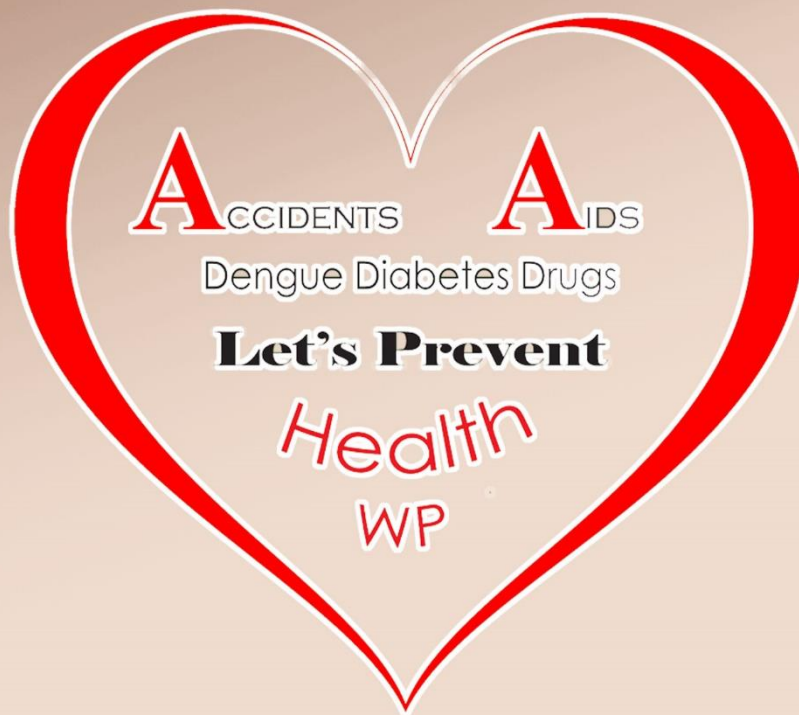


RESEARCH SYMPOSIUM 2018

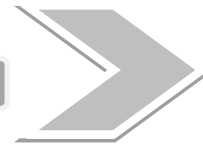
WESTERN PROVINCE

ABSTRACT BOOK



PROVINCIAL DIRECTOR OF HEALTH SERVICE
WESTERN PROVINCE





**BOOK OF ABSTRACTS OF THE WESTERN PROVINCE RESEARCH
SYMPOSIUM
NOVEMBER 2018**

ISBN – 978 – 955 – 3445 - 001

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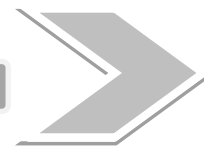
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Message of Greetings

It is my pleasure and privilege to issue this congratulatory message for the inaugural Research Symposium and Abstract Competition of Western Province 2018. The Office of Provincial Director of Health Services of Western Province has played a crucial role not only in investing and capacity building in research knowledge economy and research culture but for translating research into evidence-based policy and practice for many years. This becomes imperative as Sri Lanka becoming a middle-income developing country currently undergoing multi-faceted transitions such as demographic, epidemiologic, economic, social etc.



The term “research” means searching and researching the truth to provide scientific evidence for improving outcomes for human beings and for the society as a whole. Investing heavily on research culture in health for the benefit of people in Western Province has recognized as a priority by policy makers more than ever before. Therefore, it is an honor and a privilege to host the inaugural research symposium in Western Province, which fulfills a long felt need.

Hence, as the Provincial Director of Health Services of Western Province, I hope this research symposium will be one of the greatest milestones to be remembered in the way towards to become one of the provinces with best health status in the country. I do take this opportunity to wish all the success to this inaugural research symposium, competition and respective deliberations.

Last but not least, I do extend my deep gratitude to the organizing committee, the eminent panel of resource personnel and the participants of the Research Symposium and Abstract Competition of Western Province 2018 for their pioneering and dedicated contributions.

Dr. Anil Samaranayake. MD

Provincial Director of Health Services

Western Province





Panel of Reviewers

Prof. Upul Senerath, Professor in Community Medicine

Prof. Aurella Jennifer Perera, Dean, Faculty of Medicine, University of Colombo

Prof.Lilani Ekanayake, Senior Lecture, Faculty of Dental Science University of Peradeniya

Dr.Suranga Dolamulla, Director, Tertiary care Service, Ministry of Health

Dr.Sriyani Ranasinghe,Consultant Community Physician, Health Promotion Bureau

Dr.Chintha Jayasinghe, Consultant Community Physician, Epidemiology Unit





Abstracts



1. KNOWLEDGE AND PREPAREDNESS ASSOCIATED WITH HOME ACCIDENTS AMONG MOTHERS OF PRESCHOOL CHILDREN IN MEDICAL OFFICER OF HEALTH AREA MAHARAGAMA

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Introduction: Home accidents are more prevalent among preschool aged children around the world, probably due to their nature of high physical activity and tendency to explore the environment. Mothers are the primary care givers and best evident person to get accurate information on home accidents of pre-scholars. In fact the knowledge and preparedness assessment of the mothers of preschoolers considered a current requirement.

Objectives: To describe knowledge, preparedness and possible associated factors for home accidents among mothers of preschool children in MOH area Maharagama.

Method: A descriptive cross sectional study was carried out among mothers of preschool children in MOH area Maharagama. Cluster sampling method was used and the sample size was 606. Self-administered questionnaire was analyzed to identify the knowledge level which was identified by giving a score value and their preparedness for prevention and to attend early for any home injury was analyzed by variables with frequencies.

Results: All participants were Sinhalese and all had some level of school education. About 58% of the mothers knew that the home would be the commonest place of accidents. Further 80% of them identified falls as the commonest type of accident.

There was a significant relationship between knowledge score and education level of the mother. The preparedness on home accidents had a significant relationship with education level and age of the mother.

Conclusion: The mothers of preschool children in MOH area Maharagama had good knowledge and preparedness on home accidents but there were some knowledge and preparedness gaps for burn injuries.



2.KNOWLEDGE, USE AND ATTITUDES OF NON-BIODEGRADABLE POLYTHENE AND BIODEGRADABLE SUBSTITUTES AMONG FEMALE RESIDENTS IN MOH AREA, NUGEGODA

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Introduction: As a solution for the environmental pollution causing by polythene, Sri Lanka has introduced a new polythene prohibition law to limit the polythene usage. Although this has become a crucial issue, considerable gaps of knowledge on polythene usage among Sri Lankan population were noticed.

Objectives: To describe the use, knowledge, attitudes and associated factors regarding non-biodegradable polythene and biodegradable substitutes

Method: A descriptive cross sectional study was done at 3 randomly selected PHM areas of the Nugegoda MOH area. 120 female residents (age group of 18 -64 years) were selected. The data collected by an interviewer based questionnaire was analyzed using SPSS software, and used chi square test to find the association between the use of polythene and various other factors.

Results: Most of them had a poor knowledge regarding the topic. All of them used polythene bags, however only 20.8% used more than 10 polythene bags per week. Majority disposed those by handing over to the municipal council. After the polythene prohibition law, only 25% have stopped using polythene completely. Most of the participants believed that the polythene prohibition law is good and we should use more biodegradable substitutes. Only 47.5% believed that there are enough substitutes to polythene bags. Though the relationship between age, highest education level, employment, marital status and monthly income with the usage of polythene was assessed, only employment showed a statistically significant relationship where the currently employed females used more polythene.

Conclusion: Polythene usage is still very even though majority were aware of harmful effects of non-biodegradable polythene.



3.ASSESSING KNOWLEDGE, ATTITUDES AND USAGE PATTERNS OF SKIN LIGHTENING PRODUCTS AMONG FEMALE TRAINEES OF NATIONAL VOCATIONAL TRAINING INSTITUTE, COLOMBO

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Introduction: Skin lightening products (SLP) usage is very popular worldwide, especially in Asian countries. Many consumers are unaware about the health risks of SLP. There is lack of legal implications regarding low quality or harmful products. Regulatory process regarding low quality or harmful SLP is inadequate at present.

Objectives: The main Objective of this study was to describe knowledge, attitude and patterns of usage regarding skin lightening products among female trainees of National Vocational Training Institute, Colombo 8.

Method: A simple random sampling method was used. Study was conducted in March, 2018 in National Vocational Training Institute, Colombo. The sample (N=150) was selected from the female trainees who presented on the day of data collection. The attendance sheet on the day of data collection was used as the sampling frame. Each eligible trainee was given a serial number accordingly and final sample was selected by a computer based random sampling table. A pre tested self-administered questionnaire was used. IBM-SPSS software version 20 was used in statistical analysis of data.

Results: Overall 80.7% of participants had a satisfactory level of knowledge on skin lightening products. Majority had a positive perception on having a lighter skin tone. Prevalence of skin lightening products usage was 71.3%. Most popular formulary was creams (87.9%). Majority (52.3%) used skin lightening products once a day. Among participants who used SLP, 46.8% used creams for face and neck. Majority (53.3%) had made the decision to use skin lightening products by themselves. Safety profile was the most concerned factor when purchasing (68.2%). Reading and following instructions of the label was practiced by II majority (77.6%). Meanwhile, 77.4% had quit at least one SLP. There was a statistically significant association between highest level of education and satisfactory level of knowledge on SLP ($\chi^2 = 8.325$, $p = 0.004$)

Conclusion: Major proportion of sample respondents was using skin lightening products. Majority had an overall satisfactory knowledge on skin lightening products. Having a lighter skin tone was considered as a positive fact by majority. Further studies should be planned to obtain more information on purchasing places of skin lightening products and side effects experienced by the consumers.



4. ASSOCIATION BETWEEN GLYCEMIC CONTROL AND TASTE PERCEPTION FOR SUCROSE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Introduction: Achieving glycemic control is an important treatment goal in type 2 diabetes mellitus (T2DM). Taste perception (i.e. supra-threshold intensity ratings and preference) seems to play a crucial role in glycemic control in T2DM patients, since alteration in taste determine the food intake.

Objectives: This study aims at assessing the association between glycemic control and taste perception for sucrose in T2DM patients.

