

ABSTRACTS

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Abstract 01

Disease type, severity, demographic data analysis and ambulance response time for patient transfer by 1990 Suwa Seriya ambulances to Emergency Treatment Unit National Hospital Kandy

P A H M M B B Herath, D P S P Peiris, S Manilgama, S Chandrasekaram

Teaching Hospital, Kandy, Sri Lanka

Keywords: 1990 ambulance service, Emergency Treatment Unit (ETU)

Introduction

Pre-hospital patient transfer is an important aspect of patient care. There is doubt whether this service is misused or overused by Sri Lankans. This study was designed to find out the type of emergency, triage categories, demographic details of patients, and response time of the ambulance service of patients transported to the emergency department of Teaching Hospital Kandy.

Objective

To study the disease severity and characteristics of transferred patients and monitoring and treatment received by patients brought by 1990 ambulance service to the Emergency Treatment Unit of National Hospital Kandy and response time to emergencies.

Methods

A descriptive cross-sectional study was conducted after ethical clearance over a period of two months.

Results

The mean age of the study population was 50±21.6 years, and a male predominance (61.8%, n=230) was observed. Most were employed (59.2% (n=180), and the majority (46.6%, n=131) was from the low socioeconomic group (< Rs 30,000 per month). The most common cause of calling the ambulance was road traffic accidents (RTA) (18.2%, n=40), followed by cardiac emergencies (12.30%, n=43). The ambulance reached 63%(n=236) of the patients within 10 minutes and 34%(n=127) between 10-30 minutes. A statistically significant association between the ambulance response time and age was noted (p-value of 0.007). Longer response times were seen more commonly for older patients. The majority of patients (70%, n=262) were admitted to ETU in the daytime (6 am - 6 pm).

Conclusion

The most frequent reason for calling an ambulance was RTA. Men and people from lower economic status were more likely to call. Within 10 minutes, the majority of the patients received responses. Older patients frequently experienced longer response times. The daytime hours saw a peak in the number of calls.

Corresponding Author: P A H M M B B Herath Email: <mbbherath@gmail.com>  <https://orcid.org/0000-0001-8343-3829>
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Abstract 02

Work life balance and its association with job satisfaction among government medical officers in the Ampara district

A S M Fouzad¹, M M M Muzrif Munaz², I L M Rifas³, M B Abdul Wajith³

¹MOIC, Environmental, Occupational Health and Food Safety, RDHS Kalmunai, ²National Cancer Control Program, Ministry of Health, ³RDHS Office, Kalmunai

Keywords: work life balance, job satisfaction, government medical officers, Ampara district.

Introduction

The medical profession is a noble profession and a stressful job as well. Doctors experience extreme physical or mental tiredness due to their extended working hours, night shifts, increased workload, on-call duty, and less flexibility at work which eventually has a significant impact on their Work Life Balance (WLB) and Job Satisfaction (JS). Prevalence and relationship study about WLB and JS among medical officers has not been undertaken in the Sri Lankan context.

Objective

This study was aimed at determining the level of prevalence of WLB, its relationship, and its impact on JS.

Methods

A self-administered questionnaire was used among 424 medical officers working in hospitals using stratified random sampling and data were analyzed using SPSS. Pearson's correlation, regression, and chi-square tests were deployed.

Results

Out of 366 respondents, 66.1% and 17.8% of medical officers were having moderate and high levels of WLB respectively. Whereas 60.7% and 23.5% had moderate and high levels of JS respectively. WLB showed a significant association with an impact on JS.

Conclusion

A significant proportion of medical officers (66.1%) with a moderate level of WLB are at risk of developing low satisfaction in the future and a significantly low prevalence of WLB and JS would affect the performance, well-being, patient care, and satisfaction if proper policies and programs are not incorporated. Hence, it is important to implement WLB policies and programs to have good WLB and JS which are important for medical officers to enhance the quality of life and quality of care.

Corresponding Author: A S M Fouzad Email: <smfouzad@gmail.com>  <https://orcid.org/0000-0002-1781-5826>
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Abstract 03

Prevalence of Quality of Work Life and associated factors among the elderly workers in a selected district of Sri Lanka

M N J Gunathilaka¹, M C Weerasinghe², D B D L Samaranayake²

¹Family Planning Unit, Family Health Bureau, Sri Lanka, ²Department of Community Medicine, Faculty of Medicine, University of Colombo

Keywords: elderly worker, Quality of Work Life, personal factors, work-related factors, psycho-social factors

Introduction

With the rising elderly population, work engagement by the elders is inevitable. The Quality of Work Life (QoWL) of elderly workers becomes an important concept to be assessed and improved.

Objective

To assess the QoWL and its associated factors among elderly workers in the Gampaha district in Sri Lanka.

Methods

A community-based cross-sectional study was conducted among 835 elderly workers selected from the Gampaha district in Sri Lanka using multistage cluster sampling. QoWL was assessed using a newly developed and validated tool and associated factors were assessed through an interviewer-administered questionnaire. QoWL was dichotomized into 'good' and 'poor' using pre-determined cut-offs and associated factors were determined using the Chi-square test followed by binary logistic regression.

Results

The prevalence of good QoWL among elderly workers was 32.1% (95%CI: 29.0–35.3). Personal factors positively associated with good QoWL were earning more than 30,000/-LKR per month (AOR=2.1, 95%CI: 1.42-3.12) and having properties for income generation (AOR=2.2, 95%CI: 1.16-4.17) while, spending on own food (AOR=0.16, 95%CI: 0.07-0.38) and having arthritis (AOR=0.65, 95%CI: 0.43-0.98) were negatively associated. Of the work-related factors, being employed before 60 years (AOR=1.12, 95%CI: 1.04–1.20) was positively associated, while experiencing work-related accidents (AOR=0.39, 95%CI: 0.21-0.74) and working to support the family (AOR=0.68, 95%CI: 0.46-0.98) were negatively associated with good QoWL. Out of the psycho-social factors, job helping to have social interaction (AOR=4.03, 95%CI: 1.48–10.95) and having adequate social support (AOR=1.76, 95%CI: 1.05–2.96) were positively associated with good QoWL.

Conclusion

QoWL was low among elderly workers and was associated with multiple factors in their personal, family and work life. 'Elderly-friendly work' should be incorporated as a policy to enable elderly workers to gain the economic and social benefits of work.

Corresponding Author: M N J Gunathilaka Email: <nilukagunathilaka@yahoo.com>  <https://orcid.org/0000-0001-6887-8790>
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Abstract 04

Is the Incident Reporting System (IRS) in healthcare system, a requirement for improving patient safety? A Review

G H S Fernando¹, T Bandara²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka ²Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

Keywords: incident reporting system, patient safety, effectiveness, patient care

Introduction

Adverse events such as medical errors, injuries, or equipment failures that could harm patients, caregivers, or other individuals or has the potential to harm them are known as medical incidents. Avoidance of unintended or unexpected harm to people during the provision of healthcare is mandatory. In healthcare settings incident reporting refers to collecting healthcare incident data with the aim of enhancing patient safety and quality of care.

Objective

This review aims to evaluate the practice, effectiveness and shortcomings of IRSs in healthcare systems in relation to patient safety.

Methods

A literature search was performed using the databases Medline, Google Scholar and PubMed. Search terms used are 'Incidents Reporting System', 'effectiveness', 'patient safety' and 'patient care'. About 64 relevant articles were studied and 15 directly related articles were selected for the review.

Results

The history of adverse events assessment in hospital setup runs back to the 1980s. Since then, many developed countries have put emphasis on the establishment IRS in their health systems. Benefits of incident reporting in healthcare systems include the prevention of reoccurrences of adverse events, providing updated knowledge and understanding about risk events, creating lessons and promoting safety-minded culture. It saves a considerable sum of money for the healthcare budget in the long run. However, under-reporting is the main challenge in the incident reporting system due to the fear of legal ramifications, blame, the shame of punishments, lack of time for reporting, lack of an easy reporting system, lack of encouragement and interest from the administration, lack of training on IRS and low levels of feedback.

Conclusion

Incident reporting system ensures patient safety and improves the quality of health care service. It is recommended to implement a comprehensive incident reporting system in health service in all developing countries in order to drive good medical practice and to ensure the safety and quality of patient care.

Corresponding Author: G H S Fernando Email: <ghsfernando@gmail.com>  <https://orcid.org/0000-0001-7356-6257>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 05

Role of healthcare leaders in the digitalization of health system: a review

G H S Fernando

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

Keywords: digital leadership, health digitalization, health care leaders, leadership styles

Introduction

Digitalization of health system is defined as adaption of digital technology in healthcare service to offer high-quality patient care. However, the digitalization of the healthcare system is lagging behind compared to other business environments. Poor leadership skills of healthcare leaders may be one of the reasons.

Objective

The objective of this review is to identify the roles and attributes of healthcare leaders in order to perform in a digital world.

