THE COLLEGE OF MEDICAL ADMINISTRATORS OF SRI LANKA

31st Annual Scientific Sessions

BOOK OF ABSTRACTS

Transforming Healthcare: Fostering Leadership, Professionalism and Efficiency

25th – 27th October 2024 | Hotel Galadari, Colombo, Sri Lanka

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'Transforming Healthcare:
Fostering Leadership, Professionalism and Efficiency'

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College of Medical Administrators of Sri Lanka

College of Medical Administrators of Sri Lanka

Secretariat

Office of the College of Medical Administrators of Sri Lanka

Directorate of Health Care Quality and Safety

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Our Objectives

- To guide health development in Sri Lanka.
- To contribute to the formulation and implementation of national health policies and strategies.
- To regularly review the status of medical administration in the country and analyze problems in the health sector; to guide the Ministry of Health and the private health sector.
- To promote postgraduate studies and continuous professional development in the field of medical administration.
- To promote /facilitate health systems research that contributes to the health policies formation and promote publications related to medical administration.
- To promote and foster professional advancement of medical administration.
- To foster fellowship among the professionals engaged in the field of medical administration.
- To develop partnerships and links with similar professional bodies in Sri Lanka and in other countries.

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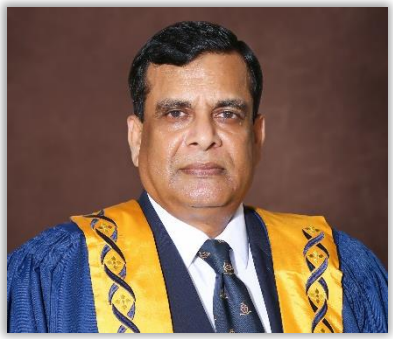

Dear Members,

It is with great pride and excitement that I present to you this Book of Abstracts for the 31st Annual Scientific Sessions of the College of Medical Administrators of Sri Lanka (CMASL). This year, under the theme "Transforming Healthcare: Fostering Leadership, Professionalism, and Efficiency," we gather to exchange knowledge, ideas, and innovations that will shape the future of healthcare in our nation.

Healthcare transformation is no longer a choice but a necessity. As medical administrators, we must lead this transformation with visionary leadership, a strong sense of professionalism, and an unwavering focus on efficiency. This year's theme reflects the three key pillars necessary for this transformation: Leadership, Professionalism, and Efficiency. Each of these elements plays a crucial role in not just maintaining our healthcare system but elevating it to new heights.

The abstracts compiled in this volume reflect the dedication, innovation, and forward-thinking ideas of our members, all of whom are contributing to advancing healthcare in Sri Lanka.

This year's presentations span a diverse range of topics, from administrative strategies to innovative solutions that will improve the quality, accessibility, and efficiency of our healthcare system. The abstracts are categorized into oral presentations, poster presentations, and innovation presentations, each offering unique insights and practical applications that address the complex challenges we face today.

It is through this collaborative exchange of ideas that we can continue to lead the transformation of our healthcare system. By fostering leadership, we ensure that our healthcare institutions are guided with purpose and responsibility. Through professionalism, we maintain the highest standards of care and ethics. And with efficiency, we make the best use of our limited resources, ensuring that every decision enhances patient care and system sustainability. In addition, this year's sessions will delve deeper into the key issues shaping the future of healthcare.

Discussions on medical professionalism, leadership, and innovation will offer insights into the very principles that will define the next era of healthcare in Sri Lanka.

I encourage you to engage fully with the content of this Book of Abstracts, as it reflects the cutting-edge work of your peers and the future of healthcare management in Sri Lanka. They are the product of the hard work, research, and forward-thinking of our members, and they reflect the collective efforts to address the challenges we face in transforming healthcare. Together, we can turn these ideas into action, ensuring that our healthcare system is not only resilient but thriving, adaptive, and ready for the future.

Let us continue to work as one body of professionals, united in our mission to create a healthcare system that is equitable, efficient, and sustainable for all Sri Lankans.

Sincerely,

Dr. Kumara Wickremasinghe,
President,
College of Medical Administrators of Sri Lanka

Meaning behind the CMASL Annual Scientific Sessions 2024 Logo: A Reflection of Healthcare Transformation

This logo for the Annual Scientific Sessions of the College of Medical Administrators of Sri Lanka (CMASL) integrates multiple elements to symbolize the overarching theme of "Transforming Healthcare: Fostering Leadership, Professionalism, and Efficiency." It reflects the mission of the College to inspire growth and innovation in healthcare while being rooted in Sri Lankan identity. The various components of the logo are carefully chosen to convey specific aspects of medical administration.

Healthcare & Medical Administration:

At the core of the logo is the Caduceus, a well-recognized symbol of healthcare. The staff, wings, and entwined snakes represent the medical profession and the administration that supports and guides it. This traditional symbol highlights the essential role of CMASL in safeguarding, managing, and advancing the healthcare sector in Sri Lanka, ensuring that leadership remains strong as the field undergoes continuous change.

Transformation & Sri Lankan Identity:

The Lotus surrounding the Caduceus is symbolic of transformation, purity, and enlightenment. In Sri Lankan culture, the lotus is a powerful symbol of spiritual awakening and resilience. Here, it signifies how the CMASL is helping to transform the country's healthcare landscape, aligning its evolution with the nation's cultural values and aspirations. The inclusion of the lotus in the design acknowledges the local roots of these healthcare improvements, making it not just about modernization but about a transformation that resonates with the identity of Sri Lanka.

Efficiency, Systems, and Streamlined Processes:

Encircling the lotus and Caduceus is a Cogwheel, representing efficiency, systems-thinking, and the importance of streamlined processes. The cogwheel reflects how the CMASL emphasizes creating effective, coordinated healthcare systems that function smoothly. Just as a cogwheel is integral to the operation of machinery, the role of medical administrators is essential to ensuring that healthcare institutions operate efficiently, making the best use of resources and improving service delivery across the board.

Leadership in Healthcare:

The Brushstroke Circle that wraps around the logo signifies leadership. The dynamic, flowing nature of the brushstroke evokes innovation, flexibility, and adaptability - all qualities needed in leaders who are transforming healthcare systems. The circle also represents wholeness, unity, and the leadership role CMASL plays in coordinating healthcare efforts and fostering collaboration among professionals to achieve a unified, efficient system. It highlights the importance of having visionary leaders to guide and shape the future of healthcare in Sri Lanka.

Modern, Professional Design:

The clean, bold, and modern design of the logo reflects professionalism and the forward-thinking mindset of CMASL. The logo uses CMASL colours – Blue & Gold. Blue - a shade representing trust, stability, and healthcare - as its primary colour. Blue is often associated with the healthcare profession, evoking a sense of calm and responsibility. The use of gold adds an element of prestige, representing leadership, achievement, and excellence, qualities that CMASL strives to promote in medical administrators. Together, the colours convey the professionalism, trust, and leadership required to push the boundaries of healthcare management in Sri Lanka.

Theme Reflection:

The theme for this year's sessions "Transforming Healthcare: Fostering Leadership, Professionalism, and Efficiency" is captured beautifully in the symbolism of the logo. The lotus signifies the transformative journey of healthcare in Sri Lanka, the cogwheel represents the efficiency of medical systems, and the brushstroke circle speaks to the leadership driving these changes. Together, these elements reinforce the core message of the sessions: that leadership and professionalism, combined with efficient systems, are key to transforming the healthcare landscape.

List of Oral Presentations – Session 1

Date: 26/10/2024 Time: 10.30 am to 12.30 pm Venue: Hotel Galadari

List of Oral Presentations – Session 2

Date: 26/10/2024 Time: 2.45 pm to 4.45 pm Venue: Hotel Galadari

List of Poster Presentations

Date: 26/10/2024 Time: 12.30 pm to 1.15 pm Venue: Hotel Galadari

List of Presentations on Health Sector Innovations

Date: 27/10/2024 Time: 10.30 am to 12.30 pm Venue: Hotel Galadari

Abstracts of Oral Presentations

31st Annual Scientific Sessions

Transforming Healthcare:
Fostering Leadership, Professionalism and Efficiency

OP 01/AB 002
An Analysis of the Multidisciplinary Team Meetings in Improving Patientcare in a Teaching Hospital

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Introduction: Multidisciplinary team (MDT) meetings are a cornerstone of modern healthcare, offering a collaborative platform where professionals from diverse specialties converge to discuss and manage patient care. MDTs facilitate comprehensive diagnostic evaluations, formulate holistic treatment plans, and enhance patient safety. By fostering open communication and collective decision-making, MDT meetings play a pivotal role in risk management and safeguarding patients, ensuring that all aspects of patient care are meticulously considered and addressed. The study highlights the importance of MDTs in the healthcare system.

Objective: To analyze the role of Multidisciplinary Team meetings in improving patient care in Teaching Hospital, Badulla.

