as significant contributors to their overall quality of life (QoL). This study aims to assess sleep disorders and QoL in children with CP and to identify factors associated with sleep disorders.

**Methods:** A descriptive cross-sectional study was done on CP children attending Teaching Hospital Kurunegala using interviewer-administered questionnaires “Sleep Questionnaire for Children with Severe Psychomotor Impairment (SNAKE)” and PedsQL-CP module.

**Results:** Of 229 CP children, mean and median ages were 6.99 and 6 years respectively with a male majority of 61.5%. 45.9% quadriplegic, 25.3% diplegic and 22.3% hemiplegic.

Majority 62.3% reported a very good sleep, and only 9.6% reported poor sleep, of which 19(86.4%) were quadriplegic. There was a statistically significant difference between levels of GMFCS by one way ANOVA. (1) disturbances going to sleep (2) disturbances remaining asleep, (3) daytime sleepiness and (4) daytime behaviour disorders, A Bonferroni post hoc test revealed that sleep problems were significantly more in higher GMFCS levels (III, IV, V) compared to lower levels (I, II).

There was a trend between sleep disorders and age, family income, epilepsy, hearing impairment, visual impairment, cognitive impairment, gastro-oesophageal reflux disease and overall QoL. The mean overall QoL score was 62.61, daily activities and school activities seemed to be most affected with mean scores of 39.15 and 50.68 respectively.

**Conclusions:** Childrens’ functional impairment had affected their sleep behaviour and sleep disorders leading to a poor overall QoL.

## PP 048

### Exploration of characteristics and associations of primary headache among grade 5 children in the Kurunegala Education Zone, Sri Lanka

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**Introduction and Objectives:** Primary headaches are a significant health problem in children and often under-diagnosed. Children sit for the highly competitive scholarship exam in grade 5 and many children report headaches in this age group. This study aims to explore the occurrence of primary headache among grade 5 children in the Kurunegala Education Zone.

**Methods:** This analytical cross-sectional study was carried out on 368 grade 5 children in the Kurunegala district. Schools were selected via stratified sampling. Data was collected through an interviewer-administered questionnaire.

**Results:** There were 51.4% males and 48.6% females aged 9-10 years. 23.1% reported a primary headache, with a female predominance of 54.1%. Demographic data showed 59.9% of fathers and 49.6% of mothers had not had education beyond the ordinary level exam. 94.6% of parents were married. 83.6% of children had siblings. The monthly income was less than Rs. 50,000/- in 45.2% of families. Correlation analysis revealed that there is a likelihood of children studying longer hours alone at home to complain of a primary headache ( $r = -.12, p < 0.05$ ). The likelihood of children not doing extracurricular activities having a primary headache was significant ( $r = -.18, p < 0.01$ ). However, scholarship examination tuition classes ( $r = .02, P > 0.05$ ), gender ( $r = -.01, p > 0.05$ ), type of school ( $r = -.02, p > 0.05$ ), parent's level of education ( $r = -.01, p > 0.05$ ), marital status of parents ( $r = .08, p > 0.05$ ), monthly income ( $r = .04, p > 0.05$ ), and parent alcohol intake ( $r = .03, p > 0.05$ ) had no significant linear association.

**Conclusions:** Children who study longer hours alone at home and who didn't engage in extra-curricular activities were more likely to get primary headaches.

**PP 049**

**Knowledge and attitudes regarding neonatal danger signs (NDS) and first-response management (FRM) among mothers attending selected Maternal and Child Health (MCH) clinics in the Kalutara District**

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**Introduction and Objectives:** Clinical features indicating neonatal illness are subtle, limiting detection to knowledgeable caregivers. National Institute of Health Services (NIHS) training area suffered 2022's highest neonatal mortality rate (NMR). Promptly identifying NDS with appropriate FRM reduces NMR. We aimed to describe knowledge and attitudes regarding NDS and FRM, and associated factors among mothers attending MCH clinics, NIHS, Kalutara.

**Methods:** Descriptive cross-sectional study was conducted among mothers attending MCH clinics, NIHS, Kalutara from March-November 2023. Calculated sample size was 138.6. Mothers within one year of delivery were included; those unable to understand the questionnaire due to psychiatric, visual or auditory conditions were excluded. Self-developed, expert-validated interviewer-administered questionnaire with photos and real-life videos displaying NDS was used. Faculty of Medicine, University of Colombo granted ethical clearance. Assessing thirteen NDSs categorized mothers' knowledge as good (9-13/13), moderate (7-8/13), and poor (<7/13). Descriptive analysis and chi-squares were used (SPSS version 27). Study was conducted as a part of the Community Stream undergraduate programme of Faculty of Medicine, University of Colombo.

**Results:** Study population was 143 mothers. Knowledge was "good" in 83.6% for NDS and 72.9% for FRM. However, only 19.3% identified hypothermia as NDS. Misconceptions of a non-serious nature (68.3%), resolution spontaneously (43.5%) or by home remedies (41.6%) were the commonest reasons behind incorrect FRM. Age >30 years and term gestation were associated with better knowledge (p<0.05). Knowledge on NDS and FRM had no association (p=0.101).

**Conclusions:** Most mothers had good knowledge about NDS and FRM except about hypothermia.

## PP 050

### **Knowledge, practices, and factors associated with knowledge of preschool teachers on age-appropriate development of children aged 3-4 years in Divisional Secretariat Division - Thimbirigasyaya**

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**Introduction and Objectives:** Child development is a dynamic process influenced by biological and environmental factors, requiring high-quality early childhood programs. Standardization of knowledge of preschool teachers on age-appropriate development improves early identification and intervention of developmental delays. We aimed to assess knowledge, practices and factors associated with knowledge of preschool teachers on age-appropriate development of children aged 3-4 years in a single divisional secretariat division.

**Methods:** A descriptive cross-sectional study was conducted among 120 preschool teachers in Thimbirigasyaya, assessing socio-demographic characteristics, knowledge, and practices on age-appropriate development using a pre-tested, expert-reviewed, self-administered questionnaire. Subjects were selected using stratified random sampling. Knowledge levels and practices of subjects were assessed using a standard scoring system. Statistical analysis was performed to identify associations between socio-demographic factors and knowledge on age-appropriate development using the chi-square test.

**Results:** Mean age of preschool teachers(n=120) was 32 years, with 71.6% having higher education, and 52.5% receiving Early Childhood Care and Development training. The majority (65%) had encountered children with developmental disorders. Also, 64.2% scored 'good' knowledge and 83.7% demonstrated good practice in handling children with developmental delays. Demonstrating good practices was positively correlated with having a "good" knowledge level (p=0.028). Awareness of CHDR significantly influenced the knowledge on age-appropriate development (p=0.002). Awareness on referral procedures for children with developmental delay was poor(41.7%). While 81.7% of teachers had identified a child with a developmental delay, only 35.7% had referred the child to a development clinic or tertiary care hospital.

**Conclusions:** Preschool teachers have demonstrated adequate knowledge and practices regarding age-appropriate development and developmental disorders, albeit with gaps in referral pathway awareness. To improve their awareness, online resources, the CHDR, community-level capacity building, and workshops are recommended.

## PP 051

### Does the level of theoretical knowledge in advance paediatric life support predict the psychomotor skills assessed during the course?

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**Introduction and Objectives:** Advance Paediatric Life Support (APLS) is a globally recognized course designed to train doctors in managing paediatric emergencies. This abstract presents the preliminary analysis of a research project titled Comparison of the theory knowledge and psychomotor skills at the APLS training course among different categories of medical doctors.

The objective of this abstract is to describe whether there is a correlation between theoretical knowledge and practical performance during the APLS course.

**Methods:** A descriptive cross-sectional study was conducted among candidates who participated in the Advanced Paediatric Life Support (APLS) program. All candidates who attended the APLS program from April to November 2023 were invited to participate, and 117 candidates responded. Theoretical knowledge was assessed using multiple choice questions (MCQs) administered before and after the course, while psychomotor skills were evaluated using a performance index (PI) based on the scores candidates received during the course.

**Results:** Of the participants, 33 (28.2%) worked in paediatric and neonatology specialities, 27 (23.1%) in emergency medicine, 35 (31.6%) in anaesthesia or critical care medicine, and the remaining 22 participants represented other specialities. The mean and standard deviation (SD) for pre-course MCQ scores were 81.62% (SD: 12.47%), for post-course MCQ scores were 84.60% (SD: 7.69%), and for the performance index were 66.68% (SD: 8.02%). The Pearson correlation coefficient between pre-course MCQ scores and the PI was 0.272 (P= 0.006). The correlation between post-course MCQ scores and the PI was 0.182 (P= 0.49).

**Conclusions:** There is a statistically significant correlation between theoretical knowledge and psychomotor skills.



## PP 052

### Assessing asthma control and associated risk factors among children with asthma presenting to Tertiary Care Hospitals in Kandy District

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**Introduction and Objectives:** Asthma has a considerable effect on the quality of life of suffering children. Optimal regulation of associated risk factors would lead to good asthma control. The objectives were to evaluate the level of asthma control and the associated risk factors among children with asthma.

**Methods:** The study was done in three tertiary care hospitals in Kandy, Sri Lanka. Patients of the 4 -11 age group in both paediatric wards and clinics were included from May to August 2023. The children were categorized as “poorly controlled” and “well controlled” according to the childhood Asthma Control Test (c-ACT). The demographic, socio-economic, environmental and treatment-associated risk factors were evaluated using an interviewer-administered, modified questionnaire based on the Asthma Call Back Survey (CDC-2019). The association between each of those risk factors and the asthma control level was evaluated using chi-square test.

**Results:** 363 patients were included in the study. 30.03% (109) were having poorly controlled asthma. Having allergic rhinitis( $p=0.037$ ), letting pets enter the child’s bedroom( $p=0.001$ ), inability to meet a doctor( $p=0.015$ ) or buy medications for asthma due to economic barriers( $p=0.008$ ), poor treatment compliance( $p=0.001$ ) and unsatisfactory inhaler technique( $p=0.001$ ) were found to be significantly associated with poor asthma control.

**Conclusions:** Nearly one-third of the patients had poor control of asthma. Identifying and targeting the modifiable risk factors associated with asthma such as avoiding exposure to allergens (pets), treating allergic rhinitis, alleviating economic barriers for obtaining necessary treatment and improving treatment compliance and inhaler technique may lead to improvement in asthma control.

## PP 053

### Phenotypic species identification and ALS3 gene analysis in oral candida albicans isolates in patients with oral submucous fibrosis: a pilot study

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**Introduction and Objectives:** Oral Submucous Fibrosis (OSF) is an Oral Potentially Malignant Disorder, with a high risk of progressing to Oral Squamous Cell Carcinoma. Main risk factors are areca nut, tobacco, alcohol, betel quid, and *C. albicans* overgrowth. ALS3 gene is responsible for *C. albicans* pathogenicity. The aim of research was to investigate the phenotypes and the ALS3 gene in oral *C. albicans* isolated from OSF patients.

**Methods:** A cross sectional study was conducted with 24 OSF patients. Unstimulated whole saliva samples were collected with sociodemographic and risk factor data. Gram staining, germ tube testing, Chrom agar and rice plate cultures were used for species identification. PCR was performed on isolated DNA from *C. albicans* positive cultures. Statistical analyses were conducted using SPSS version 25.

**Results:** The mean age of patients was 45±18.245 years, with male: female ratio of 7:1. *C. albicans* prevalence was 66.7%, *C. krusei* (4.2%) and *C. glabrata* (4.2%) were identified. Mean CFU/ml in Candida spp. was 491.67±650.179. All 16 isolates of *C. albicans* were positive for the ALS3 genotype. Statistical analysis revealed no significant associations between Candida prevalence and gender (p=0.546), education (p=0.125), smoking tobacco (p=0.640), and alcohol (p=0.341). Due to universal use, smokeless tobacco and betel quid analysis was not feasible.

**Conclusions:** This pilot data identified different phenotypes of Candida spp. in saliva samples of OSF patients, commonest being *C. albicans*. Universal presence of the virulent gene ALS3 warrants investigations into its role in pathogenesis and malignant transformation of OSF with further studies.

## PP 054

### Lung metastases in patients with head and neck cancers in northern Sri Lanka: a retrospective analysis

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**Introduction and Objectives:** Head and neck cancer (HNC) is the most common cancer in Sri Lanka. Prognosis of HNC is greatly influenced by the stage at diagnosis. Lung is the commonest site for distant metastasis of HNC and CT scanning is an effective method for detection of lung metastasis.

#### Objectives

To determine the proportion of patients with lung metastases on staging CT and the patient-and tumor-related factors associated.

**Methods:** This institution-based descriptive cross-sectional study was carried out at Tellipalai-Trail Cancer Hospital. All HNC patients who underwent a CT-scan from 1<sup>st</sup> December 2013 over 8 years, were included. Data were extracted from patients' medical-records. Frequencies, percentages, and Fisher's exact test were used in the analysis with SPSS-26. The critical significant level was set at 0.05.

**Results:** Among the 211 patients, the majority (59.2%) were 60 years or older and were males (68.2%). Oral cavity is the most common site of HNC (40.8%), followed by the pharynx (35.5%). Only 4.3% had lung metastases at presentation; among them, the pharynx (55.6%) was the commonest site. Most patients with metastases were males (77.8%), alcohol consumers (77.8%), and smokers (66.7%). There was no significant association between the presence of lung metastasis and patient-and tumor-related prognostic factors, analyzed.

**Conclusions:** Lung metastasis at diagnosis among HNC patients appears to be much lower in our study setting compared to other parts of the world. Further research is needed to explore the utility of routine CT-Chests for HNC patients in Sri Lanka.

## PP 055

### Evaluate the characteristics of medication-related problems among hospitalised oncology patients and identify opportunities for optimisation of therapy

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**Introduction and Objectives:** Medication-related problems (MRPs) in the management of oncology patients could give rise to major complications. A scientific evaluation of MRPs among oncology patients has not been conducted in Sri Lanka. The present study was conducted to identify and characterise potential MRPs and identify opportunities to optimise medication therapy in hospitalised oncology patients.

**Methods:** As a part of a prospective non-randomised controlled study, data were collected from designated medical oncology wards at the National Cancer Institute Sri Lanka (Apeksha Hospital). MRPs were identified by reviewing the bed head tickets, patients' clinic records, and structural interviews with patients or their caregivers by a ward-based clinical pharmacist. Types and causes of MRPs were identified and classified with the Pharmaceutical Care Network Europe (PCNE) Classification V9.00.

**Results:** A total of 216 oncology patients were included, and 611 MRPs were identified. The major MRP types were treatment effectiveness (86.0%) and treatment safety (11.5%). For the "Treatment effectiveness" category, "Effect of drug treatment not optimal" was the dominant category (74.3%). A total of 696 MRP causes were identified, and most MRPs were caused by the "Drug use process" (57.8%), "Drug selection" (24.7%) and "Dose selection" (11.1%). Within the "Drug use process" category, "Inappropriate timing of administration or dosing intervals" was the dominant category (90.3%).

**Conclusions:** Over 75% of participants encountered one or more MRPs mainly affecting treatment effectiveness and safety. This highlights the significant opportunities for clinical pharmacy services within oncology healthcare teams to optimise medication therapy outcomes by identifying and resolving them.

## PP 056

### Prevalence of Anxiety, Depression, and Stress in Patients with Colorectal Cancer at a Tertiary Care Hospital in Sri Lanka

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**Introduction and Objectives:** Colorectal cancer (CRC) is the fourth commonest cancer in Sri Lanka, yet its psychological burden remains under studied.

**Methods:** A cross-sectional study was conducted among 100 patients at the National Hospital of Sri Lanka, and the National Cancer Institute, from 2021 January to 2022 December. Validated Sinhala and Tamil translations of DASS-21 and Becks Depression Inventory (BDI) were used to assess the Depression, Anxiety, and Stress.

**Results:** The mean age was 59.08 years (SD=11.15), with 56 being males. The majority were Sinhalese (n=96), with smaller representation from Tamil (n=3) and Muslim (n=1) ethnicities.

None reported a history of anxiety, while one had a history of depression. T2 tumour staging was the commonest (n=48), and N0 stage was seen in the majority (n=57). Twenty had metastasized disease.

BDI responses indicated mostly normal scores (n=46), and 23 with moderate depression. The majority had normal scores for DASS21 depression (n=68), anxiety (n=70), and stress (n=100), while 14 had moderate depression and 11 reported moderate anxiety. Fewer participants experienced mild (n=9,n=8), severe (n=4,n=6), or extremely severe (n=5,n=5) symptoms in each category.

A strong positive correlation was found between the total BDI score and the Depression score ( $r=0.612, p< 0.01$ ) and Anxiety score ( $r =0.48, p< 0.01$ ) of DASS-21.

A significant association was found between BDI Score and the Tamil ethnicity ( $F=4.059, p=0.02$ ) and between DASS21 Depression score and smokers ( $F=5.43, p=0.023$ ). No associations were found with employment, income, marital status, accommodation and TNM stage.

**Conclusions:** CRC patients in Sri Lanka experience significant psychological distress. Ethnicity and smoking status were identified to adversely affect these.

## PP 057

### Second opinion in diagnosis of cancers: experience of a cancer referral centre

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**Introduction and Objectives:** The Centre for Diagnosis and Research in Cancer (CeDARC) provides second opinions to Sri Lankan pathologists on diagnostically difficult cases. This audit analyses the type of cases received at CeDARC, and the value of additional immunohistochemical (IHC) tests in providing a clinically relevant comprehensive diagnosis.

**Methods:** All cases referred to CeDARC from January 2022 to December 2023 were reviewed. The initial diagnoses of the referring pathologist (RP) and CeDARC were categorized as being concordant or having major or minor discordance. Cases with major discordance (MD) were further analyzed.