Methods

A literature search was performed using the databases Medline, Cochrane library, Google Scholar and PubMed without considering the time period. Search terms used were 'Digital leadership, Health digitalization, Healthcare leaders and leadership styles. About 80 relevant articles were studied and 30 most related articles were selected for the review.

Results

Healthcare leaders are advised to go beyond their traditional leadership style and develop new leadership skills. The transformational leadership theory was identified as the starting point for 'new-genre leadership' models emphasizing that a leader's style should be visionary, ideological, participative, servant, or authentic where a digital leader needs to perform. Leader-member exchange theory focuses on the nature and quality of the relationship between leaders and their team members which is ideal for the implementation of "digital health". Therefore, the digital leader needs to be flexible and adaptable to new ideas, have intellectual curiosity, have a transformative vision, forward-looking perspective, be change-oriented, open-minded, adaptable, innovative and have a hunger for new knowledge. Digital leaders need to develop attributes such as the ability to influence, inspire a shared vision, be proactive, and ability to avoid blaming others, be visionary and be innovative. They need to develop their analytics capability, as it is essential for healthcare leaders to ensure effective professional leadership. Delegation of work and effective communication are very important attributes a leader should possess when dealing with digital health.

Conclusion

Healthcare leaders need to develop new leadership skills in order to digitalize the health system to improve patient care service.

Corresponding Author: G H S Fernando Email: <ghsfernando@gmail.com>  <https://orcid.org/0000-0001-7356-6257>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 06

An assessment of healthcare utilization in the rural villages of Kilinochchi district

H C Fernando¹, T M E Dabrera¹, J M W Jayasundara Bandara²

¹Ministry of Health, Sri Lanka ²Project Director, Primary Healthcare System Strengthening Project

Keywords: primary medical care institutions, rural settings, bypassing, healthcare utilization, non-communicable diseases

Introduction

Primary Medical Care Institutions (PMCI) play an integral role in healthcare service delivery to rural populations. However, with the increase in Non-Communicable Diseases (NCDs) there is a need to re-evaluate their importance in rural settings.

Objective

To assess healthcare utilization patterns in a rural setting by analyzing patient preferences within a pluralistic healthcare delivery model.

Methods

A descriptive cross-sectional community and hospital-based study was conducted through self-administered questionnaires in 100 rural households in Poonakary, Kilinochchi and the health staff of two PMCIs, to determine factors influencing bypassing and identify the gaps in service delivery. A five-point Likert scale, included in the questionnaires, was used to assess client satisfaction during PMCI consultations.

Results

Of the selected households, 89% lived within 5km distance of the nearest PMCI and 95% fulfilled outpatient requirements through them, with 74% citing the close proximity of the PMCI as the decisive factor. Clinic needs of 56% were satisfied through their nearest PMCI and 44% of them were NCD-related follow-ups. Respondent's satisfaction during PMCI consultations was 96% and bypassing PMCI was influenced by marital status, number of family members, presence of children in the family and level of education. The absence of flexible consultation hours (25%) and unavailability of specialized consultants (22%) were the commonest reasons for bypassing to obtain outpatient and clinic services. Community suggestions to improve service delivery were increasing support staff (97%), establishing laboratory services (93%), improving basic infrastructure (93%) and extending service hours (90%). In the hospital-based questionnaire, unsatisfactory staff cadre and lack of telecommunication facilities were the main issues shared by both PMCIs.

Conclusion

PMCI play an instrumental role in fulfilling the needs of patients in rural settings. Therefore, strengthening them further would be beneficial for such communities.

Corresponding Author: H C Fernando Email: <shadowflame.reigns@gmail.com>  <https://orcid.org/0000-0002-3083-6904>
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Abstract 07

Tooth loss and associated factors among janitorial workers employed in government hospitals in Colombo Municipal Council area

K L M M Perera^{1,2}, V Nanayakkara²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²ET&R Unit, Ministry of Health, Sri Lanka

Keywords: tooth loss, janitorial, behaviors, prosthetic, government, CMC area

Introduction

Janitorial workers are considered as an underprivileged occupational group of workers in the society. Evidence has proven that oral health burden including tooth loss tend to polarize among marginalized people due to social inequalities.

Objective

To assess the prevalence and associated factors for tooth loss among janitorial workers employed in government hospitals in Colombo municipal council area (CMC).

Methods

A Workplace-based Descriptive Cross-Sectional study was conducted among 427 janitorial workers employed in tertiary care hospitals in the CMC area. Workers were selected using a multistage, systematic sampling technique. A pre-tested and validated interviewer-administered questionnaire and an oral health assessment form developed using WHO oral health survey methods were used as study instruments. The Chi-square test and Fisher's Exact test were used for data analysis at a 95% significance level.

Results

The prevalence of tooth loss was 94%. Edentulousness was 16% and the mean number of missing teeth was 16.45. The majority were using toothpaste (68.8%) and toothbrushes (65.2%) with improvement in oral hygiene practices. The majority (50.7%) were brushing once a day with non-fluoridated toothpaste (61.7%). Tobacco use was prevalent with increasing age. These workers utilized oral health services only for an emergency. The study found a statistical difference in increasing prevalence and severity of tooth loss with the female gender, use of non-fluoridated toothpaste, betel chewing and not utilizing dental services regularly. Prosthetic status (22%) was low compared to prosthetic needs (97.2%) of the workers. Disparities in normative (97.2%) and perceived need for prosthesis (81.3%) were observed. The majority needed partial dentures with multiple units (79.5%).

Conclusion

A higher prevalence of tooth loss, prosthetic needs and oral health-related behaviours were observed among janitorial workers than among the general population. Oral health services both curative and preventive should be expanded and reoriented to address the social determinants of health of marginalized communities such as Janitorial workers in the country.

Corresponding Author: K L M M Perera Email: <d02714@pgim.cmb.ac.lk>  <https://orcid.org/0000-0001-9346-1321>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 08

COVID-19 vaccine compliance among nurses: a cross-sectional study in a tertiary care hospital in Sri Lanka

H D L S Karunaratne¹, K L M D Seneviwickrama²

¹Medical Officer of Health office, Panadura, Sri Lanka, ²Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

Keywords: COVID-19, vaccine, compliance, nurses

Introduction

Higher coverage of the COVID-19 vaccine assists in the control of the pandemic. Despite being a high-risk group, COVID-19 vaccine uptake had been low among Asian nurses. COVID-19 vaccine compliance was less explored among Sri Lankan nurses.

Objective

To describe COVID-19 vaccine compliance and associated factors among nurses in a state hospital in Sri Lanka.

Methods

A descriptive cross-sectional study was conducted in January 2022, among nurses selected via simple stratified sampling from District General Hospital Matara. Following ethical and administrative clearance, data was collected using a pre-tested, self-administered questionnaire. Adhering to prevailed recommendations, the uptake of two primary doses and one booster dose of the COVID-19 vaccine was considered full compliance. Independent variables considered were sociodemographic factors, nursing qualifications, COVID-19 investigation status, service duration, and work setting. The associations were evaluated with the chi-square test at $p < 0.05$ significance level and presented with an odds ratio and 95% confidence interval.

Results

The response rate was 91.1% with 378 participants. The majority were females ($n=355$, 93.9%). The median age of the sample was 41 years (IQR 37- 48 years). Only 51.8% ($n=196$) were fully compliant with the COVID-19 vaccine. A statistically significant higher vaccine compliance was observed among nursing degree/ diploma holders (63.1% vs 48.6%; OR=1.8; 95%CI 1.1- 3.0; $p=0.019$) and senior grades (62.7% vs 44.1%; OR=2.1; 95%CI 1.3-3.0; $p=0.001$) compared to their counterparts. Negative associations were detected with age ≤ 41 years (OR= 0.5; 95% CI=0.4-0.8; $p=0.004$) and having been investigated for COVID-19 (OR= 0.6; 95% CI=0.4-0.9; $p=0.01$). Variables such as sex, marital status, religion, service duration, and work setting revealed no statistically significant association with vaccine compliance.

Conclusion

Higher nursing-related educational qualifications and seniority made nurses more vaccine compliant. Targeted interventions are recommended to fill the gaps in compliance with the COVID-19 vaccine among nurses in Sri Lanka.

Corresponding Author: H D L S Karunaratne Email: <liyamini90@gmail.com>  <https://orcid.org/0000-0001-9152-0164>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
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Abstract 09

Prevalence and dependency to Betel quid chewing among 20 to 45-year-olds in Kalutara District, Sri Lanka

N.A.R. Nanayakkara¹, U.S. Usgodaarachchi²

¹Health Promotion Bureau, Ministry of Health, Sri Lanka, ²National Cancer Control Programme, Ministry of Health, Sri Lanka

Keywords: betel quid, dependency, prevalence, psycho-social, behavioural, validation, modified Delphi technique, sensitivity, specificity

Introduction

Betel quid chewing is a common masticatory habit of great antiquity among South-East Asians and Pacific regions from the ancient era to date. An array of literature talks about psychological aspects of betel quid chewing using the word 'dependency'. It is a psycho-socio-behavioural related health problem with solid cultural and ritual acceptance. This study aimed to gather information on the prevalence and dependency on betel quid chewing, which is lacking in Sri Lanka.