Method: Two hundred diabetics were recruited for the study and their HbA1c was determined by HPLC method. Preference for sucrose was assessed by “Monell 2-series, forced choice method” and supra-threshold intensity ratings were tested for six sucrose solutions (2.02M, 0.64M, 0.2M, 0.064M, 0.0202M, 0.0064M) using ‘general Labeled Magnitude Scale’. Data was analysed by Mann-Whitney-U-test and Spearman’s rank correlation test.

Results: Mean (+/-SD) HbA1c level of the sample was 8.0%(+/-1.8) and 69% of the participants had HbA1c value of > 7%. Diabetics with HbA1c value of < 7% had higher supra-threshold intensity ratings with the results being significant for 0.64M (70.07+/-21.5 vs 58.4+/-20.22, p=0.001) and 0.2M solutions (41.35+/-24.0 vs 33.78+/-19.6, p=0.005) compared to those with HbA1c >7%. The mean preference (+/-SD) for sucrose was significantly decreased (0.15+/-0.1 vs 0.19+/-0.13, p=0.033) in diabetics with HbA1c < 7% compared to their counterparts. HbA1c was negatively correlated with supra-threshold intensity ratings for 0.64M and 0.2M solutions (r= -0.27, p=0.000 vs r= -0.18, p=0.015) and positively correlated with preference for sucrose (r= 0.2, p=0.007).

Conclusion: Supra-threshold intensity ratings for sucrose increases specially for higher concentrations and preference for sucrose decreases with better glycemic control.



5. EVALUATION OF THE ORAL HEALTH CARE PROGRAMME DURING PREGNANCY IN REDUCING DENTAL CARIES IN YOUNG CHILDREN IN THE DISTRICT OF GAMPAHA, IN SRI LANKA

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Introduction: Antenatal oral healthcare programme was introduced in Sri Lanka with the collaboration of existing Maternal and Child Health (MCH) programme in 2009 to provide evidence based oral healthcare to all antenatal mothers.

Objectives: To evaluate the effectiveness of the National Oral Healthcare Programme for Pregnant Mothers in reducing Early Childhood Caries (ECC) in the district of Gampaha.

Methods: A descriptive cross sectional study was carried out in 2013 - 2014, among 558 mothers, having one year or 1 ½ year old child, attending Maternal & Child Health MCH clinics in Gampaha district. A structured interview was conducted with every mother and clinically examined the child for ECC. The effectiveness of the programme was determined by comparing the level of knowledge, attitude and practices on preventive measures of ECC between exposed and unexposed mothers to the oral healthcare package in pregnancy and ECC status of their children. Multivariate analysis was performed to treat the potential confounders.

Results: Among interviewed, 41.8% (n=233) were exposed to the 'oral healthcare package' consisted of health education, timely referral, oral screening and completion of recommended treatments by a Dental Surgeon. The prevalence of early childhood caries among one-year-old children was 17.2% (n=46) while it was 32.4% (n=94) among 1 ½-year-old children. The level of knowledge, attitude and practices on oral healthcare during early childhood was significantly higher in the exposed mothers than the unexposed (Adj. OR=6.2; 95%C.I.=4.16-9.34; P<0.01). The occurrence of ECC was also significantly less likely in the children of exposed mothers than the unexposed (Adj. OR=0.41; 95%C.I.=0.22-0.75; P<0.01).

Conclusion: The antenatal oral healthcare programme is effective in prevention of ECC.



6. PREVALENCE, SEVERITY AND EXTENT OF CHRONIC PERIODONTITIS AMONG 30-60 YEAR OLD ADULTS IN COLOMBO DISTRICT, SRI LANKA

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Introduction: The prevalence of periodontal diseases is high in both developed and developing countries and the distribution varies according to socio-environment, behavioural and co-morbid conditions.

Objectives: to determine the prevalence, severity and extent of chronic periodontitis among 30-60 year old adults residing in Colombo district.

Method: a cross-sectional study with interviews and oral examination. 1400 participants, 30-60 year olds residing in Colombo district for a continued period of one year or more. A two-stage cluster sampling technique combined with probability proportionate to size was used to select the sample. An interviewer-administered questionnaire was used to obtain information about socio-demographic, behavioural factors and self-reported diabetes. The oral examination included the assessment of bleeding of probing (BOP), measurement of periodontal depth (PPD) and clinical attachment loss (CAL) on six surfaces of all teeth.

Results: the prevalence of mild, moderate and severe chronic periodontitis was 1.4%, 36.1% and 13.5% respectively and the prevalence was significantly associated with sex, age groups, ethnicity, level of education, smoking status and self-reported diabetes. The mean probing pocket depth was 2.05mm (SE = 0.02) and of the sample, 77% and 31% had at least one site with PPD of ≥ 4 mm and ≥ 6 mm respectively. The mean clinical attachment loss was 2.53mm (SE= 0.03) and 99% and 81% of the sample had at least one site with CAL of ≥ 3 mm and ≥ 5 mm respectively. The extent of periodontitis determined according to the mean percentage of sites with ≥ 4 mm and ≥ 6 mm of PPD were 8.40 (SE =0.34) and 1.37 (SE =0.11) respectively. Further, the extent of periodontitis according to the mean percentage of sites with ≥ 3 mm and ≥ 5 mm of CAL were 39.73 (SE= 0.66) and 10.95 (SE =0.43) respectively.

Conclusion: the prevalence, severity and extent of chronic periodontitis are high among adults in the Colombo district. Their periodontal status was poorer than in previously reported studies conducted in the same district.



7. ORAL HEALTHCARE DURING PREGNANCY: SUSTENANCE OF CARE AND IMPLICATIONS FOR FUTURE PRACTICE

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Introduction: Antenatal oral healthcare programme was introduced in Sri Lanka with the collaboration of existing Maternal and Child Health (MCH) programme in 2009. A discussion on sustenance of oral care in pregnancy will delineate the multiple and diverse factors that reflect the implications in future practice.

Objectives: To describe the issues for sustainability of National Oral Healthcare Programme for Pregnant Mothers in the district of Gampaha

Methods: A qualitative study was carried out using the evaluation technique of participatory SWOT analysis. Two focus group discussions were conducted among Dental Surgeons and Medical Officers of Health (MOH) followed by two key informant interviews with the Regional Dental Surgeon and the Medical Officer - MCH care in the year 2014. The most common items identified were prioritized according to the preference of Dental Surgeons and MOHs in two separate public health forums.

Results: The weaknesses pointed out by the professionals were; lack of emergency management facilities and over-crowded nature of some government dental clinics, lack of motivation among mothers and delayed appointments given in government dental clinics. The threats challenging the programme were Dental Surgeons' fear for the litigation issues, medically compromised mothers, myths run in families and risk of being treated by mal-practitioners. The strengths emerged were; team work of the staff, dissemination of practice guideline, benefits gained by mother and child, importance of early detection of oral disease, health education focused on oral health and service rendered by Mobile Dental Service. Several opportunities as suggested were; appointing Community Dental Surgeons to look after the antenatal oral healthcare, review the programme with experts, active involvement of mass media, inclusion of oral healthcare in to the basic curriculum of midwife and obtaining extra-support from private dental clinics.

Conclusion: Supervision and monitoring of the programme should be further strengthened by carefully attending on the challenging areas.



8.ASSESSMENT OF THE LEVEL OF PUBLIC AWARENESS OF ORAL CANCER

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Introduction: Oral cancer is the most common cancer among males, raking sixth among women, hence account for 12.9% of total malignancies in Sri Lanka. Several predisposing factors are associated with it. According to recent studies in a rural area the level of public awareness of oral cancer was not satisfactory and even low on oral potentially malignant disorders (OPMD). There was no previous study on this subject that could have been useful to plan future effective programmes.

Objectives: This study is aimed at assessing the level of public awareness of oral cancer, their early symptoms and risk factors, in Kalutara city. Study population was selected from the individuals residing permanently in Kalutara who were above the age of 30 years.

Method: This semi -structured questionnaire was prepared after careful perusal of literature and by obtaining a content and consensual validity from consultant in community dentistry and pre-tested before conducting the study. The volunteers were trained, and field data were collected in 2012. Analysis of data was done using SPSS.

Results: The awareness seemed good (72.6%). A significant difference in general awareness of oral cancer was also seen across all dimensions among various education groups. The general awareness was more among high school attendants and lower among respondents who were illiterate or had only primary education. No significant statistical difference was observed between general awareness of oral cancer among males and females. Among the different occupational categories, a significant difference was observed for all dimensions between the groups and varied significantly across various age groups. The age groups above 30-39 year had significantly more knowledge. Awareness of oral cancer in village population was found to fare better than estate population. 46% and 21% of the subject believed that betel chewing and smoking respectively are risk factors for oral cancer, very few subjects associated oral cancer with risk factor like poor oral hygiene. Alcohol consumption was not considered a risk factors by many participants (10%).

Conclusion: The knowledge of oral cancer in a given population is directly related to the prognosis of the cases identified. Enhanced awareness on oral cancer in general and specifically in relation to its symptoms and risk factors can possibly lead to early detection. The lack of knowledge in identifying early signs of oral cancer may result in ignoring early pre-cancerous lesions whereas misconception about risk factors lead to delayed presentation. This study clearly indicates that although the overall awareness on the general oral cancer and its symptoms is good. There is relative deficiency in the awareness on risk factors indicating the need for more customized awareness programs in the targeted population. The level of awareness was positively corelated with level of education. Furthermore, increased awareness of the younger age group can also be attributed to the wide media exposure and different anti-tobacco campaigns in recent years.



9. REDUCTION OF GENERATION OF POLYTHENE WASTE AND STRENGTHENING WASTE SEGREGATION TO IMPROVE HEALTH CARE WASTE MANAGEMENT AT DISTRICT GENERAL HOSPITAL KALUTARA

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Introduction: Many health care institutions are having problems with their waste management and mixing of different categories of waste is common. General hospital Kalutara adds about one ton of polythene and paper waste per week for final disposal but as they are mixed with other types of waste; is finally disposed as general waste.

Objectives: Improve solid waste management at District General Hospital Kalutara by reducing generation of polythene/plastic waste and strengthening waste segregation.