Methods: This ongoing project, initiated in November 2023, reviewed existing MDT practices through document analysis and focus group discussions with relevant professionals. Root cause analysis using fishbone diagrams highlighted issues in current MDT meetings, such as improper conduct, lack of documentation, and insufficient involvement of hospital administration and allied healthcare professionals. To address these issues, an MDT focal point was appointed, and rounds of discussions were held with stakeholders. Guidelines for conducting MDT meetings were designed, and systems for online and paper-based requests, communication channels, attendance tracking, and minutes documentation were established. An assessment form was created to evaluate each MDT meeting and ensure quality. The impact of MDT meetings was assessed, and case reports were uploaded to the hospital website for educational purposes.

Results: During the study period, 19 MDT meetings were conducted. Allied healthcare workers were involved in decision-making, and the Hospital Deputy Director attended the meetings. The meetings comprised of 9 Therapeutic MDTs (47%), 4 Diagnostic MDTs (21%), 2 Risk Management MDTs (10%), 2 Safeguarding MDTs (11%), and 2 Patient Safety MDTs (11%).

Conclusion: MDTs delivered holistic, patient-centered care, optimizing patient safety. Better coordination led to more efficient and effective resource management, resulting in cost savings.

Keywords: Multidisciplinary team meetings, medical administration, patient centred care

OP 02/AB 009

Analyzing The Hospital Choice of Patients Requiring Orthopedic Trauma Care: The Preference for National Hospital of Sri Lanka Over Nearby Centers with Orthopedic Services

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Introduction: Patient preference in hospital selection in orthopaedic trauma care has significant implications for resource allocation and the provision of quality patient care. Our study examines the factors that influence orthopaedic trauma patients to bypass other major centres to seek care at the National Hospital of Sri Lanka (NHSL).

Objective: To analyze the factors driving orthopaedic trauma patients' preference for NHSL over nearby major hospitals.

Methods: A descriptive cross-sectional study was conducted among orthopaedic trauma patients presenting to a single unit at an accident service, NHSL. Systematic consecutive sampling was used. Data was collected using a structured interviewer-administered questionnaire.

Results: The study population mainly falls within the age group of 61-70 years (n=16,26.7%) and exhibits an equal distribution of sexes. Most participants were educated up to Grade 6 - Ordinary level(n=27,45%). Over half of the patients preferring NHSL over nearby centres were from the Gampaha district(n=40,66.7%), followed by Kalutara(n=6,10%), few were from Ratnapura(n=1,1.7%) and none from Kegalle. Most lived within 11-20km(n=25,41.7%), with a significant number over 50km away(n=8,13.3%). Many bypassed Colombo North Teaching Hospital(n=29,48.3%), District General Hospital Gampaha(n=11,11.3%) and Colombo South Teaching Hospital (n=8,13.3). Most patients cited NHSL's perceived higher quality of care(n=50,83.3%) and trust in its staff(n=41,68.3%) as the main reasons for choosing NHSL, whereas fewer patients mentioned family influence(n=11,18.3%) and negative experiences at nearby hospitals(n=6,10%). Patients also cited good experiences at NHSL(n=18,30%), longer wait times in other hospitals(n=15,25%), better reputation of NHSL(n=16,26.7%), and quicker management at NHSL(n=9,15%) as reasons.

Conclusion and Recommendations: Despite resource availability in other hospitals, most patients prefer to come to NHSL primarily due to the perceived superior quality of care and staff expertise. A key factor influencing this preference is patients' lack of confidence and awareness in services at other hospitals. Authorities must educate the public on available quality resources and trained staff at these hospitals, while addressing patient complaints. This would ensure both efficient allocation and utilization of resources in tertiary care hospitals, enhancing the quality and quantity of highly specialized orthopaedic services

Keywords: Orthopaedic surgery, Hospital selection, NHSL, patient preference, resource allocation

OP 03/AB 012
Innovative programme for prevention of human deaths by Rabies in Monaragala District through maintenance of high dog immunization coverage above National target of 70%

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Introduction: RDHS office is the main controlling body of Health Services in a district under which all curative and preventive health activities planned, implemented, monitored, and evaluated. MOH and its team is responsible for all activities implemented under National programmes in their area which are target oriented. RDHS office coordinates and facilitates those activities by giving administrative and technical support. Rabies is one of the deadly and preventable communicable diseases. In the past, the number of human deaths due to Rabies was high and considered as a health problem in Monaragala district. Several rabies deaths were reported in the past. It is evident that transmission of Rabies can be prevented through immunization of domestic and stray dogs. Immunization coverage should be maintained above 70% each year to achieve this. But dog immunization coverage in Monaragala district was extremely low in the early years of last decade. The dog immunization coverage in 2012 is 40%. Therefore, Rabies control team of all MOH and RDHS office, Monaragala has decided to revise the dog vaccination programme as the immunization coverage was extremely low.

Objective: To prevent human deaths by Rabies through maintenance of high dog immunization coverage with effective use of available resources.

Methods: Focus group discussions were conducted with relevant stakeholders to find reason for law immunization coverage. The main reasons for law immunization coverage were due to lack of vaccinators, lack of transport facilities and high transport cost, lack of auto plungers to vaccinate stray dogs. Several brainstorming sessions conducted with all MOOHs of the region and RDHS officials and suggestions made to decentralize the mass dog vaccination programme from RDHS to MOH level. Necessary facilities obtained through advocacy of health and government authorities of provincial council. Required number of vaccinators recruited and they were trained locally at RDHS office and field. Motorcycles with mounted sound system, auto plungers were purchased to facilitate the program. Fuel allocation from Pradeshiya sabha (Rs.3000 per MOH area per month) obtained to motivate the staff. Project was regularly reviewed by RDHS and RE. We implemented this programme to overcome the issues and to achieve high immunization coverage.

Results: As a result, dog vaccination continued at villages of all MOH covering all GN areas of Monaragala District in each year. Annual Dog vaccination coverage increased and maintained between 84% to 95% over the years of 2012 to 2023 and deaths due to Rabies reduced.

Conclusion and Recommendation: Rabies deaths can be reduced by maintaining high immunization coverage through proper guidance, commitment and dedication of regional staff and continuous monitoring of dog immunization programme. The same decentralized vaccination programme can be implemented for other districts in Sri Lanka

Keywords: Dog immunization, Rabies prevention, Decentralized vaccination program

OP 04/AB 013

Factors affecting the non-technical skills practices of the operating theatre nursing officers of the National Hospital of Sri Lanka

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Introduction: Non-technical skills (NTS) are social and cognitive skills. Deficiency in NTS has been identified in high-risk healthcare settings, especially in operating theatres, that has affected healthcare quality and safety. The literature on the factors affecting NTS practices is limited.

Objective: To identify the factors affecting the NTS practices of the operating theatre (OT) nursing officers (NOs) of the National Hospital of Sri Lanka.

Methods: A mixed-method descriptive study was conducted from December 2022 to February 2023. Basic characteristics and the NTS practices of 169 OT NOs were assessed quantitatively using a self-assessment checklist with a scoring system based on the "Scrub Practitioners' List of Intraoperative Non-Technical Skills (SPLINTS) system". It assessed three NTS categories (i.e., communication and teamwork, task management, situation awareness) and their nine elements. All permanently attached, full-time employed NOs with more than two years of experience in the present OT were included. Qualitative data on the factors affecting the NTS practices of the OT NOs were collected from their supervisors through a focus group discussion with fourteen participants and nine key informant interviews. Association of the OT NOs' basic characteristics with the practices was analyzed using "SPSS version-26". The normality was tested using the Kolmogorov-Smirnov test, and one-way ANOVA and independent sample t-test were used. Qualitative data were analyzed by content analysis method using "NVivo-12 pro software".

Results: A significant ($p<0.05$) association in practices was observed with the age, hierarchy, nursing experience, experience in the present OT, and training received on NTS. Qualitative results identified training-related factors due to the unavailability of regular organizational-level formal training and NTS standards as the main factors affecting NTS practices.

Conclusion and Recommendation: In this setting, NTS practices were affected by age, hierarchy, experience, and training. It is recommended NTS training and a supportive work environment to promote practicing NTS.

Keywords: Non-technical skills, Nursing officers, Operating theatres

OP 05/AB 014
Assessment of Turnaround Time of Laboratory Investigations at Outpatient Department in the District General Hospital, Matale

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Introduction: In hospital outpatient settings, timely diagnosis and treatment rely on efficient laboratory processes. Delays in laboratory report turnaround times (TAT) hinder patient care, prolong waiting periods, and affect clinical outcomes. There is limited data on TATs for essential investigations such as Full Blood Count (FBC), Urine Full Report (UFR), and Erythrocyte Sedimentation Rate (ESR) in the District General Hospital, Matale.

Objective: To assess the turnaround time for selected investigation in the outpatient department of the tertiary care hospital in the Matale district.

