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ABSTRACTS

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Abstract 01

Undernutrition and its contributing factors among children aged 6–24 months attending a tertiary care hospital: A cross-sectional descriptive study

M B N Mannapperuma[1], S Ganesan[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Colombo South Teaching Hospital, Sri Lanka

Keywords: Undernutrition, Feeding practices, Socioeconomic disparities

Introduction: The prevalence of undernutrition continues to pose a problem for many of the children under-2-years in Sri Lanka, despite good maternal and child health figures. The first 1000 days of life is a critical period for neurological and cognitive development; therefore, failure to meet these demands could have ongoing implications. While household food insecurity has increased due to the economic crisis, there is very little known in terms of how this is impacting complementary feeding (CF), especially while they are unwell, when specific nutritional interventions may be able to reverse their growth faltering.

Objective: To assess the percentage of undernutrition and factors associated with undernutrition in infants and young children presenting to a tertiary care centre.

Methods: A cross-sectional descriptive study was carried out at Colombo South Teaching Hospital (CSTH), with 246 children aged 6–24 months. Anthropometric measurements were used to evaluate nutritional status, while CF practices and socio-demographic variables were assessed via an interviewer-administered questionnaire. Descriptive statistics and chi-square testing were used for data analysis.

Results: Study revealed 14.6% were underweight,18.3%-stunted, and 39.3%-wasted. Both stunting and wasting were significantly associated with poor maternal education ($p<0.05$) and lower household income ($p<0.01$). Inadequate CF to account for time, particularly inadequate quantity, was a significant contributing factor that doubled odds of underweight (Odds-ratio [OR]=3.2), stunting (OR=4.5), and wasting (OR=2.1). 85% continued breast feeding beyond infancy, contributing to undernutrition due to inadequate complementary feeding. Meal frequency and food consistency were mostly adequate, but only 76.8% of children met dietary diversity guidelines. During illness, 78% offered extra meals, however few considered energy-dense (21%) or preferred food (23%).

Conclusions: Although feeding frequency was adequate, there were deficits in food quantity, diversity and illness-responsive feeding. Interventions such as maternal education for lower income families are important to improve nutrition in this age group.

Corresponding Author: M B N Mannapperuma Email: m37433@pgim.cmb.ac.lk

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Abstract 02

Integrating AI into medical education: readiness, knowledge and expectations of pre-clinical academics of the faculty of medicine, University of Colombo

Nilani Dharmarathne[1], Roshan Hewapathirana[2], Pandula Siribaddana[3]

[1]Lady Ridgeway Hospital for Children, Colombo, [2]Faculty of Medicine, University of Colombo, [3]Postgraduate Institute of Medicine, University of Colombo

Keywords: AI in education, medical education, pre-clinical academics, readiness for AI, knowledge and perceptions on AI

Introduction: Artificial intelligence (AI) transforms medical education with personalized, evidence-based, and innovative approaches. The pre-clinical education of MBBS, whilst the most theory-intensive, represents the transition from teacher-led to self-directed learning, where AI integration can smooth the transition. Successful AI integration in medical education requires technical feasibility, knowledge and positive mindsets of academics and students.

Objective: This study aimed to assess the readiness, knowledge, perceptions, and expectations of pre-clinical academic staff on AI tools in medical education at the Faculty of Medicine, University of Colombo (FOM, UOC).

Methods: A descriptive cross-sectional study was conducted with an online self-administered questionnaire prepared using multiple online sources, validated through expert review and a pilot study, was distributed among academic staff members of the Basic Sciences Stream (Anatomy, Biochemistry and Physiology Departments) at FOM, UOC.

Results: The response rate was 48.2%, and 57.1% were males. Mean age was 42.9 years, with 50% professors and 43% having ≥20 years of experience. ICT proficiency was moderate (mean 3.43/5), with association being significant with male gender (p=0.045) but not with age (p=0.24). Despite 86% aware of AI use in medical education, only 28.6% had used AI tools such as ChatGPT and Gemini in teaching. Interest was high (71.4% rated “very interested”), while confidence was moderate (mean 2.64/5) in adopting AI. Improved teaching efficiency (100%) and learning outcomes (85.7%) were the main expectations of AI. They recognized ethical and equity challenges, with 75% saying experts must supervise AI. Over 75% expected AI will revolutionize medical education and requested institutional support, including workshops (100%) and technical assistance (92.8%).

Conclusions: Pre-clinical academic staff at FOM, UOC exhibit strong enthusiasm for AI integration but limited hands-on experience and moderate confidence, highlighting the need for targeted training, institutional policies, and technical support to achieve effective implementation.

Corresponding Author: Nilani Dharmarathne Email: m34265@pgim.cmb.ac.lk

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Abstract 03

Knowledge of Sri Lankan doctors on the legal and ethical aspects of leave against medical advice (LAMA)

K G R L A Kobbegala[1], Keerthi Weerawardhana[2], A A M Siddique[2], S A Dulhan Hansaja[3]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Teaching Hospital, Kurunegala, [3] Faculty of Medicine, Wayamba university, Sri Lanka

Keywords: LAMA, patient autonomy, ethical awareness, clinical decisions

Introduction: Leaving Against Medical Advice (LAMA) continues to challenge clinical practice, raising concerns about patient safety and medico-legal consequences. Despite its importance, how well Sri Lankan doctors understand the legal and ethical implications of LAMA has not been adequately studied.

Objective: This study aimed to evaluate the knowledge of Sri Lankan doctors regarding the ethical and legal dimensions of LAMA and to examine whether factors like clinical experience and prior exposure to LAMA cases influence this awareness.

Method: A descriptive cross-sectional survey was carried out among 124 doctors from various clinical backgrounds using a self-administered questionnaire. The tool explored participants' years of experience, number of LAMA cases encountered, understanding of core ethical principles, and real-world application of those principles. Data were analyzed using SPSS, with chi-square tests applied to assess statistical associations.

Results: Of the 124 participants, 76.6% had more than one year of clinical experience. Notably, 80.3% had experience handling more than 10 LAMA cases. While 75.8% correctly identified patient autonomy as the central ethical principle in LAMA decisions, 58.3% identified minor illness not requiring admission as the most common reason for LAMA. A total of 54.3% did not agree to provide a prescription upon discharge. In cases involving intoxicated patients, 68.5% chose to delay discharge until the patient regained decision-making capacity. Additionally, 38.6% had no correct idea about managing LAMA in the context of an incomplete legal process. No significant link was found between knowledge and experience ($p = 0.225$) or LAMA exposure ($p = 0.240$). Importantly, 97.6% expressed the need for more education in this area.

Conclusions: Although basic ethical awareness exists, substantial gaps remain in practical understanding. National training initiatives and clear guidelines are urgently needed to improve clinical decision-making and uphold patient rights in LAMA situations.

Corresponding Author: K G R L A Kobbegala Email: m41623@pgim.cmb.ac.lk

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Abstract 04

The dietary habits and associated factors of the school children in the Colombo District in Sri Lanka

P M Moonasinghe[1], C Gajanayke [1], A Jayathilake[1], K Lakmal[1], K Kalubowila[1]

[1]Regional Director of Health Service office, Colombo 10, Sri Lanka

Keywords: adolescents, dietary habits, nutrition, food frequency questionnaire

Introduction: Adolescence is the period of rapid biological, emotional, and cognitive development and maturation in the life journey. Consequently, they require adequate nutritious food for optimal growth and improved performance. However, their current food choices are not healthy enough to fulfil that nutrition requirement. Hence, assessing dietary habits is imperative to plan the most appropriate interventions.

Objective: To describe the dietary habits and associated factors of schoolchildren from grades six to thirteen in government schools in the Colombo district in Sri Lanka

Methods: A school-based cross-sectional study was conducted with the multi-stage stratified method, and the sample size was 1200. The probability proportionate to the size method was used to select the number of participants from schools, and the random generation number method was used to select the participants. The face and content-validated, self-administered questionnaire was used to collect the data, and reliability was ensured with the Cronbach's Alpha test (0.84). Descriptive statistics and the Chi-square were performed.

Results: The majority of participants had the influence of their peers (n=727, 61.8%) and media (n=661, 56.2%) on their dietary habits, and it was significantly associated with their age (X^2=72.16, p=0.000). The education level of parents was not associated with the selection of food. Rice is the main staple food (n=1073, 91.2 %), and wheat flour short eats are the second major source of carbohydrates (68.8%, n=809). Comparatively, a low percentage (16.1) of participants consume milk and dairy products, and the participants take food from the school canteen were 61.7% (n=726).

Conclusions: The education level of parents was not associated with the dietary habits of adolescents. However, influence from peers had a greater impact on it. The majority of adolescents didn't consume milk and milk-based products to fulfill their nutritional requirements. The school canteen plays a prominent role in creating the healthy dietary habits of school adolescents.

Corresponding Author: P M Moonasinghe Email: munasingheheo@gmail.com

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Abstract 05

Co-designing a teleconsultation system for resource-constrained settings: Insights from a qualitative requirements study

K M M P B Wijeratne[1,2], C M A Anthony[1,3], M H B Ariyarathna[1,4]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Lady Ridgeway Hospital for Children, Colombo, [3]University of Colombo, [4]Health Information Unit, Ministry of Health

Introduction: Continuity of medical care for rural communities in Sri Lanka remains a persistent challenge. Geographic isolation, poor connectivity, and limited on-site clinical resources restrict timely access to care. At the Rural Health Research Centre in Kataragama of the Faculty of Medicine, University of Colombo, healthcare access was historically limited to periodic outreach services. This study presents the formative phase of developing a teleconsultation system to support remote clinical care (an Action Design Research), through an operator-mediated hub-and-spoke model where local health workers connect rural patients with remote consultants.

Objectives: To define and prioritize stakeholder-driven requirements for a teleconsultation system designed for rural Sri Lankan healthcare context

Methods: Purposive sampling was used to recruit 27 diverse key stakeholders, including clinical, academic, and administrative personnel from the Faculty of Medicine, as well as rural and urban patients. Data was collected through in-person semi-structured interviews and analyzed using the six-phase model of Braun and Clarke thematic analysis. The resulting thematic insights informed an iterative requirements definition process. Validation and prioritization of system requirements was carried out using the MoSCoW matrix and consensus-building discussions.

Results: The thematic analysis identified ten core themes (including technical infrastructure, clinical quality, usability, sustainability and legal concerns) and 39 requirement areas. These were prioritized and synthesised into 33 definitive system requirements (16 functional and 17 non-functional). Key requirements informing the teleconsultation platform design included real-time high-definition video and audio with bandwidth adaptability, session and appointment management, remote prescription, secure role-based access, and on-premises data storage.

Conclusion: This stakeholder-driven requirements development approach provides a replicable model for telemedicine system design in resource-constrained settings. Context-sensitive requirements provided a solid foundation for system design and implementation, translating ambiguous expectations to clear, actionable requirements. This study illustrates how participatory design can better align digital health innovation with clinical realities and user challenges.

Corresponding Author: K M M P B Wijeratne Email: m39782@pgim.cmb.ac.lk

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Abstract 06

Prevalence and predictors of probable depression among junior doctors in Sri Lanka: The role of personality traits

S K A B Dilhara

Postgraduate Institute of Medicine, University of Colombo

Keywords: Probable depression, junior doctors, Sri Lanka, Big Five personality traits, occupational stress, mental health

Introduction: Depression is a leading cause of disability worldwide and disproportionately affects healthcare professionals. Junior doctors are at particular risk due to long working hours, high patient loads, and limited support systems. In Sri Lanka, resource constraints and stigma surrounding mental health further exacerbate vulnerability. While international literature suggests personality traits may influence susceptibility to depression, local data are limited. This study examined the prevalence of depression among Sri Lankan junior doctors and its association with the Big Five personality traits.

Objectives: To determine the prevalence of probable depression among junior doctors in Sri Lanka, To identify predominant personality traits in this group, to assess correlations between personality traits and depression scores.

Methods: A cross-sectional online survey was conducted from May 4–17, 2025, among 450 post-intern medical officers recruited by random sampling. Depression was assessed using the Patient Health Questionnaire-9 (PHQ-9), and personality traits were measured with the Big Five Inventory-50 (BFI-50). Data was analysed using descriptive statistics, Pearson correlations, and logistic regression.

Results: The prevalence of probable depression (PHQ-9 ≥10) was 88.2% (n = 397). Symptom severity was distributed as mild (11.6%), moderate (49.1%), moderately severe (34.2%), and severe (4.9%). The mean PHQ-9 score was 13.5 (SD = 3.5). None of the Big Five traits significantly predicted depression status in multivariable models ($p > .05$), although openness showed a non-significant trend (OR = 0.945, $p = 0.094$).

Conclusion: The prevalence of probable depression among Sri Lankan junior doctors is alarmingly high, exceeding international estimates. Contrary to global evidence, personality traits did not significantly predict depression risk among junior doctors, suggesting that occupational and systemic stressors may play a greater role. As this study relied on self-report screening tools and a cross-sectional design, causality cannot be established. These findings highlight the urgent need for systemic interventions, including regulated workloads, accessible confidential mental health services, mentorship programs, and stigma reduction, to reduce depression risk, protect physician well-being, and maintain patient safety in the national healthcare system.

Corresponding Author: S K A B Dilhara Email: skabimali1@gmail.com

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Abstract 07

Growth outcomes of exclusively breastfed preterm neonates: Time taken to double the birth weight in a Sri Lankan level three NICU

B R R N Gunaratne[1], M S S K Bandara[1], G A D N B Wimalasena[1]

[1]Postgraduate Institute of Medicine, University of Colombo

Keywords: Preterm, Breastfed, Double birth weight

Introduction: Preterm birth is a major cause of neonatal morbidity and mortality worldwide. Survival rates of preterm neonates have improved, with advances in care, making nutrition critical for growth and neurodevelopment. Exclusive breastfeeding is universally recommended, though its adequacy in meeting the high nutritional requirements of preterm neonates is still debated in certain settings. Data from Sri Lanka on growth outcomes of exclusively breastfed preterms is sparse.

Objectives: To evaluate the time taken to double the birth weight of preterm neonates who were exclusively breastfed under the care of Neonatal Intensive Care Unit (NICU) at Teaching Hospital Peradeniya

Methods: This descriptive study analysed retrospectively and prospectively collected data from preterm neonates (<37 weeks) admitted to the NICU from January to December 2022. Eligible neonates were exclusively breastfed, and exclusion criteria included congenital malformations, severe sepsis, necrotizing enterocolitis, chronic illnesses. Data on gestational age, birth weight, time taken to double birth weight were extracted from bed head tickets, clinic records and analysed using descriptive statistics.

Results: The study included 28 preterm neonates and mean time taken to double birth weight was 9.2 ± 2.8 weeks (mean+/-SD), with a median of 9 weeks (range 2–15 weeks). 67.9% achieved doubling between 8–12 weeks, consistent with international studies (10–12 weeks). By contrast, some hospital-based studies found slower weight gain among breast fed(9-13weeks) compared to formula-fed(8-10weeks) counterparts. Observational data show that formula or fortified human milk can produce faster short-term weight gain though local data are limited.

Conclusion: Exclusively breastfed preterm neonates admitted to a Sri Lankan level three NICU demonstrated satisfactory growth, majority doubling weight between 8 to 12 weeks. The findings support exclusive breastfeeding as an adequate nutritional strategy even for preterm infants and strengthen evidence for local neonatal care practices.

Corresponding Author: B R R N Gunaratne Email: m36679@pgim.cmb.ac.lk

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Abstract 08

Prevalence of obsessive-compulsive disorder (OCD) among medical and non-medical undergraduates of nine state universities of Sri Lanka during the Covid 19 pandemic

A D S Karunathilake, S Jeevathayaparan, I A H Gamage, M C N Madushanka, A A M Savidya, K G M Shiwanthini
Wayamba University of Sri Lanka
Keywords: OCD, Prevalence, Undergraduates, Sri Lanka, COVID-19

Introduction: Obsessive Compulsive Disorder (OCD) is a common psychiatric disorder affecting 1.5% of the population and of which Sri Lankan adults having a lifetime prevalence of 3%. OCD has a characteristic pattern of constant undesirable thoughts, impulses or images(obsessions) that are invasive and lead to repetitive behaviors (compulsions) to reduce the accompanying discomfort and anxiety. The COVID-19 pandemic as a fear creating environment imposes a risk of increasing OCD levels in the population.