Method: During this intervention project initial assessments were done to identify the waste generation and segregation practices in the hospital; staff knowledge, attitudes and practices on waste management and available facilities for segregation. Package of interventions developed on identified gaps and implemented. The post intervention analysis was done to evaluate the effectiveness of intervention.

Results: The main problems identified were the non-supportive environment and lack of knowledge of the staff on colour code for proper segregation. Bilingual new information, educational and communication materials were developed on the color code and segregation; and restricted polythene/plastic generation by collecting at the entrance, providing drinking water in the wards, promoting lunch boxes etc. Adequate dustbins were provided by restricting one food and glass bin per ward and redistributing them to wards/units which were lacking the dustbins. Periodical supervisions by audit team resulted in significant improvements in both segregation and reduction in waste generation. Through the project hospital was able to reduce expenditure on general waste management from Rs.49000 to Rs. 14000.

Conclusion: There was significant improvement in segregation and reduction in waste generation. The greatest impact of project was shown by savings on waste disposal. The implemented package of interventions could be used for better waste management in hospitals.



10. COPING STRATEGIES IN A SAMPLE OF DEVELOPMENT OFFICERS: FACTORIAL ANALYSIS AND ASSOCIATIONS WITH PSYCHOPATHOLOGY

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Introduction: Coping is the process of spending conscious effort and energy to solve personal and interpersonal problems. In the case of stress, coping mechanisms seek to master, minimize, or tolerate stress and stressors that occur in everyday life. These mechanisms are commonly called coping skills or coping strategies. Development officers attached to the health sector play a key role in assisting health care staff to delivering the health services to the people. They directly involve in health care development projects and programmes. Therefore, identifying their stress coping strategies plays a crucial role in promoting their health.

Objectives: To assess the coping strategies among Development Officers working in Department of Health, Western Province

Method: A descriptive cross-sectional study was carried out by administering self-administered questionnaire among all Development Officers (n=120) working in Health Sector in Western Province over a period of eight weeks from 10th December 2016 to 31st January 2017.

Results: A total sample of 125 development officers was recruited. The brief-COPE yielded nine factors accounting for 65.7% of the variance. Patients scored higher on searching support, followed by Acceptance, Changing Perspective and Problem Solving. Associations between measures of psychopathology and factors of coping strategies, mostly searching support and Avoidance, were found.

Conclusion: Data of the present study support a nine factor of the Brief COPE that includes five broad dimensions of coping. Psychopathology was mostly related to Searching Support and Avoidance factors showing that these strategies may reflect ineffective ways of coping; Problem solving and changing perspective could be a valid approach to moderate anxiety/depression symptoms and psychopathology in General.



11. ESTABLISHING A COMPREHENSIVE WASTE MANAGEMENT SYSTEM AT THE HEALTH CARE INSTITUTIONS IN WESTERN PROVINCE

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Introduction: Unavailability of safe waste disposal system at health care institutions in Western Province has caused to several public health issues and environmental nuisance.

Objectives: This project was to establish a proper waste management system at health care institutions in Western Province.

Method: A circular on proper waste management was designed at Provincial Director of Health Service (PDHS) level and distributed among all health institutions (Curative Healthcare Facilities= 123, Preventive Healthcare facilities = 42; Total=165) in March, 2015. A waste management committee was appointed at institutional level and staff was trained on waste management. Infrastructure for waste collection, separation and storage was developed. Incinerators were established to burn clinical waste. Memorandum of Understanding was signed with Recyclers' Association to collect recyclable waste. Health institutions in the province were mapped to develop a waste collection network, which was used to collect non-degradable waste to recycle and to collect clinical waste to incinerate. Composting and gardening were promoted while providing necessary equipment. A monitoring and evaluation system was established to identify issues of the waste disposal system and intervene early.

Results: By April, 2016, 94% of evaluated health institutions had started separating waste where it was only 5% before starting this project. Composting had been carried out at 51% of institutions while previously it was only 2%. Use of coloured bags/bins to separate non-degradable waste had increased from 30 to 75% of institutions. Percentage institutions used compost for gardening increased from 2 to 40%. Institutions practiced safe disposal of clinical waste increased from 30 to 60%. Four hospitals had obtained Environment Protection License and Health Care Waste License where it was none earlier. More than half of staff members in 85% of health institutions had started proper waste disposal procedures at home.

Conclusion: This system has improved waste management in Western Province and has made a behavioral change among the health staff.



12. PATIENT LINKED FACTORS ASSOCIATED WITH DELAYED REPORTING OF ORAL AND PHARYNGEAL CARCINOMA AMONG PARENTS ATTENDING NATIONAL CANCER INSTITUTE, MAHARAGAMA, SRI LANKA

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Background: Diagnosis of cancer at an early stage improves prognosis following treatment. To identify them early, oral cancer screening programme utilizing the risk factor model is being conducted all over Sri Lanka from 2013. Yet a large proportion of oro-pharyngeal cancer is diagnosed at a late stage. Many researchers have examined the types of delay that could occur between the onset of symptoms and diagnosis.

Objectives: To identify patient-linked delays between the time of noticing the symptoms and definitive diagnosis and its association with the stage at diagnosis among oro-pharyngeal carcinoma patients attending National Cancer Institute, Maharagama, Sri Lanka.

Method: A hospital-based descriptive cross-sectional study was carried out among 351 patients with histologically confirmed carcinoma of oral cavity and pharynx. Data were collected using an interviewer-administered questionnaire and a data extraction sheet. If a patient had taken more than three months to visit a Health Care Practitioner, it was considered as 'Patient Delay-1'. If a patient had taken more than two weeks following referral to reach for specialized cancer care, it was considered as 'Patient Delay 2'.

Results: Proportions of 'Patient Delay-1' and 'Patient Delay-2' were 19.0% (n=252) and 16% (n=322) respectively. Mean time duration between noticing of symptoms to definitive diagnosis was 14.06 weeks (SD=10.29). Proportion of advanced-stage cancers at diagnosis was 59.8%.

Conclusion: Stage at diagnosis was significantly associated with 'Patient Delay -1' ($p = 0.001$, $\chi^2 = 16.472$, $df = 1$) but not with 'Patient Delay-2'. 'Patient Delay-1' was significantly associated with level of education ($p = 0.630$, $\chi^2 = 0.232$, $df = 1$) and the cost of travelling ($p = 0.048$, $\chi^2 = 6.209$, $df = 2$).



13. NURSES' SKILLS IN THE CARE FOR WOMEN EXPERIENCING INTIMATE PARTNER VIOLENCE

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Introduction: Intimate partner violence (IPV) is a preventable public health problem. Inadequate skills among nurses in providing care for women who are subjected to IPV was reported in a previous study.

Objectives: The aim of this study is to assess the existing skills of nurses in providing care for women experiencing IPV.

Method: Nurses' skills in supporting woman seeking treatment and care in a hospital setting were assessed among a subsample of 45 female nurses who participated in a survey on competencies and attitudes towards IPV in 17 hospitals in the Western province of Sri Lanka. A 20 item rating scale with 10 core domains was developed and pre-tested to assess their skills in a single encounter with a standardized patient using a scenario, examined by two trained independent raters. The rating scale incorporated the five tasks of first-line support recommended by the World Health Organization. The scores for each domain were calculated using SPSS version 21.

Results: The results indicated that only three participants demonstrated good overall skills; most (42) had poor overall skills. Adequate skills were evident in the domains of Listening and Supporting while inadequate performances were shown in Building rapport, Ensuring privacy and confidentiality, Being non-judgmental, Expressing empathy, Validating, and Enhancing safety.

Conclusion: Given nurses' pivotal role in providing holistic care in hospital settings, improving their skills on IPV related care and treatment should be a priority in education programs for nurses.



14. PHYSICAL AND MENTAL WELLBEING AND JOBSATISFACTION AMONG MALE CONSTRUCTION WORKERS IN SELECTED URBAN CONSTRUCTION SITES

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Introduction: Nowadays construction sites are mushrooming in the urbanized areas of Sri Lanka, keeping pace with the rapid economic development. As this industry is inseparably associated with numerous risks endangering the workers, it is important to assess and identify any potential impairment in the overall health of construction workers.

Objectives: To assess the physical and mental wellbeing and job satisfaction among male construction workers in selected urban construction sites.

Method: A cross sectional descriptive study was carried out in a sample of 120 male workers at three urban construction sites using an interviewer administered questionnaire. Socio-demographic factors, level of physical activity, nutrition and diet, alcohol and smoking, rest and sleep, energy and fatigue, pain and discomfort, level of mental wellbeing and level of job satisfaction of the workers were assessed. Data was analysed using SPSS software.

Results: A majority of the workers monthly earned more than thirty thousand rupees. A majority were engaged in vigorous physical activities and had normal BMI. Prevalence of alcohol use (55.0%) and smoking (44.2%) were significantly higher. Most had adequate sleep but did not involve in any leisure activity. A large fraction was not fatigued whereas 66.6% had musculoskeletal pains, commonly the back pain. Most had good mental wellbeing (99.2%) and good job satisfaction (94.8%).

Conclusion: The monthly income of majority of the workers was high and the overall nutritional status satisfactory. Alcohol use and smoking were highly prevalent. Many suffered from musculoskeletal pains. Majority had good mental wellbeing and were satisfied about their job.



15. PREVALENCE AND ASSOCIATED PSYCHOSOCIAL FACTORS OF DEPRESSION AMONG POST-PARTUM MOTHERS IN MEDICAL OFFICER OF HEALTH AREA KOLONNAWA, COLOMBO, SRI LANKA

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Introduction: Post-partum depression (PPD) is gaining importance as a public health concern globally. The prevalence of PPD in Sri Lanka ranges from 27.1% to 32.1%. Depression can occur in post-partum mothers irrespective of their psychosocial status. Therefore, active screening is necessary.

Objectives: This study aimed to determine the prevalence of depression among post-partum mothers in MOH area, Kolonnawa, Colombo, Sri Lanka and to describe the psychosocial factors associated

Method: A clinic-based cross-sectional study was conducted among all post-partum mothers in 4-8 weeks post-partum period attending to child welfare clinics at MOH area Kolonnawa, during the 1st quarter of year 2017 (N=341). A self-administered questionnaire including Edinburgh Post-Partum Depression Scale (EPDS) was used for data collection. A cut off value of 9 was used for the EPDS. Prevalence of PPD was calculated. Associations were analysed using odds ratio (with 95% CI) and Chi-square test with p value at 5% significance level.

