



**Journal of**  
**THE COLLEGE OF COMMUNITY**  
**PHYSICIANS OF SRI LANKA**

**Volume 21, No 1 (Supplement), September 2015**

**ABSTRACTS OF THE**  
**TWENTIETH ANNUAL ACADEMIC SESSIONS**  
**COLLEGE OF COMMUNITY PHYSICIANS OF SRI LANKA**

**17-19 SEPTEMBER 2015**

# Contents

	<i>Page</i>
1. <i>List of oral presentations</i>	3
2. <i>List of poster presentations</i>	11
3. <i>Abstracts of oral presentations</i>	15
4. <i>Abstracts of poster presentations</i>	61
5. <i>Reviewer acknowledgement</i>	91

## LIST OF ORAL PRESENTATIONS

Free Paper Session A  
Grand Crystal Ballroom

### Maternal and Child Health

18<sup>th</sup> September 2015

1.45 P.M. - 2.45 P.M.

Chairpersons: Dr. Vineetha Karunaratne, Dr. Deepika Attygalle

- OP 01 **Maternal Suicides - Do we care enough? An overview of maternal suicides in Sri Lanka from 2002-2013**  
K. Jayaratne, S.A.Hewage, H.Benaragama
- OP 02 **Birth and emergency preparedness and associated factors among postnatal mothers at Base Hospital, Balangoda**  
W.N.D.Perera, C.S.E.Goonewardena
- OP 03 **Preparedness for birth and related emergencies among pregnant women attending antenatal clinics at Medical Officer of Health (MOH) area Padukka**  
U.C.H. Rodrigo, V.Kumarapeli
- OP 04 **Perceptions and attitudes towards the state-sector field Maternal and Child health services among clients who do not utilize those in the Pitakotte MOH area and their practices in getting them from the non-state-sector**  
W.M. Gunatunga, P.K.B. Mahesh, G.D.N. Samaruthilake, Y.N. Walpita, R.U. Mambulage, I.A. Thalagala, D. Jayawardena, R.M.S.D. Fernando
- OP 05 **Knowledge on antenatal care among primi mothers gained through Public Health Midwives in selected three MOH areas in Anuradhapura district**  
N.M.C.L. Nishshanka, C.S.E. Goonewardena

# **Tobacco, Alcohol and Musculoskeletal Conditions**

18<sup>th</sup> September 2015

1.45 P.M. - 2.45 P.M.

Chairpersons: Prof. A. Pathmeswaran, Dr. Palitha Karunapema

- OP 06 **Knowledge, exposure and responses to tobacco promotional activities among adolescents in Thamankaduwa Educational Zone**  
E. M. Perera, N. Gunawardena
- OP 07 **Prevalence and pattern of alcohol consumption, and associated socio demographic factors among female estate labourers in Medical officer of Health area, Kothmale**  
H.W.S.R. Rambukwella, D.S.Dissanayake
- OP 08 **Incidence, pattern and associated factors of injuries among infants**  
N.A.D. Indralal, K. Jayaratne
- OP 09 **A novel screening tool: Development and validation of household work related musculoskeletal disorder questionnaire**  
P.D.Ranasinghe, N.S.Gunawardana, I.Atukorale, S.D.S. Illangatilaka
- OP 10 **Are Sri Lankan children targeted by food and beverage advertising on television?**  
R.L. Fernando, K.T.A.A.Kasturiratne, H.S.R. Perera, A.R. Wickremasinghe

## Maternal and Child Health

18<sup>th</sup> September 2015

4.30 P.M. - 5.30 P.M.

Chairpersons: Dr. Hiranthi De Silva, Dr. N. Mapitigama

- OP 11      **Compliance and practices of multiple micronutrient supplementation among mothers of 6 to 24 months old children in 13 Districts of Sri Lanka**  
S. Dhanapala, H.S. Jayawickrama, C. de Silva, B.V.S.H. Beneragama, N.A.A.S. Thilakarathne, I.S. Nupahewa
- OP 12      **Risk factors for neonatal sepsis in a district of Sri Lanka**  
D.U.C.J.Jayasinghe, C. Abeysena
- OP 13      **Prevalence and Correlates of Physical Abuse during Childhood-Experiences from the Gampaha District**  
N.K. Chandrartne, A.D. Fernando, N.S. Gunawardena
- OP 14      **Knowledge of Public Health Midwives in the Kalutara district in relation to domiciliary postnatal care**  
K.A.T. Navodani, P. Fonseka, C.S.E. Goonewardena
- OP 15      **Quality of the services provided by Public Health Midwives on selected service components, in monitoring weight gain during pregnancy in Kalutara, Beruwala and Agalawatte Medical Officer of Health areas in the Kalutara District**  
S.H.P. de Silva, R.B.B.S. Ramachandra, L.T. Gamlath, C.P.G. Liyanage, D.K.A.D.L. Kumari

## **Mental Health and Burden of NCDs**

18<sup>th</sup> September 2015

4.30 p.m. - 5.30 p.m.