Objectives: To determine the prevalence of OCD and to prove the association with being a medical or non-medical undergraduate of a state university of Sri Lanka during the COVID-19 pandemic with statistics.

Methods: A descriptive cross-sectional study among consenting medical and non-medical (Arts & Management) undergraduates of the 2017/18 intake of nine state universities of Sri Lanka: Colombo, Peradeniya, Sri Jayawardhanapura, Ruhuna, Kelaniya, Rajarata, Eastern, Jaffna and Sabaragamuwa during the COVID-19 pandemic. Data was gathered via an online questionnaire. and analyzed using the Obsessive-Compulsive Inventory Revised scale (OCI-R), prevalence calculated and statistical association between medical and nonmedical undergraduates using the Chi square test.

Results: Of 498 undergraduates who fulfilled the inclusion criteria, 62.249%(310/498) had scores >= 21, indicative of possible OCD. Majority had both obsessions and compulsions. Commonest obsessions were orderliness 87.95%(438/498) and contamination 81.82%(407/498). Commonest compulsions 84.48%(421/498), washing 81.25%(405/498). The association between contamination related symptoms and OCD (p= 0.035281) indicates fear of contamination as a possible risk factor for OCD. The association OCD and being non-medical 68.05%(196/288) (p=0.002392).

Conclusion: OCD prevalence was high, a wide array of symptoms, majority had both obsessions and compulsions with a positive association between contamination related symptoms and being a non-medical undergraduate.

Corresponding Author: A D S Karunathilake Email: sewwandikarunathilake@gmail.com

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Abstract 09

Knowledge of sexual and reproductive health, cancer-causing vs, and HPV vaccination among teachers, principals, and students in a selected medical officer of health division

S J W Withanage[1], C Gajanayake[2], K C Kalubovila[3], G C Nawagattegama[1], G Ediriweera[4], S Wijesekara[5]

[1]MOH Egodauyana, [2]Regional Director of Health Services office, Colombo, [3]Provisional Director of health services office, Western province, [4]Amrak institute of medical sciences, [5]University Hospital Sussex, United Kingdom

Keywords: Human papillomavirus, sexual and reproductive health, HPV vaccination, cancer-causing viruses,

Introduction: Human papillomavirus (HPV) is an aetiological factor in cervical cancer. Early education and awareness of sexual and reproductive health (SRH), cancer-causing viruses, and HPV vaccination are crucial in reducing the disease burden.

Objectives: To assess the perceptions and knowledge of SRH, cancer-causing viruses, and HPV vaccination among teachers, principals, and students in high-risk schools within the Egodauyana Medical Officer of Health Division

Methods: A cross-sectional study was conducted from August 2024 to June 2025 across 12 schools in the Egodauyana Medical Officer of Health area. Among 230 teachers/principals (Group A) and 297 students in Grade 10 and above (Group B), selected through simple random sampling. Data was gathered via a validated, interviewer-administered structured questionnaire covering three domains: (1) SRH knowledge, (2) awareness of cancer-causing viruses, and (3) HPV vaccination. Responses were coded (1 = good knowledge, 0 = poor knowledge) and analysed using descriptive statistics and independent sample t-tests. Ethics approval was obtained from the Ethics Review Committee, Medical Research Institute Colombo.

Results: Among teachers, 43(18.7%) demonstrated good knowledge of SRH, 30(13%) were aware of cancer-causing viruses, 18(8%) had adequate knowledge of HPV vaccination. Only 27 students (9%) had good SRH knowledge, 9(3%) were aware of cancer-causing viruses, and 15(5%) had knowledge of HPV vaccination. Independent sample t-tests revealed significant differences between teachers and students in SRH knowledge ($p < 0.01$) and knowledge of cancer-causing viruses ($p < 0.001$), but not in HPV vaccination knowledge ($p = 0.09$).

Conclusion: The overall knowledge of HPV, cancer-causing viruses, and HPV vaccination was low among both teachers and students, highlighting the need for structured SRH education programs, with an emphasis on HPV and cervical cancer prevention.

Corresponding Author: S J W Withanage Email: Sankha06@hotmail.com

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Abstract 10

Degree of severity of molar incisor hypo mineralization and its relation to dental caries

R Godevithane[1], W P A W Goonathilake[2]
[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]Institute of Oral Health, Maharagama, Sri Lanka

Keywords: Dental caries, Molar Incisor Hypomineralisation, MIH severity, Enamel hypomineralisation

Introduction: Molar Incisor Hypomineralization (MIH) presents a significant challenge in pediatric dentistry due to its impact on the rapid progression of dental caries.

Objectives: To investigate the association between the severity of MIH and dental caries experience among children

Methods: A cross-sectional cohort study was conducted among 162 children aged 9–15 years diagnosed with MIH, attending Restorative Unit A, Institute of Oral Health, Maharagama. MIH severity was assessed based on the clinical diagnostic criteria proposed by Mathu-Muju and Wright. Caries experience was quantified using the Decayed, Missing, and Filled Surfaces (DMFS/dmfs) index in accordance with ICDAS II standards. Questionnaires were used to collect data on oral hygiene practices, fluoride exposure, and dietary habits based on a three-day diet chart. Statistical analyses—including Kruskal-Wallis tests with Bonferroni correction and Poisson regression—were performed using Microsoft Excel and Python, with a 95% confidence interval and a significance threshold of $p < 0.05$.

Results: Of the examined cohort, 69.75% had mild MIH, 12.96% moderate, and 17.28% severe. The overall caries prevalence was 47.53%, with higher rates observed among children with severe MIH (82.14%) compared to moderate (57.14%) and mild (37.17%) forms. Mean DMFS/dmfs scores increased with MIH severity: 2.22 in mild, 4.86 in moderate, and 7.21 in severe cases ($p < 0.005$). Poisson regression analysis identified cariogenic food, oral hygiene, fluoride use, and MIH severity as significant predictors of caries experience.

Conclusion: MIH severity can affect dental caries experience, confirming that greater severity corresponds with elevated caries prevalence. It is important not only to diagnose MIH but also to accurately classify its severity. Recognizing MIH as a contributory risk factor in the multifactorial etiology of dental caries enables early intervention and reduces treatment burden in pediatric populations.

Corresponding Author: R Godevithane Email: d02933@pgim.cmb.ac.lk

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Abstract 11

Comparative assessment of two modified HEART Scores in predicting acute coronary syndrome and major adverse cardiovascular events: A single-centre pilot study from Sri Lanka

C Welhenge[1], K M Fernando[1,2], J N Fernando[1], P C Deshapriya[3], A P De Silva[4,5]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Department of Biochemistry and Clinical Chemistry, Faculty of Medicine, University of Kelaniya, [3]Emergency department, Colombo North Teaching Hospital, Ragama, [4]Department of Medicine, Faculty of Medicine, University of Kelaniya, [5]University Medical Unit, Colombo North Teaching Hospital, Ragama, Sri Lanka

Keywords: HEART Score, Acute coronary syndrome

Introduction: The HEART score is widely validated clinical tool for risk stratification in patients presenting with chest pain. In resource-limited settings, due to restricted access to quantitative troponin assays, modified versions such as the HEART score (excluding troponin) and the mHEART score (using binary troponin results) have been proposed as alternatives.

Objectives: This study compares the diagnostic performance of HEART, HEAR, and modified HEART (mHEART) scores, in predicting the probability of acute coronary syndrome (ACS) and major adverse cardiovascular events (MACE), in patients with chest pain.

Methods: A retrospective analysis was conducted at a tertiary care hospital in Sri Lanka among 74 consecutively selected adult patients presenting with chest pain to the emergency department. HEART, HEAR and mHEART scores were calculated for each patient. Receiver operating characteristics (ROC) analysis was used to assess predictive accuracy for ACS diagnosis and 6-week MACE. Area under the ROC curve (AUC) values were compared.

Results: The AUC values for diagnosing ACS were, HEART: 0.889 (95% CI: 0.817–0.961), HEAR: 0.779 (95% CI: 0.6445–0.8942) and mHEART: 0.855 (95% CI: 0.6445–0.8942). Pairwise comparisons demonstrated statistically significant differences between HEART and HEAR: (p=0.001), and HEART and mHEART (p=0.02). For predicting 6-week MACE, AUC values were HEART: 0.905 (95% CI: 0.844–0.967), HEAR: 0.753 (95% CI: 0.645–0.862), and mHEART : 0.854 (95% CI: 0.773–0.935), with no significant difference observed between the scores (HEART vs mHEAR: $9.98x10^{-6}$, HEART vs Modified HEART: p=0.00155).

Conclusion: The original HEART score demonstrated superior predictive accuracy for both ACS and MACE compared to modified versions. While HEAR and mHEART scores may be considered interim alternatives in settings without reliable troponin testing, their reduced discriminatory performance highlights the importance of improving diagnostic, laboratory capacity for optimal chest pain risk stratification.

Corresponding Author: C U Welhenge Email: cuwelhenge@gmail.com

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Abstract 12

Shifting aetiology of onychomycosis in Sri Lanka

K A C C Pemasiri[1,2,3], B U Manukulasooriya[1], P I Jayasekera[1,2]

[1]Department of Mycology, Medical Research Institute, Colombo, [2]Postgraduate Institute of Medicine, University of Colombo, [3]Department of Microbiology, Faculty of Medicine, University of Kelaniya, Ragama

Keywords: Onychomycosis, *Candida, Aspergillus, Fusarium*

Introduction: Onychomycosis, a fungal infection of the nail characterised by discolouration and thickening of the nail plate, is a prevalent condition worldwide. While dermatophytes have long been considered the primary causative agents, recent evidence indicates a notable epidemiological shift, with yeasts and non-dermatophyte moulds (NDMs) increasingly implicated. Recognising this changing trend, we conducted a study to investigate the evolving aetiology of onychomycosis in Sri Lanka, with particular emphasis on the emerging predominance of non-dermatophyte fungi.

Objectives: To describe the spectrum of fungal pathogens isolated from nail samples of patients suspected of having onychomycosis received to the National Reference Laboratory for Mycology over a one-year period.

Methods: A retrospective analysis was performed on nail samples submitted between July 2024 and June 2025 for fungal culture. Demographic data, potassium hydroxide microscopy results, and culture findings were extracted from laboratory records.

Results: A total of 334 samples were analysed: 100 from males and 234 from females. Thirty-six samples were from patients less than 18 years of age. There were 108 (32.3%) fingernail samples and 226 (67.7%) toenail samples. In 133 (39.8%) samples, fungal elements were observed with 10% potassium hydroxide. Fungal hyphae (n=71) and yeasts (n=42) were commonly observed, while in a minority, only fungal spores/arthrospores were seen. Of the 229 (68.5%) positive cultures, 20 yielded mixed growth of fungi. The most frequently isolated fungi were *Candida* spp. (24.9%), *Aspergillus* spp. (22.1%) and *Fusarium* spp. (20.3%). *C. parapsilosis* was the predominant yeast species. Less frequent isolates included *Scytalidium* spp. (7.2%) and *Cladosporium* spp. (6.7%). Only two *Trichophyton* isolates were recovered. Eighty-five samples were negative for both microscopy and culture.

Conclusion: *Candida*, *Fusarium*, and *Aspergillus* species were the leading causes of onychomycosis in this cohort, while dermatophytes were rare. These findings highlight a shifting epidemiology in tropical climates and emphasise the importance of considering yeasts and NDMs in diagnosis and treatment strategies.

Corresponding Author: K A C C Pemasiri Email: m30182@pgim.cmb.ac.lk

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Abstract 13

Intraoperative leak testing with methylene blue in bariatric surgery: A safety check or surgical necessity

J Shelton[1], J A Vasanthan[1], T Wijerathna[2]

[1]Colombo South Teaching Hospital, [2]Department of Surgery, University of Sri Jayewardenepura

Keywords: Bariatric Surgery, Methylene Blue, Intraoperative leak test (IOLT), Anastomotic leak

Introduction: Bariatric surgery is the most effective treatment for morbid obesity, with laparoscopic sleeve gastrectomy (LSG) and one-anastomosis gastric bypass (OAGB) widely practiced in Sri Lanka. Staple line or anastomotic leaks remain serious complications, reported internationally in 0.5–3% of OAGB and 1–5% of LSG cases. Intraoperative leak testing (IOLT) with methylene blue (MB) is a simple method for detecting technical defects, although its predictive value is debated.

Objectives: To evaluate the effectiveness of methylene blue IOLT in detecting leaks during bariatric surgery in a Sri Lankan cohort and compare findings with international data

Methods: A retrospective cohort study of 56 patients undergoing bariatric surgery at Colombo South Teaching Hospital (2014–2015) was conducted. Procedures included OAGB (n=47) and LSG (n=9). Following anastomosis or staple line creation, 50–100 ml of diluted MB was instilled via a bougie with distal clamping. Extravasation was considered a leak and repaired immediately. Postoperative leaks were diagnosed clinically and confirmed radiologically.

Results: The mean age was 39 years (22–61), and the mean BMI was 41.7 kg/m², with 80% female patients. Comorbidities included diabetes (54%), hypertension (27%), and obstructive sleep apnea (11%). IOLT was performed in all cases, with three positive tests (5.3%), two at OAGB gastrojejunostomies and one at an LSG staple line, all repaired intraoperatively. This detection rate was higher than the Birmingham series (2.6%) but comparable to Iranian data (6.4%). One postoperative leak (1.8%) occurred following LSG (11.1% of LSG cases), successfully managed with stenting and drainage. No leaks occurred after OAGB. Leak occurrence showed no correlation with comorbidities, operative time, or surgeon experience.

Conclusion: Methylene blue IOLT is safe, inexpensive, and allows immediate repair of technical defects. However, its sensitivity is limited, and routine use does not significantly reduce postoperative leaks. Selective application in high-risk or technically complex cases may be more appropriate. Larger prospective studies are required to define its precise role.

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Abstract 14

Influence of Overweight/Obesity on Morbidity and Mortality of Critically Ill Patients Admitted to Intensive Care Units (ICU) in a Tertiary Care Hospital, Sri Lanka

D N A D H Nirupama[1,2]
[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]District General Hospital, Embilipitiya

Keywords: Critically ill patients, BMI, survival, South Asians

Introduction: As a result of growing obesity epidemic, more patients admitted to ICUs are also overweight or obese. Though obesity is associated with adverse outcomes, recent studies show obese patients have a survival benefit during critical illness. This phenomenon is called "obesity paradox". This is not widely studied for South Asian populations who have a different body composition.

Objectives: To investigate the association of overweight/obesity with ICU outcomes in a representative sample of ICU patients in a tertiary care setting in Sri Lanka

Methods: In this prospective cohort study, all adult patients admitted to ICUs of a tertiary care hospital between November 2024 and February 2025 were included and categorized according to WHO South Asian BMI cut offs into 2 groups: normal BMI (18.5 - 22.9 kg/m^2) and overweight (23 – 24.9 kg/m^2) /class 1 obese (25 – 29.9 kg/m^2) (OW/Ob 1). Logistic regression analysis was used to estimate adjusted odds ratios in order to explore the association between BMI and ICU/ hospital mortality, ICU morbidity (acute kidney injury, acute liver injury, acute coronary syndrome, infections), duration of mechanical ventilation (MV) and ICU/ hospital length of stay (LOS).

Results: The study included 166 patients. After adjusting for confounders, OW/Ob 1 was not associated with ICU (OR: 1.97, CI: 0.81-4.83, p=0.136) and hospital (OR: 2.06, CI: 0.81 – 5.22, p=0.13) mortality. Furthermore, among the ICU related complications, only the risk of developing acute liver failure was significantly low in OW/Ob 1 compared to normal BMI (OR: 0.29, CI: 0.12-0.71, p=0.006). OW/Ob 1 was significantly associated with increased hospital LOS (β = 0.12, 95% CI: 0.03 to 4.5, p = 0.05), however not with ICU LOS or duration of MV.