Results: Median EPDS score among post-partum mothers was 4 (IQR 2–8). Prevalence of PPD in this study sample was 15.24% (n = 52). Thought of self-harming (item number 10 of EPDS) was reported by 21 post-partum mothers (6.15%). None of the psychosocial factors were significantly associated with PPD or thought of self-harming in this study sample.

Conclusion: Prevalence of PPD in MOH area Kolonnawa, Colombo, Sri Lanka was relatively high, which is compatible with available literature in Sri Lankan studies. Depression can occur in post-partum mothers irrespective of their psychosocial status.



16. PREVALENCE OF BURNOUT IN DOCTORS OF FIVE MAJOR SPECIALTIES, IN TEACHING HOSPITALS ASSOCIATED WITH FACULTY OF MEDICINE, UNIVERSITY OF COLOMBO.

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Introduction: Despite extensive studies done on burnout among physicians in other countries, there's a paucity of data on physician burnout in Sri Lanka.

Objectives: The study was done to assess the burnout of medical doctors of medicine, surgery, gynaecology and obstetrics, paediatrics and psychiatry specialties to determine possible associations

Method: A cross-sectional descriptive study was done on a sample of 200 working medical doctors from four major hospitals with data collected by a self-administered questionnaire modified from Oldenburg Burnout Inventory and Copenhagen Burnout Inventory, validated by a panel of experts, which measured burnout under 3 components; personal, client related, and work-related, which also consisted socio-demographic factors. Mean burnout score of each specialty and association of socio-demographic factors were calculated and analysed using ANOVA and Chi-square.

Results: Prevalence of burnout was highest in paediatric specialty (25.8%) and lowest in surgery specialty (0%). Mean burnout score was higher in paediatric specialty (41.7) and medicine specialty (41.0) and lowest in surgery specialty (32.6) with a significant difference between surgery and medicine ($P=0.003$) and between surgery and paediatrics ($P=0.001$). Overall state of burnout of doctors showed a significant association with gender ($P=0$) and designation ($P=0.024$). But gender, number of years in the same specialty, designation and marital status of doctors showed varying associations with burnout within each speciality.

Conclusion: The study revealed an association of being burnt out to the specialty he or she engages in and that the socio-demographic factors that affect burnout are different for each specialty.



17. PREVALENCE OF NOMOPHOBIA AND ITS EFFECT ON PSYCHOLOGICAL WELL-BEING IN SMARTPHONE USING UNDERGRADUATES OF A SELECTED MEDICAL FACULTY IN SRI LANKA.

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Introduction: Nomophobia, the anxiety of being away from mobile phone contact is a specific phobia. Medical undergraduates are prone to develop nomophobia because of the time constraining schedule and high dependency on smartphones.

Objective: To assess the usage patterns of smartphone use, prevalence of nomophobia and its effects on psychological wellbeing in smartphone using medical undergraduates.

Method: A cross sectional analytical study was carried out among 150 medical undergraduates of Faculty of Medicine, Colombo. A self-administered questionnaire including the validated nomophobia-questionnaire was used.

Results: The prevalence of nomophobia in the study population was seen as 100.0% with 28.2% having mild, 62.0% moderate and the remaining 9.9% having severe nomophobia.

People with higher degree of nomophobia were more frequent internet users, updated software as soon as available, checked smartphone during academics, never switched off their phones, kept their phones near the bed when sleeping, used it while charging, spent more time with the smartphone than with family and friends and was depended on it to maintain their social identity.

Higher degree of nomophobia was associated with decrease sleep quality, waking up due to phantom vibrations, reduced total sleep time and quality, difficulty concentrating on studies, irritability, restlessness, less energetic, diminished trans-active memory, difficulty socializing directly with people, lonely and uneasy at public places without a smart phone.

Conclusion: The study population had a high prevalence of nomophobia, a type of anxiety disorder with many socio-demographic and smartphone usage related factors leading to its development. Nomophobia had affected the psychological wellbeing and academic prowess of students.



18. WORK RELATED HEALTH HAZARDS AMONG MORTUARY WORKERS IN THE COLOMBO DISTRICT

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Introduction: Mortuary workers are facing countless hazards as they carry out their work.

Objectives: To explore the major health hazards affecting mortuary workers.

Method: A descriptive cross sectional study was carried out between 01st April and 18th June, 2016 in 37 privately owned mortuary facilities within the district of Colombo. This Information was collected from 53 mortuary workers who gave informed consent, using a pre-tested interviewer questionnaire. Participants were conveniently sampled and selected based on strict inclusion/exclusion

criteria. Data was entered and analyzed using descriptive statistics by SPSS Statistics software and Microsoft Excel-2016 spreadsheet package.

Results: The assessment of occupational hazard exposures among mortuary workers indicated: 90.57% had frequent formalin inhalation/skin contact and only 98% used gloves.

However, 64% specified low-formalin toxicity and 71.7% complained of eye irritation. Majority (81.1%), experienced frequent ergonomic-stress-symptoms. Only 69.2% had either Hepatitis-B/Tetanus vaccination. The Pearson chi-squared test indicated a significant relationship between the level of education and the knowledge regarding the importance of vaccination ($p < 0.01$). Majority (84.91%) had consumed either alcohol/nicotine/betel/recreational substances. However, more than half, 56.6% did not want to change their occupation.

Conclusion: Health hazards are common among mortuary workers and frequently associated with inadequate use of PPE. The unsatisfactory vaccination coverage was identified as a major health risk. It is recommended to inform relevant authorities to improve safety measures for the mortuary workers including personal protective equipment (PPE) with appropriate quality/quantity and training mortuary workers on occupational safety measures.



19. JOB SATISFACTION AND JOB STRESS AMONG DEVELOPMENT OFFICERS WORKING IN DEPARTMENT OF HEALTH SERVICES, WESTERN PROVINCE

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Introduction:

The role of the development Officer is industry-specific, with the level of responsibility and variety of activities dependent on the type and size of organization. This study focuses on the development officers working in the health sector.

Objectives: To assess the level of job satisfaction and job stress among Development Officers working in Department of Health, Western Province.

Method: A descriptive cross-sectional study was carried out by administering self-administered questionnaire among all Development Officers (n=129) working in Health Sector in Western Province over a period of eight weeks from 10th December 2016 to 31st January 2017.

Results: Out of 129 development officers who were invited to participate for study 125 responded giving a response rate of 97%. Only 44% respondents were satisfied with their job while 31.2% were “at risk of burnout”. One third of them believed they are overloaded with work and 59.2% believed their duties are not matching with their educational background. While 38% were not satisfied with salary, 77.6% were not satisfied with the physical environment of workplace.

Conclusion: More than half of Development Officers were not satisfied with their job functions, while 31% were at risk of burn out. Work load analysis of these officers should be carried out to identify and address. Physical Environment of the work place should be analyzed to provide supportive working environment. Stress management programmes should be carried out to help them coping with stress and burnout.



20. PREVALENCE AND FACTORS ASSOCIATED WITH SUGAR SWEETENED BEVERAGE CONSUMPTION AMONG GRADE 10 SCHOOL CHILDREN IN EDUCATION DIVISION OF PANADURA

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Introduction: Increase in prevalence of overweight and obesity globally during the past few decades has resulted in serious complications in adult life causing increased risk of premature illnesses and deaths. The rising prevalence of obesity in children and adolescent has been linked to excess energy intake and reduce physical activity among this age group. The consumption of Sugar Sweetened Beverage (SSB) is associated with obesity, dental caries, diabetes and heart disease according to most of the studies done in western countries.

Objectives: The objective of the study was to determine the prevalence and factors associated with SSB consumption among grade 10 school children in Education Division of Panadura

Method: A Cross sectional analytical study was carried out. Multistage stratified cluster sampling was used and primary sampling unit was a classroom. Cluster size was 30. Self-administered questionnaire was used as the study instrument. Data collection was done by trained data collectors.

Results: The sample consisted 600 Grade 10 students. There were 319(53.2%) female students and 281(46.8%) male students. Majority of students were Sinhalese (85.5%) and were Buddhist (82.3%). Almost half 298 of the students buy beverages from the school canteen during school time. Ninety two percent students were found to be receiving pocket money. The favorite drink was carbonated or soft drinks (35.5%). However only 1.2% (n=7) students consumed carbonated soft drinks daily. Milk products with added sugar was daily consumed by 16% (n=96) students while tea, coffee and milk tea with added sugar was consumed daily by 75% of the students. The percentage of students who consumed any type of SSB was 80%. Only 55.7% students knew that frequent consumption of SSBs can result over weight and obesity.

Conclusion: The study showed a high prevalence (80% daily consumption) of SSBs. The percentage of students consuming soft drinks daily was (1.2%) less than the sweetened milk product (16%) consumption. So, the NCD burden due to consumption of sweet milk product should be relatively higher than from soft drink consumption. Knowledge on health effects of SSBs was less among students. The findings of the study emphasize the importance of extending the color coding and sugar taxation to sugar added milk and milk products.



21. ASSESSMENT OF USER LEVEL VULNERABILITIES AND DEVELOPMENT OF GUIDELINES FOR ELECTRONIC MEDICAL RECORD SYSTEMS IN THE STATE HEALTH SECTOR OF SRI LANKA.

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Introduction: The state sector healthcare system of Sri Lanka has been using paper based medical records of patients and currently is in the process of using Electronic Medical Record Systems (EMRSs) to be on par with the digital health revolution happening across the world and also with the aim of enhancing efficiency in the healthcare service. With this evolution, security, privacy and confidentiality of patient's information have become a challenge, due to vulnerabilities experienced in accessing these electronic systems by various users.

Objectives: Identify user level vulnerabilities of Electronic Medical Record Systems (EMR) and propose guidelines to minimize those vulnerabilities in state sector hospitals in Sri Lanka.