**Results:** There were 456 referred cases; haematolymphoid(74/456;16%), soft tissue(71/456;16%), skin(40/456;9%), bone(36/456;8%), gynaecology(36/456;8%), neuropathology(31/456;7%), endocrine(31/456;7%), breast(27/456;6%) and GIT(23/456;5%). The RP had provided a diagnosis in 399 cases (399/456;87.5%). The overall discordance rate (DR) was 28.8% (115/399, major-113/399;28.3%, minor-2/399;0.5%). Soft tissue (23/113;20.3%), haematolymphoid (21/113;18.5%), skin (13/113;11.5%), bone (11/113;9.7%), neuropathology (9/113;7.9%) and gynaecology (6/113;5.3%) had the highest DR. The cases with MD were categorized as a change in diagnosis from malignant to benign (29/399;7.3%), benign to malignant (5/399;1.2%), different entity but still benign (6/399;1.5%), different entity but still malignant (48/399;12%) and change in soft tissue/bone tumour category (25/399;6.3%). The final diagnoses were based on further IHC tests in 66.3% (75/113) cases that showed MD, requiring an average of two tests/case.

**Conclusions:** Soft tissue, haematolymphoid, skin, bone, neuropathology and gynaecology cases showed the highest rates of MD. Most cases required extra IHC testing, highlighting the need to establish more IHC facilities around the country. Moreover, these areas with the highest rates of MD require expert panels, workshops in the local setting, and specialized training in local and foreign centres.

## PP 058

### **Knowledge on insulin therapy, emergency management, chronic complications and their associated factors among adult patients with type 1 diabetes attending National Diabetes Center, Rajagiriya**

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**Introduction and Objectives:** Type 1 diabetes mellitus (T1DM) is a growing concern in Sri Lanka and preventing long-term disease-related complications and reducing the frequency emergency management of episodes, is a challenge. To describe the knowledge on insulin therapy, emergency management, chronic complications and their associated factors among adult patients with T1DM attending National Diabetes Center – Rajagiriya.

**Methods:** A descriptive cross-sectional study was conducted from November 2020 to May 2021, on 228 patients with T1DM, attending National Diabetic Canter – Rajagiriya and on treatment for at least one year duration.. Self-administered questionnaires were circulated as google forms. Each correct statement of knowledge was given 1 mark and zero for incorrect/ don't know response. Knowledge score was categorized using the mean knowledge. Descriptive statistics was performed and analyzed and their associations were established using chi square test from the SPSS software version 23. P<0.05 was taken as the significance level.

**Results:** Majority (70%) were between 18-27 years of age, with mean of 25.54 years (SD=5.690). Age of disease onset was less than 15 years among 82% of patients. Mean Knowledge scores on chronic complications, insulin therapy and emergency management were 81.49(SD=0.5) 67.76(SD=0.49), 42.92(SD=0.5) respectively. Those with higher education had better knowledge on insulin therapy, chronic complications and emergency management (p<0.05)

**Conclusions:** Majority had satisfactory knowledge score for insulin therapy and chronic complications but poor knowledge score for emergency management. Therefore, patient education, awareness and empowering on more specific issues related to emergency management of this lifelong disease would be beneficial.

## PP 059

### Urinary protein and microscopic findings in the early diagnosis of patients with diabetic nephropathy

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**Introduction and Objectives:** Proteinuria is a marker in the diagnosis and management of kidney diseases. For the early diagnosis of Diabetic Nephropathy (DN) patients, cost effective, non-invasive screening tests are important. Therefore, the current study was conducted to analyze the urine samples of patients with DN for proteinuria and microscopic findings as a supportive tool for early diagnosis of DN.

**Methods:** DN patients (n=43) were selected at Teaching Hospital Karapitiya according to the inclusion and exclusion criteria after obtaining written informed consent. Their demographic and clinical data were obtained through a questionnaire. Random urine samples were analysed for proteinuria (sulphosalicylic acid method) and microscopic findings. Data analysis was done using SPSS software.

**Results:** There is a significant association ( $p < 0.001$ ) of proteinuria with the CKD stage. With the disease severity the degree of proteinuria is increased. There was a significant correlation ( $p < 0.01$ ) in proteinuria with the eGFR. According to the sediment analysis, red cells and pus cells were found more in the late stage compare to the early stage of the DN patients. Casts are higher in late stage (73.5%) of DN patients compared to the early stage (26.4%). However, no crystals have been found significantly in DN patients in the late stage. Further, higher percentage (26.7%) of dysmorphic red cells were found in the late stage of DN patients.

**Conclusions:** There was no significant finding in urine protein and microscopy in the early stage of the DN patients compared to the late stage. Further studies with larger sample size in diverse populations are recommended.



**PP 060**

**Behavioral and demographic associations of optimal glycemic control among patients with Type 2 diabetes in Sri Lanka: a multicenter study**

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**Introduction and Objectives:** Achieving optimal long term glycemic control is pivotal in the prevention of most complications of diabetes. We aimed to study the behavioral and demographic associations of optimal glycemic control in Sri Lankan patients with type 2 diabetes (T2DM).

**Methods:** Cross-sectional study was conducted among T2DM patients attending outpatient clinics at seven Sri Lankan tertiary care centers. Data on sociodemographic and behavioral factors were collected using an interviewer-administered questionnaire. HbA1c < 7% was considered as optimal glycemic control.

**Results:** The mean (SD) age, age at diagnosis and duration of T2DM (n=1134) of the participants were 57.9(8.5), 47.8(10.6) and 10.2(8.2) respectively. Only 43.38% (n = 492) achieved optimal glycemic target of < 7% HbA1c. The optimal glycemic control was associated with age > 60 years(56.0%,p=0.004), T2DM diagnosed after 48 years (57.5%, P<0.001), female gender (56.9%, p=0.001), monthly income of 25000-50000 Sri Lankan rupees (39.2%, p=0.003), good medication adherence (72.0%, p=0.001), alcohol abstinence (77.2%, p=0.02), and less than 10 year duration of T2DM (p<0.001).

**Conclusions:** Suboptimal glycemic control was observed in a substantial number of patients. Interventions focusing on identified demographic and behavioral factors are recommended to achieve optimal glycemic control and clinical outcomes in patients with T2DM in Sri Lanka.

## PP 062

### Association of serum bilirubin levels and glycemic measurements in Type 2 diabetic patients

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**Introduction and Objectives:** Bilirubin, a waste product of the heme catabolic pathway, has proven to be a natural antioxidant associated with a lower prevalence of oxidative stress-mediated diseases. This study evaluates the association of serum bilirubin levels with HbA1c, FBS, and PPBS in diabetic patients.

**Methods:** A retrospective analytical study was conducted at the Department of Haematology of the Sri Jayewardenepura General Hospital. Data was obtained through a laboratory information system of randomly selected 201 adult patients diagnosed with T2DM and grouped as poorly and well controlled using HbA1c values over and below 7%, respectively. Normal ranges for serum bilirubin, FBS, and PPBS were (0.3-1.2) mg/dL, (75- 110) mg/dL and (80-140) mg/dL, respectively. Data were analyzed using (SPSS) version 20, descriptive statistical methods, Pearson's Correlation test with p-value and independent sample t-test.

**Results:** A negative correlation between total bilirubin and HbA1c ( $r = -0.234$ ,  $p = 0.001$ ) was observed. No significance correlation between total bilirubin level with FBS, PPBS, and age ( $p > 0.05$ ). However, the mean values were significant ( $p < 0.05$ ) in both diabetes groups. A statistically positive correlation was observed between HbA1c with FBS and PPBS, not with age.

**Conclusions:** There was a significant relationship between total bilirubin with FBS, and PPBS in both groups. A significant negative correlation was between total bilirubin and HbA1c, suggesting a potential protective or modulatory role of bilirubin in glycemic control. No significant correlation observed between total bilirubin levels and FBS, PPBS, or age in total population.

## PP 063

### Knowledge, attitudes and practices regarding hypertension among Sri Lankan adults: an online community survey

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**Introduction and Objectives:** Hypertension profoundly contributes to cerebro- and cardiovascular morbidity and mortality which can be mitigated by empowering communities towards prevention. In this light, we focused on hypertension-related Knowledge, Attitudes and Practices (KAP) among Sri Lankan adults.

**Methods:** A cross-sectional online survey was done from January-March 2024 using self-administered forms assessing hypertension-related KAP incorporating standardized questions with scoring. Knowledge/ attitudes were deemed satisfactory if the aggregate was  $\geq 50\%$ . Multivariate logistic regression was conducted to identify significant associations ( $p < 0.05$ ).

**Results:** Of 926 consecutively sampled respondents (mean age= $45.9y \pm 13.4$ ), 51.6% were female and 46.0% had hypertension. Majority had unsatisfactory overall knowledge (57.3%) especially regarding risk factors (58.7% unsatisfactory). Although 91.6% recognized hypertension as a disease, only 54.1% knew the normal BP value. 76.1% acknowledged high salt intake as a risk factor, although few acknowledged smoking (45.2%) and excess alcohol intake (30.1%). 20% incorrectly believed that excess/insufficient water intake was a risk factor. Knowledge of consequences was satisfactory in 62.7%, particularly recognizing stroke (77.8%) and heart disease (87.4%), whereas awareness of eye (27.0%) and kidney disease (42.1%) was lower. Positive attitudes were seen in 94.7%, but only 48.3% understood the role of weight loss in lowering BP. Factors associated with better knowledge included higher educational level, urban as opposed to rural residence, and a family history of hypertension. Better knowledge correlated with regular BP monitoring.

**Conclusions:** Knowledge on hypertension, particularly of risk factors was unsatisfactory. However, the generally positive attitudes were reassuring. This highlights the need for public health strategies addressing knowledge gaps, leading to healthy lifestyle behaviours.

## PP 064

### Prevalence of advanced liver fibrosis among Sri Lankans with type 2 diabetes and non-alcoholic fatty liver disease: a cross-sectional study

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**Introduction and Objectives:** Stage of fibrosis is the key predictor of outcome in non-alcoholic fatty liver disease (NAFLD) and patients with advanced fibrosis (AF) progress to chronic liver cell disease. Around 60% of Sri Lankans with diabetes have NAFLD. However, the prevalence of advanced AF among them is not known. Our objective was to determine the prevalence of AF among a cohort of Sri Lankans with type 2 diabetes (T2DM) and NAFLD.

**Methods:** We conducted a cross-sectional study among all consenting adults with T2DM and NAFLD attending the Colombo North Teaching Hospital, Ragama, Sri Lanka from November 2021 to November 2022. Fibrosis-4 Index (FIB-4) scores were calculated and those with a score  $\geq 1.3$  underwent vibration-controlled transient elastography (VCTE). Stage of fibrosis was determined on VCTE liver stiffness measurement (LSM); no AF < 8 kPa, at risk of AF  $\geq 8$  kPa and AF > 12 kPa.

**Results:** A total of 363 persons with T2DM and NAFLD were studied. Of those, 243 had a FIB-4 score < 1.3. Persons with a FIB-4  $\geq 1.3$  (n=120) underwent VCTE. 70/120 (58.3%) with a FIB-4  $\geq 1.3$  had an LSM  $\geq 8$ . Overall, 76 (20.9%) had LSM  $\geq 8$  kPa and 28 (7.7%) had LSM > 12 kPa. Risk of advanced fibrosis was associated with age (OR 1.01, p < 0.0001), duration of diabetes (OR 1.02, p = 0.006), waist (OR 1.04, p = 0.035), FIB-4 score (OR 2.08, p < 0.0001) and family history of liver disease (OR 1.42, p = 0.035).

**Conclusions:** Of Sri Lankans with T2DM and NAFLD, 8% had AF, 20% were at risk of progressing to AF and more than half of the patients with a FIB-4 score  $\geq 1.3$  were at risk of AF. Targeted interventions in this group may help prevent progression of NAFLD to AF.

**PP 065**

**Public awareness on risk factors for kidney disease: a study from Kandy District, Sri Lanka**

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**Introduction and Objectives:** Knowledge and awareness of common risk factors of kidney disease such as diabetes and hypertension among the general public leads to better outcomes. Over the last three decades, significant media and geo-political attention has been given to kidney disease in Sri Lanka which may have impacted on increased awareness among the public. The aim of this study was to identify awareness of risk factors for kidney disease among the public in Kandy District, Sri Lanka.

**Methods:** A representative sample of Kandy district was selected through a stratified random sampling method. Five screening questions were asked to evaluate participants' understanding of risk factors for kidney disease.

**Results:** 1854 participants were studied. Mean age was 55.4 years (SD13.5). 58.2% were females with majority (80.3%) being of Sinhalese ethnicity. Majority of 94.2% had some degree of school or beyond school education while only 3.2% had not attended school. 22.4% and 29.5% had diagnosed diabetes and hypertension respectively. Only 37.8% stated they have knowledge of risk factors for kidney disease. Majority of 44.1% and 50.3% didn't identify diabetes and hypertension as risk factors for kidney disease respectively. Most people (53.5%) identified contaminated water as one of the main risk factors for kidney disease over diabetes and hypertension.

**Conclusions:** Attention given to CKD of unknown aetiology has distracted the public's awareness from the more common risk factors for kidney disease such as diabetes and hypertension. This highlights the need for increasing awareness among the public regarding the more common and main risk factors for kidney disease.

## PP 066

### Prevalence of hypertension, its risk factors and associations among sanitary workers in the Colombo Municipal Council area

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**Introduction and Objectives:** The sanitary worker population is a marginalized group whose health problems are poorly examined through research and inadequately addressed through government policy. The disease burden of NCDs in the nation, and the heterogeneity of the population in the CMC area lay the grounds for this research aimed at describing the prevalence of hypertension, risk factors and its associations in this population

**Methods:** A descriptive cross-sectional study design was used with a convenient sampling method to recruit sanitary workers. The study was carried out at the Drainage & Supply division office, District 2B, and District 3 offices of the CMC area. An interviewer-administered questionnaire was utilized to identify factors associated with hypertension, while blood pressure was measured using a calibrated standard digital sphygmomanometer on two occasions. The average blood pressure was classified according to JNC-8 Guidelines. Associations were established by Chi-squared analysis.

**Results:** The prevalence of hypertension in this population was 28.6% (95% CI: 20.4% - 37.9%), while the established incidence was 13.9%. A high prevalence of smoking (41.9%), current alcohol use (64.3%), and illicit drug use (20.5%) were identified. Correlates that were significantly associated with hypertension were; age of  $\geq 50$  years ( $p < 0.005$ ), diabetes ( $p < 0.005$ ), high stress levels ( $p < 0.005$ ), and high salt consumption ( $p < 0.005$ ).

**Conclusions:** The prevalence of hypertension in sanitary workers is similar to the national prevalence. However, unique risk factors identified such as poor coping mechanisms to high stress levels and unsatisfactory dietary practices warrant the need for targeted interventions for this often overlooked subpopulation.

PP 067

## Reach and engagement of Non-Communicable Diseases (NCD) prevention content on facebook in Sri Lanka

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**Introduction and Objectives:** Facebook being the most popular social media in Sri Lanka has become a prominent vehicle of health information. Although Facebook reach or views (paid or organic-unpaid) predict the number of persons who view content, user engagement (reactions and shares) is predictive of its understanding.

This study aimed to describe the reach and engagement of selected health communication content on NCD prevention on Facebook pages under the Ministry of Health Sri Lanka from 2018 to 2022.

**Methods:** Out of 28 videos and 109 still posts addressing unhealthy diets and physical inactivity on the three Facebook pages, 15 content were selected based on the highest engagement. Back-end data for each paid content (reach, engagement, demographic information of users) was obtained and analyzed descriptively.

**Results:** Of the 10 videos and 05 posts, only 25%(n=3) addressed physical activity while majority addressed healthy diets. Content were mostly viewed by 25–34-year-olds (41.5%), and females (65%) in the Western Province (40.7%) via mobile devices (83%). Only five content had paid boost while all others had organic reach. The highest reach (323,247) and engagement (718) was of a paid post on healthy diets of which 99% reach came through paid boost. However, a post on physical activity had an organic reach of 162 and engagement of 143 making it a relatively highly engaged content (88%).

**Conclusions:** In the sample analysed the public appeared to view and engage with Facebook content on physical activity irrespective of it being paid or organic. However, the focus on physical activity on Facebook is minimal.

**PP 068**

**A rare case of cerebral oedema following anaphylaxis to IV Co-amoxiclav in a District General Hospital in Sri Lanka**

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**Introduction and Objectives:** Anaphylaxis is a multisystemic, acute potentially lethal syndrome caused by the sudden release of mediators into the bloodstream from mast cells and basophils. To our knowledge, cerebral oedema following anaphylaxis in live cases are not reported in the literature and we report such as a case.

**Methods:** A 56-year-old male patient was admitted with an ulcer on his right foot for one month with pain and swelling for two weeks. The diagnosis was made as right foot infected venous eczema. IV Co-amoxiclav was started empirically. Immediately following injection, he developed sweating, erythema, and itching of the whole body suggestive of anaphylaxis. His BP was 60/40mmHg, pulse volume was very low, and pulse was 106bpm with bilateral rhonchi.

1:1000 IM adrenalin 0.5ml, IV hydrocortisone, and IV chlorpheniramine were immediately given. His legs were elevated, IV normal saline bolus, and oxygen were given. Vitals improved rapidly.

After 12 hours from the anaphylaxis, his GCS deteriorated to 3/15 with normal vital parameters. NCCT brain showed cerebral oedema and he was managed in ICU with IV mannitol.

His GCS improved to 15/15 within 6 hours and discharged on the following day.

**Results:** Drug-related anaphylactic shock and allergies are commonly reported. However, our patient developed both anaphylaxis and cerebral oedema. Cerebral oedema is a merely common finding in postmortem cases following anaphylaxis due to hypoxia, but this does not apply to our case.

**Conclusions:** This case highlights the importance of early detection of cerebral oedema following anaphylaxis which if not treated is life-threatening.



**PP 069**

**Insights into chronic pain management: a retrospective audit on demographics, pain characteristics, and treatment strategies in a pain management unit at a Tertiary Care Hospital in Sri Lanka**

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**Introduction and Objectives:** Chronic pain poses a significant burden on individuals and the healthcare system, necessitating a thorough examination of the patient population accessing specialized pain management services. This retrospective analysis investigated the characteristics of chronic pain patients seeking care at a pain management unit in a tertiary care hospital in Sri Lanka over a 6 month period.