Methods: A descriptive cross-sectional study was conducted in May 2023, focusing on three selected investigations prescribed for OPD patients: FBC, ESR, and UFR. A total of 600 Investigation Request Forms (IRFs), 200 for each investigation were included. Forms with only one investigation were included, excluding IRFs issued to patients with mobility problems. A convenient sample was selected at the time of prescribing the investigations. The total TAT was calculated by recording the time for each phase - pre-laboratory, laboratory, and post-laboratory - using a pretested checklist.

Results: The mean TAT ± SD for FBC was 169.14± 12.3 minutes (pre-laboratory =44.67 ± 4.5 minutes, laboratory =74.47 ± 7.8 minutes, and post-laboratory =50.00 ± 5.2 minutes). For ESR, it was 204.31 ± 15.7 minutes (pre-laboratory = 55.14 ± 8.1 minutes, laboratory =82.00 ± 9.3 minutes, and post-laboratory =67.17 ± 7.4 minutes). For UFR, it was 149.22 ± 11.2 minutes (pre-laboratory = 49.00 ± 5.0 minutes, laboratory =54.89 ± 6.1 minutes, and post-laboratory =45.33 ± 4.8 minutes).

Conclusion and Recommendation: This study identified sub-optimal TATs. It is recommended to implement process improvements to reduce TATs, which include adopting laboratory information management systems, minimizing the sample transportation time, and regular TAT audits.

Keywords: Turnaround time, pre-laboratory, laboratory, post-laboratory

OP 06/AB 018
Are we effectively utilising nursing officers specially trained for pain medicines in Sri Lanka

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Introduction: Effective pain management is an essential component of high-quality healthcare and nurses are primary care providers in pain management. A certificate course in pain medicine for nurses was developed to train nurses to provide safe, high-quality, efficient pain management services. On successful completion, these nurses take up positions as 'pain nurses' and function as members of 'pain teams' in respective institutions under the leadership and guidance of consultant anaesthetists. Five batches of nurses have been trained and no data is available related to their utilization. Only a limited number of secondary and tertiary care hospitals have functioning pain clinics despite available trained nurses. It is a timely need to assess their utilization to improve the existing gaps.

Objective: 1. To assess the utilization of trained nurses in pain medicine across various healthcare settings.

2. Identify challenges and suggestions for improvement in utilizing trained nurses in hospitals.

Methods: A descriptive cross-sectional mixed study conducted among all nurses trained in pain medicine using a standard questionnaire.

Results: Only 37.1% (n=70) of trained nurses in the sample are attached to pain management units. Pain clinics are conducted by 32.9%, whereas 51.4% of pain nurses conduct pain ward rounds. The mean cumulative score of support from administrators to pain nurses is 19.91 With SD of 3.42. There is no statistically significant difference in cumulative support scores between base and tertiary care hospitals. 58.6% of nurses are strongly satisfied with their work as pain nurses. Qualitative data revealed that it is necessary to have trained doctors and positive attitudes of other staff members to establish successful pain management units in hospitals.

Conclusion and Recommendation: Nurses trained in pain medicine are underutilised and administrators should take prompt actions to utilise them effectively.

Keywords: Pain medicine, Nursing officers, Utilization

OP 07/AB 020
An Evaluation of Waiting Time for Coronary Artery Bypass Graft (CABG) in Government Hospitals of Sri Lanka

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Introduction: Ischaemic heart disease (IHD) is the leading cause of mortality globally, with coronary artery bypass graft (CABG) surgery serving as a critical intervention for patients suffering from coronary artery disease. In Sri Lanka, where cardiovascular disease is prevalent, timely access to CABG is essential for improving public health outcomes. However, government hospitals providing free healthcare face significant challenges, resulting in prolonged waiting times for CABG, often extending to several years. This study evaluates the waiting times for CABG in government hospitals in Sri Lanka and explores factors contributing to these delays.

Objective: The study seeks to determine the current waiting times for CABG in Sri Lankan government hospitals, identify factors prolonging these times, and propose solutions to reduce delays.

Methods: A national survey was conducted across all government hospitals performing CABG surgeries, complemented by key informant interviews with hospital directors, cardiothoracic surgeons, and relevant staff. Data was collected on the number of patients waiting for CABG, the capacity of each hospital, and the efficiency of resource utilization.

Results: The study found that the average waiting time for CABG surgery is three to four years:3years at National Hospital of Sri Lanka,3 ½ years at the National hospital Kandy,4 years at the National Hospital Karapitiya, and 3years at Teaching Hospital Jaffna, with over 10,000 patients on the waiting lists island-wide. Contributing factors include inefficient use of facilities, a shortage of specialized surgeons, limited resources, high patient loads, and administrative delays. Poor patient selection, inadequate postoperative care, and inefficient scheduling further aggravate these delays.

Conclusion: The findings reveal significant inefficiencies in the management of CABG services within Sri Lankan government hospitals. To reduce waiting times, it is essential to optimize facility use, increase the number of specialized surgeons, enhance postoperative care, and streamline administrative processes.

Recommendation: Recommendations include improving patient selection, optimizing staffing and training, increasing ICU capacity, enhancing scheduling systems, prioritizing critical procedures, and developing standardized protocols.

Keywords: CABG, Waiting times, Healthcare efficiency

OP 08/AB 024

Performance of cataract surgeries in tertiary care hospitals in Sri Lanka

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Introduction: Cataract is a leading cause of visual impairment and blindness globally, and Sri Lanka is no exception. With an aging population, the demand for cataract surgeries has steadily increased over the years. Despite advances in surgical techniques and the availability of treatment options, challenges such as long waiting times, disparities in access to healthcare, and regional variations in service provision persist.

Objective: This study aims to determine the waiting time for cataract surgery in tertiary care hospitals in all districts in Sri Lanka.

Methods: A secondary data extraction form was used to collect data from 34 tertiary care hospitals with eye surgical facilities in Sri Lanka. This includes the National Eye Hospital, National Hospitals, Teaching Hospitals, and District General Hospitals. Data was collected in July 2024, and analysis was done using Microsoft Excel.

Results: Almost 80% (27) of the hospitals responded to the study. Total cataract surgeries done in 2022 and 2023 were 51172 and 62895 respectively. Also, up to end of July 2024, 31741 surgeries were done. Around 75% of the surgeries were done at National Eye Hospital and other teaching hospitals. A total number of patients on the waiting list on the 31st of July 2024 was 44179. Further, four (15%) hospitals reported that they have average waiting time more than one year and only two (7.4%) hospitals declare their waiting time is less than three months.

Conclusion and Recommendation: Even though more than 50,000 surgeries were done every year, number of patients on waiting list are high. Patients on waiting list are more than surgeries done in 2024 to date. It is necessary to identify the causes of long waiting list and intervene to improve the capacity of underperforming institutions.

Keywords: Cataract Surgery, Tertiary care hospitals, Waiting time

OP 09/AB 030
Introduction of a Bystander Pass and Guidelines for Hospital Premises

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Introduction: Frequent adverse events related to misconduct of non-family bystanders who accompany in-ward patients, such as unauthorized photography, inappropriate behaviour, and substance abuse, have underscored the need for effective identification and management of bystander behaviour. These incidents disrupt hospital operations, jeopardize patient safety, and hinder staff performance. Additionally, bystanders experienced difficulties accessing the hospital due to the absence of a pass system. Although we issue visitor passes in our hospital settings these bystanders do not receive any identification documents. In response, a bystander pass system and corresponding guidelines have been introduced.

Objective: The primary objective of this initiative is to develop and enforce guidelines that delineate acceptable bystander behaviours and prevent interference with hospital operations. This aims to enhance overall hospital security and maintain a respectful atmosphere.

Methods: Following explaining the guideline detailing acceptable and unacceptable bystander behaviours, bystander passes are issued. A copy of their national identity card is obtained and necessary details are noted in the bystander register. Staff training sessions were conducted to facilitate the implementation and sustain the new system.

Results: The introduction of the bystander pass system and behavioural guidelines led to a significant reduction in incidents of misconduct and interference. The hospital environment became more secure and respectful, contributing to improved patient care and operational efficiency. Staff reported fewer disruptions and patient safety was notably enhanced.

Conclusion: The bystander pass system, combined with clear behavioural guidelines, effectively addressed challenges related to bystander misconduct in hospital settings. By controlling access and establishing clear behaviour expectations, the initiative fostered a safer and more respectful environment. Ongoing monitoring and enforcement of these measures are essential for maintaining improvements and ensuring continued safety and efficiency in hospital operations.

Keywords: Bystander pass, Bystander behaviour, Patient safety, Hospital security

Abstracts of Poster Presentations

31st Annual Scientific Sessions

Transforming Healthcare:
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PP 01/AB 003
Re-admissions at Base Hospital Udugama: an audit

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Introduction: Hospital re-admission is defined as a patient who has been discharged from a hospital and being admitted again to the same hospital or another hospital within 30 days of discharge due to the same illness. A study revealed 3% to 11% of patients are readmitted in the UK. Identifying reasons for re-admission can improve the quality of healthcare services. However, very few studies have been done about re-admissions in Sri Lanka.