Conclusion: In this single center cohort study of South Asian population, survival paradox was not observed in critically ill OW/Ob 1 patients. Larger multicenter studies including all BMI categories are recommended to further investigate this association.

Corresponding Author: D N A D H Nirupama Email: m31097@pgim.cmb.ac.lk

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Abstract 15

Association between primary breast tumour location and axillary lymph node Positivity in female breast cancer patients

M P A M Weerasinghe[1], M N F Nimza[2], B N L Munasighe[2], D K S Solangaarachchi[1], K A D Perera[2]

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]Department of Surgery, Faculty of Medicine, University of Kelaniya, Sri Lanka

Keywords: Breast cancer, tumour location, axillary lymph node positivity

Introduction: Breast cancer is the most common malignancy among women in Sri Lanka, accounting for 3,000 new cases annually. Axillary lymph node (LN) status is an important prognostic factor, influencing recurrence and survival. Tumor location may affect nodal spread, but local evidence is limited.

Objectives: To determine the association between primary tumor location and axillary LN positivity, and to evaluate related clinicopathological predictors among surgically treated breast cancer patients

Methods: A retrospective study on female patients ≥18 years with invasive breast carcinoma who underwent primary surgery and axillary staging (sentinel lymph node biopsy or axillary clearance) between December 2019 and December 2024 at CNTH. Patients with multicentric disease, prior breast surgery, T4 tumors, or metastasis were excluded. Data on demographics, tumor location (classified per ICD-O-3/SEER), size, grade, and histology were analyzed. Associations were assessed with chi-square and Mann–Whitney U tests, multivariate logistic regression was used to identify independent predictors of LN positivity.

Results: A total of 502 tumors (486 patients, including sixteen bilateral) were analyzed. Median age was 58 years (IQR 49–66); median tumor size was 30 mm (IQR 22–42). Most tumors were T2 (62.2%), invasive carcinoma NST (88.4%), grade 3 (46.2%), and located in the upper outer quadrant (UOQ, 38.6%). LN positivity was seen in 51.0% (n=256). On univariate analysis, LN positivity was associated with tumor location [χ^2 (5)= 14.0, p=0.015], stage (p=0.002), histological subtype (p=0.017), grade (p<0.001), and size (p<0.001). Multivariate analysis identified larger tumor size (aOR 1.019 per mm, 95% CI, 1.007-1.031, p=0.001), lower inner quadrant (LIQ, aOR 0.409, 95% CI 0.197-0.849, p=0.016), and grade 2 tumors (aOR 0.405, 95% CI 0.230-0.714, p=0.002) as independent predictors. Age was not significant.

Conclusion: This study provides novel evidence for location-specific patterns of lymph node metastasis in patients, with LIQ tumours demonstrating significantly lower risk of axillary involvement. Combined with tumour size, histological characteristics, and grade, tumour location emerges as an independent predictor that could enhance clinical decision-making and surgical planning.

Corresponding Author: M P A M Weerasinghe Email: m37173@pgim.cmb.ac.lk

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Abstract 16

Employee green competencies and character quality towards employee green behaviour

S N Jayasinghe

Postgraduate Institute of Medicine, University of Colombo

Keywords: Employee Green Competencies, Employee Character Quality, Employee Green Behaviour, Green Human Resource Management

Introduction: Environmental degradation and climate change have emphasized the urgency for organizations to embed sustainability into their operations. In the banking sector, where environmental impact is often indirect, encouraging employee-driven green practices is important in advancing sustainable practices. This study investigates the influence of employee green competencies (EGC) on employee green behavior (EGB) and examines the moderating role of employee character quality (ECQ) among executive-level employees in the licensed commercial banks in Sri Lanka.

Objectives: (1) to explore the impact of EGC comprising green knowledge, skills, and attitudes in EGB, and (2) to determine whether ECQ strengthens this relationship

Methods: A stratified random sample of 303 executives was surveyed using a structured, self-administered questionnaire. The instrument measured EGC, ECQ, and EGB across 33 validated items on a five-point Likert scale. Data were analyzed using SPSS (V26.0) through correlation, regression, and hierarchical regression to test the direct and moderating effects.

Results: Findings revealed a strong positive relationship between EGC and EGB ($r = 0.580$, $p < 0.01$), with EGC explaining 33.7% of the variance in EGB. All three competency dimensions significantly contribute to EGB: Green Knowledge ($\beta = 0.120$, $p < 0.05$), Green Skills ($\beta = 0.219$, $p < 0.05$), and Green Attitudes ($\beta = 0.159$, $p < 0.05$). Moreover, ECQ was found to significantly moderate the relationship ($\Delta R^2 = 0.047$, $p < 0.05$), indicating that employees with strong character qualities are more likely to convert competencies into green behavior.

Conclusion: The study highlights that developing both green competencies and character quality is vital for cultivating green behavior. Theoretical contributions include validating social cognitive theory in green human resource management contexts, while managerial implications stress integrating green competencies and character assessments into human resource management strategies to foster a green culture within the organization.

Corresponding Author: S N Jayasinghe Email: arexams2@pgim.cmb.ac.lk

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Abstract 17

Awareness, perception, and attitudes of secondary-level and administrative staff regarding quality assurance activities at a higher education institution

D D G P S Daniels, H D Molligoda, Sewwandi Karunathilake, Devin Wickramarathne, T M S Sathsarani

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: IQAC, Awareness, Perceptions, attitudes

Introduction: Quality assurance (QA) activities are essential to maintain and enhance academic standards in postgraduate medical education. However, the awareness and engagement of secondary-level and administrative staff in such processes remain underexplored.
Objectives: Study aims to assess awareness, perceptions, and attitudes of non-academic staff at PGIM regarding the Internal Quality Assurance Cell (IQAC) and its activities.
Methods: A cross-sectional survey among non-academic and administrative staff at PGIM using a structured self-administered questionnaire. Data was collected on demographics, awareness of IQAC, prior training, participation in QA-related activities, perceptions on the role of IQAC, and barriers to involvement. Descriptive statistics were used to summarize findings.
Results: A total 45 staff members participated, 94.2% female and 5.8% male, with a mean age of 34 years. Only 20.5 % reported receiving training on QA or IQAC-related topics. Awareness of the existence of the IQAC was 77.78%, but knowledge of its main functions was low. While general awareness exists, detailed knowledge and engagement with IQAC remain insufficient among non-academic staff. Perception scores (Likert scale 1–5) indicated that staff strongly agreed IQAC plays an important role in improving PGIM's quality (mean = 33.3), but fewer agreed that they felt confident contributing ideas. A majority expressed willingness to be more involved in QA initiatives (mean = 37.5). The need for training was also highlighted (mean = 38.6). The main barriers identified were lack of awareness (50%), no invitations to participate (22.7%), and time constraints (47.7%).
Conclusion: Secondary-level and administrative staff at PGIM demonstrate moderate awareness but limited practical involvement in QA activities. While their perceptions toward the importance of IQAC are positive, gaps exist in training, confidence, and opportunities for participation. Targeted awareness programs, structured training, and inclusive engagement strategies are recommended to strengthen the contribution of non-academic staff in sustaining institutional quality standards.

Corresponding Author: D D G P S Daniels Email: saradmin@pgim.cmb.ac.lk

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Abstract 18

Evaluation of clinical outcomes in patients admitted with cellulitis in a surgical unit

A R M Isthiyak[1] and E Rajasegaram[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]National Hospital of Sri Lanka

Keywords: Cellulitis, Surgical outcomes, Comorbidities, Diabetes mellitus, Hospital stay duration

Introduction: Cellulitis is a common and potentially serious bacterial infection of the skin and subcutaneous tissues, often leading to notable morbidity, particularly among hospitalized patients.

Objective: This study aims to evaluate clinical outcomes of patients admitted with cellulitis to surgical wards, identify risk factors for poor prognosis, and assess the impact of comorbidities and treatment approaches.

Methods: A retrospective cohort study was conducted on 120 cellulitis patients admitted over six months. Data on demographics, comorbidities, cellulitis severity (CREST criteria), complications, treatment modalities, and outcomes were analyzed using SPSS version 25. Ethical approval: AJ/ETH/COM/2025/Feb.

Results: Of the patients, 54% were male, with a mean age of 58.8 years. Most had grade II cellulitis (43.3%). Complete resolution occurred in 55%, partial improvement in 16.7%, while 28.3% developed complications, including abscesses (11.7%), necrotizing fasciitis (8.3%), sepsis (7.5%), and one death (0.8%). Higher cellulitis grade, elevated WBC, and serum creatinine levels at admission were significantly associated with poor outcomes ($p < 0.05$). Diabetes mellitus (present in 54.2%) was linked to longer hospital stays and more complications (6.9 ± 3.7 vs. 5.4 ± 4.1 days; $p < 0.05$). Patients undergoing surgical intervention had longer stays compared to those treated conservatively (8.8 ± 3.8 vs. 3.6 ± 1.73 days). The 30-day readmission rate was 12%.

Conclusions: Cellulitis remains a major cause of surgical admissions, with outcomes influenced by severity and comorbidities, particularly diabetes. Early diagnosis and tailored management can improve prognosis, highlighting the need for standardized national treatment protocols and enhanced clinician training in Sri Lanka.

Corresponding Author: A R M Isthiyak Email: dristhiyak@gmail.com

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Abstract 19

Assessment of risk factors contributing to the occurrence of inguinal hernias: A cross-sectional study in a tertiary care setting

T G K Weranja [1], D Ariyaratne[2], J Vishnukanthan [1], D P Dissanayake [3]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Colombo South Teaching Hospital, Kalubowila, [3]Colombo South Teaching Hospital, Kalubowila

Keywords: Inguinal hernia, Risk factors, Cross-sectional study, Tertiary care, Hernia epidemiology

Introduction: Inguinal hernias involve the protrusion of abdominal contents through the inguinal canal and remain one of the most common day-case surgeries worldwide. Prompt recognition and intervention are essential to reduce associated morbidity.

Objective: This study aimed to identify and evaluate risk factors contributing to the development of inguinal hernias in patients presenting to a tertiary care hospital.

Methods: A cross-sectional descriptive study was carried out among 150 patients diagnosed with inguinal hernias. Data on demographics, hernia characteristics, and potential risk factors were systematically collected and analyzed.

Results: The majority of patients were male (96%) with a mean age of 55 years. Age distribution showed 23.3% were aged 41–50, 25.3% aged 51–60, and 41.3% over 60 years. Right-sided hernias were most common (53.3%), followed by left-sided (32.7%) and bilateral (14%). Key risk factors included heavy weightlifting (61.3%), smoking (53.3%), chronic constipation (34%), chronic cough (30%), voiding symptoms (32%), alcoholism (38%), family history (23.3%), obesity (16.6%), and diabetes (22%). Additionally, 4.7% of right-sided hernia cases had a history of appendicectomy. Primary hernias accounted for 94% and recurrent hernias for 6%.

Conclusions: Inguinal hernia predominantly affected middle-aged and elderly males, with right-sided hernias being the most common presentation. The findings highlight heavy weightlifting, smoking, chronic constipation, chronic cough, and alcoholism as major contributory risk factors. The predominance of primary hernias underscores the importance of preventive strategies and early risk-factor modification to reduce the overall disease burden.

Corresponding Author: T G Kanil Weranja Email: gamagekanil@gmail.com

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Abstract 20

Evaluating the role of diagnostic laparoscopy in right iliac fossa pathologies in the context of inconclusive sonographic evidence

T G K Weranja[1], D Ariyaratne[2], J Vishnukanthan[2], D P Dissanayake[3]

[1]Postgraduate Institute of Medicine, Colombo, [2]Colombo South Teaching Hospital, Kalubowila, [3]Colombo South Teaching Hospital, Kalubowila

Keywords: Diagnostic laparoscopy, right iliac fossa, appendicitis, pelvic inflammatory disease, acute abdomen

Introduction: The right iliac fossa (RIF) is a common site of acute abdominal pain, frequently associated with appendicitis and gynecological conditions. When sonographic findings are inconclusive, diagnostic laparoscopy provides real-time visualization and the opportunity for immediate intervention.

Objective: This study aimed to evaluate the diagnostic and therapeutic role of laparoscopy in patients presenting with RIF pain and in the setting of inconclusive sonographic evidence.

Methods: A retrospective analysis was conducted over a 7-month period in the surgical unit of a tertiary care hospital. Seventy (70) patients (41 females and 29 males) with RIF pain and inflammatory findings on ultrasound underwent diagnostic laparoscopy. Intraoperative findings and interventions were reviewed and analyzed.

Results: In females, laparoscopic findings included appendicitis (n=16), pelvic inflammatory disease (PID) (n=7), both appendicitis and PID (n=2), ovarian torsion (n=1), ovarian cysts (n=4), mesenteric adenitis (n=4), appendicular mass (n=3), and normal findings (n=4). Among males, findings included appendicitis (n=20), ileitis (n=2), mesenteric adenitis (n=2), appendicular mass (n=3), and normal findings (n=2). Overall, appendicectomy was performed in 57% of the cohort, and gynecological interventions in 12% of females.

Conclusions: Diagnostic laparoscopy enhances accuracy in evaluating RIF pathologies when ultrasound findings are inconclusive. It reduces unnecessary appendectomies and helps identify gynecological conditions, particularly in reproductive-age females.

It improves diagnostic accuracy, lowers negative appendectomy rates, and prevents missed gynecological diagnoses. Additionally, it allows simultaneous diagnosis and treatment of coexisting conditions with reduced morbidity and better cosmetic outcomes. This dual diagnostic-therapeutic advantage makes it a preferred approach in acute abdominal evaluation.

Corresponding Author: T G Kanil Weranja Email: gamagekanil@gmail.com

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Abstract 21

Immunophenotypic analysis of B-cell acute lymphoblastic leukaemia at a tertiary care hospital in Sri Lanka

B L T Balasuriya[1], D C P Fernando[1], G G S Madusanke[1], G G P N Kulasooriya[1], C C Kariyawasan[1]

[1]Department of Haematology, Sri Jayewardenepura General Hospital, Thalapathpitiya, Nugegoda, Sri Lanka.

Keywords: B-cell Acute Lymphoblastic Leukaemia, flow cytometry, immunophenotyping, aberrant antigens, Sri Lanka

Introduction: B-cell Acute Lymphoblastic Leukaemia (B-ALL) is an aggressive malignancy caused by uncontrolled proliferation of immature lymphoblasts. While it predominantly affects children, adult cases often display distinct biological and clinical features.

Objectives: This study evaluated the immunophenotypic profile of B-ALL in a Sri Lankan cohort, emphasizing aberrant antigen expression.

Methods: A descriptive analytical study was conducted on 47 newly diagnosed B-ALL patients at Sri Jayewardenepura General Hospital between June 2021 and December 2024. Diagnosis was based on peripheral blood and bone marrow morphology, supported by eight-color flow cytometry. Standard B-lineage markers (CD19, CD10, cyCD79a, CD20), immaturity markers (CD34, cyTdT, HLA-DR, CD117), and aberrant myeloid antigens (CD13, CD33, CD15, cyMPO) were assessed. Antigen positivity was defined as >20% blast expression.

Results: The cohort comprised 32 adults (68.1%) and 15 pediatric cases (31.9%), with a mean age of 35.1 years (range 2–82) and near-equal gender distribution (51.1% female). Core B-lineage markers showed high expression: CD19 (97.9%), CD10 (89.4%), and cyCD79a (93.6%). CD20 was positive in 42.6% despite its usual absence in precursor B-ALL. Immaturity markers included CD34 (97.9%), cyTdT (66%), and universal HLA-DR positivity. CD117 was largely absent, with dim expression at 10.6%. Typical B-ALL without aberrancy comprised 53.2% of cases. Aberrant myeloid antigen expression was frequent: CD13 (32%), CD33 (30%), CD15 (8.5%), and rare cyMPO (2.1%). Adults showed higher aberrancy, with combined myeloid expression in ~35–40% compared to ~25–30% in pediatric cases. CD15 positivity was twice as common in adults (12.5% vs 6.7%), indicating greater phenotypic heterogeneity.