**Methods:** Demographic data of patients with chronic pain were captured through a comprehensive 6-month review of medical records. Pain characteristics and treatment strategies were also analysed.

**Results:** A total of 148 new registrants were there with 52 Males and 94 Females. Out of them 0%, 68.1% and 31.8% were less than 16 years between 16 to 65 and over 65 years respectively. Most patients were (65.3%) from the draining areas of the hospital, and about 8.8% had travelled more than 50km to attend the clinic. Most patients (69.6%) were self-referrals to the unit. The commonest presentation was lower backache (26.4%), followed by musculoskeletal pain (16.4%). Codeine was the commonest drug (75.3%) to be used followed by NSAIDs (63.7%) and gabapentin (52.7%). 7.5% of the patients had some kind of intervention; nerve blocks (72.7%) followed by epidural steroids (18.2%). 2.1% were prescribed TENS and 6.8% had psychological counselling.

**Conclusions:** In conclusion, this retrospective audit revealed that backache was the most common presentation among patients seeking chronic pain management. The high volume of self-referrals highlights the need for a stringent referral policy to streamline patient intake and ensure appropriate use of resources. Additionally, there is a space to increase both the number and diversity of interventional pain management strategies to better address the complex needs of this patient population.

## PP 070

### Translation, cross-cultural adaptation, and validation of the Duke Activity Status Index (DASI) to Sinhala language

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**Introduction and Objectives:** Duke Activity Status Index (DASI) is widely used to assess functional capacity among patients. A validated Sinhala version for Sri Lankans is not available. This study aimed to cross-culturally adapt, test validity and reliability of the Sinhala version of DASI (DASI-S).

**Methods:** Translation and cross-cultural adaptation of DASI were conducted following standard guidelines. It was pre-tested on ten pre-operative patients and further modified. The construct validity and reliability were evaluated by administering the modified DASI-S along with the physical functioning sub-scale of the 36-item short-form health survey (SF-36) to 81 patients awaiting non-cardiac surgeries at university surgical wards, National Hospital of Sri Lanka (NHSL), and Colombo North Teaching Hospital (CNTH), Sri Lanka. Reliability was assessed through Cronbach alpha; validity was evaluated using factor analysis and Spearman's correlation. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, Colombo, Sri Lanka.

**Results:** The mean age of the participants was 46.2 ( $\bar{x}$ , $\pm$ 16.6) years and majority were females (54.3%). Mean height, weight, and body mass index of the sample were 160.5 ( $\bar{x}$ , $\pm$ 9.6) cm, 60.3 ( $\bar{x}$ , $\pm$ 11.9) kg, and 23.4 ( $\bar{x}$ , $\pm$ 4.5) kgm<sup>-2</sup> respectively. The Cronbach's alpha coefficient for the internal consistency was 0.861. DASI-S demonstrated concurrent validity by positively correlating ( $p < 0.01$ ,  $r_s = 0.466$ ) with SF-36 sub-scale. There was a significant difference ( $p < 0.01$ ) in total score of DASI-S between two age groups.

**Conclusions:** Sinhala version of the DASI appears to be a valid, reliable and easy to administer tool to assess functional capacity among patients who are awaiting non-cardiac surgeries.

PP 071

## Clinico-Epidemiological profile of stroke patients attending Teaching Hospital Peradeniya

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**Introduction and Objectives:** In the year 2019, stroke was the leading cause of disability and the second leading cause of death globally, which is no longer a disease of the elderly. Around the world, 12.2 million new strokes per year are detected, majority affecting people younger than 70 years (63%), residing in low to middle-income countries (89%). Stroke was the 7th leading cause of death in the state hospitals of Sri Lanka in the year 2019, which has risen to the 5th place in the year 2020 highlighting the necessity of more descriptive studies.

**Methods:** We analyzed the data of all stroke patients who attended Teaching Hospital, Peradeniya (THP) from January 2017 to December 2023 to describe the socio-demographic data, risk factors and presenting features of stroke.

**Results:** The total study sample within the analyzed period consisted of 1154 patients with 593 (51.4%) males. The mean age was 67.48 (SD, 12.51) years. The commonest risk factor identified was hypertension (n=699, 60.6%) with the second common being diabetes mellitus (n=403, 34.9%). The main presenting feature identified was weakness of any part of the body (n=945, 81.9%) followed by dysarthria (n=598, 51.8%). A total of 113 patients underwent thrombolysis, the mainstay of treatment amongst the diagnosed patients with ischaemic stroke (n=955). A percentage of 99% were discharged with only 2 reported deaths.

**Conclusions:** This analysis shows that the proportion of stroke among males is slightly higher than females involving commonly people less than 70 years of age. The highest number of patients had pre-detected hypertension with weakness as the commonest presentation. Treatment amongst the diagnosed ischaemic stroke patients is low (11.8%) mostly due to late presentation.

PP 073

**Prevalence and associated factors of osteoarthritis among hospital women attendants in national hospital Sri Lanka.**

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**Introduction and Objectives:** Osteoarthritis (OA) is one of the most common form of arthritis. This study aims to identify the prevalence of OA and its associated factors among hospital women attendants in National Hospital Sri Lanka.

**Methods:** A descriptive cross-sectional study with an analytical design was conducted in a sample of 160 women attendants from the National Hospital Sri Lanka. The selection of the participants was done using the convenient sampling technique and concerning the inclusion and exclusion criteria of the study. A structured questionnaire was used to collect demographic and socio-economic characteristics of study participants, A KOOS pain questionnaire and KOOS symptoms questionnaire were used to identify the prevalence of osteoarthritis and an interview administrative questionnaire was used to collect information regarding associated factors of osteoarthritis. Data analysis was done by using SPSS version 23.0 software. Descriptive statistics, independent sample t-test, and Fisher's exact test were used in data analysis.

**Results:** In this study, a high prevalence of OA (68.1%) was detected. . Age, obesity and metabolic syndrome, genetics factors, infections and inflammations, secondary lower limb injuries, and occupational-associated factors were evaluated as possible associated factors for OA. All these factors were significantly associated with OA ( $p < 0.05$ ).

**Conclusions:** The prevalence of OA among hospital attendants was 68.1% and age, obesity and metabolic syndrome, genetics factors, infections, and inflammatory factors, secondary to lower limb injuries, and occupation-associated factors were found to be associated with OA.

## PP 074

### Factors leading to delayed presentation of inflammatory arthritis to specialty care in a Sri Lankan population: lessons learnt for improvement of care

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**Introduction and Objectives:** Contemporary studies show that early diagnosis and treatment of inflammatory arthritis leads to better treatment outcomes and low disease related morbidity. However, a recent study conducted in a National Grade Hospital specialty clinic in Sri Lanka reported that there is a significant delay in presentation of patients with inflammatory arthritis to specialty clinics. This study aims to identify factors causing delayed presentation to specialty care.

**Methods:** The study was conducted at the rheumatology clinic of a tertiary care hospital, involving 117 consenting patients, newly diagnosed with inflammatory arthritis by an experienced consultant rheumatologist. The effect of causative factors for delay was assessed via a questionnaire. Statistical analysis of collected data and Chi Square test were used to establish possible associations between each factor and delayed presentation.

**Results:** Of the 117 interviewed patients, 95 were female and 22 were male. 68 (58.1%) patients had first medical contact 3 months after symptom onset. 49 (41.9%) had no delay. Factors showing statistical significance were non-referral from primary care ( $p=0.001$ ) and delayed presentation to primary care ( $p=0.000$ ). Non-referral from secondary care, use of Ayurvedic treatment, educational status, employment, income, age, gender and mistrust in allopathic medicine assessed as potential factors failed to show statistically significant association ( $p>0.05$ ).

**Conclusions:** Non-referral from primary care and patient delay in presentation to primary care were identified as factors contributing towards delayed presentation to specialist care. These can potentially be addressed through health care policy changes and patient education, paving way for the improvement in overall patient outcomes.

## PP 075

### Effectiveness of school-based sexual and reproductive health education programs in reducing adolescent pregnancies in Medical Officer of Health area Egodaunya from 2021 to 2023

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**Introduction and Objectives:** Adolescent pregnancies pose significant health, social, and economic risks, largely attributable to insufficient sexual and reproductive education. In 2021, the Egodaunya Medical Officer of Health (MOH) area reported the highest adolescent pregnancy rates in the Colombo Regional Director of Health Services (RDHS), exacerbated by COVID-19 challenges, necessitating urgent interventions. The objective of this study is to evaluate the effectiveness of School-based Sexual and Reproductive Health Education (SSRHE) programs in preventing adolescent pregnancies in the Egodaunya MOH area.

**Methods:** A comprehensive SSRHE curriculum was developed by an expert panel. Ethical and administrative clearance was obtained from the Ethics Review Committee of Kothalawala Defence University and RDHS Colombo, and the Zonal Director of Education. Trained medical officers conducted SSRHE programs in 12 high-risk schools, targeting students in grades 10 and above. Chi-square tests were used to assess the significance and the p-value of 0.05 was considered statistically significant.

**Results:** In 2021, there were 75 reported teenage pregnancies, which decreased to 68 in 2022 and further reduced to 42 in 2023 with a statistically significant difference ( $p=0.007$ ). Similarly, the incidence of adolescent pregnancies among school students followed a declining pattern, with 38 cases recorded in 2021, 25 in 2022, and a notable decrease to 9 in 2023 ( $p=0.001$ ).

**Conclusions:** SSRHE programs effectively reduced adolescent pregnancies in high-risk schools within the Egodaunya MOH area. Continuous investment in SSRHE is crucial for positive health outcomes. Strengthening and expanding SSRHE beyond the Egodaunya MOH area, with ongoing monitoring and evaluation, are recommended. National SSRHE policy development requires collaboration between health and education ministries.

PP 076

**Dimensions and factors affecting sleep health, and its association with Body Mass Index among Grade 10 students in Rathnapura Educational Division**

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**Introduction and Objectives:** ‘Sleep health’ is a newer concept that measures several dimensions of sleep to give a comprehensive idea of how healthy a person’s sleep is.

This study was conducted to describe dimensions and factors affecting sleep health, and its association with Body Mass Index (BMI) among grade 10 students in Rathnapura educational division

**Methods:** A school-based cross-sectional study with an analytical component was conducted. The sample was selected using the multistage cluster sampling method. Data was collected using a pre-tested self-administered questionnaire, and height and weight were measured objectively. Data were analyzed using descriptive statistics and Pearson’s chi-square test.

**Results:** The response rate was 95% (n=627). Of the total participants, 68%(n=426) were 14 years of age, and 58% (n=366) were males. Out of them, 66.7% (n=418) had good sleep health. Sleep health had statistically significant associations with sex ( $\chi^2 = 9.57$ ;  $df=1$ ;  $p=.002$ ), monthly family income ( $\chi^2 = 7.707$ ;  $df = 1$ ;  $p = .006$ ), mother’s education level ( $\chi^2=4.9$ ;  $df=1$ ;  $p=.026$ ), father’s education level ( $\chi^2=3.921$ ;  $df=1$ ;  $p=.048$ ), family structure ( $\chi^2 = 4.979$ ;  $df = 1$ ;  $p = .026$ ), screen time ( $\chi^2= 4.221$ ;  $df=1$ ;  $p=.04$ ), sleeping in a brightly lit room ( $\chi^2=.585=6.288$ ;  $df=1$ ;  $p=.012$ ), bedtime depression ( $\chi^2=10$ ;  $df=1$ ;  $p=.002$ ) and fast-food consumption ( $\chi^2=.018$ ;  $df=1$ ;  $p=.018$ ). However, there was no statistically significant association between sleep health and the participants’ body mass index ( $\chi^2=1.371$ ;  $df=1$ ;  $p=.251$ ).

**Conclusions:** The study revealed that one-third of the participants had poor sleep health. Interventions for teachers, parents, and students are recommended to address the associated factors and promote sleep health.

**PP 077**

**Association of knowledge, attitudes, and practices related to STDs among non-medical undergraduates at a state university in Sri Lanka**

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**Introduction and Objectives** - Sexually Transmitted Diseases (STDs) are on the rise globally and cause high mortality rates, particularly in low-income countries. This highlights the need to assess association of knowledge, attitudes, and practices related to STDs among undergraduates in Sri Lanka.

**Method** - A descriptive cross-sectional study was conducted among 425 non-medical undergraduates selected using convenient sampling. A self-administered-questionnaire gathered data on socio-demographics, knowledge, attitudes, and practices related to STDs. Knowledge and attitudes were categorized as 'good' and 'poor' using a scoring system (Cut-off  $\geq 65\%$ ). SPSS version 15 was used to analyse data and descriptive statistics were presented as mean (SD) and proportions (95% CI). Chi-square test was used to test association ( $p \leq 0.05$ ).

**Results** - Mean age of respondents were 22 years ( $\pm 1.48$ ). Knowledge on STD were adequate among 44.5% (n=189). Although 80% (n=343) identified HIV/AIDS as an STI, majority (64%, n=272) were unaware of Trichomoniasis. Some (n=57, 13.42%) were unaware of condom use as a preventive measure, and only 38.83% (n=165) knew that treatments for some STDs must continue even after symptoms disappear. Overall attitudes were good in majority (86.6%, n=368). Majority (n=329, 77.4%) were sexually inactive, with the sexually active respondents being predominantly male (n=89, 92.7%). Good knowledge and attitudes were significantly associated. Adequate preventive practices were significantly associated with good knowledge and, attitudes.

**Conclusion** - Undergraduates had overall poor knowledge of STIs and prevention. Overall attitudes towards the prevention of STIs were satisfactory. This emphasizes the necessity to bridge knowledge deficit for the purpose of enhancing sexual practices and preventing the spread of STDs. Highlighting an urgent need to address the knowledge gap for improved sexual practices and STD prevention.



PP 078

**Unveiling drug abuse through eyes of close associates: a qualitative exploration of insights among non-drug using associates in a sub-urban community in Anuradhapura District, Sri Lanka**

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**Introduction and Objectives:** Drug addiction threatens global public health and social stability. Despite preventive strategies, understanding its root causes remains imperative. Yet, non-drug users' perspectives are frequently ignored. This study aims to explore the perspectives of close associates of drug users regarding avoidance factors and bio-psychosocial determinants of drug abstinence.

**Methods:** A qualitative study was conducted among non-drug using siblings, relatives, friends, and neighbors of active male drug users in Anuradhapura district. Snowball sampling recruited participants, and semi-structured interviews were conducted, followed by thematic analysis.

**Results:** Participants' age ranged between 18 to 64 years. Fifteen interviews were conducted, identifying four main themes with 23 subthemes: a) Nature of the relationship with drug users, b) Factors supporting drug use, c) Factors supporting non-usage, and d) Consequences of drug usage. Social factors, notably family background and social clustering predominantly supported drug use. Additionally, employers offering drugs instead of payment to employees, childhood personality traits like curiosity and stubbornness also contributed to drug usage. Relationship issues and adolescence were common precursors. Participants emphasized the importance of a stable mindset, religious adherence in resisting drug use, expressing hesitancy towards drug use after witnessing users' hardships. Lack of childhood drug exposure was noted as protective. Many participants noted drug users face societal and legal issues due to resorting to theft to fund their addiction.

**Conclusions:** Non-drug users' perspectives reveal both driving and protective factors of drug usage. We recommend to strengthen existing policies and legal frameworks and to develop interventions targeting early childhood and family stability to promote drug abstinence.

PP 079

**Health literacy and healthcare-seeking behaviour among selected garment factory workers in Ratmalana Medical Officer of Health Area, Sri Lanka**

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**Introduction and Objectives:** This research explores the interplay between sociodemographic factors, health literacy and healthcare-seeking behaviour among garment factory workers, amidst challenging work conditions. The main objective was to assess health literacy and healthcare-seeking behaviour among selected garment factory workers in Ratmalana Medical Officer of Health (MOH) area.

**Methods:** A descriptive cross-sectional study in Ratmalana MOH area surveyed 200 garment factory workers using simple random sampling. A self-administered questionnaire assessed sociodemographic factors, health literacy, and healthcare-seeking behavior. Health literacy was evaluated with four questions, using 50% marks as the cut-off. Healthcare-seeking behavior was assessed through ten statements, with scores above the mean ( $\geq 37.23$ ) considered to be 'high' healthcare-seeking behaviour. Descriptive statistics were presented as mean (SD) and proportions (95% CI). Chi-square test was used to test associations. (significance was  $p \leq 0.05$ ).

**Results:** The study encompassed predominantly female (60%) garment workers, aged 18-29, primarily Sinhalese (97%) and Buddhist (86.5%). 41.5% completed education up to GCE A/Ls, 58.5% were married, and 62.5% were Sample Machine Operators. The study showed that 48.0% of the participants had adequate and 52.0% had inadequate health literacy. The assessment of healthcare-seeking behaviour revealed that 51.5% had 'high' and 48.5% had 'low' healthcare-seeking behaviour. Accessing health information via newspapers, reports, and articles were associated with increased healthcare-seeking behavior while marital status didn't.

**Conclusions:** Despite predominantly inadequate health literacy, participants showed high healthcare-seeking behavior. The study suggests employing larger sample sizes and validated health literacy questionnaires for future research to ensure reliability and robustness.

## PP 080

### Assessment of knowledge, attitudes and practices on the management of dandruff among undergraduates of the Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

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**Introduction and Objectives:** Dandruff is considered to be a common scalp disorder which cannot be completely cured but could be controlled upon proper preventive measures. This scalp condition is characterized by excessive shedding of skin flakes and more than 50% of the global population is facing dandruff at any stage of their life. Thus, the current study aimed to assess the knowledge, attitudes and practices on the management of dandruff among the undergraduates of the Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka.

**Methods:** A descriptive cross-sectional study was conducted among 354 undergraduates in the Faculty of Allied Health Sciences, University of Ruhuna using a self-administered predesigned questionnaire by means of a Google form.