Objective: To assess the readmission rate and the main reasons for readmission at Base Hospital Udugama.

Methods: All Bed Head Tickets (BHTs) registered at ward re-admission registers from January 2022 to July 2023 (19 months) were selected for this audit. All the BHTs were evaluated and information was collected according to a pre-tested checklist. The checklist included the number of patients admitted during this period, age, sex, disease condition and diagnosis. All data was entered into an Excel sheet and descriptive statistics were analyzed.

Results: During these 19 months, 25953 patients have been admitted to all wards and 61 patients have been registered as re-admissions. The re-admission rate is 0.24%. All re-admissions covered 23 disease conditions. Of them 17(28%) were re-admitted due to wounds, 6 (10%) for ureteric colic, 6 (10%) for respiratory tract infection and 3 (5%) each for asthma, cellulitis, acute gastritis and abscess. The majority, 36 (59%) were reported from the surgical section, and the rest of 17(28%) were reported from medical wards and 8 (13%) from the pediatric section. The majority 58 (95%) of patients were admitted within 10 days after discharge and the average time was 5.5 days. Re-admission rate of females (56%) was higher than males.

Conclusion and Recommendation: The re-admission rate for the study period at BH Udugama is 0.24%, which is very low compared to what is reported from developed countries (USA 11.6%, UK 3-11%). This is a good indicator of the quality of health service provided by the hospital. It is recommended that necessary measures be taken to further reduce the re-admission rate.

Keywords: Re-admission, Rate, Hospital, Quality, Audit

PP 02/AB 004
Project to Establish an Acute Stroke Care Unit in District General Hospital Matale

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Introduction: Stroke Care Unit (SCU) is a 24/7 clinical care service coordinated by the neurologist and trained nursing staff. In Sri Lanka, access to SCU was 14.6 % and District General Hospital (DGH) Matale was identified to establish SCU in 2019. Patients seeking acute stroke clinical care in DGH Matale were referred to National Hospital (NH) Kandy until September 2022.

Objective: To establish 24/7 access to acute stroke care services at DGH Matale.

Methods: The Ministry of Health approved the proposal to establish an SCU. The multidisciplinary team was involved in discussions, and special training was arranged for the staff at NH Kandy. The unit was established in September 2022 by using available resources and sharing the infrastructure, equipment, and human resources of the Emergency Treatment Unit and Cardiac Care Unit. Demographic data of the patients and length of stay were obtained from the stroke registry to evaluate the services.

Results and Discussion: Before the establishment of the SCU in September 2022, all the patients were transferred to NH Kandy for the management of acute stroke. After the establishment of the unit, 34 patients obtained treatment up to July 2024. The majority of the patients were male (73.52%) in the age range of 60-69 years (48%). Among the female majority they also belonged to the age range of 60-69 years (44.44%). The length of stay of the patient ranges between 1 day to 29 days and 26.5 % of the patients stay three days.

Conclusion and Recommendation: Establishing an acute stroke clinical care program in DGH Matale delivers the best possible care for patients by utilizing available resources. Further, allowing a dedicated place with equipment for this program, and doing regular review meetings with stakeholders will ensure the safety and continuity of the service.

Keywords: Acute stroke care, DGH Matale, Resource utilization

PP 03/AB 005
Factors Associated with Burnout of Nursing Officers in Teaching Hospital Badulla

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Introduction: Burnout is described as "a state of physical, emotional and mental exhaustion caused by long-term involvement in situations that are emotionally demanding" (Harrison, 1999). It is common among medical personnel and has become a subject of interest in healthcare. Nursing professionals work long hours and face diverse work-related factors, possibly leading to Burnout (Sundin et al., 2007).

Objective: General objective - To determine the factors associated with Burnout of Nursing officers in Teaching Hospital Badulla.

Specific objectives- To find out if Burnout exists in Teaching Hospital Badulla Nursing officers, To find out the socio-demographic factors associated with Burnout and To find out work-related factors associated with Burnout.

Methods: This was a hospital-based descriptive cross-sectional study. A sample of 355 (n=355) nurses was selected through a stratified random sampling method from 626 nurses representing all hospital units. The Copenhagen Burnout Inventory tool measured Burnout for Personal Burnout, Work-related Burnout, and Patient Burnout.

Results: Analysis of Socio-demographic factors disclosed that Burnout increased in nurses without children (95% CI; p=0.001), single nurses (95% CI; ANOVA p=0.021), nurses who felt they were in poor personal health (95% CI; ANOVA p=0.000), nurses without own home (95% CI; ANOVA p= 0.000) and those with higher education level (95% CI; ANOVA p=0.025). Work-related factor analysis revealed higher burnout in those who worked in surgical units (95% CI; ANOVA p=0.026), who belonged to service grade III (95% CI; ANOVA p=0.003), those who had to do a shift duty in another unit during the past six months (95% CI; p=0.032) and those who perceived the number of nurses working in the unit was inadequate (95% CI; ANOVA p= 0.023).

Conclusion: Sociodemographic characteristics such as being childless, having a higher education level, being in dire financial standing, having poor personal and family health, not owning a home, and being unmarried have all been linked to increased rates of burnout among nurses. Nurses in surgical units, those who have worked shifts in other units within the last six months, those in service grade III, and those in units with insufficient nurse staffing had higher rates of burnout.

Recommendation: To handle nurse burnout, a pluralistic, multisectoral strategy is required. Implementing regular duty rotation, counselling, reinforcement of hospital welfare societies and providing junior nursing staff with greater possibilities to participate in skill development and knowledge updating training programs were recommended.

Keywords: Burnout, Nurses, Factors, Teaching Hospital Badulla

PP 04/AB 010
Prevention of Drowning Deaths in Wellawaya through a Multisectoral Approach

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Introduction: Drowning is the third leading cause of unintentional injury death worldwide, accounting for an estimated 236,000 deaths annually. In Sri Lanka, drowning is the leading cause of accidental deaths among children aged 1-14. A lack of basic swimming skills also contributes to the high incidence of drowning. In 2023, Wellawaya reported 14 drowning deaths out of 49 total injury deaths, representing 28.5% of the total compared to 478 (8.2%) drowning deaths from total injury deaths in Sri Lanka.

Objective: To reduce drowning deaths in Wellawaya through a multisectoral approach.

Methods: To address the burden of drowning, we conducted a detailed investigation, revealing that 11 out of the 14 reported drowning deaths occurred at a single location, "ELLEWALA," a small waterfall that recently gained popularity on social media. Many visitors frequented this spot for bathing. In response, a collaborative effort was initiated, involving the Base Hospital Wellawaya, Wellawaya Police, Divisional Secretary, Coroner, Grama Niladhari, and Medical Officer of Health (MOH). The initial step was to prohibit bathing at "ELLEWALA." A field visit identified the dangerous area, which was subsequently demarcated with rope boundaries. Awareness programs were conducted by the police, Grama Niladhari, and MOH through notice boards at the site and social media.

Results: By June 2024, Wellawaya reported only one drowning death, indicating a marked reduction in such incidents.

Conclusion and Recommendation: Prevention is always better than cure. Our efforts to reduce drowning deaths in Wellawaya focused on preventive measures, requiring the collaboration of multiple stakeholders and the general public. This multisectoral approach proved effective in significantly reducing drowning incidents.

Keywords: Drowning prevention, Multisectoral approach, Awareness programs

PP 05/AB 015
Implementation Challenges in the Odyssey of Establishing Hospital Health Information Management System (HHIMS) in Sri Lanka - A Deep Dive Case Analysis

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Introduction: The Hospital Health Information Management System (HHIMS) project was launched in 2016 by the Ministry of Health in collaboration with the Information and Communication Technology Agency (ICTA). It aimed to implement an Electronic Medical Records system across all government hospitals in Sri Lanka. HHIMS has been successfully implemented in eighty-five hospitals, ranging from Primary Medical Care Units to Teaching Hospitals. Despite such positive impacts, the project has encountered challenges that have hindered its progression.

Objective: This study aimed to elucidate the implementation challenges of the Hospital Health Information Management System.

Methods: This qualitative study employed document review and key informant interviews with strategically selected stakeholders. The findings were analysed using the national eHealth Strategy toolkit developed by the World Health Organization (WHO) and the International Telecommunication Union (ITU).

Results: Effective initial leadership was observed, but a secondary tier is needed for sustainability, particularly during leadership transitions. High infrastructure costs and government limitations on capital investments have hindered progress. The outpatient department (OPD) module facilitates customization, but digitalization in sub-specialties such as Ophthalmology and Oral Maxillofacial Surgery remains challenging. Interoperability with existing systems, notably the Laboratory Information System, presents significant challenges. The lack of a comprehensive legal framework for HHIMS impedes project acceleration and funding justification. Critical shortages of essential human resources, including medical officers with the required skill mix, health informatics professionals, information communication technology (ICT) officers, ICT assistants, and system administrators, have also been noted. Lack of structured capacity-building processes, staff resistance, and change management incompetencies have also been observed.