Chairpersons: Prof. Wasantha Gunathunga, Dr. Vindya Kumarapeli

- OP 16     **Emotional and psychological problems among schooling adolescents aged 12-14 years in Polonnaruwa District**  
P. A. S. Senaratne, S. Sivayagan, S. Kasthriarachchi
- OP 17     **Selected childhood experiences, current psychological status and its associates among imprisoned Sinhala speaking women in Welikada prison Colombo, Sri Lanka**  
W.M.B.G.Jayathilake, N. Lansakara
- OP 18     **Household work related musculoskeletal disorders: A hidden burden among housewives**  
P.D. Ranasinghe, N.S. Gunawardana, I. Atukorale
- OP 19     **Achieving Global Voluntary NCD Targets By 2025: Baseline assessment of Mortality due to NCDs in Sri Lanka**  
R.P. Karunapema, R.M.S.D. Fernando, D. Ediriweera
- OP 20     **Mental Health Problems and associated factors among grade five students preparing for scholarship examination**  
D. Peiris, K. Jayaratne

## Family Planning and Immunization

19<sup>th</sup> September 2015

10.45 A.M. - 12.00 P.M.

Chairpersons: Prof. Kumudu Wijewardene, Dr. Sapumal Dhanapala

- OP 21     **Population level measles immunity in Sri Lanka : are we maintaining herd immunity threshold for measles to protect infants?**  
D. Gamage, G. Galagoda, S. Ginige, P. Palihawadana
- OP 22     **Population level Polio immunity before vaccination schedule change at Endgame on Polio Eradication**  
D. Gamage, P. Palihawadana, O. Mach, W.C. Weldon, S.M. Oberste, R.W. Sutter
- OP 23     **Prevalence, Knowledge and Practice of Family Planning among married male Navy Personnel in Southern Naval Base ‘Dakshina’, Galle**  
A.W.P.I. Gunatilake, C. de Silva
- OP 24     **Prevalence and Factors Associated with Unmet Need for Family Planning among 15-49 year old women In the Medical Officer Of Health area Mallavi**  
D. C. K.Herath
- OP 25     **Contraceptive practice and Unmet Need for Family Planning among ever married reproductive age women in the estate sector in the Rathnapura district**  
L.I. Malwenna, K.B. Kannangara, N.B. Gamini, Chaminda Jayawardana, T.V. Indralal
- OP 26     **Knowledge, attitudes and practices related to contraception among pregnant teenagers in the Regional Director of Health Services division-Ampara**  
I.A. Talagala, K.K.K.M. Kodithuwakku

# **Health Systems, Health Seeking Behaviour, Health Policy and Economic Evaluation**

19<sup>th</sup> September 2015

10.45 A.M. - 12.00 P.M

Chairpersons: Dr. S.M. Samarage, Dr. Ayendra Balasuriya

- OP 27 **Incidence, immediate consequences, associated factors and health seeking behaviour related to falls among elderly in Medical Officer of Health area Elapatha**  
B.M.I. Gunawardana, R.D.S. Ranasinghe
- OP 28 **The cost effectiveness of Fluticasone and Salmeterol metered dose inhaler (MDI) versus Beclomethasone alone MDI in the long term management of adult patients with uncontrolled asthma, in Sri Lanka**  
S. Perera, J. Karnon
- OP 29 **Mothers' perception on quality of care: A satisfaction survey on care received during hospital stay among postpartum mothers at a tertiary care center, Colombo**  
S. A. Hewage, D. Rowel
- OP 30 **Economic impact on households of Rheumatoid Arthritis patients seeking care at rheumatology clinics in the district of Colombo**  
A.C.M. Basnayake, A. Pathmeswaran, A. Kasturiratne
- OP 31 **Comparison of client satisfaction for the Family Clinic and the Traditional Medical Clinics at Base Hospital Horana**  
S.H.P. de Silva, R.B.B.S. Ramachandra, H.S.G. Wijesekera, V. Kaluarachchi, P. Kariyawasam, M. Samarasinghe
- OP 32 **Gaps in tobacco packaging regulation: A comparison of South Asian countries and Australia**  
S.H.P. de Silva, S. Barraclough, S. Wijesinghe