**Results:** The prevalence of dandruff was found as 44.6% (female 29.9% and male 14.7%) among the study population. Moreover, 86.7% of respondents possessed a satisfactory level of awareness of dandruff which could be attributed to their education in the field of health sciences. Meantime 63% of the participants were willing to use herbal shampoo instead of synthetic shampoo. Already 55.6% of them have tried several homemade remedies to treat dandruff.

**Conclusions:** Although the participants of this study were generally knowledgeable about dandruff, the high prevalence rate of this condition among the study population suggested the necessity of increasing awareness of dandruff particularly among the general public. Since dandruff can affect anyone irrespective of their gender, age or ethnicity, everyone should be attentive to dandruff and its management in order to reduce its occurrence.

## PP 081

### Knowledge, attitudes and associated factors on the preschool meal programme among preschool teachers in the Colombo Municipal Council (CMC) area, Sri Lanka

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**Introduction and Objectives:** The preschool meal program (PMP) which commenced in 2017, plays a vital role in improving the nutritional status of children and helps overcome micronutrient deficiencies by ensuring a free nutritious meal for every child. Preschool teachers influence the success of this program since they play a crucial role in implementation, quality improvement and sustainability. Objectives of the study were to assess knowledge, attitudes and their associated factors regarding the preschool meal programme among preschool teachers of the CMC area.

**Methods:** A descriptive cross-sectional study was carried out using a pretested self-administered questionnaire among 403 preschool teachers in the CMC area, using a systematic sampling method. Data analysis done using SPSS version 26. Descriptive data are given as frequency distributions and chi-squared test was used to assess associations ( $P < 0.05$ ).

**Results:** The total knowledge score had a mean of 58.42 ( $SD \pm 23.88$ ) and median of 68. Only 179 (44.4%) had 'good knowledge'. Knowledge level was significantly associated with ethnicity ( $p = 0.012$ ), religion ( $p = 0.002$ ) and prior participation in a training programme ( $p = 0.025$ ). Total score for attitudes had a mean of 41.8 ( $SD \pm 4.17$ ) and median of 42. Only 167 (41.4%) had 'good attitudes'. Attitude level was significantly associated with age ( $p = 0.027$ ), marital status ( $p = 0.007$ ), conducting the PMP in their respective preschool ( $p = 0.001$ ) and prior participation in a training programme ( $p = 0.001$ ). There was no statistically significant association between the knowledge and attitudes of preschool teachers ( $p = 0.097$ ).

**Conclusions:** Less than half of the study population had good knowledge (44.4%) and good attitudes (41.4%) on PMP. It is recommended to conduct refresher training for teachers on the implementation of PMP.

## PP 082

### Utilisation pattern of micronutrient supplements and associated factors among pregnant women attending antenatal clinics in Wattala MOH area

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**Introduction and Objectives:** Micronutrient supplementation is a well-known intervention aiming to prevent anaemia among pregnant women worldwide, including Sri Lanka. However, it remains a public health concern in Sri Lanka, with regional disparities. Hence, it is important to explore the efficiency of this intervention at different localities. This study aimed to describe the pattern and associated factors among pregnant women in the use of micronutrient supplements in an urban MOH area of Sri Lanka.

**Methods:** A descriptive cross-sectional study was carried out among 106 pregnant women in 2<sup>nd</sup> and 3<sup>rd</sup> trimester, sampled systematically from 5 selected antenatal clinics in Wattala MOH area. A pre-tested interviewer administered questionnaire was used to assess compliance with micronutrient supplementation and a scoring systems was used in the analysis. Associations between compliance and several factors were analyzed by chi-square test.

**Results:** Of the pregnant women studied, 59.4% (n=63) had 'good' overall compliance for micronutrient supplements but 51.9% (n=55) had not taken pre-conception folic acid. There were statistically significant associations ( $p < 0.05$ ) between good compliance and the women being unemployed, planned pregnancy, low risk pregnancy and not experiencing any side effects for micronutrients. There was no significant association between good compliance and adequate knowledge on micronutrient use, level of education or being diagnosed as anaemic in first trimester ( $p > 0.05$ ).

**Conclusions:** The compliance with micronutrient supplement is not satisfactory and majority of pregnant women have not used pre-conception folic acid indicating the necessity to modify the existing nutrition supplementation program for pregnant women at the MoH level.

PP 083

**Knowledge, attitudes and practices of food handlers on food safety in a selected MOH area in the Colombo District**

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**Introduction and Objectives:** Millions suffer from foodborne diseases annually due to poor food handling practices. Urbanization and changing consumer behaviour have led to an increase in outside food consumption, making food handlers' knowledge, attitudes and practices crucial for ensuring food safety and hygiene. Our objectives were to assess the knowledge, attitudes, and practices on food safety and hygiene and factors associated with knowledge and practices among food handlers.

**Methods:** A descriptive cross-sectional study was conducted among 131 food handlers from 46 food-handling establishments in the Pitakotte MOH area, Colombo district. An interviewer-administered questionnaire, developed based on the PHI manual, Food Act, WHO recommendations and expert comments was used to collect data. Knowledge, attitudes, and practices were classified as good or poor based on a scoring system and chi-square tests were used to assess associations.

**Results:** The majority of the establishments belonged to 'Hotel' category (43.5%) and were below A-grade (69.6%). Most food handlers were between 20 – 39 years (66.4%) and were males (63.4%). A 'good' knowledge level was seen in 62.6%, and 74.8% had good attitudes. However, only 58.0% had good practices. Occupation-related training, less experience, higher grading of food establishment, higher monthly income, low smoking pattern, good knowledge and favourable attitudes on food safety were found to be significantly associated with better practices. ( $p < 0.05$ ).

**Conclusions:** Food handlers should be given proper training focused on areas where their knowledge is poor before employment. Fostering positive attitudes towards food safety and promoting good food safety practices should be continued through supportive supervision at the field level.

## PP 084

### Development of a model diet and behavioral change plan to prevent hypovitaminosis D among Sri Lankan students in Belarus: a case report

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**Introduction and objectives:** Epidemiological studies revealed that vitamin D deficiency is a nutritional problem worldwide. Long-standing vitamin D deficiency can lead to multiple health problems. This study aims to explore suitable prevention modalities for this student population.

**Case presentation:** A young male Sri Lankan medical student, studying in Belarus, which is a temperate zone country, suffered from Joint pain, mood instability, irritability, fatigue, and on-and-off headaches for two months duration.

Basic examination findings, full blood count and erythrocyte sedimentation rate were normal. As some other students were diagnosed with vitamin D deficiency, vitamin D level has been checked and diagnosed with vitamin D deficiency with a level of 14.1ng/ml.

**Management:** Vitamin D 2000 IU was prescribed for 2 months and advised to repeat the vitamin D level, but this was not done. Advice on lifestyle modifications was given including adequate sun exposure and a diet containing vitamin D-rich foods. A hypothetical diet plan was prepared based on weekly dietary recall of the students, available vitamin D-rich foods in Belarus and their vitamin D content.

**Discussion:** Studies concluded that Asians have more risk for vitamin D deficiency compared to native Belarusians. Daily routine activities of this student population don't warrant recommended sun exposure which is 40% of the body surface is exposed to sun for at least 15-20 minutes between 11 am and 3 pm.

Routine meals of this student population provide a maximum of 160 IU of vitamin D which is far below the recommended daily allowance (RDA) of 400 IU. The hypothetical diet can provide vitamin D closer to the RDA if the suggested vitamin D-rich foods are combined daily. Vitamin D-rich foods are limited, and the students conveniently consume food rather than considering the nutritional value.

**Conclusion:** Vitamin D supplements become inevitable for this student population when they fail to adhere to the prescribed diet plan. Supplements should be taken with proper follow-up as there is a risk of toxicity. An urgent intervention plan is necessary for this student population.

## PP 085

### Effect of excessive iodine consumption on metabolic and ovulatory disorders in young females of child-bearing age.

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**Introduction and Objectives:** Iodine is a crucial micronutrient for metabolism, but its role in metabolic syndrome (MetS) and ovulation is not fully understood. This study explores urinary-iodine concentration (UIC) as a marker for detecting MetS and ovulatory hormonal changes in young women.

**Methods:** This cross-sectional study was conducted in Sri Lanka from 2020-2023. A total of 282 female participants aged 18-35 were recruited. Their anthropometric measurements, insulin resistance (IR) by HOMA-IR, lipid profile, blood pressure and mean fasting UIC were assessed. The study excluded females who were taking iodine-containing medications or pregnant. Further, females were categorized into four iodine status groups based on UIC levels: iodine deficiency (UIC <100 µg/L), iodine adequate (UIC 100-199 µg/L), iodine more than adequate (UIC 200-299 µg/L), and iodine excessive (UIC >300 µg/L).

**Results:** The prevalence of UIC among the study cohort was as follows: adequate: 38.6%, more than adequate: 10.7%, excessive: 50.7%. The MetS and UIC levels positively correlated, with an adjusted OR of 1.72(95%CI:0.12-2.14) for the excessive-UIC group and 0.21(95%CI:0.02-0.98) for the adequate-UIC group. Progesterone and testosterone levels showed a negative correlation with UIC; that is, when UIC increased, the levels of both hormones were lower than the normal reference range. The group with adequate-UIC levels had a mean progesterone value of 6.85±6.09ng/ml, while the excessive category had a mean value of 2.12±5.9 ng/ml. For testosterone, mean values were 2.81±1.41nmol/l in the adequate-UIC group and 0.80±1.28nmol/l in the excessive-UIC group. The odds of obtaining reduced progesterone in the presence of an excessive-UIC were 1.96(95%CI:0.38-1.56) and 1.48(95%CI:0.19-2.40) for testosterone, respectively.

**Conclusions:** Excessive-UIC can lead to health issues in young females, including MetS and decreased ovulatory hormone production. This study highlights the need for improved dietary regulation and management of micronutrient consumption among Sri Lankan communities.



**PP 086**

**Dietary behaviors, physical activity and their correlates among young adult trainees aged 18 to 30 years attending the National Youth Center (NYC), Maharagama**

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**Introduction and Objectives:** Ensuring good dietary habits and sufficient physical activity among young adults is important for their growth, education, work, and even intercellular performance. This study examined dietary behaviors, physical activity and their correlates among young adult trainees at the National Youth Center (NYC), Maharagama.

**Methods:** A cross-sectional study was conducted among 300 young adults aged 18 - 30 years selected through simple random sampling at NYC, Maharagama. Socio-demographic factors, dietary behavior and physical activity were assessed using a self-administered questionnaire.

**Results:** Of the total, 155 (51.7%) were males and mean age was 22.3 (SD 3.149). Overall, 24.0% were overweight and 2.3% were obese. Colombo residents ( $p=0.008$ ), and males ( $p<0.001$ ), reported significantly less frequent consumption of vegetables and fruits. Significant differences were observed in consumption of sweet ( $p=0.015$ ) and carbonated drinks ( $p=0.05$ ) between residents of Colombo and other areas. There were gender disparities for consumption of salty snacks and carbonated drinks as well ( $p<0.001$ ). Factors such as residing in Colombo ( $p=0.019$ ), being male ( $p<0.001$ ), education above A/L ( $p=0.005$ ), student status ( $p=0.001$ ), and income over 50,000 LKR per month ( $p=0.007$ ) were associated with increased consumption of Western foods. The prevalence of physical inactivity was 51.7%, predominantly among females with inactive individuals reporting prolonged screen time use ( $>3h$ ) ( $p=0.004$ ). Increased screen time use was associated with overweight or obesity ( $p=0.017$ ).

**Conclusions:** Significant associations were observed with regard to poor dietary patterns, physical inactivity and increased screen time among young adults residing in the Colombo District. Interventions are required to address these risk factors for Non-Communicable Diseases.

**PP 087**

**Determining the effect of seminal plasma supplementation on sperm motility in males with Asthenozoospermia: a systematic literature review**

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**Introduction and Objectives:** Male infertility is defined as the inability of the male partner to aid natural conception. Sperm motility plays a significant role in determination of male fertility. Various proteins present in acellular seminal plasma (SP) are involved in regulating sperm motility. Asthenozoospermia, denotes reduced sperm motility, contributes to male infertility. The objective of this review was to investigate the effect of SP supplementation on sperm motility in asthenozoospermic males.

**Methods:** Comprehensive literature search was conducted across electronic databases, including PubMed, and Google Scholar, using predefined search terms. Studies examining the impact of seminal plasma supplementation on sperm motility were included utilizing PRISMA protocol. Data extraction and synthesis were performed, focusing on study design, participants, interventions, outcomes, and key findings.

**Results:** A total of eight studies were included. Effects of specific proteins, RNAs, and extracellular vesicular cargo on sperm motility were identified. CRISP1, CRISP2, NAG, and TRPV6 were found to be decreased in asthenozoospermic individuals compared to normozoospermic individuals. miR-582-5p was found to be differentially expressed in asthenozoospermic individuals with low CRISP2 suggesting its role in CRISP2 regulation. Coincubation of sperms with normozoospermic extracellular vesicles have shown to increase CRISP1 expression in the sperms, suggesting the significance of further exploration of SP and its constituents' supplementation in improving sperm motility.

**Conclusions:** The review identified several differentially expressed proteins that could potentially affect sperm motility. Further research should explore causal relationships between SP composition, sperm motility, and male fertility outcomes to determine the effect of SP supplementation on asthenozoospermic sperm samples.

## PP 088

### Isolation, enrichment, and characterization of syncytiotrophoblast-derived extracellular vesicles from ex vivo dual lobe placental perfusion

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**Introduction and Objectives:** Syncytiotrophoblast-derived extracellular vesicles (STB-EVs) are pivotal in cell-to-cell communication, influencing both normal and pathological conditions in pregnancies. Our research aimed to isolate, enrich, and characterize medium/large (m/l) and small (s) STB-EVs from placental perfusate via ex vivo dual lobe placental perfusion, focusing on their potential roles and applications.

**Methods:** Differential ultracentrifugation (dUC) was used to separate m/l and s STB-EVs from the placental perfusate. Characterization was comprehensive, incorporating nanoparticle tracking analysis (NTA) for quantifying size and particle concentration, Western blot for detecting protein composition, transmission electron microscopy (TEM) for assessing morphology, and flow cytometry for confirming placental origin.

**Results:** dUC effectively enriched both m/l and s STB-EVs. NTA confirmed size distributions aligned with expected profiles for each subtype. Western blot demonstrated the presence of specific EV markers (CD63, TSG101, ALIX) and placental proteins (PLAP-placental alkaline phosphatase), and the absence of cytochrome C, confirming purity. TEM and flow cytometry further substantiated the morphology and origin of the EVs.

**Conclusions:** This study successfully isolates and characterizes authentic STB-EVs, providing a robust foundation for further investigations into their biological roles in pregnancy. Understanding these roles could enhance therapeutic strategies for managing pregnancy complications and pave the way for novel diagnostic tools, potentially transforming approaches to maternal and foetal health.

## PP 089

### The effects of sperm cell driven microbots on male infertility

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**Introduction and Objectives:** Infertility is defined as inability of a couple to achieve clinical pregnancy despite regular, unprotected sexual intercourse for a year or more. Asthenozoospermia (low sperm motility), one of the main causes for male infertility, makes fertilization difficult as the sperms are unable to reach the fallopian tubes. Microbots, robotic machines attached to sperms, have gained recent interest as an option to improve sperm motility. Aim of the review was to assess the impact of microbots on sperm motility.

**Methods:** This systematic review following PRISMA-P guidelines, examined published literature from 2019 to 2024 on microbots' role in male infertility. MEDLINE and Google Scholar databases were used. Studies involving human subjects were included, while animal studies and studies addressing other causes of infertility were excluded. Zotero was used as a reference managing tool. Data were extracted using a data-form, and Robvis tool ensured unbiased integration of critical appraisals into articles.

**Results:** Eight studies were included in the review. Microbot-attached sperms displayed reduced speed in viscous fluids, but specific designs navigated mimicked oviductal fluid efficiently. Magnetic field manipulation influenced microbot movement, with static fields enhancing speed and direction. Magnetic microbots captured and transported sperms, triggered capacitation, and aided in penetrating the ova's protective layer. These results suggest microbots could potentially assist sperms with motility issues, improving fertilization success.

**Conclusions:** The review highlights the innovative potential of sperm-assisted technologies and micro-robotics in addressing male fertility challenges. While studies contribute unique insights, limitations include narrow scopes and challenges in clinical applications.

## PP 090

### Cross-cultural adaptation and validation of the Sinhala version of the Female Sexual Function Index (FSFI) among adult patients in a tertiary-care gynaecological unit in Sri Lanka: findings from Exploratory Factor Analysis (EFA)

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**Introduction and Objectives:** FSFI has shown female sexual response to constitute six factors: desire, arousal, lubrication, orgasm, satisfaction and pain. However, these constructs have not been investigated in Sinhala-speaking populations before. We aimed to culturally adapt and assess the factor structure and reliability of the FSFI questionnaire.

**Methods:** Forward-translation to Sinhala was done by a single translator and back-translation to English was performed by a separate translator. Both questionnaires were provided to an independent panel comprising three experts who assessed the content validity and cultural relevance of translated FSFI. Disagreements were settled by majority vote. The pre-final version of FSFI was administered to adult patients consecutively recruited from a gynaecological ward of the Teaching Hospital Peradeniya from November to December 2023. Principal Axis Factor Analysis (PAF) was performed with Promax rotation. Overall and subscale reliability was determined using Cronbach's alpha ( $C\alpha$ ). Item reduction was done based on cross-loading. The finalised version of the FSFI is currently being administered in the same setting for Confirmatory Factor Analysis.

**Results:** Translations of 15 items were modified based on expert consensus. 152 participants were recruited for EFA. Mean age of 34.5 years (SD: 5.86). Majority were married (95.6%) and had sexual intercourse once per week (40.8%). PAF revealed a best-fitting three-factor structure (desire, arousal and lubrication subscale, orgasm and satisfaction subscale, pain subscale). Bartlett's test of sphericity (chi-square = 2938.2,  $p < 0.001$ ) and Kaiser-Meyer-Olkin test (0.89) indicated significant factorability. The overall questionnaire had excellent internal consistency (Cronbach's alpha = 0.95) while each subscale had good internal consistency (0.79, 0.86 and 0.90 respectively). 10 items were reduced in the final questionnaire.