Conclusion: B-ALL in this Sri Lankan cohort demonstrated immunophenotypic heterogeneity, with consistent diagnostic marker expression and frequent aberrant myeloid antigen co-expression, particularly in adults. These findings reinforce the diagnostic utility of CD19, CD34, and cyCD79a while suggesting potential prognostic implications of aberrant myeloid markers.

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Corresponding Author: C C Kariyawasan Email: chitrak64@yahoo.com

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Abstract 22

Sustaining electronic medical records (EMRs) in low-resource settings: Evidence from Sri Lanka

D A N Samarasinghe [1], R B Marasinghe [2], E P Wickramasinghe [3]

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]University of Sri Jayawardenepura, Sri Lanka, [3]Health Promotion Bureau, Sri Lanka

Keywords: Electronic Medical Records, EMR, Sustainability, Low-resource setting

Introduction: EMRs are vital for equitable healthcare delivery and have been implemented in over 100 hospitals in Sri Lanka. However, the sustainability of these systems is often overlooked. Economic challenges have further strained the sustainability of EMRs. This study explored the key factors influencing the continued use and effectiveness of EMRs in a low-resource setting.
Objectives: This study aimed to identify the challenges and enablers affecting the long-term sustainability of EMRs in low-resource healthcare settings such as Sri Lanka.
Methods: The research was conducted in five hospitals in Sri Lanka's Western Province, each of which had successfully implemented and used EMRs for over five years. Data were gathered through validated questionnaires from 68 EMR users and 146 healthcare recipients, selected via random sampling. Additionally, 15 stakeholders, including health informatics consultants, medical officers, and developers, were interviewed using a snowball sampling approach. Quantitative and thematic analyses were used to evaluate the data.
Results: Results showed multifaceted sustainability issues. While 91% of users found EMRs user-friendly, only 42% found the data beneficial for daily tasks. Initial training was lacking for 66% of users, and 82% reported no access to ongoing training. Among healthcare recipients, 69% were unaware of EMR benefits, though 55% perceived improved healthcare delivery and supported system continuation. Notably, only 19% of healthcare providers believed current EMR implementations would be sustained. Key barriers included limited resources, resistance to change, and technical challenges. Interviews identified essential enablers, including recurrent funding, sufficient staffing, effective change management, supportive policies, system interoperability, continuous training, and patient engagement.
Conclusion: Sustaining EMRs in low-resource settings requires strong leadership, continuous funding, user training, and policy support to overcome technical and organisational barriers, ensuring long-term efficiency and equity in healthcare delivery.

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Corresponding Author: D A N Samarasinghe Email: naliksam1@gamil.com

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Abstract 23

Competencies of medical officers in charge, factors associated, and readiness of primary medical care units in early diagnosis and initiation of treatment for leptospirosis in Ratnapura District

P V P D Vithana[1], Thushani Dabrera[2]

[1]National Hospital, Galle, [2]Epidemiology Unit, Colombo

Keywords: Leptospirosis, Primary Medical Care Units (PMCU), Competencies, Ratnapura.

Introduction: Leptospirosis presents a significant public health challenge in tropical regions such as Ratnapura, Sri Lanka, where Leptospirosis is common. This study assesses medical officers' readiness to manage the disease, highlighting gaps and strengths to enhance patient care and community impact.
Objectives: To assess the medical officer's proficiency, related variables, and readiness to manage leptospirosis situations in Primary Medical Care Units in Ratnapura.
Methods: A cross-sectional study was conducted using a pre-tested self-administered questionnaire among 100 medical officers from 70 Primary Medical Care Units (PMCUs) in Ratnapura District. Data were collected both physically and electronically. Frequencies and knowledge scores were calculated, and associations were analyzed using Pearson's chi-square test or Fisher's Exact Test (FET) at a 0.05 significance level. Awareness of the Microscopic Agglutination Test (MAT), the gold standard for leptospirosis diagnosis, was also assessed.
Results: Of 100 medical officers, 82 responded. The majority were aged 30-40 (64.6%), and the gender split
was 52.4% male and 47.6% female. The majority held MBBS/MD degrees (96.3%), with 42.7% having 2-3 years of experience Only 13.4% recognized Leptospirosis as bacterial, while 97.6% identified rats as primary vectors. Awareness of the main transmission (98.8%) and high-risk groups was noted. 63.4% regarded MAT as the gold standard, and awareness of doxycycline for prophylaxis was high (95.1% pre-exposure, 78% post-exposure). Medical officers had a mean score of 81.43 with slight left skewness. Associations were found with gender and resource availability, but not with age, education, or experience. Notably, 54.9% live over 10 km from PMCUs, and 59.8% lack investigative facilities. While 78% of PMCUs have adequate doxycycline stocks, 67.1% lack IEC materials,

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Conclusion: Enhancing training for medical staff, increasing medication availability, and improving communication through awareness programs are vital for better managing leptospirosis and protecting public health in Ratnapura district.

Corresponding Author: P V P D Vithana Email: piumiv7777@gmail.com

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Abstract 24

Adherence to peripheral intravenous cannula care guidelines in a general medical ward, Sri Jayewardenepura General Hospital, Sri Lanka

R M D L Rathnayaka[1], C De Silva[2], R A R Ramzani[1]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Sri Jayewardenepura General Hospital, Thalapathpitiya, Nugegoda

Keywords: Peripheral Intravenous Cannula, Aseptic Technique, Infection Control, Guideline Adherence, Clinical Audit

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Introduction: Peripheral venous cannulas are an essential component of inpatient care but can lead to various complications if handled improperly. To prevent these complications, local and international guidelines have been developed. Ensuring adherence to these guidelines by healthcare staff is crucial to maintaining high-quality patient care.
Objectives: To evaluate adherence to the Hospital Infection Prevention & Control Manual by the Sri Lanka College of Microbiologists (SLCM, 2021) and the World Health Organization (WHO) guidelines (2024) for the prevention of bloodstream infections and other infections associated with the use of intravascular catheters, and to implement necessary improvements.
Methods: This audit was conducted in a general medical ward at Sri Jayewardenepura General Hospital over a two-week period. A total of 103 procedures were assessed using a structured checklist based on the Hospital Infection Control Manual (SLCM) and WHO guidelines. Data were analyzed descriptively.
Results: Among the 96 directly observed procedures, proper hand hygiene was performed in only 5.2% of cases. Appropriate skin preparation was observed in 11.4% of cases, and aseptic technique was maintained throughout the procedure in only 1% of cases.
Among all 103 procedures, sterile dressing was not applied over the cannula insertion site in 93.2% of cases. No documentation was recorded in 32% of cases, while 61.2% had incomplete documentation. Dressing integrity was maintained in 86.4% of cannulas. Cannula-associated complications such as infection, swelling, or dislodgement were observed in 9.7% of cases.
Conclusion: The audit identified significant deviations between current practices and recommended standards, particularly in maintaining sterility during cannula insertion and in documentation. Educational interventions, the introduction of a locally adapted checklist, and regular assessment and supervision are recommended to improve compliance.

Corresponding Author: R M D L Rathnayaka Email: m37467@pgim.cmb.ac.lk

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Abstract 25

Immediate perioperative outcomes of complex hepatobiliary and pancreatic surgeries at peripheral tertiary care units

H P H Pathirathne, N S Atulugama

Teaching Hospital, Kurunegala

Keywords: HPB surgeries, morbidity, mortality, pathology

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Introduction: Complex hepatobiliary and pancreatic (HPB) surgeries are considered to be associated with significant morbidity and mortality.
Objectives: While improved outcomes are suggested at main hepatobiliary units, similar outcomes are achievable in peripheral units, thus reducing patient waiting times and congestion in main units.
Methods: Twenty-nine liver resection cases and 15 pancreatic surgical cases at Teaching Hospital Kurunegala and 22 liver resection cases and 25 pancreatic surgical cases at Teaching Hospital Badulla were followed up prospectively and stored in an encrypted database. The perioperative morbidity, mortality and pathological data over the period of study were analyzed retrospectively.
Results: Thirty-eight major and 13 minor/intermediate liver resections were included. Five had combined liver and rectal cancer resections. One was combined with peritoneal cytoreduction. The median hospital stay was 13 days (5-53d). There were 4 (7.84 %) perioperative deaths. Six had major morbidity and 7 had minor morbidity. Histologically, 9 HCC, 16 colorectal adenocarcinomas, 2 breast adenocarcinomas, 1 gallbladder adenocarcinoma, 5 cholangiocarcinomas were included.
Thirty-three Whipple's and 7 distal pancreatectomy cases had a median hospital stay of 20 days (4-44d). Three cases had vascular resections.
Five (16.66 %) perioperative mortalities and 14 major morbidities were recorded. Histologically, 25 adenocarcinomas, 2 neuroendocrine, 2 benign tumors were included.
Conclusion: Complex HPB surgeries can be safely performed in peripheral units with acceptable perioperative outcomes.

Corresponding Author: H P H Pathirathne Email: pubudiniehansika@gmail.com

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Abstract 26

Socio demographic profile and selected predictors of pain perception among patients undergoing fixed orthodontic treatment at the Orthodontic Unit, National Dental Hospital (Teaching), Sri Lanka

H G R N Weerasinghe[1], I R Perera[2], W M Senadeera[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]National Dental hospital (teaching), Colombo

Keywords: pain perception, fixed orthodontic treatments, extractions

Introduction: Pain control during fixed orthodontic treatment is a significant concern for both clinicians and patients.

Objectives: The study aimed to investigate the duration of pain, the level of self-medication, effect of pain on daily performances and to determine factors associated with pain perception.

Methods: The study was conducted among 328 patients aged >12 years attending the orthodontic unit, using stratified random sampling. A pre-tested interviewer administered questionnaire was used to collect data and a self-administered visual analogue scale (VAS) was used to assess the intensity of pain perception. Descriptive statistics and paired t-test were used to analyze data by using Statistical Package for Social Sciences version 21.

Results: The mean age of the study sample was 20.4 $\pm$ 5.9 years ranging from 12- 37 years and there were more males (n=197, 60%) than females. Pain perception peaked at 24 hours after the procedure and was minimum after one month. No significant difference was found in terms of gender, different age groups or social class in relation to pain perception. There was a statistically significant difference in pain scores between patients who underwent extractions and patients without extractions. Furthermore, pain perception score at 24 hours significantly correlated with the total score of the oral impact on daily performance index (Pearson correlation 0.147, P<0.01) and the level of analgesic consumption. Involvement of both jaws compared to single jaw also showed a significantly higher pain intensity up to 2 days (P<0.05). Although there was no correlation between pre or post treatment plaque score with the level of pain perception, the mean post-plaque score of 2.6+5.7 showed a statistically significant increase compared to pre-plaque score of 4.0+7.0 (P<0.001).

Conclusion: There is no difference in pain perception with regards to sex, age, socio economic status and oral hygiene status and patient education, counseling, oral hygiene instructions and considering prophylactic use of analgesics, especially within the first 24-48 hours would help to provide best treatment experience to patients with minimal pain.

Corresponding Author: H G R N Weerasinghe Email: d02853@pgim.cmb.ac.lk

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Abstract 27

The Patterns of Spinal Injuries Presenting to the Only Neurosurgical Centre in a Province as an Experience of a Single Neurosurgeon

K A A J Perera[1,2], J H M A E Jayapathma[2], P R Liyanawaduge[2]

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]Teaching Hospital, Ratnapura

Keywords: patterns of spinal injuries. mid cervical spine injuries

Introduction: Spinal injuries are much common among low-middle income countries like Sri Lanka. Twenty percent of major spinal injuries will have a second injury at another level.

Objectives: The objective of our study is to describe the unique patterns of spinal injuries with correlation to its mechanism and occupation of patients.

Methods: A retrospective analysis was done on patients admitted with spinal injuries between October 2024 and May 2025. Patterns of spinal injuries were categorized according to the site, and mechanisms of injury, circumstances and CT/MRI diagnosis in each case were identified separately. Correlations of these factors to the patterns of injury were analysed statistically.

Results: Patients included 78. Male: female ratio was 34:5. Median age was 56 years. (Range 17 – 80). Majority (59) had cervical spine injuries (75%) with unique site being C3 – C6 level. Remaining 19 patients (25%) had thoraco-lumbar injuries with the commoner site being T12 – L2 level. Fall was the main mechanism (75%), out of which 57.6 % were ground level falls and the remainder were falls from height. Eleven patients (14%) suffered falls while at work. Road traffic crashes (RTC) comprises 19.2% and only four patients sustained assaults. More than half (64%) had background degenerative spine disease in cervical spine injury group.

Conclusion: The most unique pattern was mid cervical spine injury and significant correlation was found with falls. Nevertheless, occupations of patients were not related to the patterns of spinal injuries.

Corresponding Author: K A A J Perera Email: m28977@pgim.cmb.ac.lk

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Abstract 28

Flood preparedness behaviour and associated factors among pregnant women and mothers attending vaccination clinics at Akurana Divisional Secretariat Division

W M T V D Wijekoon[1], D A Gunawardane [2]

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2]Faculty of Medicine, Peradeniya

Keywords: Community flood preparedness, Flood Preparedness Behavior Score, Pregnant women attending antenatal clinics and mothers attending vaccination clinics, Akurana MOH

Introduction: Flood preparedness measures followed by individuals and the whole community is vital and leads to beneficial outcomes and minimizes flood-related losses.

Objectives: To describe the flood preparedness behavior and associated factors among pregnant mothers and mothers attending vaccination clinics residing in Akurana Divisional Secretariat division (DSD).

Methods: Five flood affected Grama Niladhari Divisions (GNDs), in Akurana DSD was selected to conduct a community-based descriptive cross-sectional study, enrolling 425 (minimal sample size calculated using Lwanga and Lamshow formula) women attending antenatal and vaccination clinics in Akurana DSD, using a convenient sampling technique. Each participant was considered to represent aflood affected family. Pre-tested, validated interviewer-administered questionnaire was used for data collection. Questions were used to assess knowledge, attitudes and practices adopted. The scale of the individual preparedness for floods described by Osman et al was used to assess individual flood preparedness behavior which separately assess the flood preparedness in pre, during and post flood phases. SPSS version 23 was used for analysis. One way analysis of variance (ANOVA) was used to test for the statistical significance of the group differences. t-test was used to define any significant difference between two independent groups

Results: The total mean flood preparedness behavior score obtained in the Flood Preparedness Behavior Score (FPBS), in the pre-flood phase was 12.79 with a Standard Deviation (SD)=4.72 Out of total 35), during floods score 22.33 (SD=8.12 Out of 35), post-floods phase 24.03 (SD=9.95 Out of 55). This revealed comparatively less flood preparedness during pre and post flood phases. The study findings show a statistically significant association between total FPBS, with the categories of age, residing Grama Niladhari Division (GND), ethnic group, educational level, religious group, occupation category, income category, family type, inmates' number, storey number, clinic attending, duration of residing, past experience of floods, property ownership ($p<0.05$). Association was not found with marital status, property type, employment status, having a disabled member, family support level, floods related displacement ($p<0.05$).

Conclusion: The current study revealed overall inadequate flood preparedness in the pre-floods, during-floods, post-floods phases. We recommend paying attention to improving the flood preparedness behavior of families residing in flood-prone Akurana DSD.

Corresponding Author: W M T V D Wijekoon Email: m37886@pgim.cmb.ac.lk

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Abstract 29

Assessment of cardiometabolic risk factors in patients with chronic liver cell disease at Teaching Hospital Anuradhapura: Insights into metabolic dysfunction-associated steatotic liver disease (MASLD) and metabolic dysfunction-and alcohol-related liver disease (MetALD) phenotypic profiles

N P Premawardana[1], G C V De Silva[1], S D N Senadhira[1], J Warnasekara[1], H D Umayanga[1], H A N Fonseka[1], K D Samarasinghe[2], N Shanmuganathan[2], Y D Karunarathne[1], S S Karawita[1]

[1]Teaching Hospital Anuradhapura, [2] Postgraduate Institute of Medicine, University of Colombo

Keywords: Chronic Liver Cell Disease (CLCD), Metabolic dysfunction-associated steatotic liver disease (MASLD), Metabolic dysfunction-and Alcohol-related Liver Disease (MetALD), Cardiometabolic Risk Factors, Diabetes Mellitus

Introduction: Metabolic dysfunction-associated steatotic liver disease (MASLD) and alcohol-related liver disease (ALD) frequently overlap and may interact synergistically, exacerbating both the onset and progression of hepatic injury. Steatotic liver disease (SLD) characterized by the presence of at least one metabolic risk factor in conjunction with moderate to high levels of alcohol consumption, is termed MetALD (Metabolic dysfunction-and Alcohol-related Liver Disease) is used.