Objective

To assess the prevalence and dependency on betel quid chewing among 20 to 45-year-olds in the Kalutara district, Sri Lanka

Methods

A community-based descriptive cross-sectional study was carried out among 1214 participants between 20 to 45 years of age to assess betel quid chewing prevalence and dependency. Translation, cross-cultural & language adaptation, modification by applying the modified Delphi technique and validation by applying criterion validity and reliability of 16-item Betel Quid Dependency Scale were carried out before applying the original tool to assess dependency to betel quid chewing. Data was analyzed using SPSS version 22.

Results

The cut-off point was decided as 4, based on the sensitivity (96.3%) and specificity (92.3%). The weighted prevalence of betel quid chewing was 34.1%. It was 40.4% among males and 20.7% among females. The prevalence of dependency among chewers was 54.8%, with a p-value of 0.001. The dependency on betel quid chewing among males was 60.6%, while it was 43% among females, which was statistically significant. Among three age groups, 20-30 years, 31-40 years and 41-45 years prevalence of dependency on betel quid chewing was 42%, 71% and 39%, respectively, with statistical significance.

Conclusion

In this sample, a considerable proportion is betel quid chewers. Among those, more than half were dependent on betel quid chewing, which may affect the cessation of betel quid chewing.

Corresponding Author: N A R Nanayakkara Email: <amananayakkara80@gmail.com>  <https://orcid.org/0000-0002-3909-4935>
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Abstract 10

Psychological distress and its associations among young elderly in Bandaragama Medical Officer of Health (MOH) area

A V K Jayasinghe¹, U R H Rathgamage¹, J A J U Jayalath², D L N Sandhyal², B D J Damayanthi³, C M D Sooriaarachchi⁴

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

³Teaching Hospital, Kalutara, ⁴Apeksha Hospital, Maharagama

Keywords: psychological distress, young elderly, GHQ-12, Bandaragama, Sri Lanka

Introduction

Psychological distress is considered as a state of emotional suffering typically characterized by symptoms of depression and anxiety. It is common among young elderly (aged 60 to 74 years) which hinders their health-related quality of life. However, little is known about psychological distress among young elderly living in Sri Lanka thus, scientific exploration of the situation in a local setting is much needed to have a clear understanding.

Objective

The main objective of the present study was to assess psychological distress and its associations among young elderly living in Bandaragama MOH area.

Methods

A descriptive cross-sectional study was conducted among 605 young elders. Participants were selected using cluster sampling method and a Public Health Midwife (PHM) area was considered as a cluster. Judgmentally validated questionnaire was used to ascertain data relevant to socio-demographic and other associated factors while General Health Questionnaire -12 (GHQ -12) was used to obtain data related to psychological distress. Participants who scored ≥ 2 in GHQ -12 were considered as having psychological distress. The Chi-square test was performed during bivariate analysis while the multiple logistic regression test was conducted to identify significant associations of psychological distress.

Results

The mean age of the participants was 66.6 (SD=4.3) years and the majority were female. Out of the total participants, 15.2% (95% CI: 12.3-18.1) had psychological distress. Five variables showed significant associations with psychological distress at bivariate level. They are good perceived health status, Buddhist religion, living with the spouse, having a monthly income of more than 10000 rupees and changing their usual living place within two years. Out of them participants living with the spouse (adjusted OR=0.575; 95% CI= 0.354-0.935), having monthly income of more than 10000 rupees (adjusted OR=0.448; 95% CI= 0.244-0.822) and changing their usual living place within two years (adjusted OR=3.051; 95% CI= 1.255-7.413) were significantly associated with psychological distress according to the multivariate results.

Conclusion

About 15% of young elders had psychological distress in Bandaragama MOH area. It is recommended to conduct community-based screening programs to identify young elders who need psychological support in the future.

Corresponding Author: A V K Jayasinghe Email: <m23820@pgim.cmb.ac.lk>  <http://orcid.org/0000-0001-6669-7507>
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Abstract 11

Analyzing the equipment maintenance management process in a public sector tertiary care hospital in Sri Lanka

W M C R Wijekoon¹, W M U S Wijemanne²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka ²Ministry of Health, Sri Lanka

Keywords: medical equipment maintenance management, medical equipment maintenance process, equipment maintenance in public sector hospitals

Introduction

The properly maintained equipment maintenance system provides safe, well-configured, and reliable equipment that functions accurately and reduces equipment lifecycle costs. Therefore, public healthcare organizations require investing with a sense of balance to maintain an efficient and effective equipment maintenance management system to achieve their objectives.

Objective

To analyze the equipment maintenance management process in De Soysa Hospital for Women, identifying its deficiencies, and developing solutions to streamline them.

Methods

A case study was conducted through key informant interviews with officials involved in the equipment maintenance process using a structured guide to identify processes and gaps. The information gathered was verified by examining the instrument files using a checklist. In a stakeholder meeting, identified issues were prioritized and solutions were identified. A standard operating procedure was developed based on those suggested solutions and the information obtained in consultation with experts in the fields of public procurement and equipment maintenance management, to optimize the process.

Results

The identified main problems were low knowledge of the equipment maintenance process among officers, procurement delays, non-availability of a proper preventive maintenance program, and deficiencies in supervision and evaluation. In addition to formulating a standard operating procedure using the information gathered in the stakeholder meeting and expert opinions, organizing a workshop to raise awareness and introducing an institutional checklist for supervising maintenance were identified as priority solutions.

Conclusion

There were major problems observed in the equipment maintenance management process at De Soysa Hospital for Women. However, it is expected to improve the process by implementing the developed standard operating procedure. This standard operating procedure can be adapted to improve the equipment maintenance process in other public hospitals. Furthermore, attention should be paid to the lack of awareness of the equipment maintenance management process among the officials involved and the lack of tools for monitoring.

Corresponding Author: W M C R Wijekoon Email: <m23785@pgim.cmb.ac.lk>  <https://orcid.org/0000-0002-0205-1325>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 12

Prevalence and genotype distribution of Human Papillomavirus in attendees at Central Sexually Transmitted Diseases Clinic, Sri Lanka

B Samaraweera¹, M A Y Fernando¹, U Abeyrathna², J P L T Gunathilaka¹, N Abeygunasekara³, G. Weerasinghe², J I Abeynayake¹

¹Department of Virology, Medical Research Institute, Colombo 08, Sri Lanka, ²Central STD Clinic, De Saram Place, Colombo, Sri Lanka, ³Colombo South Teaching Hospital, Kalubowila, Sri Lanka

Keywords: human papillomavirus, sexually transmitted disease, vaccination, cervical cancer, real-time PCR

Introduction

Human Papillomavirus (HPV) is a sexually transmitted infection. High-risk-HPV (HR-HPV) causes carcinomas while low-risk-HPV (LR-HPV) contributes to warts and papilloma. In Sri Lanka (SL), cervical cancer is the second major cancer in females mainly due to HPV-16. HPV vaccination is included in the National schedule since 2017 for girls 10-11 years and females are screened with cytology after 35 years.

Objective

To detect the prevalence and genotypes of HPV in attendees, Central Sexually Transmitted Diseases (STD) Clinic, SL.

Methods

This descriptive, cross-sectional study included 322 patients attending Central STD Clinic, last year. Endocervical and penile swabs were collected from females and males respectively. HPV-DNA was detected by real-time PCR using commercial kits to detect LR-HPV(6,11) and 12 HR-HPV(16,18,31,33,35,39,45,51,52,56,58,59). Data was analysed using descriptive statistics.

Results

Of the total study population (n=322), 42.5% (n=137) were females and 57.5% (n=185) were males. Age-range was 19-65 with mean of 34, median of 33, and a mode of 28 years. HPV-6 was detected in 2.5% (n=8) of patients (three males and five females) with an age range of 28-52 and a mean of 40 years. There were no HPV-11 detected. HR-HPV 16 and 18 were positive in 2.5% (n=8) of the population. Other HR-HPV 31, 33, 39, 45, 51, 52, 56, 58 and 59 were detected in 6.5% (n=21) of patients. Of all HR-HPV detected patients (n=23), 96%(n=22) were females with an age range of 22-42, a mean of 29, a median of 27 and a mode of 26 years.

Conclusion

HR-HPV was detected in 7% of patients and 52% of them were less than 35 years. Prevalence of other HR-HPV (31,33,39,45,51,52,56,58 and 59) was significant among HR-HPV positivity. HPV-6 was detected in 2.5% of the population with a mean age of 40 years. HPV-DNA testing has to be considered for both at-risk females and males before reaching 35 years of age. HPV vaccine covering all prevalent HR-HPV types may need to introduce in the future.