**Conclusions:** FSFI showed a three-factor structure that differed from the original six-factor solution and had substantial reliability among Sinhala-speaking gynaecological patients. However, limitations in the translation process and sampling method may have affected the validity of these findings.

## PP 091

### Gray platelet syndrome: a rare cause of thrombocytopenia in pregnancy

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**Background:** Gray platelet syndrome is a rare inherited platelet disorder, characterized by moderate to severe thrombocytopenia with large, dysfunctional platelets. Absence of alpha granules gives the characteristic gray appearance on Wright-stained peripheral blood smear. It results in easy bruising and heavy bleeding which is out of proportion to the severity of thrombocytopenia. This case report explains how to manage a case of gray platelet syndrome complicating pregnancy as it's not widely known.

**Case presentation:** A 26-year-old primi gravida born to consanguineous parents presented in the first trimester, with gray platelet syndrome diagnosed at the age of 12. Adding further to her disease burden, she was diagnosed with myelofibrosis a few years later.

She received pre-pregnancy counselling and was closely followed up with a multidisciplinary team. Her pregnancy was uncomplicated until 36 weeks. Labour was induced at 37 weeks as she developed a late-onset foetal growth restriction.

Three platelet transfusions increased the platelet count from  $26 \times 10^3/\mu\text{L}$  to  $34 \times 10^3/\mu\text{L}$  before induction. Unfortunately, an emergency cesarean section had to be performed due to lack of progress in the first stage of labour after 8 hours of induction.

Surgery was done under general anaesthesia. She was transfused five more units of platelets, intravenous tranexamic acid, syntocinon infusion and intravenous ergometrine during surgery. All measures were taken to do a non-traumatic delivery. ICU care was given post-operatively and was discharged on day five of surgery with a platelet count of  $50 \times 10^3/\mu\text{L}$ . Baby's platelet count was normal, and the blood picture revealed normal looking platelets

**Conclusions:** Patients with gray platelet syndrome can have a safe pregnancy and delivery.

**PP 093**

**Sensorineural hearing loss in patients with hyperlipidemia at a tertiary healthcare center in Sri Lanka**

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**Introduction and Objectives:** Hyperlipidemia is a medical condition that describes elevated lipid levels. While hyperlipidemia is well acknowledged as a risk factor for cardiovascular disorders, emerging evidence suggests that it may also have an impact on the auditory system in addition to the circulatory system. The main objective of the study was to assess the presence of sensorineural hearing loss in patients diagnosed with hyperlipidemia and compare hearing thresholds with lipid profile.

**Methods:** A descriptive cross-sectional study was conducted on 108 patients aged between 18 - 60 years newly diagnosed with hyperlipidemia at the Family Medicine Unit, Faculty of Medicine, University of Kelaniya from August to November 2023. Pure tone audiometry was used to assess for sensorineural hearing loss in these patients. Medical laboratory reports were used to obtain information about the patient's lipid profile.

**Results:** Sensorineural hearing loss was found in 44% of participants. There were statistically significant differences in levels of total cholesterol and low-density protein ( $p=0.00$ ) between participants with hearing loss and those without hearing loss while, there were no significant difference in levels of total cholesterol, triglyceride and low-density protein with degree of hearing loss. Their p values were respectively 0.0219, 0.689 and 0.084

**Conclusions:** Total cholesterol and low-density protein levels are significantly higher in participants with sensorineural hearing loss compared to those without hearing loss. However, there were no association between levels of total cholesterol, triglycerides and low-density lipoprotein with severity of hearing loss. Hyperlipidemia serves as a risk factor for sensorineural hearing loss.

**PP 094**

**Development of 1 kHz low pass filtered speech test in Sinhala to assess auditory closure ability in young adults: a pilot study**

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**Introduction and Objectives:** Background: The study addresses Central Auditory Processing Disorder (CAPD) in Sinhala-speaking young adults, focusing on auditory closure deficits. While existing tests address some aspects, there's a gap in evaluating auditory closure, crucial for understanding degraded speech. Therefore this research aims to develop a Sinhala version of the low pass filtered speech test for young adults, enhancing the CAPD assessment battery in Sri Lanka.

Objectives: The objectives of this study were to develop the test stimuli and to determine the performance score for the 1 kHz Low Pass Filtered Speech Test (LPFST) in the Sinhala language.

**Methods:** A quantitative pilot study developed a Sinhala LPFST to evaluate auditory closure in 18 to 30-year-old adults. Thirty participants were purposively selected. The LPFST employed Sinhala words filtered at 1 kHz, validated by native Sinhala speakers and linguistic experts. The study encompassed case histories, audiological assessments, and LPFST administration. Data analysis via SPSS included descriptive, inferential statistics assessing LPFST performance scores and inter-aural differences.

**Results:** The pilot study comprised 30 Sinhala-speaking young adults, aged 18-30, demonstrating normal hearing sensitivity. Right ear performance score was 54.0038 % and left ear performance score was 53.8159 %. However, no significant intra-aural difference ( $p = 0.655$ ) was found.

**Conclusions:** The study introduces the first Sinhala LPFST for CAPD assessment in Sri Lanka, comprising 31 words and a 1 kHz cutoff frequency. This LPFST shows potential for assessing auditory closure deficits in Sinhala-speaking young adults. Future recommendations include normative studies for cutoff scores and evaluating sensitivity and specificity in clinical samples.



## PP 095

### Prevalence and factors associated with dietary supplement use among athletes in University of Colombo

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**Introduction and Objectives:** Global dietary supplement use is rising among athletes, including university athletes. Factors influencing supplement use in this population are not well understood. This study aims at determining the prevalence and factors associated with dietary supplement use among athletes in University of Colombo.

**Methods:** A descriptive cross-sectional study was carried out among 125 athletes representing 12 types of sports in University of Colombo. Employing a stratified random sampling method, athletes were randomly selected and provided with self-administered questionnaires to collect information.

**Results:** The prevalence of dietary supplements usage was 29.6% (n=37). Main types of dietary supplements used were sports drinks (n=25;67.6%) and mixed nutrition (n=22;59.5%). Main reasons for using dietary supplements were considering them as energy supplements (n=23;62.2%) and performance enhancers (n=22;59.5%). Major information sources were other players (n=23;62.2%), media and the internet (n=21;56.8%). Usage of dietary supplement in first year athletes (n=7, 70%) was significantly higher ( $p<0.05$ ) than usage among other athletes (n=30,26.1%). The type of diet emerged as a significant factor ( $p<0.05$ ), with majority of the vegetarian athletes using dietary supplements (n=8; 57.1%).

Athletes perceiving themselves as having above-average health status (n=36;33.3%) were significantly ( $p<0.05$ ) more likely to use dietary supplements. Surprisingly, prevalence of dietary supplement usage in non-intense athletes (n=9;52.9%) was significantly ( $p<0.05$ ) higher than prevalence among intense athletes (n=28;25.9%). Knowledge and attitude towards dietary supplements did not emerge as a significant factor.

**Conclusions:** A notable percentage of University of Colombo athletes use dietary supplements, especially first-year athletes, vegetarians, non-intense athletes and those with high health perceptions, warranting targeted education programs.

PP 096

**Relationship between Cumberland ankle instability tool score with postural stability, strength and balance among university athletes with and without ankle instability**

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**Introduction and Objectives:** Lateral ankle sprains are common injuries in both athletes and general population. Chronic ankle instability (CAI) contributes to recurrent sprains and functional impairments. This study aimed to investigate the relationship between Cumberland Ankle Instability Tool (CAIT) score and postural instability, lower limb muscle strength and balance among athletes with and without ankle sprains.

**Methods:** A cross sectional study was conducted involving 114 university athletes. Participants were categorized into three groups: Chronic Ankle Instability (CAI) (n=38), individuals with prior ankle sprains but no subsequent instability (copers) (n=38), and those without ankle sprains (Healthy) (n=38). Cumberland Ankle Instability Tool (CAIT-Sin), Time-in-Balance and Y-balance tests were employed to evaluate ankle instability severity, static and dynamic balance, while the Balance Error Scoring System (BESS) and hand-held dynamometer were utilized to assess postural instability and lower limb muscle strength, respectively. The statistical analysis was performed using SPSS v25, employing the Kruskal-Wallis and Mann-Whitney U tests.

**Results:** The three groups significantly differed in CAIT-Sin score (p=0.000). BESS score, Time-in-Balance, and Y-balance reach distances differed significantly among groups (p=0.000). The CAI group exhibited significant differences in BESS (p=0.000) and Time-in-Balance (p=0.000) scores compared to copers, along with significant differences in posterolateral (p=0.002), posteromedial (p=0.000) and anterior (p=0.008) reach distances between the two groups. Significant differences existed in lower limb muscle strengths between CAI and copers groups, except for plantar-flexors (p=0.127), hip adductors (p=0.282) and hip flexors (p=0.266).

**Conclusions:** It is possible to utilize BESS score, Time-in-balance, and Y-balance test results, along with lower limb muscle strength measurements, to predict the development of recurrent sprains following a lateral ankle sprain.

**PP 097**

**Study on surgical antibiotic prophylaxis in a private hospital, in Sr Lanka**

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**Introduction and Objectives:** Our objectives was to see the adherence to surgical prophylaxis guidelines when selecting the antibiotics, whether antibiotic was given at the correct time and dosage, whether surgical antibiotic prophylaxis continued beyond the expected duration, to identify targets for quality improvement.

**Methods:** A study on use of antibiotics for surgical prophylaxis was carried out from July to December 2023. A formatted table was filled during each surgery collecting data on: type of surgery, antibiotic/s given, given time, dose and the route, surgery started time, number of doses given.

**Results:** Among 690 patients analyzed, the most frequently used antibiotic was co-amoxiclav (33%) followed by cefuroxime (27%). Guideline adherence when selecting the antibiotic for urological surgery was found to be 30%; 80% for orthopedic surgery, 90% in abdominal surgery, 96% in general surgery and 100% in head and neck surgery. According to the time of administration, majority of antibiotics (49%) had been given after the surgical incision was made and 46% of antibiotics were administered within 60 minutes of the surgical incision. 5% of the antibiotics were given more than 60 minutes before the incision had been made. Analysis of dosing showed multiple doses given according to the guidelines.

**Conclusions:** Adherence to antibiotic guidelines on the type of antibiotic used is not satisfactory, mainly in urological surgeries. Guideline compliance was found to be less than 50% with respect to the time of administration, which is unsatisfactory. However, the compliance regarding the number of doses given was satisfactory.

## PP 098

### Anatomy of inferior mesenteric artery: a cadaveric study

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**Introduction and Objectives:** A comprehensive knowledge of the anatomy of the inferior mesenteric artery (IMA) is essential for the surgical procedures related to left colon and rectum. Variations in the branching patterns of the IMA may pose difficulties during surgical procedures and a knowledge of these variations would be useful during surgical procedures. The objectives were to assess the patterns of branching of IMA, the distances from the root of the IMA to the origin of the left colic artery (LCA) and its course and its intersection from the inferior mesenteric vein (IMV).

**Methods:** We analyzed 50 fresh cadavers in the department Anatomy, Faculty of Medicine Ragama from 2022 to 2024. Latarjet's classification was used; Type A: LCA arose independently from IMA; Type B: LCA and sigmoidal artery (SA) branched from a common trunk from IMA; Type C: LCA, SA, and sigmoidal artery (SRA) branched off at the same point.

**Results:** Majority had Type A branching pattern 35/50 (70%). The length (mm) (mean  $\pm$  SD) from the origin of the IMA to the LCA was; Type A  $33.4 \pm 4.7$ , Type B  $36.5 \pm 5.4$ , Type C  $39.2 \pm 8.6$ . The number of LCA under IMV in type A (51%); type B (54%); type C (62%) respectively. There was no statistically significant difference among the three types.

**Conclusions:** Our study showed that type A branching pattern was commonest. No significant difference was seen in LCA traversing under or above the IMV. Further studies will enhance the comprehensive knowledge of the anatomy LCA and its relationship to the IMA.

**PP 099**

**Penile entrapment with a steel ring removed using an angle grinder: a case report**

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**Introduction and Objectives:** Penile entrapment with steel rings used to increase sexual performance can present with strangulation. This is a rare urological emergency that may require industrial tools for removal.

**Methods:** 42-year-old male presented to the accident service unit of Colombo South Teaching Hospital with a steel ring in the penile base inserted the previous day night. A suprapubic aspiration was done to relieve him of the acute urinary retention. Aspiration of the penis as in priapism and multiple punctures as done in paraphimosis aided the ring to be moved slightly along penile shaft lubricated by lignocaine gel. This ensured adequate length from the penile base to cut the ring and enabled insertion of a gauze swab underneath. With the penis in the detumescence state and a gauze swab underneath the cutting surface, it was cut with short bursts alternating with saline irrigation to minimize thermal damage to the skin. Angle grinder in our maintenance unit was used by an experienced operator to cut the ring in two places. After removal, there were few superficial burns on the penile skin and patient left against medical advice.

**Results:** Timely and strategic removal of constricting devices in the penis will prevent strangulation and high-grade injury to the penis. It calls for use of equipment not found in the operating theatre and competent personnel to operate them. Clinical knowledge should be applied promptly to minimize complications.

**Conclusions:** Angle grinders can be used safely to remove metal rings in the penis by an experienced operator collaborating with clinical expertise.

## PP 100

### Variations of the cystic artery and its surgical relevance

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**Introduction and Objectives:** The cystic artery (CA) arising from the right hepatic artery (RHA) supplies the gall bladder and runs across the Calot's triangle. Since damage can cause hemorrhage during surgery knowledge on its variations is important particularly during laparoscopic cholecystectomies. Objective of this study was to document variations in CA origin/position and differences between genders in preserved (PC) and fresh (FC - medicolegal autopsies) cadavers of Sri Lankan origin.

**Methods:** CAs of cadavers were dissected at Departments of Anatomy/Forensic Medicine, Faculty of Medicine, Peradeniya from December 2022 to February 2024. CA origin, position, presence of variations were documented. Descriptives and Fisher's exact test were used.

**Results:** 20 PCs and 32 FCs of >23 years-of-age with equal male:female ratio were studied. CA originated from 4 arteries: commonest was RHA (92.3%) followed by common hepatic artery (3.8%) with gastroduodenal and left hepatic arteries having one case (1.9%) each.

100% of CAs were positioned in the Calot's triangle. Detailed relationships within the triangle were visualized in 31 cases, where 48.4% were posterior to common hepatic duct (CHD) and 35.3% anterior. Lateral to CHD and posterior to cystic duct were observed in 2 cases each. One ran posterior to common bile duct, while double CAs were found in 3 cases, both arising from the RHA.

No significant difference was observed in CA variations with gender (origin-p=0.110, position-p=0.861).

**Conclusions:** Variations in anatomical origin and position of CA are common regardless of gender. Thorough knowledge, prompt recognition will prevent iatrogenic injuries and reduce surgical complications.

## PP 101

### Access delays to essential surgical care among post-operative patients in selected hospitals in Colombo District

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**Introduction and Objectives:** Sri Lanka, despite having significant advancements in the healthcare infrastructure, still faces challenges in providing timely surgical intervention as a lower -middle income country. Striving to assess the 2h access target for the three bellwether procedures mentioned by the Lancet Commission on Global Surgery 2015, objective of this study was to describe access delays to essential surgical care among post-operative patients in selected hospitals in Colombo district

**Methods:** A descriptive cross-sectional study recruited 200 post-operative emergency surgery patients systematically from surgical, gynecological, obstetric and orthopedic wards in two selected hospitals in the Colombo district. Using the three delays framework, information on the durations of seeking (first delay), reaching (second delay) and receiving (third delay) surgical care was obtained using an interviewer administered questionnaire.

**Results:** The median delay time of the first and second delays were 2h (first delay IQR = 48h, second delay IQR = 9h) while the mean delay time of the third delay was 56min (+/-35min). Out of the total number of patients, 152 had undergone one of the three bellwether procedures where 55.3% had a 2h geographic access to the two selected hospitals

**Conclusions:** The third delay which is the duration receiving care from the hospital was less than the first and second delays, which are the duration in seeking and reaching care, which both are highly influenced by the patients themselves. This suggests insufficiencies outside the hospital might be more impactful. However, further investigation is needed to fully understand the reasons

## PP 102

### Prognostic significance of lymphovascular invasion in colorectal cancer patients: A retrospective study by a specialized colorectal cancer center in Sri Lanka

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**Introduction and Objectives:** In colorectal cancer (CRC), lymphovascular invasion (LVI) signifies nodal metastasis and plays a crucial role in determining adjuvant therapy for node-negative disease, underscoring its significance in patient care. This study investigates the prognostic value of LVI in CRC patients, addressing the scarcity of literature on the South Asian region.

**Methods:** A retrospective cohort study enrolled CRC patients who had surgical resection with curative intent from January 2013 to May 2018, followed until May 2023. Collected data included LVI status, age, gender, and family cancer history, along with follow-up time since surgery to last follow-up or death. Pearson's chi-square test compared groups. Survival rates were estimated via Kaplan-Meier curves and tested with the Log-rank test, utilizing right-censored survival data. Cox proportional-hazard models identified features associated with survival. Forward variable selection done by log-likelihood ratio test determined explanatory variables in the adjusted final model. Proportional hazard assumption and outliers were tested in final model.

**Results:** Out of 145 participants, 62 (42.76%) were males. Median age 70 (IQR: 61-76). 48 (33.10%) participants were LVI positive. The LVI positive and negative groups were similar in gender ( $p=0.7278$ ), family history of CRC ( $p=0.1947$ ), and other cancers ( $p=0.3493$ ). The 5-year OS rate for CRC patients is 57.9%. 5-year survival rate of LVI positive is 33.3% & LVI negative is 71.3%. When considering OS, LVI status indicated a significant difference in the Log-rank test ( $p=0.000004$ ). The adjusted hazard ratio from final model for LVI is 2.78582 (96% CI, 1.719-4.514,  $p=0.0000316$ )

**Conclusions:** Presence of LVI strongly predicts prognosis in CRC patients and quantified hazards of the study align with international literature.