Conclusion and Recommendation: Despite significant achievements in implementing HHIMS in Sri Lanka's hospitals, addressing the encountered challenges is crucial for the project's continued success. A comprehensive evaluation of the project's reach and encountered challenges is recommended to align its outcomes with the initial expectations.

Keywords: HHIMS, Sri Lanka, Digital Health

PP 06/AB 021
Sociodemographic Profile of Infertile Women Presenting to a Specialized Fertility Clinic in Colombo, Sri Lanka

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Introduction: Infertility is a pressing public health issue, especially in developing countries like Sri Lanka, where cultural and familial expectations often place significant pressure on women to conceive soon after marriage. A detailed understanding of the sociodemographic profile of infertile women is essential for tailoring fertility services to meet the needs of this population. This study was conducted at the Specialized Fertility Clinic of Castle Street Hospital for Women in Colombo to explore the sociodemographic characteristics of women seeking infertility treatment.

Objective: The primary objective of this study was to assess the sociodemographic profile of infertile women presenting to a specialized fertility clinic and to evaluate how these factors influence their access to and utilization of fertility services.

Methods: A cross-sectional descriptive study used a self-administered questionnaire to collect data from sample of 425 female clinic patients. The questionnaire covered various socio-demographic factors, including age, ethnicity, educational level, employment status, and monthly income. Descriptive statistics were used to summarize the data.

Results: The study sample consisted of women aged 19 to 49 years, with a mean age of 32.2 years. The majority (35.6%) were between 31-35 years old. Most participants were Sinhalese (90.3%) and had completed at least G.C.E. A/L (39.4%). A significant portion (51.9%) were employed, and 22.1% had higher education. Most patients (53.7%) travelled over 30 km to reach the clinic, with an average monthly income of Rs. 30,001-50,000 (45.5%). Most women (65.6%) were experiencing primary infertility. The study revealed significant sociodemographic disparities in delayed fertility treatment. Women over 35 years (36.9%) and those earning less than Rs. 30,000 (42.1%) were more likely to delay seeking treatment. Ethnicity also influenced delays, with 55% of Tamil women and 44% of Moor women postponing care.

Conclusion and Recommendation: This study underscores the importance of understanding the sociodemographic profile of infertile women to improve the delivery of fertility services in Sri Lanka. Women over 35 years, those with lower income, and ethnic minorities, were more likely to delay seeking care. These findings emphasize the need for targeted interventions to address financial, educational, and cultural barriers and improve timely access to fertility services for vulnerable groups.

Keywords: Infertility, sociodemographic profile, fertility treatment, healthcare access

PP 07/AB 023
Evaluation of Completeness of Laboratory Request Forms in a Sri Lankan Tertiary Healthcare Facility

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Introduction: Laboratory request forms are crucial for accurate communication between clinicians and laboratory staff, containing essential patient and test details to ensure proper diagnosis and care. Incomplete or improperly filled forms can lead to diagnostic delays, medical errors, and compromised patient safety. This study evaluates the completeness of laboratory request forms submitted to the central laboratory at District General Hospital, Kegalle (DGH-Kegalle).

Objective: To assess the completeness of laboratory request forms submitted to a tertiary healthcare facility.

Methods: A descriptive cross-sectional study was conducted using 1,110 laboratory request forms (biochemistry, haematology, and microbiology) submitted in July 2024. Stratified random sampling was applied to ensure proportional representation of the three types of forms. A panel comprising a clinical consultant, medical officer, medical laboratory technologist, and nursing officer identified essential parameters which were validated against the 2011 laboratory manual. Forms were evaluated for completeness in the following fields: patient name, age, sex, investigation type, requesting officer, clinical history, date, and reference number. Data was analyzed using Microsoft Excel 2021.

Results: Among the forms analyzed, 85% (n=948) had valid patient names, with haematology forms showing the lowest rate of 64% (n=189). Over half (52.8%; n=586) of the forms lacked a recorded date. The investigation name, requesting officer, and reference number fields were completed in over 96% of cases. Microbiology forms were more consistently completed compared to biochemistry and haematology. Notably, 38.8% (n=188) of biochemistry requests and 24.4% (n=72) of haematology requests were submitted in non-standard forms.

Conclusion: The study highlights significant inconsistencies in the completeness of laboratory request forms across different test types. Emphasizing the use of proper request forms and providing targeted staff training is vital for enhancing the completeness and accuracy of laboratory requests and, thus, patient safety.

Keywords: Laboratory, Investigations, completeness

PP 08/AB 026
Assessment of customer feedback process at Lanka Hospital

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Introduction: Lanka Hospital, a leading private healthcare provider in Sri Lanka, is renowned for its high standards and accreditations. Despite reporting over 95% customer satisfaction, the hospital's Google Review rating is significantly lower at 3.6 out of 5. This suggests a potential misalignment between the hospital's internal feedback mechanisms and patient perceptions, warranting a review of the current customer feedback process.

Objective: Analyse the effectiveness of the existing patient satisfaction survey at Lanka Hospital. Identify discrepancies between survey results and Google Reviews. Propose an integrated feedback system that includes Google Reviews and patient surveys.

Methods: The study reviewed Lanka Hospital's current feedback process, including the patient satisfaction survey and data collection methods. Google Reviews were analysed to identify common themes and issues not captured by the study. A comparative analysis was conducted to identify gaps and overlaps between the two feedback sources. Recommendations were then developed based on this analysis.

Results: The analysis revealed several areas for improvement in the current survey process, including technical issues and limitations in capturing the full range of patient experiences. The Google Reviews highlighted problems that needed to be reflected in the internal surveys, suggesting a disconnect between patient perceptions and the feedback being collected.

Conclusion: The current feedback process at Lanka Hospital must fully capture patient expectations and experiences. Integrating Google Reviews with the existing patient satisfaction surveys could provide a more comprehensive understanding of patient feedback.

Recommendation: It is recommended that Lanka Hospital assign dedicated staff to manage and analyse both Google Reviews and patient surveys. Regular reviews should be conducted to continuously improve service quality and enhance customer satisfaction, ultimately improving the hospital's online reputation.

Keywords: Customer feedback, Patient satisfaction, Google Reviews integration

PP 09/AB 027
Rational Use of Medicines in Provincial Tertiary Care Setting in Gampaha District

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Introduction: Many studies have been done on this subject area. The rational use of medicines is essential for ensuring optimal therapeutic outcomes, minimizing harm, and conserving healthcare resources. In healthcare institutions under the Provincial tertiary care setting in Gampaha District, challenges such as overprescription, underuse of essential medicines, self-medication, and polypharmacy threaten the effective use of medications.

Objective: To identify factors associated with the irrational use of drugs in the Provincial tertiary care setting in Gampaha District. To make recommendations to improve the rational use of drugs in the Provincial tertiary care setting in Gampaha District.

Methods: A comprehensive review of prescription practices, patient self-medication behaviours, and the availability of essential medicines was done. Data was gathered through audits of healthcare institutions, interviews with healthcare providers, and surveys of patients. The role of Drug and Therapeutics Committees (DTCs) and clinical pharmacists was also evaluated.

Results: The study identified significant issues in over-prescription, particularly of antibiotics and multivitamins, and the under-prescription of essential medicines due to availability and awareness gaps. Self-medication and insisted medication was prevalent among the population, leading to misuse of drugs. Polypharmacy was a common problem among elderly patients, increasing the risk of adverse effects. DTCs, prescribers and clinical pharmacists were found to play a crucial role in promoting rational medicine use but were underutilized.

Conclusion: There is an urgent need to address the challenges in the rational use of medicines in the Gampaha District. A multi-faceted approach involving healthcare providers, patients, and regulatory bodies is essential.

Recommendations: Key recommendations include continuous professional development of medical officers to promote rational prescribing, strengthening the role of DTCs, integrating clinical pharmacists into healthcare teams, advocating regulations on prescription-only medicines, and conducting regular audits of prescription practices. Conducting Public awareness is also necessary to reduce self-medication

Keywords: Rational medicine use, Prescription practices, Polypharmacy

PP 10/AB 028

Effectiveness of the financial management in household level to strengthen the family economy of members of the Mother Supportive groups in the Colombo district

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Background: Planning and organizing household expenditures is a cornerstone of strengthening the family economy, and it is imperative to survive even in economic crisis situations. The mother, as a manager of the family economy, plays a key role in prioritizing needs and controlling expenditures. Members of the Mother Supportive Groups (MSG) are well-recognized among the community, and they act as change agents. Therefore, it is important to implement household-level financial management initiatives through the MSG members.

Objective: To assess the effectiveness of the financial management in household level to strengthen the family economy of members of the Mother Supportive groups in the Colombo district.