Corresponding Author: B Samaraweera Email: < buddiyasasi@gmail.com >  <https://orcid.org/0000-0002-9920-4622>
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Abstract 13

Establishment of health information management system at Base Hospital Udugama

G H S Fernando¹, K J M D Tharanga²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka

Keywords: health information, digitalization, quality of patient care, health technology

Introduction

Digitalization of health system offers more convenient, efficient, safe and quality patient care services with the advances in Science and technology. At present, many aspects of healthcare have incorporated with Information Technology applications such as for admissions, diagnostics, treatment, imaging, planning, monitoring, inventory management, and maintaining statistics. As a developing country, Sri Lanka is not much integrated with this technology and still manages healthcare services with paper-based system and retrieving patient records are difficult with this. As a secondary care Hospital, Base Hospital Udugama (BHU) planned to initiate Health Information Management System (HIMS) to improve efficiency, safety and quality of service.

Objective

Aimed to establish a HIMS at Out Patient Department of the BHU.

Methods

After several stakeholder meetings, planning unit of the hospital developed technical and structural plan to establish HIMS at BHU. The plan included establishment of internal network system, purchasing of hardware, preparation of registration room, recruitment and training of staff with the guidance of responsible authority.

Results and Discussion

With successful planning, good inter-sectoral coordination and effective communication with the ministry of health and provincial ministry officials the HIMS was established at Base Hospital Udugama in 2021. Once a patient is registered to the system, at the Out-Patient Department (OPD), an identity card would be issued with a barcode number that could be used in subsequent hospital visits. Through this networked system, the patient Registration room, Doctors' consultation rooms, Laboratory, Outdoor dispensary, vaccination & dressing room, director's office and health information unit were linked to each other. Producing this one-time registration card, patients will be able to continue treatment in subsequent visits and clinicians will be able to review past records by just scanning the barcode without re-registration.

Conclusion

With the implementation of HIMS, OPD at BHU converted to paperless OPD. Through HIMS system, waiting time, and drug issuing errors have been significantly reduced, and patient satisfaction, safety of the service and stock maintenance have been improved.

Corresponding Author: G H S Fernando Email: <ghsfernando@gmail.com>  <https://orcid.org/0000-0001-7356-6257>
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Abstract 14

Determining dimensions of normal pituitary gland in a cohort of patients on MRI brain in the department of Radiology, at a Tertiary Care Hospital in Sri Lanka

C N Dissanayake¹, C L De Silva², L P Kolambage¹

¹Teaching Hospital, Karapitiya, Sri Lanka, ²Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: Pituitary, MRI, dimensions, shape, bright spot, Sri Lanka

Introduction

Pituitary gland lies in the sella turcica of the brain which secretes about nine regulatory hormones. Normal size, shape and bright spot visibility are important to detect pathological changes as growth and thyroid activity are dependent on hormones secreted. No such charts are available in Sri Lanka.

Objective

To determine the size, shape, volume and visibility of 'bright spot' in the normal pituitary gland in different age groups of both genders with Magnetic Resonance Imaging (MRI) at the department of Radiology, Teaching Hospital, Karapitiya (THK), Sri Lanka

Methods

Stored data analysis of height, anteroposterior (A-P) diameter, width, shape of the free surface and bright spot visualization were determined on Brain MRI images done for extrasellar causes at THK in 185 patients from May to July 2021. They were correlated with 8 age groups and gender from 1 to 89 years. Acquired data was analyzed with SPSS version 26. Gender and 8 age groups were correlated with the measured variables using ANOVA and independent t-test. p-value <0.05 was considered as significant.

Results

The mean A-P diameter, width and volume of pituitary gland except mean height in females were higher than males. Maximum height was in the 3rd age group. Height declined up to 40 years followed by an increase. The upper margin was concave in 45.4% of subjects and "bright spot" was visible in 46.5%. The volume of the first 3 age groups had a difference with gender while 2nd and 3rd age groups showed a difference between A-P diameter and gender while 1st age group showed such a difference in width.

Conclusion

Size, shape and presence of "bright spot" of the Pituitary gland can be reliably measured in subjects who undergo brain MRI for other reasons and can be considered normal and can be generalized. As reference values seen only by imaging methods are valuable in image interpretation, more studies with imaging methods without radiation should be encouraged.

Corresponding Author: C L De Silva Email: <lilangani@pgim.cmb.ac.lk>  <https://orcid.org/0000-0002-4003-2969>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
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Abstract 15

Standardization of medication trolley to ensure medication safety of in-ward patients at Base Hospital Udugama

G H S Fernando¹, K M Somarathne², K J M D Tharanga³, P P A P Pathirana⁴, A A S Senevirathna⁴

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²Regional Director of Health, Galle, Sri Lanka, ³Department of Nursing, Faculty of Allied Health Sciences, University of Ruhuna, ⁴Base Hospital Udugama, Sri Lanka

Keywords: standardization, patient safety, medication administration, medication error, near misses

Introduction

Medication errors are described as any Patient Safety Incidents (PSI) where there has been an error in the process of prescribing, preparing, dispensing, administering, monitoring and or providing advice on medicines. It is found that medication (drug) administration errors in hospitals is around 3 – 8 %. One of the main causes of deaths due to medical errors was identified as wrong medication administration as a result of medication name confusion, look alike or sound alike misleading container labelling.

Objective

The objective of the project was to develop a standard medication trolley for the hospital to minimize and prevent drug administration errors with ensuring patient safety.

Methods

Hospital administration called a meeting with Quality Management Unit (QMU) to discuss reported medication errors and near misses during the year 2020. During the meeting, all were encouraged to make suggestions to develop a standard medication trolley to minimize and eliminate adverse issues reported to the QMU last year. Further, members agreed to give common institutional number and permanent colour code to each medication container according to the alphabetical order of the medication name. Arrangements were taken to give a definite place for each container according to the alphabetical order. Consensus that expiry date of each drug needs to be labelled clearly in each drug container on regular refilling basis was made. A drug allergy band was introduced to prevent the risk of administering allergic drugs. A medication trolley was prepared including all agreed suggestions, and the responsibility was given to the QMU to conduct awareness sessions with demonstrations to all nursing staff of the hospital. To do an audit and a progress review after six months of implementation were finally planned.

Results

After introducing the standard medication trolley, all the hospital wards have adhered to it with adequate prior awareness. At present, Nursing Officers are able to identify one medication by five different identities by name, number, colour code and position of the container and strength. With this new common practice, the allocation of nursing officers for scarce resourced units from another unit has been hassle-free. The initial progress review done by the QMU was evident as effective to minimize medication administration errors.

Conclusion

The hospital was able to successfully implement the standardized medication trolley with the collective effort of all units and currently, it is contributing a lot to prevent wastages of expiry medication in wards, saving nursing time, enhancing medication safety and saving the cost of healthcare. The sustainability of this project can be ensured with regular audits and supervision.

Corresponding Author: G H S Fernando Email: <ghsfernando@gmail.com>  <https://orcid.org/0000-0001-7356-6257>
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Abstract 16

Practices of waste management, their associated factors and selected health outcomes among female householders in MOH, Millaniya

P M C Kumara¹, C S E Goonewardena²

¹Ministry of Health, Sri Lanka, ²University of Sri Jayewardenepura, Sri Lanka

Keywords: food waste, household waste, health outcomes, practices, stray dogs

Introduction

Waste management is a major public health concern. Household waste is a major contributor for the global waste production. Knowledge, practices and health outcomes regarding household waste is therefore important.

Objective

To describe the methods of waste management practiced by female householders, associated factors and selected health outcomes among female householders in MOH, Millaniya

Methods

A cross-sectional study was conducted among 428 female householders in Millaniya MOH area. Thirty clusters were selected using WHO EPI coverage survey. Pretested interviewer administered questionnaire and an observational checklist were used and each correct practice was given one mark and incorrect practice was given zero mark. Mean value of 52% was taken as the cut off for good and poor practice. The statistical analysis was done using chi square test and significance was taken at 95% confidence limits($p=0.05$).

Results

Majority (64.6%) were below 50 years of age while mean age was 45.23 years (SD 11.5). Only 16.7% household waste were collected by local authority. More than 62% households disposed plastic and polythene improperly and 9.3% used polythene to generate fire for cooking. Mean practice score was 52% (SD 13.48). Statistically significant association noted between younger age group ($p=0.017$), those currently married($p=0.036$), higher education level of female householders ($p=0.002$) and higher education level of spouse ($p<0.001$). There was no statistically significant association between practices with income category, employment status and the number of family members ($p>0.05$). There was a statistically significant association between giving food waste to stray dogs and with stray dogs living around 500m from the household($p=0.005$) and there was no significant association between practices and other health outcomes like respiratory symptoms, dengue, skin diseases and diarrhoea ($p>0.05$).

Conclusion

Most female householders were not following proper waste collection practices and no significant association was observed between improper practices and health outcomes.