## PP 104

### The clinical significance of bacterial biofilms in cutaneous leishmaniasis wounds

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**Introduction and Objectives:** This study reports on twenty-five cases of cutaneous leishmaniasis (CL) wounds with bacterial biofilms. The objective was to investigate the clinical significance of the biofilms in CL wounds concerning healing time, treatment mode and treatment with antibiotics simultaneously with antiparasitics.

**Methods:** All the patients with PCR-confirmed CL were Sri Lankans above the age of 18 years with no major confounding factors for microbiological assessment of the wound. The Ethics Review Committee, Faculty of Medical Sciences, University of Sri Jayewardenepura approved this study (27/19).

**Results:** There was no significant association between the presence of microscopically visualized bacterial biofilms and healing time in this cohort of twenty-five CL wounds. It was observed that intralesional sodium stibogluconate (SSG) was associated with better healing rates in both the biofilm-positive and negative wound groups compared to cryotherapy. Treating the biofilm-positive wounds with antibiotics administered simultaneously with antiparasitics had no advantage over healing rates. However, none of these results showed a statistical significance possibly due to the small sample size and skewed distribution of the parameters.

**Conclusions:** Further research is needed in this area, particularly randomized control studies, to determine the following: 1. Bacterial biofilms do not delay CL wound healing. 2. Cryotherapy may not be effective in treating infected CL wounds. 3. Concurrent antibiotic usage does not aid wound healing unless started early. The authors propose investigating wound debridement as a possible treatment for bacterial biofilms in CL wounds.

## PP 105

### Characteristics of Plasmodium ovale malaria infections patients reported in Sri Lanka from 2013 to 2023

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**Introduction and Objectives:** Plasmodium ovale infection is normally associated with low morbidity and mortality, longer incubation period and has a higher ability to relapse as compared to other species. This study highlights the characteristics of imported P. ovale malaria infection in Sri Lanka

**Methods:** A retrospective descriptive study was carried out at the Anti Malaria Campaign, Sri Lanka on cases reported from 2013 to 2023, analyzing secondary data of malaria patients infected with P. ovale as confirmed by quality-assured microscopy of blood smears and Polymerase Chain Reaction.

**Results:** Of the 532 imported malaria cases reported during the study period, 50 (9.4%) cases were diagnosed with P.ovale infection. The disease had been acquired from African countries in 48 individuals while the other two infections were acquired from China and India. The highest proportion of patients (42%) were 31-40 years of age. A majority (94%) were males. With regard to nationality, 92% were Sri Lankans; 6% were Chinese, and 2% were Filipinos. Most (16%) patients were diagnosed from Galle district followed by Colombo (12%) and Kalutara (12%) districts. In 44% of patients, the duration from arrival to onset of symptoms was more than 100 days and the maximum duration recorded was 365 days.

**Conclusions:** P. ovale infection account for nearly 10% of the imported malaria cases in Sri Lanka during the prevention of re-establishment phase. It poses a threat to malaria-free status of the country due to the long incubation period of the parasite and its potential to cause relapses.

## PP 106

### Severe Malaria cases in Sri Lanka from 2013 To 2023

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**Introduction and Objectives:** Sri Lanka declared elimination of malaria in 2012 but continued to report imported malaria infections. Some of these cases progress to, or are diagnosed as, severe disease. This study highlights features of severe malaria patients diagnosed after malaria elimination in Sri Lanka

**Methods:** A retrospective descriptive study was carried out analyzing secondary data of all imported cases classified as 'severe malaria' according to the World Health Organization guidelines, by the Anti Malaria Campaign, Sri Lanka, from 2013 to 2023.

**Results:** Of the 532 imported malaria cases reported in Sri Lanka from 2013 - 2023, 46 (8.6%) were with severe malaria. Plasmodium falciparum was the causative agent in 45 patients while P. vivax acquired from Madagascar was responsible for a single case. The disease was acquired from African countries in 44 individuals while one each acquired it from Guyana and India. Majority of the patients (87%) were between 26-60 years of age. All were male except one. Sri Lankan nationals accounted for 83% of severe malaria cases. Over 60% of the cases were diagnosed in the Western Province. Although a majority (93%) of individuals sought healthcare within 3 days, upon consulting a clinician, only half of the patients were diagnosed to have malaria within 3 days. In one patient in whom the diagnosis was delayed the infection was fatal, and all others recovered fully.

**Conclusions:** Early treatment is crucial to prevent severe malaria. Therefore, clinicians should elicit the travel history overseas in patients with fever and test for malaria in suspected patients to prevent severe malaria.

**PP 107**

**Knowledge, attitudes and practices about Leishmaniasis among community people in Tangalle and Beliatta**

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**Introduction and Objectives:** Cutaneous leishmaniasis is a disease in Sri Lanka. Our research aims to assess the knowledge, attitudes, practices and community opinion towards awareness of Leishmaniasis in Tangalle and Beliatta which are two main disease hotspots in Sri Lanka.

**Objectives**

To assess knowledge and attitudes among people in the Tangalle and Beliatta about the prevalence, symptoms, and prevention of Leishmaniasis.

**Methods:** It is a descriptive cross-sectional study conducted among 119 people between 18-60 years of age in Beliatta and Tangalle Divisional Secretariat areas which was sampled by multi-stage cluster sampling. A pre-tested, interviewer-administered questionnaire, adapted from two previously validated questionnaires to assess knowledge and attitudes and a self-made questionnaire to assess practices were used to obtain data.

**Results:** Majority in both regions recognized a disease caused by a fly leading to skin lesions (Beliatta 93.6%, Tangalle 94.4%). However, awareness of the term 'Leishmaniasis' was low (Beliatta 17.0%, Tangalle 8.3%). Only a small percentage could identify the insect (Beliatta 17%, Tangalle 5.6%). Significant lack of knowledge existed regarding the sand fly's habits such as biting time and breeding places. Attitudinal differences were observed between the regions. In Beliatta, 48% (n=23) believed in the disease's curability, while in Tangalle, 63.9% (n=46) lacked clarity on this aspect.

**Conclusions:** This study reveals familiarity with the disease symptoms and vector control methods, though with limited recognition of the term 'Leishmaniasis' and insufficient knowledge regarding vector and associated high-risk factors.

## PP 108

### Clinico-epidemiology of tarantula (*Poecilotheria* spp.) bites in Sri Lanka

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**Introduction and Objectives:** Tarantulas (*Poecilotheria* spp.) of Family Theraphosidae are medically important arthropods in Sri Lanka. They comprise a group of large and often hairy spiders. There are five endemic *Poecilotheria* species in Sri Lanka. Corneal keratitis and abdominal cramps have previously been reported following their bites. The objectives of this study were to describe the clinical and epidemiological features of tarantula bites.

**Methods:** This was a case series of 5 patients with tarantula bites, prospectively studied in medical and paediatric wards of Teaching Hospital, Ratnapura from April 2022 to March 2024. Data were collected using an interviewer-administered questionnaire.

**Results:** There were 5 patients with tarantula bites of which 3 (60%) were males and 2 (40%) were females. Four (80%) were adults and their mean age was 39.5 years (range 31-49 years). There was a 2-year-old child. The sites of the bite were feet (3; 60%) and hands (2; 40%). The places of bites were small jungles (3;60%), home gardens (1;20%) and inside home (1;20%). The occupations were manual labourers (3;60%) and estate workers (1;20%). The majority (4;80%) were bitten at daytime [6AM-5.59PM]. Most patients were admitted within 1-3 hours of bite (4;80%). Four (80%) patients applied first aid methods including washing and ligation. Local envenoming was observed in all patients including local pain in 5 (100%) [mild-4 (80%), severe-1 (20%)], swelling in 3 (60%) [mild-2 (40%), moderate-1 (20%)], itching in 2 (40%), muscle spasms in 2 (2%) and muscle pain in 1 (20%). Mild hypocalcaemia was observed in 2 (40%).

**Conclusions:** Tarantula bites frequently cause local envenoming effects and rarely cause hypocalcaemia.

## PP 109

### Ratnapura snakebite cohort: one year experience

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**Introduction and Objectives:** Snakebite envenomation is an important public health problem in Sri Lanka and causes considerable illness and death. There is a geographical variation in the incidence of hospital admissions due to snakebites and the biting species. The objectives of this study were to describe the clinico-epidemiology of snakebites among patients presenting to a tertiary care hospital in the Ratnapura district.

**Methods:** A prospective observational clinical study was conducted on patients admitted with snakebites to Teaching Hospital, Ratnapura for a period of one year starting from February 2023. Data were collected using an interviewer-administered questionnaire.

**Results:** Of 108 patients, 96 (90%) were adults and 12 (10%) were children. Out of adults, 63 (65.6%) were males and 33 (34.4%) were females. Mean age was 45.7 years (range 35-44years). Majority were bitten on lower limbs (64;66.7%) at daytime [6am-5.59pm] (58;60%) and in home gardens (28;29%). Most patients (35;36%) were admitted within 1-3 hours from the bite. Native treatment was obtained by 19 (20%). Sixty (62.5%) applied first aid methods including washing (41;43%) and ligation (19;20%). The snake was identified in 73 (76%) with bites from hump-nosed vipers (41;49%), Russell's vipers (14;17%), cobras (4;5%), green pit vipers (2;2%) and nonvenomous snakes (12;12.5%). Twenty-three (24%) were unidentified snakebites. Local effects were observed in 93 (97%). Twenty nine (30%) showed systemic manifestations including neuroparalysis (22; 23%), coagulopathy (15; 15.6%), acute kidney injury (7; 7%) and cardiac effects (4; 4%). Antivenom was administered to 25 (26%) of which 12 (12.5%) developed allergic reactions. One (1%) patient died.

**Conclusions:** The most common presentation to the Teaching Hospital Ratnapura is following hump-nosed viper bites.

## PP 110

### Multidrug resistance in *Neisseria gonorrhoeae*: identification of functionally important residues in the MtrE efflux channel

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**Introduction and Objectives:** *Neisseria gonorrhoeae*, a Gram-negative diplococcus bacterium, is obligately a human pathogen causing the second most reported STI globally, gonorrhoea. It has been co-evolving with its human host for decades towards its widespread multidrug resistance state, causing a significant public health threat worldwide. The trans-envelope transport mechanism, namely the Multiple transferable resistance (Mtr) CDE efflux pump in *N. gonorrhoeae*, plays a specific role in achieving antibiotic resistance by actively extruding a wide range of antibiotics, limiting their efficacy in treating the infection. MtrE, the outer membrane-embedded channel protein of the efflux pump, is primarily passive but does exhibit gating characteristics.

**Methods:** Here, we did site-directed mutagenesis on potential target sites in the alpha barrel region of the MtrE channel protein and disrupted its primary structure to assess their implications on the efflux mechanism conferring to antibiotic resistance.

**Results:** Glutamic acid (E) at the 404th and Tyrosine at the 413th positions of the MtrE protein have been proven to exert substantial implications on the manifestation of antibiotic resistance in *Neisseria gonorrhoeae*. Significantly, Y413 in MtrE exhibits functional similarities to its counterpart in TolC, an outer membrane efflux protein that exports a wide range of small molecules and toxins across the outer membrane of other Gram-negative bacteria.

**Conclusions:** We conclude our structural-functional analysis by providing crucial evidence that facilitates the development of future strategies and innovative therapeutic approaches for targeting the multidrug resistance exhibited by *N. gonorrhoeae*.

## PP 111

### Antibiotic sensitivity pattern of uropathogens in hospitalized patients with a positive urine culture at Teaching Hospital Jaffna

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**Introduction and Objectives:** The indiscriminate use of antibiotics has precipitated the emergence of antibiotic resistance in hospital settings. Our study underscores the knowledge of local antimicrobial susceptibility in guiding prudent empirical therapy of urinary tract infections. This study describes the isolated uropathogens, their antibiotic sensitivity patterns, and associated factors in adult inpatients with a positive urine culture at Teaching Hospital Jaffna.

**Methods:** All positive urine culture reports of adult inpatients ( $\geq 18$  years) investigated at the Microbiological Unit of Teaching Hospital Jaffna during a 3-month period (October 1st to December 31st 2020) were analysed retrospectively with SPSS v27. Standard descriptive statistics and the chi-square test were used (critical value 0.05).

**Results:** Data were extracted from 426 culture reports. The mean age of the sample was 53.2 years (SD 19.9); 47.2% (n=201) of the reports belonged to patients  $\geq 60$  years, and 60.1% (n=256) were females. Empirical antibiotics prescribed before culture were documented in 183 (43%) reports. The most commonly prescribed empirical antibiotic was co-amoxiclav (24%, n=183). Coliforms were the commonest isolate (63.4%, n=270) and showed resistance to several commonly prescribed antibiotics; antibiotic sensitivity was relatively low to ampicillin (9.5%), ceftriaxone (40%) and amoxicillin (48.1%); highest susceptibility was to meropenam (87.6%). Age group and gender were significantly associated with the type of uropathogen isolated ( $p \leq 0.05$ ).

**Conclusions:** Empirical therapy was common among inpatients with urinary tract infections at the Teaching Hospital Jaffna. Sensitivity patterns suggest that antibiotic resistance is a significant concern. Empirical therapy needs to be guided by institutional policies and local sensitivity patterns.



## PP 112

### Antimicrobial resistance (AMR) pollution of ground water sources in Gampaha District

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**Introduction and Objectives:** AMR pollution in the environment is a silent danger and the ground water is a source that should be combatted in the “One Health” approach. Environmental surveillance is an integral part of this process.

Our objective was to determine the pollution of ground water sources with resistant *Escherichia coli* in Gampaha district.

**Methods:** A descriptive cross-sectional study was carried out from November 2023 to February 2024. *E.coli* isolates from ground water samples received for surveillance in Gampaha district at MRI were collected during this period. Antibiotic susceptibility tests were performed by disc diffusion method according to standard protocol (CLSI M100 33rd edition).

**Results:** Total of 84 *E.coli* isolates were collected. Coliform count was >200CFU in 67% of the well water isolates. *E.coli* colony count was between 1 to 100 CFU in 92% of isolates and 7% of isolates had >200CFU.

Among the *E.coli* isolates, 19% were resistant to 3 or more antibiotic classes (multi drug resistant), and 61% were non susceptible to at least 1 antibiotic class. The non-susceptible rates to individual antibiotics are: ampicillin 45%, co-amoxiclav 18%, tetracycline 18%, ciprofloxacin 17%, trimethoprim/sulfamethoxazole 14%, gentamicin 13%, cefotaxime 7%, ceftazidime 7% and chloramphenicol 2%. All isolates were sensitive to ertapenem.

Amp-C beta-lactamases were detected in 2 isolates. Extended spectrum beta lactamases (ESBL) was detected in one isolate.

**Conclusions:** Our findings show that ground water sources are a reservoir of AMR pollution and a public health threat since it is a main drinking water source for many Sri Lankans. An island wide surveillance is warranted to elucidate the situation.

**PP 113**

**Temporal trends and demographic variations in Varicella Zoster Virus (VZV) seroprevalence across urban and rural communities in Kandy District, Sri Lanka**

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**Introduction and Objectives:** VZV is a ubiquitous pathogen, exhibiting higher activity in temperate regions compared to tropical areas. Anti-VZV IgG antibodies are detected using ELISA (Enzyme-Linked Immunosorbent Assay). Results from this study hold significant implications for vaccine policy development and public health interventions to mitigate VZV-related illnesses in Sri Lanka.

**Methods:** Data from urban and rural areas in Kandy District, Sri Lanka, were collected based on the 2016 Department of Census and Statistics. The study included 92 randomly selected individuals belonging to 3 age groups, 10-19, 20-29, and 30-40 years. Each participant provided a 3cc blood sample for ELISA testing to detect anti-VZV antibodies, using a VZV IgG ELISA kit from HUMAN (USA).

**Results:** The study included 46 individuals from each area. In the urban setting, participants were distributed across the 10-19, 20-29, and 30-40 year age groups as follows: 14 (30%), 9 (20%), and 23 (50%), respectively. In the rural area, the distribution was 13%, 28%, and 59%. Seroprevalence rates in the urban setting were 42.9%, 77.8%, and 60.9% for the 10-19, 20-29, and 30-40 year age groups, while in the rural setting, they were 33.3%, 61.54%, and 48.15%. Overall seroprevalence was 58.6% in urban areas and 50.0% in rural areas.

**Conclusions:** The highest seroprevalence was in the 20-29 age group in both areas, with the lowest in the 10-19 age group, reflecting a tropical pattern. This suggests VZV infection isn't mainly pediatric here. Our findings show no significant difference in age-specific VZV seroprevalence between urban and rural Kandy District populations, Sri Lanka.

**PP 114**

**A clinical audit of COVID-19 patient experience in the intermediate care centre at Pambaimadu, Vavuniya, Sri Lanka**

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**Introduction and Objectives:** Introduction: COVID-19 Intermediate Care Centre (ICC) is a new concept introduced in Sri Lanka. Asymptomatic COVID-19 patients were transferred to ICC during the pandemic to prevent overcrowding in the Hospital. Most of the ICCs are established within a short period with the minimum available facilities.

Objective: To improve COVID-19 patient experience in Intermediate Care Centre

**Methods:** This clinical audit was evaluated by using a pretested self-reporting questionnaire. A convenient sampling method was used.

**Results:** 41 patients participated in this audit. The participants' response rate was 100%. The overall quality of service satisfaction in this ICC was 75.7%, staff-patient communication - 63.4%, patient physical and psychological well-being - 75.6%, ward arrangement and privacy - 82.9%, facility provided for bathing, washing clothes and toilet - 85.4%, food and water 51.2% and cleanliness and waste disposal - 82.9%. Patient happiness in the prevention of COVID-19 transmission was 100%.