Method: Two (2) Sri Lankan government hospitals namely Castle Street Hospital for Women and Base Hospital Panadura which, are using the two (2) main EMRSs in Sri Lanka, i.e. the Health Information Management System (HIMS) and Hospital Health Information Management System (HHIMS) were selected for the study. The research was based on a mixed method using quantitative and qualitative analysis. An interviewer guided questionnaire was distributed and one to one discussions with the system users were held to determine their perception on EMRS and user level security vulnerabilities. Further, observations made by the author/ investigator were also considered.

Results: This study found that, currently both health institutions are heavily exposed to user level vulnerabilities which should be recognized as a "critical and imperative concern" by the relevant authorities.

Conclusion: As Sri Lanka embraces these e-Health innovations, considering the present weaknesses identified, immediate attention should be focused on developing, appropriate guidelines to improve user level security of EMRSs in the state hospitals. If not, Sri Lanka's health sector will be exposed to greater vulnerability and loss of confidence by the public.



22. PREFERENCE AND ASSOCIATED FACTORS FOR THE CAESARIAN SECTION AS A MODE OF DELIVERY AMONG PRIMI PREGNANT MOTHERS ATTENDING SELECTED ANTENATAL CLINICS OF MEDICAL OFFICER OF HEALTH AREA BANDARAGAMA IN SRI LANKA.

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Introduction: Increasing caesarean section (CS) rate is observed in the world, which has a significant negative impact on the health of the pregnant mother, her family and the economy of the country.

Objective: To describe the preference and associated factors for the caesarean section as a mode of delivery (MOD) among primi pregnant mothers selected attending antenatal clinics of Medical Officer of Health (MOH) area Bandaragama

Method: This study was a descriptive cross-sectional study among 238 primi pregnant mothers who were in their second and third trimester and who wouldn't undergo planned CS (pregnant mothers with severe heart diseases, pelvic deformities) attending antenatal clinics in the Bandaragama MOH area. They were selected by systematic random sampling method. Pre-tested interviewer-administered questionnaire was used. Associated factors with preferred MOD were determined using chi-square test. Significance level was set at 5%.

Results: Response rate was 90% (217). Prevalence of preferred MOD for CS was 12% (26). The factors significantly associated with CS were high maternal age ($p < 0.05$), being Sinhalese ($p < 0.05$), private job sector ($p < 0.05$) and the monthly income more than Rs 40,000 ($p < 0.05$). There was no significant association between preferred MOD and POA ($p > 0.05$), having planned pregnancy ($p > 0.05$), BMI ($p > 0.05$), channeling VOG in private sector ($p > 0.05$).

Conclusion: As preferred MOD, CS is significantly associated with high maternal age, being a Sinhalese, private job sector and the monthly income more than Rs 40,000. Fifty-seven percent of the pregnant mothers felt that they have the right to choose the preferred MOD. Therefore, it is recommended that a Health Education Intervention, to educate pregnant mothers in reducing the CS rate in Sri Lanka.



23. PREVALENCE OF POST-TRAUMATIC STRESS DISORDER (PTSD) AFTER CHILD BIRTH AND ASSOCIATED FACTORS IN A SRI LANKAN POST-PARTUM MOTHER COHORT: A DESCRIPTIVE STUDY.

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Introduction: Child birth is a stressful event. Post-traumatic stress disorder (PTSD) and Depression are psychiatric disorders which associate with stressful events as well as child birth.

Objectives: To assess the prevalence of PTSD among post-partum mothers and associated factors.

Method: A Cross sectional analytical study was conducted in Horana MOH areafield clinic setting, over a period of eighteen months during year 2017 and 2018. A pretested interviewer administered questionnaire was used to collect demographic details and pre-pregnancy, intra-pregnancy, labor and post-partum risk factors. Self-administered, Validated Sinhala versions of Edingbourg Post-partum Depression Screening Scale and PTSD Symptom Scale-Self Report: PSS-SR were used to assess the presence of postpartum depression (PPD) and PTSD respectively. Each participant was assessed one month, two months and six months after the delivery for PTSD and PPD. SPSS Statistical package was used to analyze the data. Prevalence was calculated as a percentage and associations were determined by chi squared test. Ethical approval was obtained from the Ethical Review Committee of Faculty of Medicine, University of Colombo.

Results: Total of 225 post-partum mothers were included in the study at one month. Out of them 214 and 211 were interviewed at 2 and 6 months after the delivery respectively. At postpartum one, two and six months the prevalence of PTSD was 2.7% (n=6), 0.9% (n=2) and 0.5% (n=1) respectively. Three significant associations were found for post-partum PTSD were Poor family support (P=0.031), physical ailments after pregnancy (p=0.025) and presence of Post-partum Depression (P=<0.001). There were no significant associations between PTSD and education level of mothers, timing of delivery, Gap between pregnancies, planned or unplanned pregnancies, history of subfertility, history of psychiatric disorders, partner violence, number of antenatal hospital visits, ante-natal counselling, fear of pain, hospital of delivery, private sector delivery, type and mode of delivery, labour duration, verbal or physical abuse, presence of labour companion, mental trauma, post-partum hemorrhage, manual removal of placenta, negative birth experience, low Apgar at delivery, neonatal and maternal intensive care, birth defects, breast feeding problems and opportunity to discuss problems with a health care worker.

Conclusion: PTSD is a post-partum psychiatric condition present in minority. It is significantly associated with poor family support, physical ailments and presence of Postpartum Depression.



24. KNOWLEDGE, ATTITUDE AND PRACTICE AMONG NURSING OFFICERS ON DISASTER RESPONSE AND ASSOCIATED FACTORS AT BASE HOSPITAL, HORANA.

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Introduction: Kalutara district is one of the disaster-prone districts in Sri Lanka where both manmade and natural disasters are common. Health sector plays a vital role in disaster response. Hospitals are the first responders to disasters providing immediate and subsequent healthcare. Nursing officers are an important category who plays a vital role in hospital disaster response. A good knowledge on disaster management, positive attitudes towards disaster response and updated practices are essential for the nursing staff of a hospital to provide a comprehensive care.

Objectives: To describe knowledge, attitudes and practices among nursing officers on hospital disaster response. To describe the factors associated with knowledge, attitudes and practices among nursing officers on hospital disaster response at Base Hospital Horana

Method: Base Hospital, Horana was selected as it is situated in a geographical location where manmade and natural disasters are common in the district. Institution-based descriptive cross-sectional study was conducted from April to December using a sample of nursing officers (n=314) in base hospital Horana.

Results: 95.3% of the nursing staff was aware about the difference between natural and manmade disasters. Only 25.4% knew that the response to natural and manmade disasters is similar. 48.8% of nursing staff were aware of the disaster cycle. 89.5% were aware of the hospital disaster preparedness and response plan but known to be accessible for activation only for 64.4%. 98.3% responded that disaster drills are important. 94.9% knew that the most experienced person should conduct triage. Only 59% were aware of CPR. 45.4% participants had a good attitude score. Good practices were more among those with > 10 years group (40.1%) than those with less or equal to 10 years (26.5%). Age, sex and education levels were not associated.

Conclusion: Nursing staff need to be educated more on disaster preparedness and response with special emphasis on the similarity of response in natural and manmade disasters, disaster management cycle and CPR. Nursing staff should be educated with response to hospital disaster management plans with special emphasis on activating the plans. Interventions to improve attitudes of all categories of nursing staff towards disaster preparedness and response need to be implemented as a high priority.



25. REDUCTION OF INTERVENTION TIME OF STROKE PATIENTS AFTER IMPLEMENTING COMPUTER TOMOGRAPHY SCAN FACILITIES AT BASE HOSPITAL HORANA.

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Introduction: Cerebro-vasculo accident (CVA) is a leading cause of mortality globally. Timely and appropriate acute stage management is important to control the progression of the severity of CVA. The mainstay of diagnostic investigation is Computed Tomography (CT) scan. The availability of such facilities at base hospital level is utmost important for timely therapeutic interventions.

Method: Horana base hospital, where the CT scan facility established in February 2018 was selected for the study. A descriptive cross sectional study was carried out at BH Horana by comparing time taken for starting the anti-platelet treatments to the stroke patients before (from 1st of November to 31st of December 2017) and after (from 1st of May to 30th June 2018) the implementation. The bed head tickets of all stroke patients admitted to medical wards were analysed. The average time intervals taken to start antiplatelet drugs in ischemic type stroke patients were calculated. The mean intervention times were compared using t- test at the level of significance of $p < 0.05$.

Results: Total number of patients included was 116. The number of patients admitted during the study period before and after the introduction of CT facilities was 57 and 59 respectively. Mean intervention time before and after introduction of Ct facilities for starting antiplatelet drugs were 14.85 hours and 2.40 hours respectively. There is a statistically significant difference in mean intervention time before and after the introduction of CT facilities.

Conclusion: The CT scan facility has a direct effect on intervention time of stroke patients. Availability of CT scan facility at base hospitals would reduce the time taken for therapeutic decision making for a large cohort of stroke patients.



26. “SUPPORTIVE MAPPING SYSTEM” A SIMPLE GEOSPATIAL VISUALIZATION TOOL FOR PUBLIC HEALTH INFORMATION.

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Introduction: Geo-spatial visualization of health related data is an essential element in epidemiological decision making. Spot-map is a fundamental and recommended method of visualizing communicable disease incidence in time and space in public health institutions. There is a growing need of a more informative public health data visualization interface highlighting “Grama Niladhari (GN)” divisions based on disease incidence. However such visualization needs sophisticated computer software and technical skills which are not universally available at present. A simple and user-friendly tool is a felt need.

Method: We developed a data visualization interface using commonly available. Microsoft excel work sheet. The excel work sheet was modified to indicate and GN divisions by grouping the cells as they appear in the GN map. Each group of cell representing a GN division was linked to a second excel data sheet in which number of disease occurrences could be entered against the respective GN division name. According to the value entered, the map changes the color intensities of the GN division based on a pre-defined scale. An optional transparent overlay of GN labels were created using Corel Draw for easy identification.

Results: Public Health Inspectors could easily enter surveillance data and visualize highrisk GN divisions for different communicable disease. Public Health Nursing sister entered and analysed well women and immunization coverage by PHM area after merging the GN divisions. The maps generated were used for public health planning and advocacy in inter-sectoral meetings.