Objectives: To assess the burden of cardiometabolic risk factors among CLCD patients in Anuradhapura, Sri Lanka, and examine their association with MASLD and MetALD phenotypes.

Methods: This study utilizes both prospective and retrospective cohort designs. It includes newly and previously diagnosed CLCD patients admitted to the medical wards and followed up at the medical and gastroenterology clinics of THA from June 2024 to June 2025.

Results: Of the total 287 patients, 168 (58.53%) reported moderate to high levels of alcohol consumption. Among these individuals, 104 (61.9%) had at least one additional cardiometabolic risk factor. Diabetes mellitus (DM) was the most prevalent comorbidity, identified in 63 patients. Among those diagnosed with DM, 43 individuals (68.3%) had a disease duration exceeding five years. 68.9% (n = 82) of nonalcoholic patients(n = 119) had at least one cardiometabolic risk factor. Among these individuals, 64.6% (n = 53) were diagnosed with diabetes mellitus (DM), and notably, 53% (n = 28) of those with DM had been living with the condition for more than five years.

Conclusion: Both alcohol-consuming and non-consuming patients had diabetes mellitus. These findings underscore the importance of considering MASLD and MetALD phenotypes in the clinical evaluation and management of CLCD patients.

Corresponding Author: K D Samarasinghe Email: m34654@pgim.cmb.ac.lk

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Abstract 30

A novel approach to prescription auditing: Prescription pattern insights via electronic medical record systems in a shared care cluster divisional hospitals in Sri Lanka

I L A N Darshana[1], P Illangasinghe[1], B Dayarathne[2], P Karunapema[2]

[1]Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, [2] Health information unit, Ministry of Health, Sri Lanka

Keywords: MRS, OPD care, prescription patterns

Introduction: A dedicated electronic Medical Records System (MRS) is essential to ensure accurate, timely, and confidential documentation of patient care. A well-functioning MRS supports clinical decision-making, legal compliance, hospital administration, and research. By centralizing the patient information, the MRS enhances the quality, continuity, and safety of healthcare services provided by the hospital.

Objectives: To assess the prescription pattern in a divisional hospital Galnewa, Sri Lanka by using secondary data in Medical Records System.

Methods: A cross-sectional study was conducted by using Open MRS recorded anonymous secondary data of all the patients visiting Outpatient Department (OPD) of Galnewa Divisional hospital for one month duration in 2025. Only the data recorded from OPD was extracted. The prescription patterns were described by using frequency, percentage, mean and stranded deviation of descriptive statistics.

Results: More than 13000 patients (n=13312) had visited OPD during the study period and majority were females (59.5%). Mean (SD) age of the sample was 37.2(24.7) years while 27.3% were children and 21.3% were elders. Respiratory tract infections (RTIs) (32.9%), musculoskeletal symptoms (13.1%), nonspecific symptoms (11.9%), flue like illnesses (8.5%) and gastrointestinal symptoms (7.8%) were identified as common indications for health seeking behavior in the sample. Nearly 39.0 % of patients were treated with more than five drugs while nearly 1/3rd of the sample (34.6%) had prescribed drugs for five days and above. Paracetamol (68.4%), antihistamine (64.1%), omeprazole (40.0%), diclofenac sodium (29.1%) and famotidine (24.3%) were identified as commonly used drugs. Interestingly, antibiotics were prescribed for 31.0% of the patients.

Conclusion: OPD is overburdened with RTIs, acute and nonspecific symptoms with widespread antibiotic usage. Documentation based on MRS identified as a strength in identifying prescription patterns which can be used to deliver evidence-based practices in OPD care.

Corresponding Author: I L A N Darshana Email: m32902@pgim.cmb.ac.lk

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Abstract 31

Racing against time: Profiling road traffic accident casualties and their pre-hospital transit to the National Hospital of Sri Lanka

A M H Attanayake[1], L Panapitiya[2], A U Gamage[3]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Ministry of Health, Colombo, [3]General Sir John Kotelawala Defence University, Ratmalana

Keywords: RTA, Prehospital care, NHSL

Introduction: Sri Lanka records an annual average of 38000 Road Traffic Accidents (RTA), resulting in 3000 fatalities and 8000 casualties with severe injuries. Timely access to trauma care is critical in reducing RTA-related deaths and complications.
Objectives: This study aimed to describe the case profiles, prehospital care, and transit times of RTA casualties presenting to the National Hospital of Sri Lanka (NHSL).
Methods: This was a descriptive, cross-sectional study conducted at the Accident Service Unit, NHSL, from June 1 to July 15, 2024. A total of 389 RTA casualties were selected through systematic sampling. Data was collected by five trained data collectors using a structured, pretested, and validated interviewer-administered questionnaire. Timings (hh:mm) were documented from hospital records, direct observations, and where necessary, inquiries from patients, their relatives, bystanders and care givers. Data analysis was done with SPSS version 26.0 software.
Results: The RTA casualties, with a male predominance of 3.23:1, ranged in ages from 13.27 to 89.19 years. The mean age was 40.06 (± 16.82). The highest number of casualties was in the 15–29 age group (n=137, 35.2%). Most accidents occurred within Colombo city (n=178, 45.9%). Most casualties (n=203, 52.19%) presented between 4:01 p.m. and 5:00 p.m. Rented vehicles (n=142, 36.5%) were the most common mode of transport to the hospital. The Suwasariya emergency ambulance service transported only 38 (9.8%) casualties. Motorcycle riders were the most vulnerable (n=152, 39.1%), with 26 (11.93%) unhelmeted at the time of the crash. First aid was not provided for 89.7% (n=349) of casualties.
Most of the casualties (n=214,55%) reached NHSL more than one hour from the accident. Based on the hospital triage protocol, it was observed that 60% with imminently life-threatening injuries, and 51.32% with potentially life-threatening injuries, arrived one hour after the time of the accident. The mean time taken to reach the hospital was 3:57 hours (± 5:38).
Conclusion: Most RTA casualties have presented to NHSL beyond the “golden hour,” indicating delays in accessing definitive care. Hence, strengthening prehospital care — including timely first response, effective initial stabilization, and community awareness on preventive methods — is imperative to improve care outcomes.

Corresponding Author: A M H Attanayake Email: hasithaus@yahoo.com

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Abstract 32

Complication Spectrum of Chronic Liver Cell Disease (CLCD) in Anuradhapura, Sri Lanka: Insights from a Hospital-Based CLCD Registry - Preliminary Report

N P Premawardana[1], G C V De Silva[1], S D N Senadhira[1], J Warnasekara[1], H D Umayanga[1], H A N Fonseka[1], K D Samarasinghe[2], N Shanmuganathan[2], Y D Karunarathne[1], S S Karawita[1]

[1]Teaching Hospital Anuradhapura, [2] Postgraduate Institute of Medicine, University of Colombo

Keywords: Chronic Liver Disease (CLD), Hepatic Decompensation, Portal Hypertension, Hepatocellular Carcinoma (HCC), Spontaneous Bacterial Peritonitis (SBP)

Introduction: Chronic liver disease is a progressive condition associated with substantial morbidity and mortality. In its advanced stages, progresses to hepatic decompensation, manifesting as portal hypertension, hepatic encephalopathy, variceal gastrointestinal hemorrhage, and spontaneous bacterial peritonitis. The development of hepatocellular carcinoma (HCC) in this context markedly exacerbates clinical outcomes, further complicating therapeutic management.

Objectives: A detailed CLCD patient registry has been established at Teaching Hospital Anuradhapura (THA) to evaluate the clinical characteristics, complications, and outcomes of patients with CLCD. This report presents a preliminary assessment of the complication spectrum among patients in the CLCD Registry – Anuradhapura.

Methods: This study utilizes both prospective and retrospective cohort designs. It includes newly and previously diagnosed CLCD patients admitted to the medical wards and followed up at the medical and gastroenterology clinics of THA from June 2024 to June 2025. The complication spectrum of this cohort was analyzed.

Results: A total of 287 patients with chronic liver disease were evaluated. The cohort was predominantly male 202 (70.3%), with 96 (33.4%) aged over 65 years. Clinical manifestations of hepatic decompensation were identified in 210 (73.1%). Ultrasonographic findings consistent with portal hypertension were present in 200 (69.6%). Hepatic encephalopathy (HE) was observed at the time of admission in 34 patients (11.9%), while an additional 61(20.9%) developed HE during the course of their illness. Evidence of upper gastrointestinal bleeding, including at least one episode of hematemesis, was documented in 104 (36.1%). Spontaneous bacterial peritonitis (SBP) occurred in 59 patients (20.5%). Moreover, hepatocellular carcinoma (HCC) was diagnosed in 18(6.2%).

Conclusion: A significant proportion of patients presented with advanced liver disease, marked by high rates of decompensation, portal hypertension, and related complications such as encephalopathy, bleeding, and infections. The frequency of hepatocellular carcinoma in this cohort underscores the critical importance of routine screening and early detection strategies.

Corresponding Author: S Niroshan Email: m34107@pgim.cmb.ac.lk

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Abstract 33

Growing up with grief: Proportion and socio-demographic realities of parentally bereaved children under 18 Years in Gampaha District, Sri Lanka

P Illangasinghe[1], P Karunapema[2], P Wijesinghe[3],D Karunapema[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Ministry of Health, Colombo,[3]Lady Ridgway Hospital for Children, Colombo

Keywords: Socio-Demographic Characteristics, Parentally Bereaved Children

Introduction: Bereaved children who have lost a parent or both face a unique set of challenges. Different characteristics lead to significant risks to psychosocial development, education, and economic stability.

Objectives: This study aimed to estimate the proportion and describe the socio-demographic profile of parentally bereaved children under 18 years in Gampaha District.

Methods: A descriptive cross-sectional study was conducted to identify the 1049 parentally bereaved families with children under 18 years of age using a single-stage area survey between May and December 2024, and 2701 bereaved children who had experienced parental loss under 18 years of age were included. The characteristics were described using frequency, percentage, mean, and standard deviation, and the proportion of parentally bereaved children was estimated with a 95% confidence interval.

Results: The proportion of Parentally bereaved children was 650/ 100000 children population (95% CI 626 – 674). Majority 2,145 (79.4%), experienced paternal loss while only 49 (1.8%) had lost both parents. Mean age at bereavement was 8.7 years (SD=5.08). Gender distribution was balanced (males: 50.5%, females: 49.5%). The majority were Sinhala (86.4%) and Buddhist (68.6%). Most children, 2,026 (75.0%), were cared for by their surviving mothers and 201 (7.4%) were cared for by relatives or neighbours. The majority, 2632 (97.5%), belonged to very low, low, or lower-middle income households. Currently 78.8% were schooling; among those who were not schooling, 89 (40%) were school dropouts. Nine teenagers (4%) were married, and 29 (12.9%) were employed Most (87.8%), lived in their own homes as nuclear families (64.4%). One fifth of children524 (19.4%) didn't receive extended family support.

Conclusion: The findings highlight the critical context of poverty, school dropout, and early marriage. Targeted psychosocial, educational, and economic interventions need to support these vulnerable children.

Corresponding Author: I M P C Illangasinghe Email: poojani.illangasinghe@gmail.com

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Abstract 34

The association of selected physiological characteristics and cycling performance among male elite professional cyclists of the Air Force team, Sri Lanka

W J M P S M Silva[1], D M P Karawita[1], S M S Jayaweera[1], A D P Perera[1], S P Senanayake[1]

[1]Department of Physiotherapy, Faculty of Allied Health Sciences, General Sir John Kotelawela Defence University, Sri Lanka

Keywords: Physiological characteristics, elite cyclists, performance level, VO_2 max

Introduction: Cycling is one of the most demanding sports, requiring a combination of physiological abilities to maximize performance.

Objectives: The objective of this study was to determine how the performance level of male elite professional cyclists of Sri Lanka is related to selected physiological traits.

Methods: This descriptive cross-sectional study was conducted with twenty (20) male professional cyclists from the Sri Lanka Air Force. Physiological parameters, including grip strength, quadriceps strength, and hamstring strength, were measured using a hand-held dynamometer. Other parameters including muscular endurance and flexibility were assessed using a leg press machine and sit and reach test respectively. Performance level was examined using the Beep test to determine the maximal oxygen consumption (VO_2 max). Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, General Sir John Kotelawala Defence University (Protocol no: RP/S/2024/05). Data entry and analysis were conducted in SPSS (Version 25). The Associations between these factors were investigated using Pearson correlation analysis.

Results: The mean VO_2 max was 51.61 ± 5.53 ml/kg/min. Muscular endurance showed a strong positive correlation with performance level ($r = 0.697$, $p = 0.001$), while quadriceps strength demonstrated a moderate positive correlation ($r = 0.521$, $p = 0.019$). Grip strength, hamstring strength, and flexibility did not show significant associations with VO_2 max.

Conclusion: The present study concluded that Sri Lankan Air Force Team Cyclists with higher muscular endurance and higher quadriceps strength showed better cycling performance. Training programs emphasizing these components may enhance competitive performance. More studies with higher samples may be needed for more generalized conclusions.

Corresponding Author: W J M P S M Silva Email: milshadisilva@gmail.com

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Abstract 35

A Clinical Audit of Antibiotic Use in a Medical Ward at a Tertiary Care Hospital in Sri Lanka

H Amanda[1], K A Nanayakkara[1], W M I N Weerasinghe[1], S A S P Subasinghe[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Sri Jayewardenepura General Hospital

Keywords: Antibiotic Audit, Antibiotic stewardship, Antibiotic Prescribing, Antibiotics, Antimicrobial Resistance

Introduction: Indiscriminate use of antibiotics contributes to antimicrobial resistance. Sri Lanka implemented multiple national level measures in 2024 to guide responsible antimicrobial usage. This audit was performed to evaluate current antibiotic use comparative to national guidelines.

Objectives: To audit the antibiotic prescribing practices at a tertiary care-medical unit in Sri Lanka, against 'National Antimicrobial Stewardship Guideline for Healthcare Institutions-2024' as standard of care.

Methods: This retrospective audit was conducted from 01- 06- 2025 to 30-06-2025, using patient records. Details on indication for antibiotic use, microbiological testing, initial antibiotic usage and review of prescription were ascertained. Observed practice was compared with the predefined standards in accordance with national guidelines using quantitative analysis and presented using descriptive statistics.

Results: A total of 179 patient records were examined. Majority 112(62.57%) were above 60 years of age, 144 (80.44%) had co-morbidities, commonly diabetes (n=68). Main indication for antibiotic prescribing was clinically suggestive community acquired infections (CAI) 161 (89.94%). Nine (5.03%) prescriptions had no identifiable indication. Among 161 presumed-CAI, 18 were viral infections, 98(4.75%) of antibiotics were initiated by intern medical officers, 54 (30.17%) by registrars, while the prescriber was not documented in 11(6.15%) records. Microbiological testing done in 82 (45.81%). Only 118 (65.92%) prescriptions adhered to appropriate prescription criterion (5R-'Five Rights of Antibiotic Safety'). Co-amoxiclav was the most prescribed antibiotic (n=94,52.51%). 81 (45.25%) patients were prescribed 'Watch' category antibiotics. Prescriptions were in accordance with AWaRe classification recommendations, except one that prescribed 'Reserve' antibiotic Levofloxacin. All antibiotic prescriptions were documented in the dedicated chart, however only 6 (3.35%) were appropriately completed. 146 (81.56%) prescriptions were reviewed within 48 hours.