**Conclusions:** Meals and staff-patient communication were the major drawbacks to patient satisfaction. Although psychological well-being was low, patients' happiness in preventing COVID-19 disease was 100%. The health staff's training is recommended specially for communication skills and hospitality. Establishing the practice of supervision, and food quality monitoring is essential to improve the COVID-19 patient experience in ICC.

## PP 116

### Study of work-life balance of postgraduate trainees attached to tertiary care units in Sri Lanka

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**Introduction and Objectives:** Work-life balance has importance in physician development and its potential impact on patient care quality and healthcare system sustainability. This study aimed to investigate the work-life balance of postgraduate trainees.

**Methods:** A newly designed, online self-administered questionnaire collected data on work-life balance attributes and challenges from volunteering, consenting trainees.

**Results:** N=229; mean age = 33.9±7.1 y; M:F=0.76. Most (79.5%) were married, 94% of whom had employed spouses. 48% had children and 54.7% had a dependent parent or sibling. 48% reside at home, 41.4% from rental, rest at quarters. 10% commute over 30 km, and 11.3% commute over 1 hour, daily. 55.8% are satisfied with their work, and 27.4% are satisfied with their way their work-life balance. 54.5% have less than half of the monthly earning left for their personal use. 38.4% have 2 hours or less left for themselves on a working day. 38.4% cannot take breaks during work. 53.2% frequently work overtime. 41% never vacationed over previous 6 months. 55.8% feel exhausted. 46.3% are comfortable discussing issues of work-life balance with their supervisors or colleagues. 27.9% feel that others do not acknowledge their work-stress. Major stressors included economic difficulties (77.5%), education/exams (51.5%), and family/children (43.2%). Heavy workload, long working hours and understaffed units were rated as major challenges for healthy work-life balance. Majority did not spend time on exercise, hobbies, meditation or seeking support. The overwhelming majority (97.8%) complained about not having a programme or support system at their workplace to help maintain a good work-life balance.

**Conclusions:** Trainees face challenges in achieving asatisfactory work-life balance.

PP: 117

**Perceived stress levels and the factors causing stress among medical students in the Faculty of Medicine, University of Ruhuna**

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**Introduction and Objectives:** Stress can be defined as a state of worry or mental tension. Medical Students (MS) are considered susceptible to having high levels of stress. The study aims to describe the levels of stress among MS of the Faculty of Medicine, University of Ruhuna, and to identify factors associated with their stress levels.

**Methods:** A descriptive cross-sectional study was conducted using a pre-tested interviewer-administered questionnaire. The Perceived Stress Scale (PSS) which is validated in Sri Lanka was used in the original English Language. Data was analyzed using (SPSS) software. The association between different factors causing stress and their results were calculated via Chi-Square test ( $P < 0.05$ ).

**Results:** We recruited 25% of students from each batch via stratified random sampling ( $n=347$ ). Intermediate levels of perceived stress was seen in 237 (71%); 73 MS (22%) had high levels of perceived stress and only 23 (7%) MS had a low levels of perceived stress. Regarding factors associated with stress, a significant association was detected with problems related to academic work ( $\chi^2=9.700$ ,  $p=0.002$ ), family problems ( $\chi^2=16.484$ ,  $p=0.000$ ), lack of English language proficiency ( $\chi^2=8.391$ ,  $p=0.004$ ), economic problems ( $\chi^2=10.506$ ,  $p=0.001$ ), problems in place of accommodation ( $\chi^2=7.203$ ,  $p=0.007$ ), phase of medical study ( $\chi^2=4.099$ ,  $p=0.043$ ), relationship breakdown ( $\chi^2=333.323$ ,  $p=0.000$ ) and undergoing verbal abuse during medical training ( $\chi^2=6.819$ ,  $p=0.009$ ).

**Conclusions:** Problems related to academic work, family problems, lack of English language proficiency, economic problems etc. are factors that can be modified to reduce the stress levels. Planning and guidance have to be provided to change these factors to reduce stress levels.

## PP 118

### Exploring the usage, practices and perceptions in relation to social media among the first and fourth year medical students at University of Peradeniya

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**Introduction and Objectives:** Social Media is a dynamic field and it is inseparable from students' lives nowadays. This study explored multiple aspects of social media usage within the context of Medical Education.

The study investigated the types of social media platforms used, their frequency, purpose and time consumption, and the perceptions regarding social media among the first- and fourth-year medical students at University of Peradeniya during the year in 2023.

**Methods:** A descriptive cross-sectional study was conducted using an expert-validated self-administered questionnaire via a Google form inviting all students in the two batches without using a particular sampling method. The data obtained were analyzed to meet the objectives of the study.

**Results:** YouTube, WhatsApp, Facebook, Instagram and TikTok were the most used platforms among the 405 participants of the study. WhatsApp was used 100%. The highest time consumption was by YouTube. Main purposes of use of social media were for academic activities, entertainment, communication, employment and spiritual activities. YouTube was the most utilized platform for academic activities (90.8%). The usefulness of social media was positively perceived by the group with a mean of 4.04 on a five-point Likert scale. Time spent on YouTube for academic activities showed a weaker positive correlation with the advancing academic year.

**Conclusions:** Social media consumes a considerable amount of time in the lives of the study group while having benefits and downsides. However, the results emphasize, that the usage of social media had become slightly more academically inclined with the advancement of academic year and we can motivate the students to improve the use of social media for more academic activities.

**PP 119**

**Knowledge, attitudes and willingness of patients in select medical specialty wards at National Hospital of Sri Lanka regarding medical students and their involvement in patient care**

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**Introduction and Objectives:** The ailing patient is irreplaceable to medical education. We assessed the knowledge, attitudes and willingness of patients in selected wards at National Hospital of Sri Lanka (NHSL) regarding medical student involvement in their care.

**Methods:** This cross-sectional study involved 151 patients from medical, cardiology, and nephrology wards at NHSL. Patients were selected using a multi-stage approach of stratified sampling followed by systematic sampling. An interviewer-administered questionnaire was developed by the investigators. Questions assessing knowledge of patient rights were based on Indian and British patients' rights charters. Likert scales were utilized to assess willingness.

**Results:** A significant number of patients were unable to correctly identify a medical student in the wards. Half the patients thought medical students had completed medical school. Similarly, 61% believed that medical students had a role in patient treatment. Most participants (63%) had poor knowledge of patient rights. Only 51.0% were aware of the right to 'privacy and confidentiality.' Letting students do invasive examinations on them obtained a mean willingness score of  $3.33 \pm 1.53$  out of 5, a lower score compared to other procedures. Female patients were significantly less willing than males for examinations. Most patients preferred a specific gender of student. Most patients (75%) felt good about helping students learn. However, they gave low scores for students' ability to take interest in patients' stories.

**Conclusions:** There were significant gaps in the knowledge of patients regarding medical students. The majority were willing to have students engage in their care, but this decreased with invasive procedures and sometimes based on student gender. Some negative attitudes towards students were observed.

## PP 120

### The relationship between downtime activities and empathy among third year Sri Lankan medical students

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#### **Introduction:**

Empathy, the cornerstone of medical practice, denotes caring with understanding. Downtime activities provide an opportunity for people to recover from exhaustion and may affect the level of empathy.

#### **Objectives:**

The objective of the study was to determine the relationship between downtime activities and empathy among the third-year medical students of four Sri Lankan state universities (Jayewardenepura, Rajarata, Ragama, Jaffna).

**Methods:** The validated Jefferson Scale was used to measure empathy, and a literature-based questionnaire was developed to assess downtime activities. A combined online questionnaire was sent to eligible students. Statistically, the levels of empathy and engagement in downtime activities among respondents were described, the socio-demographic groups were compared, and the correlation between the two constructs was determined.

**Results:** 424 responded (52% - females). The overall empathy level was moderate (74.48%) with no major socio-demographic differences. The downtime activities were reading fiction (n=229), watching television/movies (n=332), participating in sports (n=186) and engaging in outdoor activities (n=278). The empathy levels among the respondents who read, watched television/movies, and did outdoor activities were significantly higher than those who didn't. Sportsman didn't demonstrate a higher level of empathy. There was no correlation between the time spent in any downtime activity and the levels of empathy.

**Conclusions:** In the early stages of clinical training, engaging in downtime activities helps develop higher levels of empathy among medical students, irrespective of time spent on downtime activities.



## PP 121

### Screen time utilization among medical undergraduates and its impact on academic performance: a study at the University of Kelaniya, Sri Lanka

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**Introduction:** The integration of digital devices has revolutionized medical education offering access to a wealth of resources, particularly during the COVID-19 pandemic. However, excessive use of screens can impact academic performance. It is essential to effectively manage screen time to optimize learning and safeguard student well-being.

**Objective:** To assess screen time utilization and its impact on the academic performance of medical undergraduates.

**Method:** A cross-sectional survey was carried out on 402 medical undergraduates (157 (39.1%) male, mean age 24.6 (SD 1.6)years), using a self-administered online questionnaire after obtaining informed consent. The survey assessed the screen time utilization for academic and non-academic activities (social media, entertainment, etc.) during both weekdays and weekends, academic performance (at the most recent summative examination) and perception related to screen time (perceived benefits, challenges, etc.). Ethical approval for the study was obtained from the Faculty of Medicine.

**Results:** In our cohort, mean daily screen time was 7.9 hours (academic 3.3hours [41.8%], non-academic 4.6hours [58.2%]). Of them, 269 (66.9%) achieved a pass mark (>50%) in the most recent examination, while 133 (33.1%) failed. Total screen time did not significantly differ between these two groups ( $p>0.05$ ). There was a significant difference in academic screen time. Students who scored higher marks spent more screen time on academic activities ( $p=0.001$ ).

**Conclusions:** Total screen time did not significantly impact academic performance. However, the allocation of screen time specifically for academic purposes was associated with higher academic achievement. Therefore, raising awareness among medical undergraduates about effective digital tool utilization is imperative to enhance their academic performance.

## PP 122

### Attitudes and practices of volunteerism in working under challenging circumstances of medical students in a tertiary care hospital in Sri Lanka

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**Introduction and Objectives:** Volunteerism of healthcare professionals plays a major role in the health field, especially during challenging circumstances. Volunteerism is an essential driving force in the well-being of the healthcare system. Inculcating volunteerism during medical student days are important. Studies on volunteerism in Sri Lanka among medical students are minimal. Therefore, the study aims to describe experiences of volunteerism based on gender, reasons, motivation and barriers of volunteerism in challenging circumstances as well as academic performance and past experiences.

**Methods:** A cross sectional descriptive study was carried out in February-March 2023 among medical students who are on clinical rotations at the North Colombo Teaching Hospital, using a self-administered online questionnaires. Data was analysed using SPSS.

**Results:** Among 437 participants, 45% were involved with volunteerism activities during their faculty days. It was observed that female participation in volunteerism activities except for coordination, was more than males and it was not statistically significant. The majority had participated in blood donation and 'Shramadana' programmes in the past compared to voluntary activities during pandemic. Among our participants who showed interest in volunteerism (51%), inability to allocate time (5.7%) and financial instability (6.9%) were identified as statistically significant barriers ( $p < 0.05$ ). Among them, the opportunity to develop clinical competencies and teacher's requests were statistically significant motivations ( $p < 0.05$ ).

**Conclusions:** The main motivational factors such as teachers' requests and developing clinical competencies should be prioritized when developing educational curricula to improve volunteerism among students in future, while barriers such as time management should be addressed carefully by the educators.

## PP 123

### The abusive nature of love relationships and its impact on academic stress among medical students

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**Introduction and Objectives:** Medical undergraduate programs are stressful. The abusive love relationships add to the academic stress. This study aimed to evaluate the impact of abusive love relationships on academic stress.

**Methods:** All medical students at state universities in Sri Lanka were invited to respond to an online questionnaire with one component to determine the stress levels and another to determine the abusive nature of love relationships (ALR). The stress and ALR levels were computed, and the socio-demographic differences were calculated between groups with an acceptable number of respondents. The stress and ALR levels were correlated

**Results:** 244 (62%) were in love relationships; 61.5% were females, 48% were in the fourth year, and 43.4% got through the last bar examination with a 'pass'. The mean stress level was 3.2, with no gender or 'class/pass' difference. The stress levels were higher in the second and third years than in the fourth years, but there were no differences between the second and the third. The mean ALR level was 2.2, with a higher mean among males than females (2.5 vs 2.0,  $p=0.000$ ). Second-year students demonstrated the highest ALR level, and significant differences were observed between the second, third, and fourth years. No differences were observed between students with examination results of 'passes' and 'classes'. The correlation between stress and ALR levels was 0.3 ( $p=0.000$ )

**Conclusions:** The stress and ALR levels among medical students were low to moderate, and the stress levels were poorly associated with the abusive nature of love relationships.

## PP 124

### Involving senior students to influence new medical undergraduates during the orientation programme

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**Introduction and Objectives:** Senior students(SS) are excluded from orientation/foundation programmes for undergraduates due to suspected ragging and manipulation of junior students. This study was conducted to find out whether a positive impact could be made on the academic life of new entrants by the seniors.

**Methods:** 12 outstanding senior students at the Ruhuna Medical School were requested to conduct sessions for the new batch of medical students undergoing the foundation/orientation module with guidance from educationists. Following completion of the module, the students were requested to journal their experiences. Thematic analysis was conducted.

**Results:** Five themes emerged from the new student reflections; 1)Preparation for academic study (short notes, flashcards/mind maps, required books and resources, past questions, study methods, using the library and attending lectures),2)Qualities to develop (peer learning, self-learning, self-control, using modern technology for learning, time management, teamwork and adaptation), 3)Transition from schools to University (balance between life and academic studies, different paths but common final destination, work smart not hard, importance of extracurricular activities), 4)Language skills (improving English language skills, commence even now),5)Change of attitudes and feelings (self-confidence, role models, resonance, empathy, enthusiasm, motivation, consistency, freedom, and relief, staying humane during vicious training, positive mindset, inspiration).

Three themes emerged from senior students' feedback; 1)Feelings (anxiety, excitement, pride, honoured), 2)Preparation (discussion to identify problems, solutions), 3)Feedback (instant feedback from new students, attempts to contact and discuss after the session).

**Conclusions:** Involving SS to positively influence new junior students can be done successfully during orientation. Leveraging SS influence positively impacts attitudes, feelings, and academic readiness of new medical undergraduates.

## PP 125

### Peer assessment in teaching pharmacology for medical undergraduates: student perceptions

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**Introduction and Objectives:** Pharmacology, though challenging, is fundamental in medical practice, necessitating effective knowledge acquisition and retention for future application. This study aims to analyze student perceptions of peer assessment, the newly introduced teaching method, to enhance Pharmacology teaching.

**Methods:** 86 third-year medical students of the Faculty of Medicine, University of Peradeniya participated in the peer assessment. They were divided into two groups of 40-45 and given a case scenario with questions in Pharmacology. Three volunteers from each group presented the answers while peers evaluated the answers using provided criteria and gave feedback. Assessors and assessor perceptions on the teaching learning method were evaluated using a questionnaire and focus group discussions (FGD).

**Results:** The majority of students (n=64, 82.05%) enjoyed the task of assessing their peers and 80.23% (n=69) acknowledged the value of peer assessment for student engagement. 55.84% (n=42) enjoyed being assessed by peers. However, 35.29% (n=30) stated they did not feel they had the skills and knowledge to assess their peers. Few (18.51%, n=15) mentioned that they were reluctant to be critical of their peers. In the FGD, students mentioned that all students actively participated in this student centered learning method compared to the usual small group discussion sessions. They could compare peers knowledge with their own. However, they preferred teacher grading to be combined with peer grading.

**Conclusions:** Peer assessment for enhancing Pharmacology teaching was well received by the students. Students emphasized the importance of lecturer guidance and advocated for a combined grading approach to improve engagement and learning outcomes.

**PP 126**

**Student perception & efficacy of simulation-based history taking as a part of early clinical exposure: a qualitative study from a Sri Lankan Medical Faculty**

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**Introduction and Objectives:** SBL (Simulation based learning) is used to create a high-fidelity learning environment. SB history taking takes a different approach as trained human beings act as patients. We aim to evaluate student perception & efficacy of SB history taking as a part of early clinical exposure(ECE).

**Methods:** A qualitative study was conducted for the second year students of Faculty of Medicine-University of Moratuwa who have undergone SB history taking as a part of ECE. Student perception, efficacy of improving self-confidence and communication skills were evaluated among a total of 15 students in 3 separate focused group discussions. Verbatim was transcribed and thematic analysis was done.

**Results:** Participants acknowledged the importance of integrating SBL early into the curriculum. Students gained increased familiarity with proper history taking overtime. Many perceived its beneficial to take part in more sessions in the future for preparation of future patient consultations. SBL was recognized as beneficial for reinforcing basic sciences learning and improving self-confidence and verbal communication skills.

However, some perceived SBL as challenging due to knowledge gaps and uncertainty with facilitator expectations., Participants also noted limited improvement in non-verbal communication skills.

**Conclusions:** Medical students highly value SB history taking as a beneficial educational experience. Incorporating SB history taking early into curriculum assists students in connecting basic sciences content with clinical sciences, strengthening their understanding and application of core concepts. It also contributes to notable enhancements in both self-confidence and communication skills among students.

## PP 127

### Students usage of artificial intelligence for undergraduate medical education: the Ruhuna Experience

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**Introduction and Objectives:** Artificial Intelligence(AI) is emerging as a prominent force influencing higher education. This study was conducted to explore how Medical Students (MS) use AI in undergraduate medical education.

**Methods:** This quantitative study using an online questionnaire, collected data from all batches of Ruhuna MS assessing the usage of AI in assignments, examinations, clinical training, research report writing, and personal usage.

**Results:** Out of 256 MS, ChatGPT (58.2%) and Grammarly (53.9%) were the most commonly used AI apps. Assistance from AI was obtained by 62.9%.