Corresponding Author: P M C Kumara Email: < m24982@pgim.cmb.ac.lk >  <https://orcid.org/0000-0001-6556-6062>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 17

Prevalence and associated factors of high job strain among bank employees in the Kesbewa divisional secretariat area during the COVID-19 pandemic

U K Shilpeswarage¹, N D Wickramasinghe²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka

Keywords: job strain, occupational stress, bank employees, COVID-19 pandemic, Sri Lanka

Introduction

Even though global evidence suggests high prevalence of job strain in the banking sector during the COVID-19 pandemic, there is a dearth of research on job strain among Sri Lankan bank employees, who played a vital role in providing essential public services during the pandemic.

Objective

To determine the prevalence and associated factors of high job strain among the bank employees in the Kesbewa Divisional Secretariat (DS) area during the COVID-19 pandemic.

Methods

A cross-sectional study was conducted in the Kesbewa DS area, Colombo district from January to February 2022. The study population included all bank employees employed in all 31 branches of banks in the Kesbewa DS area. A self-administered questionnaire, including the validated 22-item Job Contentment Questionnaire (JCQ-22), was used for data collection. The prevalence of job strain among the bank employees was computed with 95% CI. Odds ratios (OR) with 95% CI were computed to quantify the associations of high job strain in bank employees.

Results

The sample consisted of 323 bank employees (response rate=83.9%). The mean (SD) age was 32.7 (7.6) years and the majority were females (n=183, 56.7%). The prevalence of high job strain among the bank employees in the Kesbewa DS area during the COVID-19 pandemic was 25.1% (95%CI=20.3%-29.8%). Service experience less than 10 years (OR=1.6, 95% CI=1.0-2.8; p=0.043), doing less overtime work (OR=0.5, 95% CI=0.3-0.9; p=0.037), high job satisfaction (OR=0.2, 95%CI=0.1-0.3; p<0.001), perceived adequacy of different workplace facilities to prevent and control COVID-19 (p<0.05), and working with the constant worry of contracting COVID-19 emerged as statistically significant associations with high job strain among the bank employees (OR=1.8, 95% CI=1.1-3.0; p=0.023).

Conclusion

The prevalence of high job strain among bank employees in the Kesbewa DS area during the COVID-19 pandemic was high. Adequate measures to prevent and control COVID-19 within the workplace showed significant negative associations with high job strain among bank employees.

Corresponding Author: U K Shilpeswarage Email: <spukokila@gmail.com>  <https://orcid.org/0000-0003-3324-1006>
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Abstract 18

Burden of Hepatitis B and C infection among high-risk groups and blood donors in Sri Lanka

J I Abeynayake¹, D V R G Ruwan¹, A I K Mahanama², D Edirisinghe¹, P Hashani¹

¹Department of Virology, Medical Research Institute, Colombo 8, Sri Lanka, ²Teaching Hospital Anuradhapura, Sri Lanka

Keywords: burden of Hepatitis B and C, high risk groups, blood donors, laboratory testing for viral markers, elimination of HBV/HCV

Introduction

Hepatitis B (HBV) and C (HCV) transmission, occur by blood/ blood products, sexually or vertically. High-risk groups include people with HIV, prisoners, people who inject drugs, men having sex with men and transfusion dependents. Knowledge on HBV/HCV among high-risk groups in Sri Lanka needs to be reviewed.

Objective

To determine the burden of HBV/HCV infection in high-risk groups, to demonstrate their socio-demographics and to appraise the burden of blood donors as a proxy population.

Methods

Retrospective analysis was conducted using results of samples received for HBV/HCV testing for a one-year period to the Medical Research Institute since August 2021. Infections were identified by testing for HBsAg and HCV antibody and with reflexed testing for HCV-RNA. Results were analysed with stored laboratory information to determine the burden among risk groups and positive individuals' data assessed with socio-demographics. Descriptive statistics used to present the data.

Results

HBV overall positivity was 1.73% of 12,161 tested, while HCV 1.18% of 6366 tested. Among blood donors HBV positivity was 3.32% and HCV was 3.45%. Socio-demographics for HBV/HCV showed highest positives reported in the Western province followed by Eastern and Northern and risk for the infection was higher among males than females. Predominant positive age group was 21-30 years. The highest risk category for HBV was inmates of institutions /custodial and second highest was among IV drug users and transfusion dependents. HCV positives was highest in IV/intranasal drug users followed by transfusions dependents, individuals with HIV/ STIs and those on regular haemodialysis.

Conclusion

It is evident HBV burden falls into low prevalence. Socio-demographics highlighted heterogeneity in HBV/HCV burden across risk groups. The survey contributes to the mapping of HBV/HCV burden in different geographical areas and helps in planning public health interventions. Data on blood donors highlighted much concerning the need to strengthen screening. Scaling up screening assists in elimination targets, and control/ prevention of transmission.

Corresponding Author: J I Abeynayake Email: < m15591@pgim.cmb.ac.lk >  <https://orcid.org/0000-0002-3425-7635>
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Abstract 19

Analysis of Employee-Perceived Bureaucratic Red Tape in a District General Hospital of Sri Lanka

W M C R Wijekoon¹, R A Hewage², W A P P Ratnasekare³

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²Sri Jayewardenepura General Hospital, Sri Lanka, ³National Hospital Sri Lanka

Keywords: bureaucratic red tape, bureaucracy in healthcare, employee-perceived bureaucratic red tape

Introduction

Sri Lankan public hospitals, staffed by medical and non-medical personnel, are complex hierarchical organizations characterized by features of bureaucracy. Bureaucratic red tape refers to unnecessary burdensome rules and regulations that lead to meaningless paperwork, unreasonable delays, frustration, inefficiency, and poor performance. The perceived red tape among non-medical staff is detrimental to the optimal functioning of hospital administration.

Objective

To analyze the employee-perceived bureaucratic red tape among the staff of the administrative section of the District General (Teaching) Hospital Kalutara.

Methods

A case study was conducted with the voluntary participation of management assistants and development officers using a self-administered structured questionnaire. The questionnaire consisted of a one to ten points scale to measure red tape. Point one represented the lowest value while point ten represented the highest value. Information on the causes of red tape was collected through open-ended and closed-ended questions. A consultative meeting was conducted to prioritize the causes and to identify strategies to minimize red tape.

Results

The response rate was 76.74% (n=33). The mean red tape score was 5.03 (95% CI 4.25-5.81). The major causes of red tape, according to the analysis of qualitative data using a word cloud, were outdated rules, regulations, procedures, and lack of information systems. Analysis of responses to closed-ended questions revealed that centralization of decision-making, employee alienation, morale, engagement, and satisfaction were not statistically correlated to red tape. The identified strategies to reduce red tape were arranging training on office procedures, file management, establishment code, and financial regulations and conducting monthly performance review meetings.

Conclusion

The average level of red tape that is perceived by non-medical staff alarms top-level managers in the health sector to be vigilant about it. A sound working knowledge of the office procedures, file management process, establishment code, and financial regulations, is required to reduce red tape.

Corresponding Author: W.M.C.R. Wijekoon Email: <m23785@pgim.cmb.ac.lk>  <https://orcid.org/0000-0002-0205-1325>
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Abstract 20

Level of information technology skills as a determinant of self-directed learning ability in medical students

M B F Yoosoof¹, S Mendis¹, D N Dahanayake¹, S Gunawardena¹, F R Ihsan²

¹Faculty of Medicine, General Sir John Kotalawela Defence University, Sri Lanka, ²Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: analytical essay, assessment, information technology skills, medical students, self-directed learning ability

Introduction

Pandemic-triggered escalation in the use of information technology facilitated the introduction of more self-directed learning activities and assessments in the Sri Lankan medical education system. One such intervention was the introduction of the analytical essay as a continuous assessment in Physiology, requiring the retrieval and critical analysis of information, scientific writing and referencing on an online platform.

Objective

To evaluate the association between student performance in a self-directed learning-based assessment and information technology skills.

Methods

First year medical students (n=122) of the Faculty of Medicine, Kotalawela Defence University, who had submitted the analytical essay, were invited to participate in this cross-sectional study. A pre-tested, self-administered questionnaire was used to collect data on demographics, sources of information, challenges and self-rated information technology skill. Students' scores on the analytical essay were obtained from departmental records. Data was analysed as descriptive and inferential statistics (independent samples t-test and Pearson's correlation coefficient).

Results

Response rate was 58.2% (n=71), with 50.7% males and 49.3% females and majority (83.1%) being above 20 years. Only 7% had previously written an analytical essay. Of the respondents, 95.8 % used both online journals and websites as sources of information equally, while 56.3% also used traditional print sources. The mean essay mark was 6.72/10 (SD=1.3). Although 60.4% reported difficulty in searching for information online, only 28.2% found using the computer for word processing difficult. There was no significant difference in essay marks between age and gender groups. While essay performance was not correlated with previous experience, it was positively correlated with perceived level of information technology skills, $r(69) = .38$, $p < 0.05$.