Conclusion: This is a simple tool to visualize any parameter according to GN divisions, PHM area or PHI area belonging to medical officer of health areas in the country.



27.GEO-GRAPHICAL DISTRIBUTION OF NUTRITIONAL DATA IN MILLANIYA MOH AREA IN 2017 AND 2018.

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Introduction: Childhood malnutrition is a common and important public health problem. Even though there are many activities conducted particularly by the public health midwives (PHM) dedicating considerable amount of their time, lot more attention to be given for planning, monitoring and evaluation of such interventions. One of the essential steps in planning nutritional intervention is to identify the temporal and spatial distribution of childhood nutritional status in a medical officer of health area.

Method: Nutritional month data in 2017 and 2018 in Millaniya MOH area were retrieved and analysed. Children who are between 2SD to 3SD and below 3SD for their weight were included. We adopted “Supportive Spot Map” excel application developed in our MOH office to visualize the nutritional data in children by age group, year and PHM area. Demographic data including marital state, educational level and availability of latrine facilities were retrieved from the demographic survey conducted by public administration in 2015 and visualized by “Grama Niladhari” and PHM area.

Results: Six PHM areas were identified with high prevalence of moderate and severe underweight children. When comparing the areas having high and low prevalence of childhood under nutrition, no visual correlation observed for the demographic factors.

Conclusion: Geo-spatial visualization of nutritional data has given more insight in to easy identification of vulnerable PHM areas with respect to different variables. Composite risk index for childhood under nutrition could be developed in future by incorporating service delivery components in to spatial context. Though the identification of statistically significant determinants for under nutrition needed more systematically designed research, the information obtained through this preliminary study would be useful in initial planning and evaluation of public health interventions.



28. USE OF SPATIAL AND SPACE-TIME MAPPING APPROACHES FOR ENTOMOLOGICAL SURVEILLANCE DATA ANALYSIS IN OPERATIONAL CONTROL OF AEDES MOSQUITOES AND DENGUE IN KALUTARA.

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Introduction: Dengue is a major and growing public health burden. Geographical expansion of dengue dramatically increased during recent years spreading across rural areas of district of Kalutara. Dengue vector surveillance is an essential element of integrated vector management activities designed to curtail the dengue epidemics. Recently published national guideline for Aedes vector surveillance and control shed light to implement effective vector control strategies. However, the analysis and interpretation of entomology surveillance data at medical officer of health (MOH) level needs improvement. Increasingly user-friendly geographic information system (GIS) software and other emerging mapping technologies, such as Google Earth provide new opportunities to visualize spatial and space-time patterns for entomological and epidemiological data for easy interpretation.

Objectives: To explore the possibility of using spatial and space-time mapping techniques to visualize and analyse mosquito vector and epidemiologic data.

Methods: Aedes surveillance data collected from 2014 to 2018 in sentinel site, routine site and spot checks by the health entomology officers (HEO) in the district was retrieved. Surveillance sites were geocoded using mobile app by a trained HEO. Keyhole Markup Language (KML) was used to create KML files embedded with surveillance data which in turn could be visualize by using Google Earth application. Inverse distance weighted interpolation technique in GIS was used to identify the more prevalent areas with Aedes vectors and breeding places. The geocoded entomology data were analysed within the “r” statistical environment.

Results: KML file with entomology surveillance data were developed and shared with MOH offices in the district via email along with user instructions. MOH staff visualized the data using Google Earth application. Locations of *Ae. albopictus* and *Ae. aegyptie* with the respective larval indices were identified. Interpolated maps were developed and shared to identify spatial dispersion of Aedes vectors, larval indices and different breeding places with time and space. Since the type of vector breeding in relation to the terrain could be identified, more focused vector control strategies could be implemented. Visualizing the prevalence of wet and dry containers highlighted the urgency of interventions.

Conclusion: Spatial and space-time mapping approaches can aid operational vector and dengue control by enabling MOH staff to identify the more vulnerable areas for further surveillance, planning, monitoring and implementation of vector control activities.



29.STREAMLINING CURRENT SYSTEM OF DOCUMENTATION ON DEATHS BEFORE ADMISSION TO CURATIVE INSTITUTIONS; AN INTERVENTION, BASE HOSPITAL PANADURA.

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Introduction: Information on death before admission plays a vital role in judicial medical record keeping, information retrieval and re-using in medico-legal activities. It is used for medico legal procedures for deaths due to injuries and unidentified bodies, delayed autopsy references and other post death clearances such as insurance claims for relatives of the deceased. Systematic collection of above information in curative institutions is important.

Objectives: 1. To assess the completeness of existing medical records on death before from 2015 to 2017 at base hospital Panadura.

2. To make an efficient information flow by streamlining the current system of documentation on deaths before admission in Base hospital Panadura.

Method: Medical records of patients who died before admission available at the medical statistics unit of base hospital Panadura from 2014 to 2016 were retrieved and analysed. Completeness on the information documented was assessed using a checklist. A focus group discussion was conducted involving relevant staff members of the hospital and a standard format was developed to assist in recording essential information. The new format implemented from January 2017. Post intervention evaluation was conducted using the same check list during 2017.

Results: A total of 805 medical records of death before admission identified for the study period from 2014 to 2016. 285 medico legal records were available for post intervention period. Post intervention evaluation showed remarkable improvement in inclusion of following details; information on the diseased patients from 66% to 96%, information on guardian or contact person from 44% to 92% and following proper administrative pathway from 28% to 80%.

Conclusion: Providing proper format on recording medico legal information improved the availability and quality of data on deaths before admission base Hospital Panadura. This format could be tested and implemented in similar setups.



30. INTEGRATION OF DISEASE SURVEILLANCE INFORMATION INTO OUTBREAK PREPAREDNESS AND RESPONSE MATRIX OF CURATIVE INSTITUTIONS: A CASE STUDY- BASE HOSPITAL PANADURA.

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Introduction: Disease surveillance is essential for disease control and prevention. Curative institutions are responsible for communicable disease notification which is a fundamental step in disease surveillance. Notifications are routinely analysed by the Medical Officer of Health (MOH) for decision making on preventive measures. Notifying institutions rarely analyse such data which is important for maintaining the coverage, timeliness and quality of notification system and administrative decision making on outbreak preparedness and response in curative institutions itself.

Objectives: To document the good practice of integrating surveillance information for outbreak preparedness and response decisions in base hospital Panadura

Method: A technical committee was appointed for monitoring and evaluation of disease surveillance process in the hospital. Ensured the availability of adequate copies of National guidelines on surveillance case definition, notification forms (H544), notification registers and special investigation forms at each ward. Regular training of clinical staff on surveillance case definition and notification system was conducted under the technical guidance of the regional epidemiologist. Infection control nursing officer (ICNO) compiled and visualized surveillance data for hospital authorities by compiling monthly, weekly or daily summaries for decision making. Information generated shared with the regional epidemiologist and surrounding medical officer of health units. Monitoring, evaluation and performance appraisal of hospital notification and dengue sentinel site information system were conducted. Education campaigns on preventive measure were organized and follow up telephone calls for patients were made by the ICNO to assure timely implementation of control measures.

Results: Administrative authorities became more aware of the disease surveillance and notification system. A system of self-assessment of timeliness and coverage of notifications was established. Technical capacity of analysis and interpretation of surveillance data was improved. Surveillance based alarm triggers for activation and deactivation of hospital emergency dengue and influenza preparedness protocols were developed.

Conclusion: Integrating surveillance information in to decision making matrix of all curative institutions would immensely benefit for the effective communicable disease prevention and control in the country.



31. TRANSFORMING NEWLY APPOINTED HUMAN RESOURCE INTO A BETTER VECTOR CONTROL LABOR FORCE IN MEDICAL OFFICER OF HEALTH AREA HORANA.

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Introduction: Dengue is a major public health problem in the Medical officer of Health (MOH) area Horana and it is identified as one of the priority area in the Kalutara District. Since 2016 the incidence of dengue cases increased and had a larger island wide outbreak in 2017 raising major public concern creating an urgent need of human resource to control the massive outbreak. Therefore, a group of personals, “Maduru Mardhana Sahayaka”, was recruited by the government with the aim of engaging them in vector control activity in the field. As we are engaging the untrained people with different education levels, skills and attitudes there is a need of developing a process to train the people and change their behavior with scientific basis.

Objectives: To document the capacity building process conducted in Horana medical officer of health area to newly appointed human resource for better mosquito control.

Method: Individual level assessment on skills, knowledge and attitudes was done by informal interviews and observations. A technical knowledge on integrated vector management, communication skills and personnel relationships were given periodically as in-service training programmes. A system of monitoring & evaluation was developed to evaluate the effectiveness of the programme by setting targets, indicators and pre and post program entomology surveillance. A register with measurable performance indicators developed for individual level daily work assessment. Performance evaluation and appraisal was conducted during each monthly conference with the participation of range Public Health Inspectors (PHI).

Results: All “Maduru Mardhana Sahayakas” were adhered to the register and became self-aware on individual level of performance. The registers showed gradual improvement in performance indicators in each individual which was confirmed by the field inspections. PHI division level performance evaluation became possible emphasizing the need of continuous supportive supervision. Post implementation reduction of entomological parameters and dengue cases was observed.

Conclusion: Providing proper guidance coupled with regular supervision and opportunity of self-evaluation improved the quality of vector control activities by “Maduru Mardhana Sahayaka” in Horana MOH area. Positive results were encouraging and the same practice was expanded in to other MOH areas in the district.



32. INTRODUCTION OF A NEW LABORATORY BASED E-SURVEILLANCE SYSTEM FOR DENGUE INFECTION WITHIN THE WESTERN PROVINCE, SRI LANKA

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Introduction: A rising trend in dengue fever has been observed in Sri Lanka over the past few years. It has been challenging how the epidemic could be effectively controlled. Rapid investigation of suspected/diagnosed cases and taking appropriate action to prevent further spread has been the most effective control strategy so far. Considerable delays in investigating cases and thus taking preventive action have been noticed in the current paper based notification system where the notification is done on clinical suspicion.

Objectives: To introduce a new laboratory based e-surveillance system for notification of dengue cases within the Western Province, Sri Lanka

Method: A new laboratory based online e-notification system was established from April 2016, within Colombo District. The new system covers the laboratories of both the government and private sector.