While 38.3% indicated they use AI tools for assignments 55.0% were aware that AI-generated assignments can be detected. However, MS used it for tutorial writing (54%), making presentations (53.1%), and writing analytical essays (47.0%)

Analyzing different patient profiles and medical scenarios effectively using AI was done by 30.6% of MS. Other uses were to look at management options (27.3%), generate different diagnoses (23.1%), and find the accurate diagnosis (23.6%).

when preparing research proposals and reports, MS gets assistance from AI for grammar (65.2%), content suggesting(35.7%), and formatting(20.7%)

MS also used AI for time management (17.2%), language translation (39.1%), and maintaining a good health status (28.1%). MS stated that AI has improved their quality of life (48.5%).

Some MS (12.1%) stated that they have been punished/reprimanded for using AI for assignments. MS were not confident about AI-generated answers for past paper questions (97.6%).

**Conclusions:** AI acts as a promising tool in Medical education. Proper guidelines on the usage of AI will empower MS to utilize it appropriately.

PP 128

## Hepatic tuberculosis mimicking hepatic metastases of a lymphoma – a rare case diagnosed with laparoscopy

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**Introduction and Objectives:** Hepatic TB without active pulmonary TB is quite rare. An estimate of the incidence is around 1% of all active TB cases. It manifests as a thickened liver capsule with subcapsular nodular lesions and is referred to as “sugar-coated” or “frosted” liver.

**Methods:** A middle-aged, ASA II male presented with anorexia, evening pyrexia, loss of weight for one year, with USS findings of splenomegaly and para-aortic lymph nodes and mediastinal lymphadenopathy on HRCT. His basic serum biochemistry was normal except for an elevated ESR count of 100. His LDH was 105U/L (125-220). A CT abdomen was performed with findings of multiple small non enhancing hypoattenuating ill-defined lesions noted in both lobes of the liver, suggestive of lymphoma with involvement of the liver.

**Results:** A diagnostic laparoscopy was performed, and multiple bi-lobar liver lesions found suggesting secondary liver involvement of lymphoma. Wedge liver biopsy was performed which revealed granulomatous inflammation of the liver suggesting Tuberculosis. Although the Acid-Fast stain was negative the patient was started on anti TB regimen and patient is currently asymptomatic and being followed up.

**Conclusions:** This case report highlights the significance of considering TB as a potential cause in patients with lower gastrointestinal symptoms, in TB endemic areas. It further emphasizes the diagnostic challenges posed by hepatic tuberculosis with isolated liver involvement. In order to prevent serious complications of abdominal TB, early diagnosis and timely treatment is crucial. It also shows the importance of diagnostic laparoscopy and biopsy in view of early diagnosis.



## PP 129

### Single Vs multi tract access for supine mini PCNL for complex and staghorn calculi: outcome analysis

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**Introduction and Objectives:** Single Vs Multi tract access for Supine Mini PCNL for Complex and Staghorn Calculi; Outcome analysis

**Methods:** Total of 132 patients with staghorn or complex renal calculi who underwent SPCNL from July 2015-March 2024 were analyzed, based on stone characteristics, collecting system anatomy and whether single or multiple tracts were made. Stone fragmentation was done using high energy laser or ultrasonic/pneumatic lithotripter. Demographics, stone characteristics, overall stone clearance and complications were assessed.

**Results:** Total of 90 (68.18%) had ST while MT was necessary in 42 (31.81%) patients. Dual tracts were used in majority (95%) in the MT group. There was a male preponderance ST:MT=66.7%:90.47%. Age, BMI and comorbidity were matched between two groups. Mean stone length and density were, ST group 29.1 mm (15-55mm),1098Hu, MT group 13 mm (12.8-55mm) 1037Hu. Complete stone clearance was achieved in 87 (96.6%) of ST group and 36 (85.7%) patients in the MT group. Four patients in MT group required two sessions to achieve this. Most common significant complications were urosepsis (ST=3, MT=12) and blood transfusions (MT=5) which was significantly higher in MT group (P<0.01). Angioembolization was done in ST=1, MT=3 patients. No conversion to open surgery nor renal loss occurred. Mean post-operative hospital stay was comparable in both groups; ST= 4 days (1-8), MT= 4 days (3-16).

**Conclusions:** Multi-tract PCNL for appropriately chosen patients/stones have a favorable safety and effectiveness as single tract PCNL for staghorn calculi.

## PP 130

### Complete ureter replacement with an untapered isoperistalsis ileal loop in a Sri Lankan Tertiary Care Center

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#### **Introduction and Objectives:**

Complete ureteral replacement is a surgical nightmare for the Urologist, due to its complexity and associated long-term complications. Most of these patients have long segment and complex iatrogenic ureteral injuries following endourological surgeries. However, in Sri Lankan literature there is minimal data on this complex surgery

#### **Methods:** Case Presentation:

A 48-year-old lady with left side lower ureteric obstructive stone underwent L/ Ureteroscopy(URS) and laser lithotripsy in 2022.

In 2023, she presented back with left sided loin pain in septic shock with high creatinine of 9.1 mg/dL. NCCT KUB revealed left hydronephrosis with upper hydroureter. L/ DJ stenting failed and percutaneous nephrostomy (PCN) was inserted. L/Nephrostogram identified an abrupt cut-off below L3 level. Diagnostic URS showed a lower ureteric tight stricture and could not scoped beyond 3 cm from the vesico-ureteric junction (VUJ). Complex Iatrogenic Ureteric injury was the diagnosis.

In 2024, we successfully replaced her ureter with an isoperistalsis untapered ileal loop. She developed post-op azotemia, which settled with supportive care. She was followed up in clinic for 4 months and creatinine came down to 1.8 mg/dL.

**Results:** Out of iatrogenic ureteric injuries, majority are following urological surgeries (31.9%) and gynaecological surgeries (17.6%). The most common urological procedure associated with this condition was URS-guided lithotripsy.

Serum creatinine level before the ileal ureter formation is considered a predictor of post-operative azotemia risk and complications.

**Conclusions:** Complete ureter replacement surgery is a viable option in Sri Lankan setting. Careful patient selection and mastering the technique play a vital role in success.

## PP 131

### Novel use of atrial septal defect (ASD) closure device for treatment of post esophagectomy leak: a case report with long term follow up

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**Introduction and Objectives:** Oesophagectomy, a procedure associated with significant postoperative complications, often entails the risk of anastomotic leakage, affecting a notable proportion of patients. Various treatment options include conservative management and surgical and endoscopic procedures. The off-label use of atrial septal defect (ASD) closure devices to close leakage sites post-oesophagectomy is a novel endoscopic treatment option. Case reports of the use of this device are scarce worldwide, and no report mentions long term outcomes.

**Methods:** A 72-year-old Buddhist priest underwent Laparoscopic oesophagectomy for gastro-oesophageal junction adenocarcinoma. On post-op day 10, he developed high spiking fever. Initial antibiotics and conservative measures failed. Contrast-enhanced computed tomography (CECT) revealed an anastomotic leak draining into the left thorax.

**Results:** Endoscopic clipping failed to close the defect due to thickened mucosa at the anastomotic site. A 15mm ASD closure device successfully closed the 8mm defect. A nasojejunal tube was used for feeding purposes.

Subsequent CECT done 2 weeks after the procedure showed no leak, oesophagogastroduodenoscopy done at 6 months revealed device dislodgement. 3 years after the procedure, the patient remains asymptomatic despite the device being dislodged.

**Conclusions:** Despite limited use in gastrointestinal interventions, ASD closure devices offer minimally invasive, successful leak closure. The unique structure of the ASD closure device which promotes tissue growth, and the availability of multiple waist and disk sizes contributes to a higher success rate than other conventional endoscopic treatment methods.

This case demonstrates the efficacy of ASD closure devices in managing post-oesophagectomy leaks, highlighting their potential as valuable addition to leak management strategies, where other interventions have failed.

## PP 132

### Phenotypic species identification and antifungal susceptibility of oral candida albicans in patients with oral lichen planus

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**Introduction and Objectives:** Oral potentially malignant disorders (OPMD) include a group of oral mucosal diseases with different morphological characteristics, capable of progressing into oral squamous cell carcinoma (OSCC). Oral lichen planus (OLP) is a common OPMD affecting 1–2% of the population. Candida super-infection on oral lesions requires special management due to its risk of transforming OPMD into OSCC. Our study aimed to determine Candida phenotypes and the susceptibility of *C.albicans* to antifungal agents in OLP patients compared to controls.

**Methods:** We conducted a case-control study with 25 OLP patients and 23 controls. Buccal mucosa and tongue swabs were collected from participants and seeded onto SDA media, followed by incubation. Species identification included germ tube test, color production in chrome agar, and chlamydoconidia detection in rice plate agar. Anti-fungal susceptibility testing (AFST) for isolated *C.albicans* employed the disk diffusion method with Fluconazole (25mcg) and Amphotericin B (10u).

**Results:** Among 25 OLP patients, 11 (44%) tested Candida positive, compared to 7 (30.4%) in the control group, showing no statistically significant difference ( $p = 0.332$ ). Most cases exhibited pure *C.albicans* growth, with one exception showing mixed growth of *C.albicans* and *C.krusei*. In AFST, 18.2% (case) and 14.3% (control) were Fluconazole-resistant with a mean inhibition zone of 26.61mm (SD + 2.01). Both groups showed 100% resistance to Amphotericin B, with a mean inhibition zone of 9.878mm (SD + 1.50).

**Conclusions:** This pilot study indicates increased presence of Candida in OLP patients compared to controls but without statistical significance. Most strains of rimary isolated *C.albicans*, were sensitive to Fluconazole but resistant to Amphotericin B.

**The reliability of large language model generated patient information on liver disease**

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**Introduction and Objectives:** We assessed the utility of Large Language Models (LLMs) (ChatGPT-3.5, Gemini) against human experts, as a source of patient information on liver disease.

**Methods:** We compared measures in three domains (accuracy, quality, completeness) of LLM-generated (ChatGPT-3.5, Gemini) responses against human expert-generated (two experienced Gastroenterologists) responses to 20 frequently asked questions (FAQs). Three independent, experienced Gastroenterologists carried out a blinded assessment for each response, using a three-point Likert scale for accuracy, and five-point scales for completeness and quality [scoring tool by Lim et al. (2023), Global Quality Score (GQS)]. The aggregate and mean scores were calculated for each response and were used to determine final ratings in respective domains. Significance among the three groups was assessed using the Kruskal-Wallis test.

**Results:** The expert, ChatGPT-3.5 and Gemini responses displayed high mean scores in all domains with no statistically significant difference. The mean[±standard deviation (SD)] for aggregate accuracy scores were 8.45(± 0.88) for experts, 8.20(±1.19) for ChatGPT-3.5 and 8.40(± 0.95) for Gemini (maximum score-9.00) [p=0.79]. Accuracy ratings as “Poor”, “Borderline” and “Good” for experts were 0%, 18.3% and 81.7%, for ChatGPT-3.5 were 5.0%, 16.7% and 78.3% and for Gemini were 1.6%, 16.7% and 81.7% respectively.

The mean(±SD) for aggregate completeness scores were 11.50(±2.01) for experts, 11.35(±1.59) for ChatGPT-3.5 and 10.80(±1.44) for Gemini (maximum score-15.0) [p=0.45]. The mean(±SD) aggregate GQS were 12.50(±1.43) for experts, 11.80(±1.64) for ChatGPT-3.5 and 12.00(±1.33) for Gemini (maximum score-15.0) [p=0.30].

**Conclusions:** Our findings outline the potential of LLMs in their ability to provide reliable answers to FAQs on liver disease.

## PP 136

### Perceptions on teaching sexual health in secondary schools among science and health science teachers in the Rathnapura district

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**Introduction and Objectives:** Adolescence is a period of significant physical and psychological change. Adolescents are vulnerable to child marriages, abuse, and unsafe abortions resulting lifelong negative impacts where inadequate Sexual Reproductive Health Education (SRHE) is a contributory factor. Teachers play a crucial in providing SRHE to adolescents. The study aimed to evaluate the strategies and perceptions of secondary school science and health science teachers on Sexual Health Education.

**Methods:** A descriptive cross-sectional study using a self-administrated questionnaire was carried out among science and health science teachers of 10 randomly selected schools in the Rathnapura district. The data was transferred to Microsoft Excel and analysed descriptively using SPSS statistical software (P<0.05 for significance).

**Results:** The study included 102 Secondary school teachers (Female, 71.5%) in the Rathnapura District. Of these, 67.6% were science teachers, and 29.4% were health science teachers with 2.94% teaching both subjects. A majority (97%) agreed that SRHE should be provided to students. Only 24% were satisfied with the status of SRHE. The response varied significantly with age. (P=0.004), with older teachers more comfortable teaching SRHE compared to young teachers. The response did not vary significantly with the working experience (P=0.073) or gender (P=0.14). Perceived main barriers to SRHE included cultural (61.76%), social (60.78%), and religious (29.24%) factors. Discomfort in teaching sexual topics to opposite-gender students varied significantly with type of school as 75% of teachers from mixed schools were comfortable teaching sexual-related topics to the opposite gender compared to only 3.3% of teachers from boys' schools (P=0.014). Most teachers (52.9%) preferred integrating SRHE into science and health science subjects, and 51.9% favoured evaluating effectiveness through case studies.

**Conclusions:** The study reveals that 97% of teachers in the Rathnapura district support SRHE, while only 24% are satisfied with its current status. Cultural, social, and religious barriers impede progress. Teacher discomfort is dependent on type of school. Most teachers prefer integrating SRHE into existing subjects and evaluating effectiveness through case studies.

PP 137

**Perceptions regarding sexual and reproductive health among expectant mothers and their partners during the antenatal period in Katana Medical Officer of Health area**

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**Introduction and Objectives:** Addressing attitudes toward sexual and reproductive health during pregnancy is crucial, given the myriad concerns and changes it brings to sexual life, including discomfort and fear of complications. Yet, research on this topic, especially in Sri Lanka, remains sparse. This study seeks to assess the socio-demographic profiles and attitudes toward sexual and reproductive health among pregnant women and their partners in the Katana Medical Officer of Health area during the antenatal period

**Methods:** A descriptive, cross-sectional study was undertaken among pregnant women and their partners who visited nine antenatal clinics within the Katana MOH area from May to July 2023. Data were gathered using a pre-tested, interviewer-administered questionnaire. Privacy of the participants was ensured by selecting appropriate locations within the clinics for data collection.

**Results:** The study group comprised 206 pregnant women and their spouses, with a mean (SD) age of 29.5 (4.5) years. Most participants were Sinhalese (89.1%) and had education up to Ordinary Level (25.5%). Three-quarters (75.9%) were employed, with an average monthly family income between Rs 11,000-50,000. Nearly half (44.9%) of the pregnant mothers were in their third trimester. A majority (42.2%) believed sexual activity wouldn't harm pregnancy, while 38.8% thought it caused miscarriages. Additionally, 47.1% mentioned sexual position affected the baby's health. Gender and employment status significantly influenced participants' attitudes ( $p < 0.05$ ).

**Conclusions:** Substandard attitudes toward sexual and reproductive health in pregnant women and spouses underscore the importance of enhancing education at MOH centers.

**PP 138**

**Knowledge and practices on self-medication of antibiotics among medical students of a selected university in Sri Lanka**

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**Introduction and Objectives:** Antibiotic self-medication poses a significant threat to public health, fostering antibiotic resistance and other adverse outcomes. Understanding the knowledge and practices of medical students regarding self-medication is crucial, as it influences their future behavior as healthcare professionals. The objective was to describe the knowledge and practices associated with antibiotic self-medication among medical students in a selected university in Sri Lanka.

**Methods:** This descriptive cross-sectional study, conducted from July to September 2023, included medical students from six batches. Data was collected through a self-administered questionnaire using consecutive sampling.

**Results:** 288 participated (response rate-97.3%). Mean age was 23.49± 1.95 years. The study revealed that 41% of participants had self-medicated with antibiotics within the past 12 months. Co-amoxiclav was the most commonly used antibiotic (40%), followed by azithromycin (26.3%). Sore throat (42%) and cough (37%) were the predominant complaints. Convenience (84%) and cost-saving (38%) were the main reasons for self-medication. The selection of antibiotics was primarily based on previous experience (67%), with fewer relying on pharmacist recommendations (17%) or dosage information from pharmacists (18.6%). Most antibiotics (79%) were obtained from pharmacies, and 40% of participants ceased antibiotics once symptoms subsided. Seniority in the degree program and the belief in the acceptability of self-medication were associated with higher rates of self-medication. However, there was no significant correlation between knowledge and self-medication behaviors.

**Conclusions:** The study highlights suboptimal knowledge and practices regarding antibiotic self-medication among medical students. Targeted interventions are warranted to enhance understanding and promote responsible antibiotic use among future healthcare professionals, ultimately mitigating the threat of antibiotic resistance.



PP 139

**Perceived barriers towards practicing occupational safety measures among informal sector and small-scale welders in the District of Colombo**

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**Introduction and Objectives:** Welding is considered as an occupation that causes work-related accidents and diseases to a greater extent in developing countries. The welders in Sri Lanka are minimally concerned on occupational health and safety. The objective was to explore perceived barriers towards practicing occupational safety measures among informal sector and small-scale welders in the District of Colombo.

**Methods:** A qualitative study was conducted to explore the barriers. Focus group discussions were conducted with employees and in-depth interviews with owners to identify the barriers. Purposeful sampling was done until data saturation. Thematic analysis was conducted. Trustworthiness was maintained.

**Results:** Total of 42 welders and 15 owners were interviewed. Organizational and individual barriers were identified during the focus group discussions. Barriers related to employers and workers were identified during the in-depth interviews. Safety practices among welders are often neglected, with low priority given to safety at work. Low commitment by the employers in ensuring adequate facilities to improve safety was identified. Financial difficulties in informal sector work settings led to poor safety practices.

**Conclusions:** Low priority given for safety at work by the workers, inadequate facilities, and poor commitment by the owners regarding safety, which are further worsened by financial difficulties faced in informal sector and small-scale work settings have resulted in non adherence to safety practices among welders. Workplace-based health education programs are recommended to improve unsafe work behaviors, such as non-use of PPE, for the welders in informal sector and small-scale work settings.