Conclusion: Majority of antibiotic prescriptions were done according to current local guidelines although there is still room to further improve prescribing practices.

Corresponding Author: H Amanda Email: hirunii.amanda@gmail.com

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Abstract 36

Landslide preparedness of households in risk grama niladhari areas in selected medical officer of health area of Kalutara District

H Ranmini Wathsalya Fonseka[1], Charith Amidha Hettiarachchi[2]

[1]National Hospital of Sri Lanka, Colombo, [2]National Institute of Health Sciences, Kalutara

Keywords: Landslides, Household preparedness

Introduction: Landslides are a significant natural hazard, particularly in regions with steep terrains and heavy rainfall. Sri Lanka, a tropical country with hilly landscapes, is highly susceptible to landslides during the monsoon seasons. Numerous landslides have occurred in Kalutara district, leading to socio-economic impacts on affected communities. Despite recognizing the risk of landslides, many communities remain unprepared, and their awareness does not always transform into actionable preparedness measures.

Objectives: To assess the preparedness of households for landslides in risk Grama Niladhari areas in Palindanuwara Medical Officer of Health area of Kalutara District.

Methods: A community-based descriptive cross-sectional study was conducted among a sample of 196 households from 30 high-risk Grama Niladhari areas, selected using a two-stage random sampling technique, with a response rate of 96.5%. A pre-tested, interviewer-administered questionnaire and a checklist were used for data collection. Data were analyzed using SPSS version 23

Results: The majority of participants were aged 50-60 years (62.8%), male (75%), and either self-employed (40.8%) or labourers (38.8%) with a monthly income between 10,001 to 25,000 rupees (45.9%). Although all participants perceived the risk of landslides, 69.4% knew about warning signs & actions, while 69.2% were only slightly prepared, and 23.1% were not prepared at all. Factors significantly associated with higher preparedness included ethnicity (p=0.009), self-employment (p=0.015), marital status (p=0.007), presence of a member with special needs (p=0.031), access to communication method (p=0.030), previous exposure to landslides (p=0.000) and moderate knowledge of early warning systems, signs and on actions during an impending landslide, as well as community support (p=0.000).

Conclusion: The study highlights a critical gap between the perception of landslide risk and actual preparedness. It emphasizes the need for targeted community education, strengthening early warning systems and implementing policy interventions to enhance household resilience in landslides high-risk areas.

Corresponding Author: H R W Fonseka Email: m40597@pgim.cmb.ac.lk

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Abstract 37

Hyperthermic Intraperitoneal Chemotherapy (HIPEC) - Is it the new hope for peritoneal carcinomatosis?

S A T N Abeyweera[1], H P H Pathirathne[1], J C Ariyarathne[2], S D Mahaliyana[3], M R S Manathunga[3], N W B K H De Silva[1], N S Atulugama[1]

[1]Teaching Hospital, Kurunegala, [2] National Cancer Institute, Sri Lanka, [3]National Hospital, Galle

Keywords: HIPEC, CRS, PCI, Peritonectomies

Introduction: Hyperthermic Intraperitoneal Chemotherapy (HIPEC) combined with Cytoreductive Surgery (CRS) has emerged as a promising treatment modality with improved survival for primary peritoneal carcinomatosis and selected stage IV (peritoneal disease) carcinomas. TH Kurunegala pioneered the technique in Sri Lanka and is the leading service provider to date. The success of the surgery depends primarily on tumour type, disease burden, and level of cytoreduction achieved.

Objectives: This study evaluates the initial experience with HIPEC at TH Kurunegala in terms of immediate postoperative morbidity, mortality and hospital stay.

Methods: A retrospective analysis of 65 patients who underwent CRS-HIPEC between 2018 and 2025 was conducted. Clinical data were extracted from a prospectively collected encrypted database. Disease extent was calculated according to the Peritoneal Cancer Index (PCI).

Results: Fifty were female. Median follow up ranged from 3 to 25 months. Forty-five had multi organ resections. Standard peritonectomies (SP) were done in 24 (36.9%). Twenty-four (36.9%) had SP with splenectomy, 25 (38.4%) had SP with bowel resections, 13 (20%) had SP with bowel and gynaecological organ resections. Median PCI ranged from 25.5 to 30 across all primary tumour types. The most common primary tumour site was the ovary (46.2%), followed by Pseudomyxoma peritoneii (PMP) originating from appendix (16.9%). 33% of ovarian carcinomas were serous adenocarcinomas, while 57.1% of colorectal carcinomas were mucinous adenocarcinomas. Sixteen patients (24.6%) experienced major morbidity (above grade III of the Clavien Dindo Classification). There were 8 immediate postoperative deaths (12.3%). The median ICU stay was 9 days, and the median hospital stay was 11 days.

Conclusion: HIPEC, while being a complex procedure, can still be offered for disseminated cancer and can be performed with acceptable short-term outcomes. However long-term survival benefits are yet to be evaluated.

Corresponding Author: S A T N Abeyweera Email: tharushiabeyweera@gmail.com

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Abstract 38

Molecular characterization and phylogenetic analysis of the Mpox Virus in Sri Lanka

B Samaraweera[1], M A Y Fernando[2], G Ruwan[3], I Samaraweera[3], G P Chathuranga[3], J I Abeynayake[3]

[1]National STD/AIDS Control Programme, Colombo 10, [2]Department of Medical Microbiology and Immunology, Faculty of Medicine, University of Colombo, [3]Department of Virology, Medical Research Institute

Keywords: Mpox virus, Clade IIb, molecular characterization, genome sequencing

Introduction: Mpox virus, a rare zoonotic virus attracted global attention in year 2022, with the clade IIb outbreak that occurred worldwide across non-endemic regions. Mpox virus genomic sequencing provides a precise characterization of the virus with clade typing, tracking changes in the virus and insights into the genomic epidemiology with transmission dynamics in a given context. Choice of sequencing instruments and protocol is likely to depend on the availability of instruments, reagents and expertise.

Objectives: To determine molecular characterization and phylogenetic analysis of the Mpox virus in Sri Lanka, in the context of the recent global outbreak.

Methods: This retrospective study utilized swabs obtained from patients with suspected Mpox infection received at National Mpox laboratory from May 2022 to May 2025. A commercially validated real time polymerase chain reaction assay was utilized to detect the Mpox virus. All positive samples were subjected to Oxford Nanopore technology-based whole genome sequencing using a multiplex amplicon sequencing ARTIC protocol, and data analysis was performed using EPI2ME software, to determine Mpox virus clades and phylogenetic analysis. Socio-demographic data and clinical characteristics were obtained from request forms accompanying the samples.

Results: A total of 44 samples were tested, of which five (11.36%) detected Mpox virus. A majority (80%) belonged to ages between 15 to 45 years and male gender. Vesicular or papular genital lesions(n=2) or lesions elsewhere(n=2) and myalgia were present in 80% of positive cases, whereas fever was present among 60%. Bronchopneumonia was present in one case with no reported complications among others. All cases reported a travel history. Genomic sequencing and phylogenetic analysis of all positive samples identified MPXV clade IIb.

Conclusion: In a par with the recent global outbreak, all confirmed Mpox virus cases detected clade IIb. All patients reported a history of travel, confirming zero endogenous cases with chain transmission.

Corresponding Author: B Samaraweera Email: buddiyasasi@gmail.com

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Abstract 39

Comparative analysis of national poisons information centre (NPIC) of Sri Lanka against international standards

S A A Jagadeesh[1], E S W De Silva[2], K D C Fernando[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]National Poisons Information Centre, NHSL

Introduction: The National Poisons Information Centre (NPIC), Colombo, Sri Lanka, provides round the clock toxicology advice to clinicians across the country. Despite its national significance, NPIC operates with limited staffing, lacks patient follow-up mechanisms, and utilizes basic tools for data management. As toxicology remains underprioritized, evaluating and benchmarking the centre's operations against international models is essential.

Objectives: To evaluate the NPIC's service delivery and compare its structure and practices against two internationally recognized poison centres: the UK's National Poisons Information Service (NPIS) – a global leader and Malaysia's National Poison Centre (NPCM) – a regional leader, with the aim of identifying gaps and proposing service improvements.

Methods: A mixed-method approach was employed. Internal reviews assessed staffing patterns, call volumes, documentation methods, and data workflows. A structured questionnaire was distributed to NPIC staff. External benchmarking utilized publicly available data from NPIS and NPCM reports and websites. Key domains assessed included accessibility, follow-up mechanisms, staffing, data management, and outreach.

Results: NPIC receives over 8,000 calls annually, exceeding the call volume of NPMC. 24/7 calls are managed by four medical officers without training in toxicology. Manually written data are entered into Google Sheets and later transferred to SPSS, leading to workflow delays. There is no mechanism for follow-up or outcome tracking. In contrast, NPIS and NPCM have better staffing, utilize integrated databases and perform routine follow-ups for quality assurance and outcome measurement. Both centres maintain specialized toxicology teams and engage in public awareness campaigns.

Conclusion: NPIC's core delivery service is functional and responsive but limited by staff and systemic inefficiencies. Introducing a follow-up system, modernizing data handling, enhancing staffing with toxicology-trained personnel, and implementing structured public education programs are recommended. Aligning with international standards will enhance NPIC's capacity to improve toxicological outcomes and affirm its role as a national authority in poisoning management.

Corresponding Author: S A A Jagadeesh Email: asanka.toxi@gmail.com

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Abstract 40

Molecular epidemiology and clinical characterization of the re-emerging Chikungunya virus infection in Sri Lanka

M A Y Fernando[1], G Ruwan[2], I Samaraweera[2], G P Chathuranga[2], B Samaraweera[3], J I Abeynayake[2]

[1]Department of Medical Microbiology and Immunology, Faculty of Medicine, University of Colombo,
[2]Department of Virology, Medical Research Institute, [3]National STD/AIDS Control Programme, Colombo

Keywords: Chikungunya virus, Indian Ocean lineage. Molecular epidemiology

Introduction: Chikungunya virus (CHIKV) infection has re-emerged as a global health concern currently, with the spread of outbreaks in the Indian Ocean region to other regions. Four distinct lineages of the virus have been identified through phylogentic analysis, corresponding to their geographical origins. Thus, molecular epidemiological analysis of CHIKV cases within a geographical area is crucial to identify the circulating or emerging strains and characteristics of viral transmission.

Objectives: To describe the molecular epidemiology and clinical characteristics of the recent CHIKV outbreak in Sri Lanka.

Methods: The study included serum/plasma samples received from patients with suspected CHIKV infection from throughout the country, at the Department of Virology, Medical Research Institute, Colombo, from November,2024 to May,2025. Commercially validated, in-house verified serological and molecular diagnostics were applied to identify the CHIKV infection. Reverse-transcriptase polymerase-chain reaction (RT-PCR) was performed on samples collected within seven days of onset of symptoms, whereas samples collected afterwards were tested to determine the immune response to CHIKV antigen. All RT-PCR positive cases were subjected to genomic-sequences through Oxford nanopore technology (ONT) and phylogenetic analysis. Patient details were scrutinized using the request forms which accompanied the samples.

Results: A total number of 57 samples were tested during the study period, of which 64.91% (n=37) were positive for CHKV with RT-PCR (63.15%, n=12) or serology (65.78%, n=25). All samples sequenced (n=11) detected the Indian Ocean lineage emerged from the East/Central/South-African (ECSA) lineage through phylogenetic analysis. Majority of the positive cases belonged to ages between 15 to 45 years of age (54.05%) and female sex (75.67%). Cases were detected from the Western province predominantly (83.78%). Of the cases 75.67% exhibited fever and joint pain whereas 21.62% experienced a rash.

Conclusion: CHIKV genome sequencing provided insights into its evolution and transmission dynamics within the country in the current outbreak. Clinical presentations of the infected patients agreed with global data.

Corresponding Author: M A Y Fernando Email: anusha@micro.cmb.ac.lk
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Abstract 41

Prevalence of Overweight, Obesity, and Associated Factors Among Individuals Seeking Medical Fitness Certification at the National Hospital of Sri Lanka (NHSL)

M D N D Pushpakumara[1], A Bandusena[2], S P Kurukulaarachchi[3]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Health Promotion Bureau, Sri Lanka, [3]National Hospital of Sri Lanka

Keywords: Obesity, Overweight, Prevalence, Central obesity, Sri Lanka

Introduction: Obesity and overweight are rising public health concerns, especially in South Asia, where metabolic complications often appear at lower Body Mass Index (BMI) levels. Central obesity, in particular, is an emerging silent risk factor for non-communicable diseases.

Objectives: This study aimed to assess the prevalence of overweight, obesity, and central obesity, along with associated socio-demographic and lifestyle factors, among individuals seeking medical fitness certification at NHSL.

Methods: A cross-sectional study was conducted among 200 adults (sample size according to Fishers' Formula) attending for medical fitness certification at NHSL. Data collection included socio-demographic information, a 24-hour dietary recall, food frequency questionnaire, the International Physical Activity Questionnaire (IPAQ) Short Form, and anthropometric measurements. BMI and waist circumference were used to assess obesity.

Results: Of the participants, 57% were aged 19–34 years and 61% were male. Overweight and obesity were observed in 36.5% and 9.0%, respectively; 51.5% had normal weight, while 3.0% were underweight. Central obesity was found in 78.5%, including 58.4% of males and 45.2% of females. The mean waist circumference was 94.3 ± 9.8 cm (males) and 91.2 ± 9.5 cm (females). Notably, 69 participants with normal BMI had central obesity. Significant associations were found between overweight and residence and ethnicity ($p<0.05$). Central obesity correlated significantly with gender ($p<0.001$), urban residence ($p=0.002$), education ($p=0.009$), income ($p=0.011$), and evening snacks ($p<0.001$). Dietary patterns including mid-morning snacks ($p<0.001$), lunch ($p<0.001$), and evening snacks ($p=0.006$) were linked with overweight. Mean caloric intake (overweight-1425.59 ± 483.23 kcal, normal BMI-410.09 ± 452.16 kcal, central obesity-429.80 ± 494.99 kcal, non-centrally obese-1370.90 ± 336.97 kcal) was not significantly different across BMI or central obesity categories.

Conclusion: The high prevalence of central obesity, even among individuals with normal BMI, highlights the inadequacy of BMI as a sole indicator of metabolic risk. Early screening and lifestyle interventions are essential to address emerging health risks in this urban working-age group.

Corresponding Author: M D N D Pushpakumara Email: mdndpkid148@gmail.com

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Abstract 42

AI App framework for climate-related skin health issue detection in Southeast Asia

D H Jayakody[1], K S Sidhu [2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2] University of Southampton, United Kingdom

Keywords: Climate health, Skin disease, AI framework, Southeast Asia, Predictive modeling

Introduction: Skin health is highly sensitive to climatic variations such as extreme heat, humidity, ultraviolet radiation, and pollution, all of which are intensifying across Southeast Asia due to climate change. These environmental stressors disproportionately affect vulnerable communities, leading to an increased burden of dermatological conditions such as eczema, infections, and heat-related skin disorders. However, the lack of predictive tools hinders timely public health response.

Objectives: To propose an AI-powered mobile app framework that predicts climate-related skin health issues in Southeast Asian populations by integrating environmental and health datasets, enabling early intervention and improved dermatological care.

Methods: A literature-informed, modular AI framework was designed using a hybrid model combining convolutional neural networks (CNNs) for image-based symptom analysis and gradient-boosted decision trees for environmental risk prediction. Data inputs include real-time meteorological data (temperature, UV index, humidity), air quality indices (PM2.5/PM10), nutritional deficiencies and self-reported skin health symptoms. Geospatial mapping and temporal forecasting models were integrated to identify location-specific risk patterns. Privacy-preserving federated learning was considered to train models on decentralized dermatological data without compromising personal health records.

Results: In synthetic end-to-end tests reflecting Southeast Asian exposure patterns, the environmental risk model exceeded the prespecified 85% target (AUROC ≈ 0.98; average precision ≈ 0.96) with good calibration (Brier ≈ 0.04). At a 0.5 threshold, accuracy was ≈ 95% with high specificity and acceptable sensitivity. The framework enables real-time personalized risk alerts, environmental exposure tracking, and AI-assisted preliminary skin condition screening. Prototype implementation demonstrated feasibility in mobile platforms with potential for large-scale public health deployment.