Methods: Training on financial management was given to the primary health care staff by the Central Bank Officials. Selected MSG members were trained by the health staff and government officers. Householders (n=150) were selected through purposive sampling and pre and post assessment was carried out after six months. The questionnaire was developed by the Health Promotion Bureau. Descriptive statistics and paired sample t test were done.

Results: Mean age of the participants was 41.5±4.5 and 71% (n=106) were female. At the baseline only 12% (n=18) houses had the home gardening. The percentages of houses which categorize the income and expenditure and doing saving of money monthly were 18 (n=27) and 8 (n=12) respectively. After the intervention, home gardening is done by 62.5% and monthly serving are done by 36%. Family income has significantly increased (p=0.000, 95%CI (0.251, 0.630). Conversely expenditure for alcohol, and smoking have been reduced significantly (p<0.000, 95% CI (0.179, 0.435).

Conclusion: Family economy can be strengthened through house hold level financial management, led by mothers and it should be guided and followed up by the community level public officers including health personnel.

Keywords: Financial management, Family economy, Mother supportive groups

PP 11/AB 033

Trial of a Multi-Component Program to improve the effective use and maintenance of selected medical equipment in a low-resource setting

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Background: Medical equipment (ME) maintenance retains an asset's original anticipated useful life and preserves its reliability and cost-effectiveness.

Objective: This study developed and trialled a multi-component program to improve ME maintenance in nine Sri Lankan hospitals.

Methods: This pre-post study involved an initial baseline assessment of existing ME maintenance systems in nine hospitals, the development and implementation of a multi-component improvement program, and a three-month post-evaluation. Five target ME were selected for the study: oxygen regulators, electrocardiogram (ECG) machines, suction apparatus, blood pressure (BP) apparatus and mini autoclaves. A validated questionnaire for randomly selected nursing officers (n = 101) and healthcare assistants (n = 120) was used to obtain baseline ME maintenance data. Six focus groups and 24 interviews were conducted with key stakeholders to co-design the multi-component interventions, which included: developing a standard operating procedure (SOP) targeting preventive maintenance activities; establishing focal points to provide technical and logistic support; staff training; and the introduction of institutional ME maintenance documents. Program effectiveness was assessed at three months post-implementation.

Results: The baseline assessment identified that no ME maintenance programs had been implemented in any of the hospitals. Following program implementation, improvements were noted in: the availability ($p < 0.05$) and functional level ($p < 0.05$) of all selected ME; equipment maintenance processes ($p = 0.000$); as well as staff knowledge, skills, perceptions and satisfaction.

Conclusion: The program improved the use and maintenance of ME and was widely supported by key stakeholders. The approach is likely relevant to other resource-poor hospital settings where inadequate ME maintenance causes health system inefficiencies.

Keywords: Medical Equipment (ME), Maintenance, Hospital

Abstracts of Presentations on Health Sector Innovations

31st Annual Scientific Sessions

**Transforming Healthcare:
Fostering Leadership, Professionalism and Efficiency**

INO 01
Improving the Effectiveness of the Laboratory Investigation Process of the Outpatient Department in the District General Hospital, Matale

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Introduction: Effective laboratory processes contribute to timely diagnosis and treatment. Laboratory process effectiveness is multidimensional which includes quality, timeliness, and cost efficiency. Laboratory review meetings in District General Hospital (DGH), Matale, had identified quality-related complaints, prolonged waiting times for investigation reports, and a notable number of unattended investigation reports.

Objective: To improve the effectiveness of the laboratory investigation process in the Outpatient Department (OPD) at DGH Matale.

Methods: An interventional project was conducted from January to November 2023 at DGH Matale. Laboratory process quality was assessed through key informant interviews with nursing officers, medical laboratory technologists, patients, and OPD medical officers. Two checklists evaluated timeliness through Turn-Around Time (TAT) of FBC, ESR, UFR, and cost aspects through daily unattended reports while a self-administered questionnaire assessed patient satisfaction. Data collected before and after the project were analyzed using NVivo software for qualitative data and SPSS for quantitative data. Interventions developed with stakeholders to address quality, cost, and timeliness gaps by developing guidelines, request forms, sampling manuals, SOPs, non-conformity reporting forms, establishing electronic report mechanisms, and relocating the OPD lab to its premises.

Output/Outcome: Streamlining the laboratory investigation process improved the effectiveness of the process. Unattended investigation reports decreased significantly from 19% to 2.4%(χ^2(df=1)=64.747;p=0.00). Mean TAT for all three investigations reduced significantly; for FBC from 169.14 to 79.7 minutes (Z=235.84; p=0.000), ESR from 224.31 to 130.34 minutes (Z=151.25; p=0.000), and UFR from 149.22 to 97.32 minutes (Z=90.86; p=0.000). Patient satisfaction scores increased significantly from 71.2% to 79.8% (Z=7.34; p=0.000).

Conclusion and Recommendation: Interventions improved the OPD laboratory investigation process effectiveness in DGH, Matale. Better Communication and collaboration between the laboratory and OPD are recommended to improve the overall process effectiveness.

Keywords: Laboratory effectiveness, Quality, Timeliness, Cost

INO 02
Re-Defining Referral pathways at Rikillagaskada Cluster - Apex Referral Hub

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Introduction: The Rikillagaskada Cluster Referral and Back Referral System has been re-defined to enhance service delivery at the district level, aiming to achieve Universal Health Coverage (UHC). This system integrates the apex hospital with 8 Divisional Hospitals and 5 Primary Medical Care Units, covering a target population of 129,760. The primary goal of this initiative is to streamline the referral process and reduce patient waiting times, thereby improving the overall quality of care.

Objective: To improve the efficiency of the referral process by utilizing a dedicated hotline and referral formats, which aims to reduce the average time for patients to access specialty care. To equitably distribute the patient load between primary care institutions and the apex hospital to alleviate the burden on the apex hospital. To facilitate better management of patient referrals and back referrals to ensure timely and quality care, contributing to the achievement of Universal Health Coverage.

Methods: Referral Initiation: When a patient requires specialty care (non-urgent/elective), the Medical Officer at the peripheral hospital will complete a referral form. Referral Processing: The dedicated officer at the peripheral hospital will contact the apex hospital through the hotline to arrange an appointment. Referral Documentation: The officer at the peripheral institution will document the details on the referral form and instruct the patient accordingly to attend the relevant clinic. Patient Consultation: The patient will attend the apex hospital on the scheduled date for their specialty consultation. Back Referral: After the consultation if necessary the specialist will refer the patient back to the the peripheral institution.

Output/Outcome: In routine setup patients have to visit four times to government hospitals to get a specialty care service, but this referral system has reduced it to two visits only. Further, it has improved patient satisfaction and expedited the process of diagnosis.

Conclusion and Recommendation: The implementation of the Rikillagaskada Cluster Referral System has successfully streamlined the referral process, leading to a reduction in patient waiting times and an improved distribution of patient load between primary and specialized care facilities.

Keywords: Referral, Specialty care, Streamline

INO 03

Innovative approach to screen school children in Grades 10, 11, 12, and 13 to identify Thalassemia carriers in the Monaragala District through multi-sectorial coordination

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Introduction: Thalassemia is an inherited blood disorder that causes significant reduction of a protein called hemoglobin, an important component of the red blood cells carrying oxygen in the human body. Thalassemia carriers are living normally among people without the disease. Early screening and identification of carriers and minor Thalassemia patients are crucial in the reduction of the thalassemia burden to the country. A survey conducted in 2009 to 2010 found that 4.4% of Beta thalassemia trait is prevalent in the Monaragala district. However, there were no records of further studies, or continuous screening conducted to identify the patients in the district and there are no proper screening programs to identify the undiagnosed thalassemia patients in the district. This would increase the probability of giving birth to more Thalassemia babies in the district which leading to high health care cost.

Objective: This program is aimed to identify all the thalassemia patients and carriers in the district in order to prevent future burden of Thalassemia.

Methods: A focus group discussion was conducted with all the stakeholders and decided to screen all the school children in Grades 10,11,12 and 13 with the help of Medical Officer of Health, and Provincial hospitals and District educational authorities. A committee was established including Regional Director of Health Services at Monaragala, Director DGH, Monaragala, Consultant Haematologist at DGH Monaragala, MO NCD and PHNO at RDHS Monaragala to monitor the program. The district Thalassemia committee decided to complete this strategic screening practice in each educational zone and one zone at a time in the whole district. The first program was initiated at the Wallawaya educational zone with the participation of all the stakeholders in the zone upon invitation, including Medical Superintendent, Chief MLT, Chief Matron at BH Wallawaya, MOH and supervising PHI at Wallawaya MOH office, Director Education at Wallawaya educational zone, Consultant Hematologist at DGH Monaragala and RDHS Monaragala with his team. MOH and MS at BH Wallawaya was given the whole responsibility to conduct the program with the help of their team. Director Education was given responsibility to educate school principals regarding the importance of the screening program for Thalassemia. A WhatsApp group was created to coordinate the process efficiently and effectively among them. All suspected samples (MCV< 80, MCH < 27 and high red cell count) were sent to Hematology lab at DGH Monaragala for High Performance Liquid Chromatography (HPLC) for confirmation of Thalassemia. The program was gradually implemented in the Monaragala and Bibile educational zones with the help of relevant authorities by giving responsibility to the area MOOH.