Conclusion

This study contributes to the evidence that self-directed learning is facilitated by a higher level of information technology skills. Given the increasing emphasis on self-directed and lifelong learning in medical education, it would be advisable to implement formal, focused computer training for medical students to ensure the continuance of life-long learning.

Corresponding Author: M B F Yoosoof Email: <farahyoosoof@kdu.ac.lk>  <https://orcid.org/0000-0001-6781-041X>
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Abstract 21

Clinical audit on adherence of standards in managing type II Diabetes Mellitus patients at the outpatient clinics of Base Hospital Panadura

V Nivethini¹, P Manivannan², A Hittarage¹, U Dissanayake¹, D Venoden³

¹National Hospital of Sri Lanka, ²Base Hospital Panadura, ³Regional Director of Health Service, Mannar, Sri Lanka

Keywords: diabetes, NCD, clinical audit, BH Panadura, American Diabetes Association

Introduction

Non communicable Diseases (NCD) account for more than two third of hospital deaths in Sri Lanka and causes morbidity and disability. NCD prevention and control programme in Sri Lanka aims 25% relative reduction in premature mortality from NCDs by 2025. Diabetes mellitus (DM) causes mortality and leads to long term micro and macro vascular complications resulting in significant morbidity. Optimal glycaemic control can reduce morbidity and mortality due to DM.

Objective

To audit the follow up care provided to the Type II DM patients, in terms of ensuring optimal glycaemic control and prevent complications, at the DM clinic of Base Hospital, Panadura

Methods

American Diabetes Association guideline was adopted as the standard. Sixty patients of type II DM who attended to the follow up clinic of Base Hospital Panadura on a particular day were recruited using systematic random sampling method. A checklist was used to gather information on examination and investigations of these patients. Information was derived from patients and their clinic notes.

Results

Response rate was 100%. All patients were checked for their blood pressure and blood sugar according to the standard; however only 8.3% met the standard for HbA1c. Matching the standards for lipid profile, eye check-up, renal complications check and foot examination were 61.7%, 35%, 33%, 1.6% respectively.

Conclusion

Follow up care provided to the diabetic patients at the clinic was excellent in terms of ensuring optimal glycaemic control and detecting hypertension early. However, it requires improvement in detecting dyslipidaemia, eye, renal and foot complications. Establishing testing facilities for HbA1c and urine for micro albumin, and deploying additional trained medical and nursing work force to clinics can contribute improvements.

Corresponding Author: V Nivethini Email: < m24248@pgim.cmb.ac.lk >  <https://orcid.org/0000-0001-7778-1835>
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Abstract 22

A retrospective study on Human Rabies in Sri Lanka, 2015 to 2020

M A F A Akram, A P G Punchihewa, H Rajapakshe, R B M Wickramasinghe, K C D Jayasinghe, G G B Sampath, D Kumarasinghe, S Nanayakkara

Department of Rabies and Vaccine Quality Control, Medical Research Institute, Colombo, Sri Lanka

Keywords: Human Rabies, Sri Lanka, post exposure prophylaxis, Medical Research Institute, retrospective study

Introduction

Rabies is a vaccine-preventable viral zoonosis. It causes an invariably fatal acute encephalomyelitis which is nearly 100% preventable by timely administration of post exposure prophylaxis.

Objective

To describe the socio-demographic data and post exposure prophylaxis (PEP) use of confirmed Human Rabies from 2015 to 2020 in Sri Lanka.

Methods

This is a retrospective study performed in the Department of Rabies, Medical Research Institute. Human brain samples received for confirmation during study period were tested using a direct fluorescent antibody test. Socio-demographic and clinical details obtained from request forms, clinicians and the family of the deceased were analyzed using Microsoft Excel.

Results

The number of deaths due to Human Rabies confirmed from 2015 to 2020 was 147. Of them, 143 were laboratory confirmed. Cases were, 25 in 2015, 21 in 2016, 26 in 2017, 18 in 2018, 26 in 2019, 31 in 2020. This shows a static incidence during the last 5 years with a relative increase in 2020. Highest incidence was reported from Kurunegala (n =23, 15.6%). Kalutara, Gampaha, Jaffna, Galle, and Anuradhapura reported 15, 10, 8, 9 and 9 cases respectively. Male: female ratio of the victims was 3.2:1. 21(14.2%) were under the age of 15 years and 84 (57.1%) were between 15 to 60 years. Out of 109, 93(85%) were following dog bites, 6(5.5%) cat bites or scratches, and 10(9.1%) wild animal bites including 2 deaths within one month, following jackal bites in 2020. Out of 93 dog bites, 59 (63%) were following stray dog bites. Out of 147, 133(90.4%) had not taken any form of rabies PEP, 8(5.4%) have taken partial treatment, and 6(4%) developed rabies despite recommended PEP. Clinically, 119/128 (93%) were furious rabies, 6 (4.6%) were paralytic, and 3 (2.3%) with atypical symptoms. Out of 75 available histories, 39/41 (95%) adult males were in the lower socio-economic group.

Conclusion

Majority of patients were adult males of earning age belonging to a low socio-economic group. Furious rabies is the commonest presentation and the main source was dogs. Although PEP is freely available, majority had not sought proper medical advice. Treatment failures might be due to inadequacy of wound infiltration with anti-rabies serum or direct inoculation of the virus to nerves. Different denominators were used for analysis due to the lack of complete data which is the main limitation of this study.

Corresponding Author: M A F A Akram Email: <atheekaakram@gmail.com>  <https://orcid.org/0000-0002-7773-6249>
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Abstract 23

Perceived stress among in-ward patients in National Eye Hospital during the COVID-19 Pandemic in Sri Lanka

P H Warnakulasooriya

Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: National Eye Hospital, perceived stress, in-ward patients

Introduction

National Eye Hospital is the main referral centre for catering eye services in Sri Lanka. Stress is a destructive physical, and emotional response caused by discrepancies among apparent demands and apparent resources and abilities of people to accomplish those.

Objective

To determine the perceived stress among in-ward patients at the National Eye Hospital in Sri Lanka during the COVID-19 pandemic

Methods

A descriptive cross-sectional study was performed for inward patients (N=427) of the National Eye hospital from the 1st of December 2021 to the 31st of December 2021 (During the third wave of the pandemic). The interviewer-administered questionnaire including the Perceived Stress Scale (PSS-10), was used to assess stress (5-point Likert scale 0 (never) 4 (very often); total score of 0 to 40). The tool was validated in Sri Lanka. To assess the association (5% significant level) logistic regression analysis was performed.

Results

The response rate was 80%. The majority were females (56.9%), more than 55 years (60%), and 82% were married. It was found that 69% had moderate stress and 5.6% had severe stress. A long-term illness was found in 90% of the population. Infection with COVID-19 was seen in 21%. The proportion of postponed surgeries due to COVID-19 itself was 20%. The proportion awaiting cataract surgery in-ward was 63%. Postponement of the surgery due to the COVID-19 pandemic than those without postponement and patients who have not been infected with COVID-19 than those previously infected were positively associated with perceived stress ($p < 0.001$) with binary logistic regression.

Conclusion and recommendations

In-ward patients at the National Eye hospital during the pandemic period experienced perceived stress, and a positive significant association was found to be with patients whose surgeries were postponed due to COVID-19 itself than patients who were not infected with COVID-19. Appropriate psychological interventions are needed to promote the mental well-being of those who have perceived stress.

Corresponding Author: P H Warnakulasooriya Email: <pharshani@gmail.com>  <https://orcid.org/0000-0003-0878-6063>
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Abstract 24

Evaluation of root and root canal morphology of permanent maxillary and mandibular premolars in patients attending to Dental Hospital Peradeniya with CBCT imaging

S M B S Navaratne, R M Jayasinghe, P V K S Hettiarachchi, M C N Fonseka, R D Jayasinghe

Faculty of Dental Sciences, University of Peradeniya, Sri Lanka

Keywords: Maxillary premolars, Mandibular premolars, Vertucci classification, root canal system, root morphology

Introduction

Knowledge of root is mandatory for successful endodontics. Cone-beam Computed Tomography (CBCT) imaging is an ideal imaging modality to study root canal morphology and variations, in endodontics.

Objective

Our objectives were to evaluate the commonest root and root canal morphology of maxillary and mandibular premolars using CBCT, to assess the variations among root and root canal configurations according to gender and to assess the presence of lateral canals, auxiliary canals, isthmuses, bifurcation of canals and the location of canal exit.

Methods

Vertucci classification was used for this retrospective study conducted at the Faculty of Dental Sciences University of Peradeniya. The sample consisted of 189 CBCT studies where DICOM (Digital Imaging and Communications in Medicine) format was used in all 3 sections to assess premolars. Summary statistics and analysis of association were used with 335 first maxillary premolars, 340 second maxillary premolars, 347 lower first premolars and 349 second lower premolars. Chi Square test was used to reveal the association of canal configuration with gender.