Results: The process start at the laboratories by creating a new notification whenever a Dengue NS1 Antigen test result is detected positive. Notification will be forwarded to the relevant MOH area at the PDHS Office and MOH will update action implemented to complete the notification process. A dashboard visualizes the each notification status with a color code.

Conclusion: Salient features of the new e-surveillance system are the rapidity of notification/investigation process, user friendliness, providing access to multiple stake holders simultaneously, the involvement of the field staff from the first day of notification, and the ability to trace the cases using check lists and a color coding system.



33. STRENGTHEN CANCER SURVEILLANCE IN SRI LANKA BY IMPLEMENTING CANCER REGISTRY INFORMATICS TO ENHANCE CANCER REGISTRY DATA ACCURACY, COMPLETENESS, AND TIMELINESS.

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Background: Surveillance of cancers is a process of systematic, continuous collection, storage, analysis, interpretation and dissemination of epidemiological information on cancer cases occurring in a particular geographic area. The process of cancer surveillance is also called 'cancer registration'. System to conduct cancer registration is called 'Cancer Registry'. The National Cancer Control Programme (NCCP) of Sri Lanka is the national focal point for prevention and control of cancers in the country. Sri Lanka Cancer Registry (SLCR) is maintained by NCCP and plays a pivotal role in cancer control.

Objectives: A total of 13,635 new cancer cases had been diagnosed in 2007 with a crude cancer incidence rate of (CR) 68.0 per 100,000 population. There were 16,888 new cases diagnosed in 2010 with a CR of 82.6. It is evident that the cancer prevalence in Sri Lanka is on the rise. Since a considerable number of private health care institutions and government hospitals have started diagnosis and treatment of cancer patients, the necessity of using information technology in cancer surveillance domain have become absolutely essential to improve the data quality, accuracy and completeness because the value of a cancer registry depends on the quality of its data.

Method: Cancer surveillance informatics is the systematic application of information and computer science and technology to cancer surveillance practices, research, and learning. Thus, using emerging technology to incorporate automated process and electronic data exchange in cancer surveillance business is an efficient, fast and cost effective way to obtain quality, accurate and complete cancer registry data. Therefore designing, developing and implementing a new web-based cancer registry data management system not only replaces the current paper-based method and also helps in maintain the registers of all reportable cancer cases, analyze and interpret the data and provide information about incidence and prevalence of cancer in defined populations. The basic software infrastructure will be based on Free and Open Source Software with the two-tier client-server system architecture and mobile technology.

Results: The intended results to be expected by implementing cancer registry informatics is to convert existing cancer registry in to a modern era cancer registry. This helps Sri Lanka cancer registry stands with the global cancer registries by improving the dimensions defined by the Cancer Incidence in Five Continents (C15). They are completeness, validity (or accuracy) and comparability. The proportion of cases microscopically verified (MV%), and the mortality-to-incidence (M:I) ratio are important indices and are expected to improve as they are used to measure data completeness and accuracy.

Conclusion: The system will ensure timely availability of cancer registry information that is needed for better improvement in cancer surveillance. Among the goals expected to achieve are: determine the incidence of cancers with respect to geographic and demographic characteristics, monitor trends and pattern of cancer incidence over time, identify high risk populations, provide data for epidemiological studies, and prioritize health resource allocations.



34.ANALYZING PROBLEMS RELATED TO UN-ACCEPTANCE AND REFUSING OF HUMAN SPECIMENS FOR SPECIAL TESTS RECEIVING TO MEDICAL RESEARCH INSTITUTE

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Introduction:

State sector laboratory service of Sri Lanka, consists of hospital based laboratory set up and specialized institutions based laboratory set up. Medical Research Institute (MRI) is one of the specialized Institutes which provide laboratory facilities for island wide hospitals, especially for the tertiary care laboratory investigations that are not performed in hospital laboratory set up. These investigations include special biochemical investigations such as Glycosylated haemoglobin (HbA_{1C}), chronic kidney disease investigations (Tacrolimus level, Cyclosporine), specific mycology, virology investigations, endocrinological investigations (thyroid function tests, hormonal assays) and immunological investigations (antinuclear antibody complement levels) etc. These investigations have considerably high professional and financial involvement. There are record based evidences at MRI for unacceptance of human specimens sending from government hospitals. It is important to find out the reasons for unacceptance and percentage refusing of specimens in order to minimize the problem.

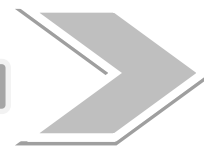
Objectives: 1. To find out the percentage of refusing human specimens receiving to MRI.

2. To find out reasons for unacceptance of specimens.
3. To find out special tests with high refusing rate.
4. To identify government hospitals, subjected to high refusing rate.

Method: Specimen receiving counter of the MRI has all the data regarding receiving and refusing of patient samples from various hospitals all over the island. This data was used for this case study.

Results: The results showed that 6.17% of the patient samples receiving to MRI are subjected to refusal. Regarding the reasons for the refusal, 90% was due to unavailability of reagents at MRI. It is seen that almost hospitals were subjected to a high refusal rate. Sample returning due to wrong collection method was about 7% and due to transportation errors was nearly 3%.

Conclusion: According to questionnaire, out of the total 10% of un-acceptance can be avoid by giving instructions or training to senior MLTs those who have total responsibility of collecting and sending samples to MRI.



35. INNOVATIVE TECHNIQUE TO CONVERT AN IV NEEDLE TO AN EYELESS SUTURE NEEDLE

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Introduction: The divisional hospital Dodangoda is a type C Divisional hospital located close to the Southern Expressway. Approximately 200 patients per day are treated at outpatient department (OPD), out of those majority are treated for wounds due to accidental injuries. Number of patients visiting OPD due to accidental injuries has increased over the years due to several reasons and has an increasing demand for eyeless needles for wound suturing.

Objective: To report an innovative technique to convert unused IV needle in the IV set to an eyeless suture needle.

Method: IV needle provided free with the IV set is used. Suture material nylon was inserted in to the IV needle nearly up to the sharp end of the needle. The needle is then bent to a circular shape using a simple device built with two metal tubes. Then the plastic portion of the IV needle is removed and the blunt edge of the needle is pressed using a wrench to stabilize the nylon string following which the needle is packed correctly, labeled and sterilized.

Result: It was possible to convert unused IV needles of the IV sets as disposable eyeless needles with a minimal cost. and the wastage of unused IV needles was also reduced. Risk of infection was minimal because of one time use. Sharpness needle could ensure minimum discomfort to the patient or the doctor which ultimately increased the patient satisfaction.

Conclusion: This method can be easily used to fulfill the requirement of eyeless needles in the hospitals.



36. IMPLEMENTING THE CONCEPT OF HEALTH PROMOTION HOSPITALS IN THE DIVISIONAL HOSPITAL - BADURALIYA

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Introduction: A health promotion hospital is a hospital dedicated to promote health of its patients, staff and the surrounding community. The Divisional Hospital Baduraliya is a type B Divisional Hospital which provides primary healthcare services to a population of 55,000. Improving the quality of service is the basis for providing an effective healthcare to the community.

Objective: To uplift the Divisional Hospital Baduraliya as a dedicated hospital for health promotion.

Method: The nursing sister of the hospital staff was trained under the World Bank funded “Management at Administration of Public Health” programme of the Western Province Health Department in 2017 and an action plan was developed under the directive of the Regional Director of Health Services. This plan was discussed and agreed upon by all stakeholders. Accordingly, funds were secured for the project. Preparing old buildings according to health promotion concepts, implementation of e-Hospital project, implementation of productivity concepts, introducing clinical audits and improving the identified shortcomings, planning training programmes and initiating an Ayurveda treatment unit are the main components of the project. Developing a performance appraisal procedure for the staff and recruiting community health assistants are also important features of this project.

Results: Conducted ten training workshops based on identified needs and according to a schedule. Development of positive attitudes of the hospital staff towards clinical audits, improvement of team spirit to engage in community work, increase in institutional productivity, contesting in the productivity awards - 2018, conducting community programmes on Mondays and increasing clinic attendance with the help of community health assistants were the results of this project.

Conclusion: Implementation and maintenance of health promotion hospital concept leads to wider and productive health care service to the community.



37. DEVELOPMENT OF A DATA COLLECTION AND STORAGE SOFTWARE FOR THE ANNUAL PROGRESS REVIEW MEETING OF THE NATIONAL IMMUNIZATION PROGRAMME

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Introduction: National Immunization Programme is a highly successful programme in Sri Lankan health sector and its success is mainly due to the dedication by the parents, the healthcare staff and the regular monitoring of the system. The data analysis conducted beyond the district level and the Medical Officer of Health (MOH) level to focus up to public health midwife area (PHM) area level, by the annual progress review meetings conducted at national level. Currently the data collection and analysis is performed using paper based forms using manual methods which consumes significant time and effort as well as a higher possibility for errors. This study attempted to use a user friendly software package “Microsoft Excel” based programme to increase accuracy and efficiency of data analysis.

Objective: To assess the feasibility of developing a data collection and storage programme based on Microsoft Excel for the annual progress review meeting of the national immunization programme

Method: A suitable programme based of Microsoft Excel was developed and all midwives of the area were requested to bring their paper based data collection forms. Data collected by midwives on births and vaccinations, pregnancy records and registries were entered in to the programme. It was possible to enter multiple immunization reports to the same child. Summary details and tables and charts were displayed using the network connected computers. The new method and old paper based method was compared to identify any quality improvement.

Results: Currently 6-8 weeks are spent to compile the immunization report while the new method can shorten the duration to 2¹/₂ days. The accuracy of data also improved to 100% from the previous 26% - 74%.

Conclusion: It is possible to prepare a data collection and storage programme based on Microsoft Excel for the annual progress review meeting of the National Immunization Programme with a higher accuracy and efficiency. This needs to be piloted in some other MOH areas and based on the results it can be recommended all MOH area in Kalutara district.