Output/Outcome: Ninety-one Positive for Beta Thalassemia trait students were identified from the screened population up to now and the incident rate is 3.7%. The rest of the student will be screened within 6 months.

Sustainability of project: The program is continuing with the existing system without extra physical, financial and human resources and linked to the school health program of the MOH to screen Grade 10 students in each year. Identified patients will be referred to the necessary counselling and family awareness programme at the MOH level and if necessary sent to the district level for follow up.

Conclusion and Recommendation: Around 3.7 % of students are suffering from the Beta Thalassemia trait. A Continuous sustainable program needs to be established to trace all thalassemia patients in the community. These finding can be used to counsel affected children to prevent a future Thalassemia burden in the county.

Keywords: Thalassemia screening, Multi-sectoral coordination, School health program

INO 04
Online Monitoring System for Oral Pre-Malignant Disease Referrals

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Introduction: In Sri Lanka, Oral Pre-Malignant Disease (OPMD) prevalence is reported at 1.15% among the general population aged over 20 years and 6.7% among estate workers. Early detection, prevention, and treatment are essential to prevent OPMDs from progressing to cancer. Currently, a paper-based referral system exists from the Medical Officer of Health level to Dental Surgeons and then to Oro-Maxillo-Facial (OMF) Surgeons, but it often fails due to the lack of a proper monitoring system. Patients are often unwilling to follow up, and referral-feedback chits are frequently lost or overlooked by both patients and doctors.

Objective: This project aims to digitize the process and digitalize the OPMD referral-feedback process to ensure the follow-up of referred individuals at every level of the referral-feedback cycle.

Methods: Digitizing the manual referral-feedback process and digitalizing the same process using online free and open-source resources called Cognito Forms with zero cost. The Regional Oral Health Unit (ROHU) has been committed to monitoring and regulating the entire referral-feedback process. A dedicated team of employees at the ROHU will periodically check the system to monitor and follow up with the referred individuals. In the meantime, all dentists and OMF surgeons will also be alerted on defaulted referred individuals.

Output/Outcome: By digitalizing the referral feedback process, the ROHU has achieved 100% monitoring and regulation. As the first entity to implement an online OPMD referral-feedback system, it ensures continuity of care for individuals with OPMD in the region and creates a novel digital record of OPMD status. The system also conserves valuable time for healthcare staff by auto-capturing details. Adopting similar solutions in other regions could benefit the entire country.

Conclusion and Recommendation: The ROHU, in collaboration with the Health Information Management Unit (HIMU) of the RDHS office, has successfully created an online digital OPMD referral-feedback system for the Kalmunai region. This system replaces the manual chit-based process, enabling the ROHU to monitor and regulate the entire OPMD referral-feedback cycle, ensuring no patient referred by MOH or Dental Surgeons to the consultant clinic is missed.

Keywords: Oral premalignant diseases, Referral, Online monitoring

INO 05
Establishment of Monitoring and Evaluation Unit at Regional Directorate of Health Services Kalmunai (Pioneer project in Sri Lanka)

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Introduction: Monitoring and Evaluation (M&E) strengthens healthcare by identifying strengths, weaknesses, and enabling evidence-based decisions. While some projects and programs have M&E elements to track progress, there is no centralized system. The lack of a dedicated M&E Unit overseeing multiple health institutions has resulted in inconsistent practices, inefficient resource use, and limited accountability. This fragmentation impedes effective gap identification in healthcare delivery.

Objective: The objective is to establish a centralized M&E Unit to standardize practices, improve healthcare quality, and ensure programs meet community needs.

Methods: The M&E Unit was systematically established starting on 01.06.2024. An initial analysis identified M&E functions dispersed across various roles. Leadership support was secured, linking the unit to the highest decision-making bodies. The M&E structure was integrated with planning and budgeting, incorporating diverse skills needed for all M&E components. Job descriptions were developed, clearly defining roles at managerial, technical, and operational levels. Resources were allocated for staff, training, and essential tools. Stakeholder involvement was prioritized, with input from healthcare providers to ensure system responsiveness. The unit's implementation was closely monitored, with ongoing evaluations to refine processes and improve outcomes.

Output/Outcome: The M&E Unit enhanced healthcare quality by consistently monitoring services, identifying key areas for improvement, and strengthening accountability through data-driven reports. Evidence-based decision-making optimized resource allocation and strategic planning, while standardized practices reduced fragmentation and improved efficiency. The unit developed data management systems, key performance indicators, and systematic evaluation processes, producing regular performance reports and promoting evidence-based practices. Some of the new initiatives included review meetings, a separated asthma and COPD clinic, an introductory program for new doctors, the creation of a kitchen inspection tool and many supervision formats.

Conclusion and Recommendation: The establishment of the M&E Unit has significantly improved quality, standardize practices, enhance resource use, and ensure better outcomes and effective information sharing. The success of this centralized approach demonstrates its potential as a replicable model.

Keywords: Monitoring and evaluation; performance indicators

INO 06
Project to Improve Decision-Making in Selecting Appropriate Biomedical Equipment for Line Ministry Hospitals

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Introduction: Health technology is crucial for delivering healthcare services, but it can be expensive and may not meet the needs of under-resourced areas. Biomedical equipment is a major asset for healthcare institutions. Unlike developed countries, Sri Lanka lacks systems for informed decision-making on biomedical equipment. Therefore, a research project was conducted to create a decision support system for more effective equipment selection to optimize healthcare resources and improve services.

Objective: To improve decision-making in selecting Biomedical Equipment for hospitals.

Methods: The research project was conducted in three phases in four-line ministry hospitals in the Western province, namely Colombo South Teaching Hospital, National Cancer Institute, District General Hospital – Negambo and Colombo East Base Hospital. In Phase I, current practices and satisfaction with the decision-making process in selecting biomedical equipment in the selected hospitals were assessed. Upon the findings of Phase I, in Phase II the "Need Assessment and Prioritization Model" (NAPM), a web-based system for collecting essential information and prioritizing requirements was developed and implemented. This system incorporates weighted criteria for the selection of biomedical equipment. In phase III the user satisfaction of the system was assessed.

Output/Outcome: The implemented NAPM system for gathering data was entered into mandatory fields, enabling 100% completion of the inclusion of general information, equipment-related details, infrastructure details, human resource-related details, workload and economic factor details. This supported capturing the relevant information enabling effective decision-making based on information. The user satisfaction was increased after the implementation of the new system in comparison to the inconsistent paper-based system that was used.

Conclusion and Recommendation: The established NAPM system was found to be beneficial in improving the practice and user satisfaction in the decision-making process in selecting biomedical equipment. The use of the NAPM system was suggested to be expanded to other line ministry hospitals to obtain prioritized Biomedical equipment requirements from 2025 onwards and further to be expanded to the Provincial level hospitals.

Keywords: Biomedical Equipment, Decision-making, Prioritization

INO 07

"Sahurda Danawwa": Enhancing Mental Wellness among Healthcare Staff Post-Pandemic in Base Hospital Kanthale

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Introduction: The "Sahurda Danawwa" ("සහෘද දනව්ව" - Friendly Atmosphere) programme was launched at Base Hospital (BH) Kanthale in 2022 to address the mental health challenges faced by healthcare staff during and after the COVID-19 pandemic and the subsequent economic crisis. Aimed at reducing stress and burnout, the programme involved monthly forums where staff could anonymously share concerns and participate in expert-led discussions on stress management, work-life balance, and conflict resolution. The initiative has been successfully sustained under successive hospital leaderships.

Objective: To enhance the mental well-being of BH Kanthale's healthcare staff by reducing stress and burnout through structured forums and expert-led discussions, fostering a supportive work environment.

Methods: Suggestion boxes were strategically placed in less crowded areas of the hospital, allowing staff to anonymously submit concerns related to stress and mental health. These concerns were reviewed and discussed during monthly forums open to all staff. Expert speakers, including a Consultant Psychiatrist, led discussions on topics such as stress management, work-life balance, and conflict resolution, creating an inclusive and supportive environment.

Output/Outcome: The programme significantly improved staff morale and mental well-being. Feedback indicated that participants felt more supported and better equipped to manage stress. Regular discussions and expert guidance contributed to a reduction in reported burnout and conflicts among staff. The programme's continued implementation under successive administrations underscores its effectiveness and sustainability.

Conclusion and Recommendation: The "Sahurda Danawwa" programme has been an effective and sustainable initiative for improving mental health among healthcare staff at BH Kanthale. By fostering a supportive environment where staff can openly discuss and address their concerns, the programme has contributed to reduced burnout and enhanced teamwork, particularly during the compounded challenges of the COVID-19 pandemic and the economic crisis. It is recommended that similar initiatives be adopted in other healthcare institutions to promote staff well-being and resilience.