Results

Single roots were identified in 61.25% of first maxillary premolars and 89.96% in the second. Two roots were present in 40.12% of first maxillary premolars. Almost all lower premolars were single rooted. The commonest canal configuration was Vertucci type I among both upper and lower premolars. Type IV was the second most common canal configuration among the upper first while, type II was for second premolars. Type V canal configuration was the second commonest among lower premolars. Lateral canals were observed in 10%, auxiliary canals in 7.41% and isthmi in 2.12. Exit from the apex was seen in 95% of the canals. The commonest bifurcation was in coronal 1/3 of the root in the upper first premolars (60%).

Conclusion

Single root and Vertucci type 1 canal configuration is the commonest followed by type IV for upper first premolars and type II for upper second premolars. Single root and type 1 is the commonest canal configuration in mandibular premolars, followed by type V. Canal configuration in each tooth and number of roots do not vary with the gender of the individuals.

Corresponding Author: S M B S Navaratne Email: <d02517@pgim.cmb.ac.lk>  <https://orcid.org/0000-0001-7687-9996>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
Competing Interests: Authors have declared that no competing interests exist.

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Abstract 25

Sero-prevalence of hepatitis E virus infection in pregnant women attending a major maternity hospital in Sri Lanka

M A F A Akram¹, A R J P Niyas², F Noordeen³

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²De Soysa Maternity Hospital for Women, Colombo, Sri Lanka, ³Department of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka

Keywords: Hepatitis E virus, sero-prevalence, anti-HEV IgG, pregnant women, Sri Lanka

Introduction

Hepatitis E is an enterically transmitted disease, which can cause fulminant hepatitis in pregnant women and the immunocompromised. There were very few published data on the sero-prevalence of HEV (Hepatitis E virus) infection in Sri Lanka. This project was undertaken to determine the sero-prevalence of HEV infection in a selected sample of pregnant women.

Objective

To determine the sero-prevalence of HEV exposure and to identify the factors associated with past exposure in the selected sample of pregnant women recruited for the study.

Methods

This descriptive cross-sectional study was carried out in Castle Street Hospital for Women from December 2019 to April 2020. The study sample was consecutive in nature, recruiting all pregnant women aged 16-42 years who attended OGTT (Oral glucose tolerance test) clinic. A total of 260 blood samples were collected. The data related to socio-demography and associated factors were collected using a questionnaire. Each sample of serum was tested for anti-HEV IgG using an Enzyme Linked Immunosorbent Assay (ELISA) at the Virology Laboratory, University of Peradeniya to determine the seroprevalence rate.

Results

Only one pregnant woman was positive for anti-HEV IgG with a prevalence rate of 0.38%. She had risk factors for exposure to HEV infection according to the data. The mean age of the study sample was 28 years (SD, ± 7.7). The mean gestational age was 21 weeks (SD, ± 7.9). Majority (n=149; 57%) was with multi-parities, 68% (n=176) in the 2nd trimester and 62% (n=161) were Sinhalese. The population had a literacy rate of 99.6% (n=259) with 80% (n=209) having secondary level education, 90.3% (n=235) reported using good hygienic practices, 82% (n=214) reported using purified chlorinated water for drinking and 97% (n=252) reported using water sealed toilets with proper sewage disposal.

Conclusion

Overall, anti-HEV IgG sero-prevalence rate of 0.38% suggests a low exposure to HEV according to literature. Exposure to enteric infections is generally through improper sewage disposal, contaminated drinking water and poor sanitary facilities, which were not identified in the study sample. Large scale studies in different communities would help to determine the actual exposure to HEV in Sri Lanka.

Corresponding Author: M A F A Akram Email: < m32256@pgim.cmb.ac.lk >  <https://orcid.org/0000-0002-7773-6249>
Presentation at the Annual Research Symposium 2022 of the Postgraduate Institute of Medicine on 1st December 2022.
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Abstract 26

Antibacterial activity of Silver graphite composite containing red clay beads

V M R Swarnamali¹, T H N G Amaraweera¹, Y M S S Yapa², M M S N Premathilake¹

¹Faculty of Applied Sciences, Uva Wellassa University of Sri Lanka, ²Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

Keywords: *Escherichia coli*, red clay, graphite, silver graphite composite, antibacterial activity

Introduction

Effective water treatment methods should be capable of eradicating pathogenic micro-organisms along with other pollutants since microbial contamination of water is one of the major public health concerns. Red clay beads have been widely employed as a filter medium for the purification of contaminants other than bacterial contamination.

Objective

To investigate the antibacterial activity of filter beads developed by nano silver graphite composite and red clay.

Methods

Red clay beads were prepared using silver graphite composites synthesized by a patented method (Patent No. 21484 (7/12/2020), IPC: B 22F9/24) and purified red clay by wet sieving. Prepared beads were initially oven-dried and then heat-treated at a moderate temperature in a muffle furnace. Filter beads were characterized by X-ray diffraction analysis. The effectiveness of the prepared filter was investigated using Gram negative bacteria, *E. coli* using the plate count method. For positive and negative controls, commercial antibiotic (Ofloxacin) and raw red clay beads (without silver graphite composites) were used respectively. The samples were checked at one-hour intervals within 6 hours.

Results

X-ray diffraction analysis of the filter beads revealed the existence of diffraction patterns corresponding to Nano-silver graphite composite and red clay. This confirms the existence of silver nanoparticles even after the heat treatment. Results of antibacterial activity showed that silver graphite composite containing red clay beads reduced bacterial count at a very high rate. After 6 hours, the bacteria removal efficiency (BRE) values for *E. coli* reached 84% whereas the negative control (raw red clay beads) showed only 3% BRE.

Conclusion

Silver graphite composite containing red clay beads shows potential antibacterial activity against *E. coli* and could be developed as an effective filter medium.

Corresponding Author: T H N G Amaraweera Email: <thngamaraweera@gmail.com>  <https://orcid.org/0000-0002-6486-0777>
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Abstract 27

Utilization of antenatal care and pregnancy outcomes of women in advanced maternal age at a Teaching Hospital in Sri Lanka

P Illangasinghe¹, K Jayaratne²

¹Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, ²Family Health Bureau, Ministry of Health, Sri Lanka

Keywords: advanced maternal age pregnancy, contributory factors of AMA, utilization of antenatal care services, adverse pregnancy outcomes of AMA

Introduction

Increase in adverse pregnancy outcomes with advanced (>35 years) maternal age (AMA) is well known. Proper antenatal care (ANC) usage by AMA women improves their pregnancy outcomes. Recent scientific evidence on the subject for Sri Lanka is not available.

Objective

To describe the pregnancy related and socio-demographic characteristics, utilization of ANC and pregnancy outcomes of AMA women delivering at North Colombo Teaching Hospital. The association between utilization of ANC services and selected pregnancy outcomes was also assessed.

Methods

A descriptive cross-sectional study was conducted among 216 women aged >35 years who delivered at Colombo North Teaching Hospital, selected using a non-probability consecutive sampling method. Women were interviewed within 7 days postpartum in-ward using an interviewer-administered questionnaire. The other data required was extracted from clinical records. Key elements of ANC (booking visit, type, frequency, services etc) were scored and their association with pregnancy outcomes was assessed.

Results

A total of 216 AMA postpartum women (age range 35–45 years, mean 37.8 (SD=2.4)) were recruited (response rate 100%). Majority (91.7%, n=198) were multiparous. The current pregnancy was planned in 77.8% (n=168) and 52.7% (n=114) experienced antenatal morbidities. Adverse maternal (8.3%, n=18) and newborn (37%, n=80) outcomes were noted. Majority (75.9%, n=164) optimally utilized ANC. Sinhalese (OR=2.98, 95% CI 1.29–6.87, p=0.008), Buddhist (OR=2.53, 95%CI 1.33–4.80, p=0.004) women with intended pregnancies (OR=5.67, 95%CI 2.81–11.43, p<0.001) well utilized ANC. Women educated <10 years of formal education (OR=0.4, 95%CI 1.33–4.80, p=0.027), had contraceptive issues (OR=0.27, 95% CI 0.10–0.74, p=0.007) and had adverse newborn outcomes (OR=0.32, 95%CI 0.16–0.61, p=0.001) reported low tendency to utilize ANC.

Conclusion

Many AMA women are multiparous and with planned pregnancies. Presence of adverse maternal & newborn outcomes is substantial. Majority of the study population well utilized ANC and it reduced adverse pregnancy outcomes. Effective strategies should be formulated to promote well-planned pregnancies in the early reproductive ages of women.