Conclusion: This highlights the feasibility and public health value of an AI-based app framework to predict climate-sensitive skin health conditions in Southeast Asia, which can strengthen early warning systems, support preventive care, and guide public health resource allocation in climate-vulnerable regions.

Corresponding Author: D H Jayakody Email: m26243@pgim.cmb.ac.lk
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Abstract 43

A clinical audit on the achievement of obesity treatment targets in patients Attending the medical nutrition unit in a Tertiary care Hospital in Sri Lanka over a six-month period

S S Liyanage[1], S Kurukulaarachchi[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Medical Nutrition Unit, National Hospital of Sri Lanka

Keywords: obesity, treatment targets, management, weight loss

Introduction: Obesity is a global health concern that contributes significantly to chronic conditions such as hypertension, diabetes, and cardiovascular diseases. In Sri Lanka, obesity prevalence is rising, with increasing health and economic consequences. Despite the availability of treatment guidelines and interventions, achieving sustained weight loss remains a significant challenge. Effective management requires tailored interventions, consistent monitoring, and ongoing care.

Objectives: This audit aimed to evaluate the effectiveness of obesity treatment interventions at the Medical Nutrition Unit, National Hospital Colombo, in achieving predefined treatment targets.

Methods: A retrospective audit was conducted on the clinical records of 36 obese patients who underwent six-month follow-up between July 1 and July 31, 2024. Data were collected using a data extraction sheet which included data on weight loss, adherence to lifestyle changes, pharmacological treatments, bariatric surgery referrals and follow up. The audit adhered to the "Guideline on the Management of Overweight and Obesity among Adults in Sri Lanka" and the Australian Obesity Management Algorithm.

Results: Of the 36 patients, 91% were female with a mean age of 46 years, and 52% were classified as obesity class 1. The audit found that 80% of patients had documented weight-loss goals, and almost all were provided with personalized diet plans, primarily low energy diets (97%), with only 3% using very low-calorie diets (VLCD). Pharmacotherapy was prescribed to 36% of patients, and bariatric surgery was considered for 28%. At the six-month follow-up, 38% achieved 5-10% weight loss, 5.5% lost 10%, and 33% achieved less than 5%.

Conclusion: Most patients achieved individualized dietary management, with one-third attaining the target 5–10% weight loss and another one-third remaining below target. The findings highlight the need to improve access to pharmacotherapy, VLCD and referrals for bariatric surgery to enhance overall outcomes. Enhanced staff training and patient education are crucial in achieving better treatment outcomes for obesity.

Corresponding Author: S S Liyanage Email: m24087@pgim.cmb.ac.lk

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Abstract 44

Clinical characteristics and use of antibiotics in patients admitted with pyelonephritis and urosepsis in a Teaching Hospital in Sri Lanka

W M I D Nakkawita[1], A G Fernando[1], V T Kariyawasam[2], A T Sandaruwan[2], R M V Ranasundara[2], U T N Senaratne[1], N S Fernando[4], D S Govindapala[5] , M M P T Jayasekara[1]

[1]General Sir John Kotelawela Defence University, [2]General Sir John Kotelawela Defence University Hospital, [4]University of Moratuwa, [5]University of Sri Jayewardenepura

Keywords: Pyelonephritis, urosepsis, clinical characteristics, antibiotic use

Introduction: Urosepsis accounts for approximately 9–31% of all sepsis cases globally, and in Sri Lanka. Data on clinical characteristics and antibiotic use in this patient population remain limited in Sri Lanka.

Objectives: This study analysed clinical characteristics and antibiotic use in a cohort of patients with urosepsis and pyelonephritis.

Methods: A prospective cross-sectional study was conducted in patients admitted with urosepsis and pyelonephritis. Consecutive patients who met the inclusion criteria were enrolled. Data were obtained using an interviewer-administered questionnaire and from medical records.

Results: Of the 89 patients enrolled, the mean age was 52.3 years (SD ±18.9), with 73%, 65/89, females. Comorbidities were present in 74.1%, 66/89, of which diabetes mellitus in 71.2%, 47/66. Almost half (48.3%) reported one or more episodes of urinary tract infection during the previous year, with 58.1%, 25/43, requiring admission. Urinary tract instrumentation during the preceding year was reported by 41.6% (37/89). Fever (70/89), flank/back pain (65/89), loss of appetite (69/89), and vomiting (56/89) were the common presenting symptoms. Ultrasonographic evidence of pyelonephritis was present in 67.4% (58/86). On admission urine cultures were performed in 86.5%,77/89, while blood cultures in 34.8%, 31/89. The most frequently isolated organisms from urine and blood belong to Enterobacterales (coliforms). Common empirical antibiotics started were meropenem (48.3%, 43/89), followed by ceftriaxone (21.6%) and co-amoxiclav (18.2%). Antibiotics were upgraded to meropenem in 19 patients during treatment. The average inward stay and duration of IV antibiotics were 9 and 8 days, respectively, with 97.7% patients recovered fully without complications at discharge.

Conclusion: Analysis highlights the presence of predisposing factors, clinical burden, deficiencies in collecting timely cultures and the higher carbapenem use in this population. Early clinical recognition and timely bacterial cultures are needed. Pathogen spectrum and antibiotic susceptibility profiles will be important in implementing context-specific antimicrobial stewardship and improving patient outcomes.

Corresponding Author: W M I D Nakkawita Email: dilininak@gmail.com

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Abstract 45

Evaluating the effectiveness of a breastfeeding counselling programme for midwives and nursing 0fficers: A post-intervention study

P D Liyanagama, J K D N Chanaka, K Kumuduni

Castle Street Hospital for Women, Colombo, Sri Lanka.

Introduction: Frontline maternity care providers play a vital role in breastfeeding promotion, yet structured counselling training is often limited. This study evaluated the effectiveness of a focused programme.

Objectives: To assess the impact of a one-day breastfeeding counselling training programme on knowledge, confidence, and perceived usefulness among midwives and nursing officers.

Methods: Post-intervention study using retrospective self-assessment methodology. Forty participants attended a training session on 24 June 2025 at Castle Street Hospital for Women. A post-intervention questionnaire collected data on knowledge and confidence (pre/post), perceived usefulness, clarity, and overall impact. Descriptive statistics and paired t-tests were used.

Results: Knowledge improved significantly (e.g., taking history: 1.88 → 4.58, Δ = +2.70, $p < 0.00001$). Confidence also rose substantially (e.g., supporting mothers: 2.03 → 4.70, Δ = +2.68, $p < 0.00001$). All sessions were rated highly (mean > 4.5) for usefulness and clarity. 92.5 % rated the training "Excellent"; 100% planned to apply learning clinically.

Conclusion: The training significantly improved breastfeeding counselling competence. This model is recommended for integration into national CPD programs.

Corresponding Author: J K D N Chanaka Email: jayawickramac@yahoo.com

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Abstract 46

Transparency in emergency care: A study of patient autonomy through documentation of diagnosis disclosure in the emergency treatment unit of the National Hospital of Sri Lanka

H M G N Senevirathna[1], I de Lanerolle[2], D D Bogahapitiya[2], H M H S Wijerathne[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Emergency Treatment Unit, National Hospital Colombo,

Keywords: diagnosis disclosure, informed consent, patient autonomy, documentation, emergency medicine.

Introduction: Transparent communication, patient autonomy, and accurate documentation are fundamental in ethical medical practice. In emergency medicine, time pressure and overcrowding often compromise these standards. While international studies report poor documentation of disclosure, evidence from Sri Lankan emergency departments is scarce.

Objectives: To assess the extent of diagnosis disclosure to patients and families, evaluate documentation practices, and identify gaps between verbal communication and written records in the Emergency Treatment Unit (ETU) of the National Hospital of Sri Lanka.

Methods: A prospective clinical study was conducted on 115 adult patients admitted to the ETU. Data was collected through structured patient interviews and documentation reviews. Descriptive statistics were calculated, and Fisher's exact and Chi-square tests were applied to assess associations and determine statistical significance.

Results: Among patients with preserved capacity (Preserved capacity is defined as the patient's intact cognitive ability to comprehend, reason, and voluntarily communicate informed decisions related to medical management) (n=89), 62 (69.7%) received verbal disclosure while 27 (30.3%) did not. Of those disclosed, only 14 (22.6%) were documented, leaving 77.4% unrecorded, with no difference across clinician grades (p=0.1841). Among patients informed directly, 90% reported clear understanding. and patients with preserved capacity were more likely to be informed than those without (p=0.0096). Overall, families were informed in 35 cases with only 17 family discussions (48.6%) occurred with documented patient consent, while 18 (51.4%) proceeded without it. Documentation of family disclosure was present in just 13 cases (28.9%), leaving more than 70% unrecorded. Fewer than one in five disclosure notes included diagnosis, plan, and risks comprehensively, reflecting significant lapses in both patient autonomy and medico-legal transparency

Conclusion: This study demonstrated a critical deficit in documentation of patient and family disclosures in emergency care. Structured clerking templates, explicit consent documentation, staff education, and re-audit are urgently required to enhance transparency, safeguard autonomy, and mitigate medico-legal risk.

Corresponding Author: H M G N Senevirathna Email: rpgngayaninirmala@gmail.com

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Abstract 47

Knowledge, attitudes, practices and perceived barriers on service provision for clients exposed to domestic violence among field public health midwives in Gampaha District and associated factors for selected practices

R A S L Ranaweera Arachchi, I Malwenna

Regional Director of Health Services office, Gampaha, Sri Lanka

Keywords: Domestic violence, practices, field Public Health Midwife

Introduction: Sri Lanka is a country with prevailing domestic violence. The involvement of field Public Health Midwife in prevention and management of domestic violence is crucial. As the first contact health personnel for survivors of domestic violence, it is time to evaluate their knowledge, attitudes, practices and perceived barriers on service provision for clients experiencing domestic violence.
Objectives: To describe knowledge, attitudes, practices and perceived barriers on service provision for clients on domestic violence among field Public Health Midwives in Gampaha district and associated factors for selected practices.
Methods: A descriptive cross-sectional study was conducted among 441 field Public Health Midwives chosen using the stratified random sampling method in Gampaha district. A self-administered questionnaire was used after pre-testing. The principal investigator (PI) designed the questionnaire by thorough literature review of all the national, regional and international research and validated with face validity and consensual validity by showing it to the expertise in the field. The knowledge, attitudes and total practices scores were calculated using SPSS software and described as frequencies. Selected 5 priority practices (identification of the victims, provide first line support/basic emotional support to all survivors, refer to Mithuru Piyasa, offer follow-up visits, provide health education on domestic violence during sessions for newly married couples) scores were calculated and with the expert opinion decided on good and poor scores.
Perceived barriers were described as frequencies. Associated factors were analyzed using odds ratios and chi square test to assess the statistical significance at level $p < 0.05$
Results: About 62.6% (n=276) of the study sample had good knowledge on domestic violence. The majority 71.7% (n=316) of the study sample had good attitudes on domestic violence. But only 31.7% (n=140) had good practice. Nearly 53.3% (n=235) were good in selected practices. Less than 50 years of age (OR= 0.6, 95% CI=0.4-0.9, p= 0.014), been supervised related to service provision at monthly conference (OR= 1.6, 95% CI= 1.1-2.4, p= 0.012) were the significant associations with selected practices in the study.
Conclusion: Knowledge and attitude on domestic violence were satisfactory though the total practices on domestic violence were poor. Nearly half of the participants were good in selected practices.

Corresponding Author: R A S L Ranaweera Arachchi Email: drlakmali2025@gmail.com

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Abstract 48

Evaluation of Nutritional Risk Screening 2002 (NRS 2002) Risk Categories as Predictors of Clinical Outcomes in Patients Admitted to the Intensive Care Units (ICU) in a Tertiary care Hospital: A Prospective Cohort Study

M A A S Munasinghe

Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: NRS 2002, nutrition risk, critically ill, clinical outcomes

Introduction: Thirty to seventy percent of hospitalized patients worldwide suffer from malnutrition. Hospital malnutrition significantly affects clinical outcomes, having a higher risk of complications, mortality rates, longer length of hospital stay, and increased readmission rates, all of which have a negative impact on the cost of healthcare.
Objectives: This study evaluates the NRS 2002 screening tool's effectiveness in predicting clinical outcomes including death, length of hospital stays, and length of mechanical ventilation among critically ill patients in ICU.
Methods: This prospective cohort study was carried out at Colombo North Teaching Hospital in Sri Lanka. The NRS-2002 tool was used for nutritional risk screening. Patients were categorized based on NRS scores into no-risk (score <3) and at-risk (score ≥3) groups, and clinical outcomes-ICU and hospital mortality, length of stay, and duration of mechanical ventilation-were assessed. Logistic regression was used in the analysis to evaluate if the nutritional risk categories could predict clinical outcomes.
Results: The cohort included 166 adult patients. The majority (73%) were under 65, with a mean age of 52 years. Significantly higher ICU and hospital mortality rates were seen in the at-risk group (33.7% vs. 6.0% and 38.6% vs. 8.4%, respectively). According to logistic regression, there was a strong correlation between higher ICU (OR=1.05) and hospital mortality (OR=1.3) and nutritional risk. The duration of mechanical ventilation and length of stay did not significantly differ across risk groups.
Conclusion: This suggests that the NRS-2002 tool could be an effective tool for predict ICU and hospital mortality in critically ill patients in Sri Lankan intensive care units. However, no significant relationship was found between NRS-2002 risk categories and length of stay or mechanical ventilation.

Corresponding Author: M A A S Munasinghe Email: m23937@pgim.cmb.ac.lk

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Abstract 49

Pre-operative anxiety and coping strategies in adults awaiting elective surgery: A cross-sectional study in a surgical unit of a tertiary care center

T G Kanil Weranja[1], D Ariyaratne [2], K Wijesinghe[2], J Vishnukanthan[1], D P Dissanayake[2]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Colombo South Teaching Hospital, Kalubowila

Keywords: Preoperative anxiety, Coping strategies, Elective surgery, APAIS

Introduction: Preoperative anxiety is a common and often distressing experience for patients undergoing surgery. It can impact perioperative outcomes and postoperative recovery. Understanding the prevalence of anxiety and the coping mechanisms used by patients is essential for providing effective, psychological and perioperative support.

Objectives: To assess the prevalence of preoperative anxiety and identify the coping strategies used by adult patients awaiting elective surgery.

Methods: A descriptive cross-sectional study was conducted among 133 adult patients awaiting elective surgeries at a tertiary care center with convenient sampling technique. The study population included 70 females and 63 males, with 73 undergoing general anesthesia and 60 under spinal anesthesia. The validated English version of Amsterdam Preoperative Anxiety and Information Scale (APAIS) was used to assess anxiety levels.

The APAIS consists of six questions which assess three anxiety components: anesthesia-related-anxiety (Sum A), surgery-related-anxiety (Sum S) and information-desire-component (Sum IDC). The combined score (Sum C) is given by the total of Sum A and Sum S. A Sum C of ≥11 indicates significant anxiety. Coping strategies were categorized as problem-focused or emotion-focused.

Results: The mean anxiety score was 8.63. Significant anxiety was observed in 30% of females and 28.6% of males. Prevalence was 31.5% in patients receiving general anesthesia and 26.7% in those receiving spinal anesthesia. Higher anxiety was reported among married individuals (29.8%) and those with children (30.6%) compared to their unmarried (26.3%) and childless (24%) counterparts. Anxiety prevalence was similar in patients with (29.7%) and without (28.9%) comorbidities. Employed individuals had a slightly higher prevalence (30.3%) than the unemployed (28.4%). Problem-focused strategies included seeking online information (45.3%), while emotion-focused methods included distraction and positive thinking (65.5%) and anxiolytic use (51.1%).

Conclusion: This study highlights the notable prevalence of preoperative anxiety and the diverse coping strategies employed by surgical patients. The findings underscore the importance of individualized preoperative counseling and support to address anxiety and improve overall patient care and surgical outcomes.