Keywords: Staff mental well-being, Stress management, Supportive environment

INO 08

Development of an Online Administrative Dashboard to enhance the Productivity and Cost-effectiveness of the Healthcare Delivery System in the Regional Directorate of Health Services, Kalutara District

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Introduction: The Regional Directorate of Health Services, Kalutara district, manages 45 healthcare institutions with over 3,000 employees, serving nearly a million residents. The Regional Director oversees the entire healthcare system in the district, supported by other administrative and technical officers in the administration of curative and preventive health services.

Objective: To develop an online administrative dashboard that enhances the productivity and cost-effectiveness of healthcare delivery in the Kalutara region in 2023/2024.

Methods: A situational analysis identified key areas needing regular updates. Stakeholder meetings and workshops were held to introduce the online system. Officers from various units were assigned responsibilities: the planning unit managed email addresses, Google Sheets, and monitoring; establishment and salary units updated employee data; the administration unit handled daily vehicle allocation and daily telephone queries. The dashboard, compiled into a single dashboard for easy access, was shared with the Provincial Director of Health Services and other authorized officers and displayed in the directors' office.

Output/Outcome: Situation analysis revealed that cadre information, assets such as vehicles and quarters, and other basic administrative data were identified as essential areas to update regularly. The daily vehicle allocation plan and list of daily queries received were identified as essential information that needs to be updated daily. Through the dashboard, data could be provided when requested to the national and provincial levels on time without delaying through the dashboard. Accessibility is available to data even during a meeting without disturbing the office. The dashboard easily facilitates timely decision-making on crucial issues and queries of all healthcare institutes and employees. The daily vehicle allocation of the office can be monitored distally.

Conclusion and Recommendation: An online dashboard provides a platform to manage resources effectively to ensure maximum productivity and cost-effectiveness through timely decision-making to maintain the smooth functioning of health services in a region.

Keywords: Online, Dashboard, Productivity, Cost-effectiveness

INO 09

Introduction of Blood Pressure (BP) monitoring graph to improve medication adherence of hypertensive patients attending the medical clinic of Divisional Hospital (DH) Deiyandara

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Introduction: Hypertension affects 20.9% of Sri Lanka's population, but providing antihypertensive medication alone doesn't ensure effective treatment outcomes. Success largely depends on patients' adherence to their medication regimen.

Objective: To introduce a Blood Pressure (BP) monitoring graph to improve medication adherence among hypertension patients at the NCD clinic of DH Deiyandara.

Methods: A pre-intervention assessment was conducted to evaluate current medication adherence levels and identify reasons for poor adherence among hypertensive patients. This assessment involved an interviewer-administered questionnaire, Key Informant Interviews, and a Focus Group Discussion. Following this, a "BP monitoring graph" was developed, displaying BP values on the Y-axis and time on the X-axis. The graph was distributed with patients' clinic books and allowed them to track their BP over a year. The normal BP range was shaded to give patients and medical staff a clear visual overview of BP control over time.

Output/Outcome: Level of medication adherence was initially low at 38%, with a lack of awareness about BP values (37%) being a key factor. The introduction of the BP graph increased patients' motivation to adhere to their medication and helped medical staff quickly identify patients with uncontrolled BP. Although there was a significant improvement in patients' awareness of their BP values (67%), the increase in medication adherence was modest (42%).

Conclusion and Recommendation: BP graph is an effective and sustainable tool for improving patients' awareness of their BP and encouraging better medication adherence. The low cost and positive reception from both patients and healthcare providers suggest that the intervention is sustainable. Regular surveys are recommended to monitor the long-term effectiveness of the BP graph in this setting.

Keywords: Hypertension, Medication adherence, BP graph

INO 10
Saving Clean Drinking Water through Reuse of Treated Sewage Wastewater in Hospital Settings

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Introduction: Hospitals are significant consumers of water, utilizing substantial volumes daily for various operations. At Colombo East Base Hospital (CEBH), which spans nearly 79 acres, with 80% of the area designated as green space, a considerable amount of clean water is used for garden maintenance. Simultaneously, substantial volumes of wastewater are discharged from the hospital's sewage treatment plant without being repurposed. This project explores the potential for reusing treated sewage wastewater to reduce the consumption of clean drinking water within the hospital.

Objective: The primary objective is to treat and reuse wastewater from the hospital's sewage plant for suitable applications within the hospital premises. It reduces the reliance on clean drinking water for non-potable uses.

Methods: The project involves the following steps. Treatment of wastewater from the sewage plant to remove contaminants that could pose environmental or health risks, testing the treated wastewater to ensure it meets safety standards and collection of the treated wastewater in a large storage tank. This water can be used for non-potable applications such as gardening, cleaning of sewage tanks, and other similar purposes.

Output/Outcome: The implementation of this project resulted in the daily collection of approximately 5,000 litres of treated wastewater which can be used for non-potable purposes. It annually saves nearly 1800units of cleaned water for the water board and 171,000 Rupees on the hospital’s water bill. Additionally, it has helped maintain the hospital garden and crops even during dry seasons, supporting our environmental promotional activities.

Conclusion and Recommendation: The reuse of treated sewage wastewater in hospital settings has proven to be both feasible and beneficial. This project highlights the potential for significant water and cost savings, contributing to enhanced sustainability and environmental stewardship.

Keywords: Wastewater reuse, Sewage, Water treatment, Environmental impact

INO 11
Implementation of a User-Friendly Blood Investigation Tracking Format to the Bed Head Tickets (Ward 5)

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Introduction: Efficient management and tracking of blood investigations are essential for enhancing patient care and ensuring timely medical interventions. The current system often suffers from a lack of streamlined notification and tracking processes, leading to delays, incomplete, or overlooked blood tests. It negatively impacts patient outcomes, and wastes resources. To address these issues, a novel, user-friendly tracking format has been introduced to the Bed Head Tickets (BHT).

Objective: The primary objective is to enhance the tracking and management of blood investigations by integrating a user-friendly format directly into the BHTs.

Methods: The innovation involves the following steps: a small cardboard card (made from discarded drug boxes) is attached to the front of all BHTs. Blood investigations are listed on the card when samples are sent for testing. Received reports are marked in the card using a highlighter pen, before attaching to the BHT. This provides real-time updates of investigations (un-highlighted = pending, highlighted = received) for ward staff. It also prevents patient discharge until all investigations are traced and approved by a medical officer. Additionally, ward staff were trained on the new system.

Output/Outcome: It enhanced visibility of the current status of blood investigations and reduced the time wasted on repeated tracking attempts. This also led to zero incidence of missed or overlooked tests. Ultimately leading to timely follow-up of investigations, better clinical decision-making, patient safety, and discharge processes.

Conclusion and Recommendation: The integration of a user-friendly blood investigation tracking format into the BHTs represents a significant advancement in investigation management. This approach has improved the efficiency of the tracking process, and ultimately enhanced overall patient care. Ongoing monitoring and evaluation is recommended to sustain its effectiveness.

Keywords: Blood investigation tracking, Bed Head Ticket, Patient care

INO 12
Transformative Innovation in Health Data Management

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Introduction: The initiative involved the conversion of traditional paper-based monthly returns and the adoption of electronic platforms such as Google Forms for reporting and Epicollect5 for maintenance-related data collection from peripheral hospitals and other health institutions under the purview of Regional Directorate of Health Services (RDHS) Vavuniya. We aim to highlight the journey, benefits, and key learnings from this innovative approach to health data management and efficiency.

Objective: Enhance data collection efficiency by transitioning to electronic monthly returns via Google Forms and Epicollect5, ensuring timely submission and completeness of required information, thereby preventing delays in reporting from healthcare institutions under the RDHS Vavuniya.

Methods: All monthly returns were received via a pre-designed Google form, and all the maintenance-related requests from peripheral hospitals were received through a pre-designed Epicollect5 form. All the pending maintenance works were followed up.

Output/Outcome: We observed an initial resistance with various excuses including technical limitations. However, it was implemented successfully with brief training and effective change management. Google form implementation ensured timeliness, data accuracy, data integrity, real-time monitoring, and readiness for use for review and research purposes. Similarly, Epicollect5 allowed us offline data collection and Geographic Information System (GIS) integration which ensured data accuracy and correctness. It also allowed us to track all pending works in real time and take follow-up measures.

Conclusion and Recommendation: The successful implementation of electronic platforms for health data management in the Vavuniya District has demonstrated the potential for transformative change in healthcare administration. The transition from paper-based systems to Google Forms for monthly returns and Epicollect5 for maintenance data has not only streamlined processes but has also improved data accuracy, timeliness, and overall decision-making and reduced unnecessary expenses.

Keywords: Health data management, Transformative Innovation, Geographic Information System