38. ACHIEVING SUCCESS OF WELL-WOMAN CARE SERVICE BY PRODUCTIVE INVOLVEMENT WITHIN EXISTING PROCESSES

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Introduction: The objective of conducting well-woman clinics is to identify non-communicable disorders early, to refer the identified patients for treatment and to increase life expectancy of women. Since breast cancer and cervical cancer tops the prevalence of cancer among women in Sri Lanka, it is expected to increase the coverage of target population for early identification of women-at risk. The well-woman care coverage in Horana MOH area was 15% in 2014 among women over 35 years mainly due to the difficulty getting the target group to visit the clinics. Therefore, it was a necessity to develop an effective method to improve the coverage of well women clinics.

Objectives:

1. To increase the well-woman clinic attendance of the target population.
2. To identify the Public Health Midwife areas (PHM) with low coverage and increase the coverage of those areas.
3. To maintain the well-woman care coverage at an optimum level annually.

Method: Developing a plan to conduct well-woman clinics covering all regions at the beginning of the year, paying attention to the estimated and actual population of target group during the monthly conference. Target group was educated using “35 for you” leaflets on the importance of well-woman care, when and where the services provided during household visits of PHM in the first quarter. Invitation letter was sent to those who were difficult to get attracted to the service and steps were taken to make sure they attend the clinics. Area-wise well women clinic coverage and identified issues were discussed at each monthly conference and suggestions were obtained from the staff to solve the issues. Additional steps were taken in low coverage areas; home visits by health care teams, conduct mobile clinics and to provide care on Saturdays for employed women. Well-woman care was arranged at the workplaces to those who haven't obtained well women care by the end of the year.

PHM and the clinic that reported the highest coverage was appreciated monthly and the names were displayed at the notice board of MOH office. Further, a performance appraisal session was organized annually and the PHM areas with coverage above 80% and PHMs who have catered highest number of females in target population in highly populated areas were appreciated.

Results: The well-woman care coverage has improved to 76% in 2015 from 15% in 2014 it was maintained continuously next three years. This was reported as the best coverage in Kalutara district and 10th best island-wide.

Conclusion: It is possible to achieve well women clinic targets by proper planning of the institutional processes, positive supervision, and regular work appraisal of the staff.



39. ANAEMIA IN PREGNANCY: COMPARISON OF DATA FROM 2013 TO 2018 IN KARALDEKMA PHM AREA IN BULATHSINHALA WITH HORANA PHM AREA.

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Introduction: Anaemia in pregnancy can cause maternal and foetal complications. Increasing trend in anaemia in pregnancy was reported in Kalutara district and also Bulathsinhala MOH area in past five years which necessitated local study on anaemia in pregnancy.

Objective: 1. To compare anaemia in pregnancy in PHM area-KaralDekma from 2013- 2018 with urban PHM areas of Horana

2. To analyse anaemia in pregnancy in relation to age, parity, BMI, level of education of pregnant mother and spouse, occupation urban and rural setting.

Method: Age, parity, BMI, occupation, education, occupation of the spouse and level of education among pregnant mothers 2013 to 2018 were obtained from their pregnancy-records (512B). Sample included mothers from Horana I and III (Urban areas) and KaralDekma PHM area. Mothers who have done the haemoglobin test from government approved laboratories and who have received iron treatment and worm treatment were included for the study.

Results: Mean Haemoglobin level of 174 pregnant mothers from KaralDekma PHM area and 218 from Horana Urban PHM areas, has reported a mean Haemoglobin of 11.54 g/dL (range 6.5g/dl to 13.5g/dl) and 11.74g/dl (range 7.9g/dl to 13.35g/dl) respectively. Percentage of mothers with anemia in first trimester reported as 23.6% and 22.5% for KaralDekma and Horana respectively while reported as 53.1% and 35.1% for second trimester respectively. It confirmed an increasing trend in anaemia among pregnant mothers, in rural PHM area than in urban PHM area for the second trimester. There is no significant difference in percentage of mothers with anaemia in first trimester in the selected urban and rural PHM areas while there is a significant difference reported in second trimester. Percentage of mothers with corrected anaemia was reported as 17.1% and 6.9% for the selected rural and urban PHM areas respectively revealing a significant difference, The education level of pregnant mothers showed a significant association with anaemia for the selected PHM area in Bulathsinhala but not for the selected areas in Horana. No significant association was reported with other factors for in selected rural and urban PHM areas. Percentage of pregnant mothers with anaemia have increased from 2013-2018 while a marked drop in anaemia was revealed in 2015 and 2016.

Conclusion: Anaemia in pregnancy is a considerable problem in rural and urban PHM areas in Kalutara district. Further interventions should be planned to overcome this issue. Further studies should be planned to identify the reasons for the fluctuating trend in anaemia in pregnancy during last four years.



40. RETENTION AND EFFECTIVENESS OF DENTAL SEALANT AFTER TWO YEARS IN SCHOOL CHILDREN AT MEDICAL OFFICER OF HEALTH AREA, AGALAWATTE

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Introduction: 2002/2003 National Oral Health Survey shows the prevalence of dental caries among 5-year-old children, 12-year-old children and 15-year-old children was 63.3%, 40% & 52.2% respectively. Research evidence shows, 90% of all dental caries in schoolchildren occurs in pits and fissures of the occlusal surfaces of the permanent molars. In 2013 Save Molar Programme was launched in Sri Lanka as a component of strengthening of primary health care. In this National Oral Health Care Programme dental surgeons and school dental therapists screen school children between age 6-9 and the occlusal surfaces of their first and second molars are covered with fissure sealants. The pilot project was carried out in four Medical Officer of Health Areas (MOHH) including Agalawatte MOH in Kalutara district.

Objectives: The purpose of this study was to evaluate the retention rates and effectiveness of occlusal sealants in children in Agalawatte MOH area.

Method: In 2016 primary school children from Tamil Primary school at Galawatta, Katuwalagoda Kanishta Vidyalaya (K.V), Welipenna and Girikola Siri Gunarathana K.V. from Agalawatta MOH area were considered for the pilot project. According to the guidelines given in the National Programme high-risk school children for dental caries were selected after several screening sessions. Occlusal surfaces of the first permanent molar teeth were covered with Fuji VII fissure sealant material. All teeth were evaluated 24 months after application of fissure sealants and data were collected.

Results: A total of 110 sealed first permanent molar teeth in 58 students. Among them, 49 students with 89 sealed first permanent molars were evaluated after two years. Among 19 children with sealed first permanent molars, 23 molars were decayed. Another 19 children who lost fissure sealants, only one molar tooth was decayed out of 23 teeth. It was found that children with decayed teeth, did not brush at night at all and sweet consumption was high.

Conclusion: It is very important to brush twice a day as well as reduce sugar consumption along with fissure sealants to have a promising result.



41. ANALYSIS OF DATA ON PATIENTS ATTEMPTED DELIBERATE SELF HARM BY INGESTION OF TOXIC SUBSTANCES

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Introduction: Suicide is a global health issue and a social issue, specially among Sri Lankan youth. High number of admissions with deliberate self-harm is reported each year in Primary Care Unit of Base Hospital (BH) Panadura which is located in an urban setting. This data has not been studied analytically to date.

Objectives; To analyse data on admissions to BH Panadura on attempted deliberate self-harm by ingestion of toxic substances.

Methods; Bed Head Tickets ((BHT) of admissions to BH Panadura with deliberate self-harm by ingestion of toxic substances and patients referred to “Sith Pahan Piyasa” mental health clinic were studied and data were analysed. Deaths on admissions and patients in critical stage on admission were excluded from the study. .

Results: Records of 284 patients were included in the study. Majority of patients were males (n=167, 59%) and the rest were females (n=117, 41%) Admissions were evenly scattered throughout the year except in October and November which had reported a significant reduction. Highest number of deliberate self-harm by ingestion of toxic substances was reported in the age category 14-25 years (54%). Reported cases of deliberate self-harm by ingestion of toxic substances have decreased with age. Paracetamol has been used by 50% of patients as the toxic substance for deliberate self-harm among patients who attempted suicide using ingestion of toxic substances.

Conclusion: Preventive programmes should be prioritized mainly to 14-35 year group. Programmes should be conducted to prevent deliberate self harm by Paracetamol poisoning. Further studies are recommended on identifying reasons for attempting deliberate self harm and their financial, social and psychological status.



42. DESCRIPTION OF THE BMI TREND FROM 2001 TO 2017 AMONG PREGNANT MOTHERS BEFORE 12 WEEKS OF GESTATION IN BULATHSINHALA SOUTH PHM AREA

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Introduction:

Overweight and obesity are public health issues on rising trend which also contribute to ante-natal and post-natal complications. It is important to explore the trend in BMI among pregnant women in rural population

Objectives:

1. To study the trend in BMI among pregnant women less than 12 weeks of gestation in Bulathsinhala South PHM area from 2001 to 2017
2. To describe the association of age, parity, education and employment with BMI

Method:

All pregnant mothers registered in Pregnant Mother Register –H 513 at Bulathsinhala South PHM area from 2001 to 2017 were included for the study. BMI value before 12 weeks of gestation, parity and age obtained from pregnant mothers register and education status and occupation of pregnant mother and spouse were obtained from pregnancy record (H512B) and eligible family register (H526). Standard Ditecto scale had been used to measure height and weight. Pearson's Chi-squared test and multivariate logistic regression were conducted for data analysis using R statistical software package.

Results: Pregnant mothers registered from 2001 to 2017 were 455. Mean BMI was 22.69 (SD3.87, Min: 14.3, Max 43). Pregnant mothers with BMI over 25 were reported after year 2005 while obese pregnant mothers were first reported after 2009. Number of pregnant mothers who are overweight and obese registered at this PHM area has significantly increased from year 2005 ($p < 0.000$) while pregnant mothers with low BMI (< 18.5) has gradually decreased from 2001 to 2017. There is significant association with BMI and second pregnancy ($p < 0.03$), third pregnancy ($p < 0.007$) and occupation of the spouse ($p < 0.03$). There is no significant association revealed in BMI of pregnant mother and her occupation, and age. Further no significant association of educational status of pregnant mother or the spouse with BMI of the pregnant mother.

Conclusion: Overweight and obesity among pregnant mothers is on increasing trend in rural population which could be identified as a public health issue in near future. Further research should be planned to identify the determinants.

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