Corresponding Author: T G Kanil Weranja Email: gamagekanil@gmail.com

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Abstract 50

Troponin testing across Sri Lanka: Ethical and medico-legal implications of analytical and reporting disparities

K K M Fernando[1,2], D W D D Madurangi[1], M J N Fernando[1], S Madanayaka[3], R Samarasinghe[4], B K T P Dayanath[5]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Faculty of Medicine, University of Kelaniya, [3]Colombo North Teaching Hospital, Ragama, [4]National Cancer Institute, Maharagama, [5]Dorevitch Pathology, Victoria, Australia

Keywords: High-sensitivity troponin, cardiac biomarkers, acute coronary syndrome, assay variability

Introduction: High-sensitivity cardiac troponin (hs-cTn) assays are essential for diagnosing acute coronary syndromes (ACS). However, many clinicans are unaware that hs-cTn values from different assay platforms are not analytically interchangeable. Consequently, serial testing is sometimes performed across different laboratories for the same patient, undermining interpretation and risking misdiagnosis.

Objectives: To assess troponin testing practices across Sri Lankan hospitals and discuss potential ethical and medico-legal implications arising from observed analytical and reporting variability.

Methods: A structured cross-sectional survey was distributed to chemical pathologists or senior laboratory technologists in 25 government hospitals representing all provinces. Data were collected on assay type, analyzer make and model, use of sex-specific or common cut-offs, delta protocols, reporting units, and interpretative comments and analysed using descriptive statistics.

Results: All hospitals used troponin I assays, while four also utilized troponin T. Fully automated analyzers were employed in all laboratories, spanning seven analytical platforms across the country. Reference cut-off varied considerably, even among hospitals using the same instrument models. Reported limit of detection (LoD) ranged from 0.3 to 4 ng/L. Only 36% of laboratories implemented delta value protocols for serial testing, with time intervals varying between 0/1h, 0/2h, and 0/3h. While 56% applied a common cut-off, only 44% used sex-specific 99th percentile thresholds. Units of reporting were inconsistent; 4 out of 25 laboratories still used ng/mL instead of ng/L, contrary to international recommendations.

Conclusion: Marked variability exists in troponin testing and reporting across Sri Lankan hospitals. Such differences may compromise clinical comparability and raise ethical and medico-legal concerns related to patient safety and diagnostic equity. Serial testing across laboratories without recognizing assay-specific variability can lead to misdiagnosis and delayed care. Laboratory reports often omit critical details such as assay make and model, limiting safe interpretation. National guidelines mandating assay-specific reporting and standardized delta protocols are urgently needed.

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Abstract 51

Seasonal variation in paediatric intussusception: A single-centre experience from the western province of Sri Lanka

N A K A Naligama[1], J K G Madhawa[1], I Rathnayaka[1], M Samarasingha[2]

[1] Postgraduate Institute of Medicine, University of Colombo, [2]Faculty of Medicine, University of Colombo

Keywords: Paediatric intussusception, Seasonal variation, Southwest Monsoon, Sri Lanka, Western Province

Introduction: Paediatric intussusception (PI) is a leading cause of intestinal obstruction in young children. Seasonal clustering of PI has been reported internationally, often linked to infectious or environmental factors. Evidence from Sri Lanka is limited.

Objectives: This study explores the seasonal distribution of PI in a tertiary hospital in the Western Province.

Methods: A retrospective review was performed on 51 children treated with saline reduction for intussusception. Based on local climate, the year was divided into: Northeast Monsoon (Nov–Feb), Inter-monsoon (Mar–Apr, Sep–Oct), and Southwest Monsoon (May–Aug), the wet season in the Western Province. Admission frequencies were compared using chi-square analysis.

Results: Median age at presentation was 2 years 10 months, with a male predominance (55%). Over half of admissions (54.9%, n = 28) occurred during the Southwest Monsoon, followed by 23.5% during the Northeast Monsoon, and the remainder during Inter-monsoon periods. Seasonal distribution showed significant clustering in the Southwest Monsoon ($\chi^2 = 20.7$, df = 2, $p << 0.001$).

Conclusion: This single-centre study suggests that paediatric intussusception in the Western Province peaks during the Southwest Monsoon. The pattern may reflect environmental or infectious influences. However, findings are limited to one tertiary hospital and cannot be generalized nationally. Broader multi-centre studies are needed to confirm geographical and seasonal variations across Sri Lanka.

Corresponding Author: N A K A Naligama Email: knaligama@gmail.com

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Abstract 52

Gendered dimensions of digital literacy: Analysing the impact of mobile technology on reading habits among Sri Lankan adolescents

Dilhani Munasinghe[1], W A D K Jayawardane[2], Lihini Wanniarachchi[1,3]

[1]Postgraduate Institute of Medicine, University of Colombo, [2]Withybush General Hospital, Hywel Dda University Health Board, United Kingdom, [3] National Hospital, Kandy

Keywords: Gender Disparities, Digital Literacy, AI-Assisted Communication, Adolescent Reading Habits, Sri Lankan Education

Introduction: This study investigates the gendered impact of emerging mobile technologies on the reading habits and literacy skills of adolescents in Sri Lanka.
Objectives: The primary objectives are to: (1) examine how adoption patterns of AI-assisted messaging and Virtual Reality (VR) reading platforms differ by gender; (2) assess the implications for reading comprehension and writing competence; and (3) explore how these effects are shaped by genre preference and socioeconomic factors. VR reading platforms are defined here as immersive, simulated environments accessed via mobile devices for engaging with textual content.
Methods: Employing a mixed-methods approach, the research collected quantitative data from a stratified sample of 450 students (50% male, 50% female) aged 12–18 from urban and rural districts, using surveys and standardized literacy tests. Qualitative data were gathered through focus group discussions to provide contextual depth. The analysis specifically compared usage trends, genre engagement, and literacy outcomes between male and female participants.
Results: The results reveal pronounced gender-based trends. Female adolescents demonstrated higher engagement with text-based AI messaging, which correlated with maintained reading comprehension. In contrast, male participants showed a preference for voice-based communication and used VR platforms primarily for informational and game-based reading, which improved technical comprehension but reduced engagement with traditional books. A key finding across both genders was a trade-off where AI assistance correlated with a decline in original composition and spelling accuracy. The study also identified digital fatigue as a critical issue, disproportionately affecting rural users.
Conclusion: These findings underscore that technology's impact on literacy is mediated by gender and genre. The study concludes by advocating for gender-responsive educational policies that leverage the benefits of mobile technologies while implementing interventions to mitigate digital fatigue and preserve foundational writing skills.

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Corresponding Author: D Munasinghe Email: dilhani@pgim.cmb.ac.lk

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Abstract 53

Incidence of post-COVID-19 Syndrome among survivors of COVID-19: A prospective cohort study in National Hospital Kandy

K G V J Kobbegala[1], S Bowattage[1], W K S Kularatne[1]

[1]National Hospital, Kandy

Keywords: COVID-19, post-COVID-19 syndrome, incidence, Sri Lanka, cohort study

Introduction: According to NICE guidelines, "post-COVID-19 syndrome" is defined as "signs and symptoms that develop during or after an infection consistent with COVID-19, continue for more than 12 weeks and are not explained by an alternative diagnosis". National Hospital Kandy is the second-largest hospital in the country and received a large number of COVID-19 admissions with variable severity from mild to severe.

Objectives: This study aimed to determine the incidence of post-COVID-19 syndrome among patients treated at the National Hospital Kandy, and to identify associations and the impact of acute disease severity on long-term outcomes.

Methods: A prospective cohort study was conducted involving 386 patients who were followed up 12 weeks post-discharge through structured telephone interviews to assess the presence of persistent symptoms. The interview guide contained questions on dyspnea, fatigue, sleep, memory, concentration, musculoskeletal symptoms, taste or smell, gastrointestinal symptoms and appetite. To assess the severity of the symptom, validated tools were incorporated. Patients with significant symptoms were reviewed in the clinic, and NICE guidelines were used to diagnose patients. Ethical approval was obtained from the ethics review committee of the National Hospital, Kandy. All the patients who fulfilled the inclusion criteria were enrolled in the study and followed up until the sample size reached.

Results: The female-to-male ratio was 14:11, with a mean age of 53.8 years. Two-thirds of the population had mild disease. Fifty-one per cent of the sample had post-COVID-19 syndrome. The most prevalent symptoms were fatigue (34.2%), dyspnoea (27.5%), and musculoskeletal pain (20.2%). Age was significantly associated with the incidence of post-COVID syndrome ($p<0.001$). Females reported higher rates of fatigue and musculoskeletal symptoms. Pre-existing comorbidities, such as diabetes, hypertension, dyslipidemia, and ischemic heart disease, were significant risk factors for persistent symptoms. Acute disease severity was positively correlated with the incidence of post-COVID-19 syndrome. Nearly 7% have not returned to work or worked reduced hours due to post-COVID symptoms.

Conclusion: More than half of the participants had post-COVID-19 syndrome, and a significant proportion have not returned to work or worked reduced hours due to post-COVID-19 syndrome. Older adults, females, and individuals with pre-existing comorbidities are at higher risk of persistent symptoms.

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Corresponding Author: K G V J Kobbegala Email: m32661@pgim.cmb.ac.lk

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Abstract 54

A secure, eco-conscious Java-based standalone application for MCQ management and automated exam paper generation

Deeba Sellembaram

IT Unit, Postgraduate Institute of Medicine, University of Colombo

Keywords: MCQ Bank, Secure MCQ Storage, Automated Paper Generation, Question Usage Tracking, Eco-Friendly Education

Introduction: Traditional management of Multiple-Choice Questions (MCQs) at our institution relied on printed cards stored in cupboards. This practice consumed large amounts of paper, required extensive physical storage, and risked loss or damage. Beyond inefficiency, it imposed an ecological burden through continuous paper use and waste generation.

Objectives: To design and implement a secure, sustainable, and user-friendly standalone application for MCQ management and automated examination paper generation.

Methods: A Java-based offline application was developed to store MCQs on a password-protected USB drive, with a secondary drive serving as an automatic backup. Both drives must be connected for program access, restricted to the Chief Examiner or MCQ Coordinator. A two-level password authentication system was incorporated for authorized staff. Automatic backups occur every 20 min and upon program closure to ensure redundancy. The application enables adding, editing, and categorizing MCQs by topic, sub-topic, learning outcome, keyword, author, date, difficulty index, and facility index. Usage history is tracked to minimize repetition and support balanced exam paper generation.

Results: Compared to the traditional printed-card method, the Java-based system reduced examination paper preparation time by 75%, from an average of six hours to under two hours. Paper consumption was eliminated, aligning with the institute's sustainability goals. Storage space requirements were reduced to near zero, as the database now resides securely on dual USB drives. Furthermore, the system's automated backup feature improved data reliability and reduced the risk of question loss or duplication. Collectively, these outcomes demonstrate significant operational efficiency and measurable environmental benefits.

Conclusion: The secure Java-based MCQ management system improved efficiency, strengthened data protection, and reduced environmental impact. By minimizing paper dependency and automating exam preparation, the system supports both academic quality and institutional sustainability.

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Corresponding Author: D Sellembaram Email: deeba@pgim.cmb.ac.lk

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Abstract 55

Evaluation of a low-cost moulage technique for enhancing education and training in crime scene investigation

C M A Gunathilaka[1], S A Gunawardena[2]

[1]Department of Forensic Medicine and Toxicology, Faculty of Medicine, University of Colombo, Sri Lanka,
[2]Department of Pathology & Pharmacology, School of Medicine, IMU University, Kuala Lumpur, Malaysia

Keywords: forensic education, low-cost simulation, crime scene investigation, injury modeling

Introduction: Simulation-based education (SBE) provides safe opportunities for learners to practice complex skills without risk to patients. Moulage—the application of realistic injury makeup—enhances fidelity by increasing immersion, engagement, and perceived realism. Evidence from nursing and medical curricula consistently links moulage to improved knowledge, psychomotor skills, and confidence. The evaluation of moulage in forensic education or crime scene investigation (CSI) training is a relatively unexplored area and this study aims to address this gap.

Objectives: To develop and evaluate the efficacy, authenticity and educational value of a low-cost moulage protocol using domestic materials to simulate diverse injuries for forensic education and CSI training.

Methods: This study was conducted at the Department of Forensic Medicine and Toxicology, Faculty of Medicine, University of Colombo between January 2024 and June 2025. Eight moulage types (abrasions, contusions, lacerations, incisions, burns, bite marks, ligature marks, gunshot wounds) were created using PVA glue, cosmetic pigments, brushes, petroleum jelly, sewing needles, and optional fake blood. Participant satisfaction, authenticity, and educational value were assessed via structured questionnaires. Cost-effectiveness was compared against costs of commercial moulage obtained from Varghese et al. Statistical analysis employed descriptive and comparative tests.

Results: Of the 80 participants, 69 (86.3%) reported being extremely satisfied with moulage realism and educational value. Injuries were described as visually convincing, enhancing immersion in photography, documentation, and mock trial exercises. Total material cost was under USD 25 for ~100 wounds. Cost analysis showed per-wound expenditure of <USD 0.25 versus USD 4–5 for commercial kits. While durability was lower than silicone appliances, fidelity was sufficient for short training sessions.

Conclusion: Compared to commercial kits, the approach was highly cost-effective while maintaining educational value. Overall, moulage offers a practical, scalable strategy to strengthen authentic learning in forensic and CSI curricula, particularly in resource-limited settings.

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Corresponding Author: C M A Gunathilaka Email: madhu@fortox.cmb.ac.lk

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Abstract 56

Stakeholder acceptance of psychosocial approaches and the need for structured debriefing in sexual-violence investigations in Sri Lanka; A qualitative study conducted in 6 police areas

C M A Gunathilaka[1], N D N A Mendis[1]

[1]Department of Forensic Medicine and Toxicology, Faculty of Medicine, University of Colombo, Sri Lanka

Keywords: traumatization, trauma-informed justice practice, debriefing, stakeholder acceptance, psychological resilience

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Introduction: Sexual-violence investigations expose professionals to traumatizing narratives and emotionally demanding encounters. Psychosocial approaches (PSA) have been recommended to enhance survivor wellbeing and minimize re-traumatization while supporting the resilience of investigators. However, in Sri Lanka, PSA remains underexplored, and institutionalized mechanisms for practitioner support are limited. Stakeholder acceptance of such approaches is essential for sustainable implementation.

Objectives: This study examined the openness of institutional constraints faced by Sri Lankan stakeholders—law enforcement, medico-legal professionals, prosecutors, and scientific officials in Sri Lanka to adopting PSA in sexual-violence investigations and explored their perspectives on structured debriefing as a mechanism for emotional support.

Methods: Eight stakeholders—including police officers, medico-legal staff, prosecutors, and forensic scientists were recruited, each with a minimum of three years' experience handling sexual-violence cases. Semi-structured interviews lasting 45–75 minutes were conducted, transcribed, and analyzed using Braun and Clarke's reflexive thematic analysis. NVivo 14 facilitated coding. The analysis focused on knowledge readiness, emotional burden, and structural support needs. Ethical clearance for the study was obtained prior to data collection.

Results: Two key themes emerged. First, Readiness for Knowledge Expansion: participants, though unfamiliar with PSA terminology, expressed strong willingness to receive formal training, recognizing gaps in current practice. They valued empathy as integral to professionalism and suggested PSA could complement evidence-based procedures. Second, Debriefing as Emotional Necessity: participants reported intrusive thoughts, emotional fatigue, and lack of formal support mechanisms. Informal peer coping was common but seen as inadequate. Respondents recommended structured, multidisciplinary debriefing led by trained professionals, noting that psychological resilience directly enhanced investigative quality and wellbeing

Conclusion: Findings indicate high stakeholder receptivity to PSA principles and clear recognition of emotional vulnerability in sexual-violence casework. Institutional reforms are needed, including mandatory PSA training and structured debriefing systems, to embed trauma-informed justice practices in Sri Lanka.

Corresponding Author: C M A Gunathilaka Email: madhu@fortox.cmb.ac.lk
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