Corresponding Author: P Illangasinghe Email: <poojani.illangasinghe@gmail.com>  <https://orcid.org/0000-0002-7984-1384>
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Abstract 28

Prescription errors among intern doctors in Sri Lanka: A single center experience

K Galappathth, H Wijesekara, U Ratnapala, P Gunasekara, D Dissanayake, K Hanwellage, C Liyanage, A Wijesinghe

Provincial General Hospital, Badulla, Sri Lanka

Keywords: prescription errors, intern doctors, Sri Lanka, prescribing errors, junior doctors

Introduction

Prescription errors that lead to misinterpretation can exert negative consequences on patients. These are iatrogenic yet preventable. To the best of our knowledge, no research in Sri Lanka have primarily focused on errors in prescriptions written by intern doctors.

Objective

We conducted this study to describe the shortcomings in prescriptions written by intern doctors in a selected tertiary care facility, in Uva province, Sri Lanka.

Methods

This cross-sectional study was conducted over one-week in randomly selected units at Provincial General Hospital, Badulla. All prescriptions written by intern doctors on bed-head-tickets upon admission to ward were scrutinized for errors.

Results

A total of 252 prescriptions with 1150 drugs were analysed. All prescriptions included patient's age and gender. When evaluating prescriber details, the majority had prescriber's name (92.1%) and designation (91.7%) mentioned. Although the majority (60.7%) had no date, 83.3% had a time of prescribing. Most common omission error was lack of duration/quantity (95.8%) followed by lack of route (46.3%), unit (24.4%) strength (24.1%) and frequency (1.7%). In 22.9% of prescriptions, word "tab" was used instead of strength and unit. Amongst, commission errors, almost all (98.4%) had errors of frequency (ex: - BD instead of 12 hours) followed by lack of item numbering (58.8%), unauthorized abbreviations (32.4%), units not in standard international units (23.1%), and incomplete name (22.2%). Interestingly, all prescriptions were either easily legible or legible with effort.

Conclusion

This study emphasizes the importance of initiatives to improve medical education programs with the aim of producing quality prescriptions by intern doctors that will assist the delivery of quality treatment outcomes.

Corresponding Author: U Ratnapala Email: <udana752@yahoo.com>  <https://orcid.org/0000-0002-4655-3298>
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Abstract 29

Practices of feeding during illness among primary caregivers of children less than 24 months in a ward setting at a tertiary center

A M J Senavirathne¹, M H C D D Hettige¹, P U Kottage¹, S Ganesan²

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

Keywords: IYCF, childhood nutrition, illnesses, feeding practices, Sri Lanka

Introduction

Illness in children results in poor nutritional intake leading to compromised immunity and malnutrition. If nutrient requirements are not met during illness and convalescence, it can lead to further complications. The primary caregiver is responsible for providing nutrition during illness to their child.

Objective

This study aims to describe the knowledge and attitudes that impact the feeding practices of caregivers of less than 24-month-old children in a ward setting at a tertiary centre.

Methods

A prospective descriptive cross-sectional study was conducted in a general paediatric ward at Colombo south teaching hospital from January to July 2022. A structured, pre-tested, interviewer-administered questionnaire based on Sri Lankan Infant and Young Child Feeding (IYCF) guidelines was used for data collection. Data were analyzed using statistical package for social sciences version 21.

Results

A total of 190 caregivers participated in the study. The response rate was 100%. All participants were female, with a mean age of 29 years (SD±3). Mean total knowledge score was 5.48 (SD±1.9) out of a total score of 18 and 21% (n=40) scored more than 50% of the total knowledge score. A positive attitude towards feeding during illness was seen in 30%(n=57) for half (50%) of the assessed components. A significant association was seen in feeding practices of those with a higher knowledge score and positive attitude level (p<0.05) as well as with a higher level of education (p<0.05). However, there was no significant association between feeding practices and financial status (p=0.347). Only 35% (n=66) had accomplished at least three of the five IYCF-recommended feeding practices.

Conclusion

Poor feeding practices are influenced by caregivers' poor knowledge and attitudes. Further research is required to identify myths, misconceptions and other contributory factors for prevailing practices and challenges to implement effective IYCF during illness in this age group.

Corresponding Author: A M J Senavirathne Email: <achee2014@yahoo.com>  <https://orcid.org/0000-0002-2684-2527>
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Abstract 30

Comparative study on presentation and clinical outcome in thrombolysed young adults and elderly stroke patients; a single center experience in Sri Lanka

D W A Shantha¹, R B D Madhusanka², W J B S M S Jayawardana¹, L P M M K Pathirage^{1,2}

¹Teaching Hospital, Peradeniya, Sri Lanka, ²Department of Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka

Keywords: ischemic stroke, young adults, elderly, thrombolysis, dysphasia

Introduction

The third commonest cause of disability-adjusted life years lost is Stroke. Limited availability of the thrombolysis facility and lack of awareness make stroke a neglected entity in Sri Lanka. We compared two cohorts of young adults and elderly patients with ischaemic stroke who underwent thrombolysis with tissue plasminogen activator (rtPA/Alteplase).

Objective

To identify the differences in presentation, risk factors, and outcome between young adults (age <65) and elderly (age >65) patients admitted with ischaemic strokes.

Methods

This is a descriptive cross-sectional study with analytical component conducted among 97 ischaemic stroke patients who have thrombolysed from January 2018 to September 2022.

Results

There were 49 patients in the elderly group (EG) with mean age of 71.1±5.8 and 48 in the young adult group (YAG) with the mean age of 53±8.8. Male to female ratio was 1:1 in both groups. Commonest presentation was limb weakness which was 96% in both groups and the second common symptom was dysarthria which was 62%. Cerebellar signs were present only in EG (n=4). There was no significant difference in the clinical presentations where there was a significant difference between YAG and EG regarding dysphasia on admission ($\chi^2=15.7$, $P=0.000$). If patient belongs to EG, there is 5.5 times higher chance of being presented with dysphasia (OR=5.5, 95% CI =2.3–13.2). The commonest associated co-morbidity was diabetes mellitus which was 30% and the second common was hypertension which was 19% in both groups. None of the associated co-morbidities were found to have significant difference between YAG and EG. The commonest aetiopathology was small and large vessel diseases (LVD) and there was a significant difference between YAG and EG regarding the presence of LVD ($\chi^2=5.0$, $P=0.024$). There is 3.4 times higher chance of having LVD in EG than YAG (OR=3.5, 95%CI=1.1-10.4). Regarding disability outcome YAG has a relatively higher improvement than EG. (Mean improvement of Barthel index=32 vs 28, mRS=1.6 vs 1.3 and NIHSS=6.2 vs 3.9.

Conclusion

The clinical pattern is similar in both age groups except having significantly higher chance of having dysphasia on admission and LVD being the aetiopathology in elderly. YAG is having relatively better clinical improvement.

Corresponding Author: D W A Shantha Email: <arunasha@live.com>  <https://orcid.org/0000-0002-3286-9320>
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Abstract 31

Indirect expenditure, financial risk protection in health among residents of Kalutara district in 2019

H N D Zoysa¹, P De Silva², P Chulasiri¹

¹Anti Malaria Campaign, Ministry of Health, Sri Lanka, ²WHO Country Office, Maldives

Keywords: financial risk protection, catastrophic-health-expenditure, mean-positive-catastrophic-overshoot, incidence-of-impovertishment, poverty-gap-index

Introduction

Catastrophic-Health-Expenditures (CHE), Mean-Positive-Catastrophic-Overshoot (MPCO), Incidence-of-impovertishment (Iol) and Poverty-Gap-Index (PGI) are indicators of Financial Risk Protection (FRP) which is a component of Universal Health Coverage. Direct healthcare spendings are incorporated into Sri Lankan household income and expenditure survey (HIES) but not the indirect costs.

Objective

To describe the health related FRP of patients receiving healthcare and factors associated with CHE among patients in all categories of Western health facilities in Kalutara district.

Methods

A community-based cross-sectional study was conducted among 1737 households assessing financial profile and FRP using an interviewer-administered questionnaire. The required sample size was calculated based on a statistical formula. Two-staged cluster and systematic sampling method was used. Predictors of CHE were assessed using odds ratio, with 5% significance level using bivariable analysis followed by logistic regression. Data were analyzed using Statistical Package for Social Sciences version 25.

Results

Median-income and expenditure of households at community-level were Rs. 68,625 and Rs. 65,225. CHE (10% level) was 7.91 and increased to 8.41 when indirect health expenditure was added. Number of family members with; heart disease ($p < 0.001$), hypertension ($p = 0.003$), diabetes ($p < 0.001$), cancer ($p = 0.004$), kidney disease (0.048) and arthritis ($p < 0.001$) were found to be independently associated with the occurrence of CHE at 10% cut-off level. MPCO ranged from 14-16%. Iol increased from 4.8% to 6.7% due to out-of-pocket expenditure. PGI was 1.2% and 1.65% before and after total health payments.

Conclusion

Once indirect costs were added to health-expenditure, CHE indicators raised more than the reported values of HIES analysis. Thus, Indirect Health Expenditure needs to be considered when estimating FRP in Sri Lanka.

Corresponding Author: H N D Zoysa Email: <naveendesoyasa@gmail.com>  <https://orcid.org/0000-0003-0634-0076>
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