## **Occupational health, environmental issues and food labeling regulations**

19<sup>th</sup> September 2015

2.30 P.M. - 4.00 P.M.

Chairpersons: Prof. Rohini De Alwis Seneviratne, Dr. H.M.S.S.D.Herath

- OP 33 **Compliance of health and nutrition related claims of beverages to the Sri Lankan Food Labelling Regulation**  
S.M.Arnold, M.S.K.Wickramatilake, R.M.S.D. Fernando  
C.J.Denawake, W.Y.J.Fernando, K.C.P.Aluthge, P.J. Suraweera
- OP 34 **Patterns of occupational eye injuries and knowledge and practices on their prevention among the patients attending the outpatient department of National Eye Hospital**  
M.N.J.Gunathilaka, D.B.D.L.Samaranayake
- OP 35 **Occupational stress associated factors and coping strategies among bus drivers in buses commencing from Maharagama Municipal Council area**  
D.K.Illangasinghe, S.M.Arnold
- OP 36 **Victimization to workplace violence and its correlates among medical officers in the Galle district**  
A.M.S Niranjala, N. Gunawardana
- OP 37 **Effectiveness of occupational therapy for shoulder joint after neonatal brachial plexus injury**  
W.P.K. Hemalatha, R.B.B.S. Ramachandra, S. Kurukulasooriya
- OP 38 **Prevalence and factors associated with musculoskeletal disorders among ceramic factory workers in the district of Colombo**  
P.K.D.C. Perera, S.M. Arnold
- OP 39 **Chunnakam Power Plant: A point source of underground water pollution?**  
N.W.A.N.Y. Wijesekara, V. Murali, H.D.B. Herath

## **Tuberculosis, Leprosy, Dengue and Rabies**

19th September 2015

2.30 P.M. - 4.00 P.M.

Chairpersons: Prof. Pushpa Jayawardana, Dr. Stanley De Silva

- OP 40 **Knowledge, attitudes and practices towards leprosy amongst public healthcare workers in Colombo Municipal Council Area**  
M. P. Wijeratne, J.I.N.C. Karunaratne, P.S. Hettiarachchi, M.L.S.N, Fernando
- OP 41 **Knowledge, attitude, practices and associated factors in relation to provision of care for pulmonary tuberculosis patients among nursing officers in Teaching Hospital Kurunegala**  
R.M.P.T.D. Rajapaksha, S. Samaraweera
- OP 42 **Health seeking behaviour and associated factors of parents of patients treated in-ward for dengue at Lady Ridgeway Hospital for Children, Colombo**  
K.E.S. Fernando, H.A. Tissera
- OP 43 **Treatment non-compliance, stigma and factors associated, among patients treated for pulmonary tuberculosis at the Central Chest Clinic, Colombo**  
K.D.S.C.Vijewardane, V.Kumarapeli
- OP 44 **Prevalence of depression and associated factors among a Sri Lankan sample of leprosy patients**  
S.S. Madawarachchi, H.H.P.C. Madhuranga, P.T. Madhusankha, P.D. Ranasinghe
- OP 45 **Knowledge on rabies, treatment following dog bites and associated factors among persons aged 20-59 years in Medical Officer of Health area, Maharagama**  
L.S.D. De Silva, V. Kumarapeli
- OP 46 **Potential impact of the special dengue control programme on control and prevention of dengue in Kalutara, Sri Lanka, 2014**  
P. Liyanage, U.I. Rathnayaka, P. Chulasiri, S. Amunugama, P. Palihawadana, H. Tissera

## **LIST OF POSTER PRESENTATIONS**

- PP 01            **Knowledge, practices and associated factors regarding responsive feeding among primary caregivers of children aged 6 to 12 months attending child welfare clinics in Homagama Medical officer of Health area**  
S.S.Jayaratne, S.S.P.Godakandage
- PP 02            **Awareness regarding treatment, prevention and control of cutaneous leishmaniasis among medical practitioners in the Colombo South and Jayewardenepura teaching hospitals**  
H.A.A.S. Weerasinghe, D.H.M. Niluka, H.P.G.T.P. de Alwis, U.S. Weerasena, S.G.V.C. Gunasekara, R. Wickremasinghe, S. Goonawardena
- PP 03            **Knowledge regarding Filariasis and morbidity control practices among patients who attend the filariasis clinic at Boralesgamuwa MOH area**  
P.M.S.Ayantha, T.S.Dissanayake, M.A.D.L.Munasinghe, K.K.D.M.Ranaweera., W.M.Rukshani, S.Ranasinghe , S.Goonewardena
- PP 04            **Knowledge, attitudes and practices towards Leptospirosis among farmers of Palapathwela Secretariat division in Matale district**  
P.C.W.M. Piyadigama, R.M.A.G. Ranasinghe, M.A.S.D.Somasiri, W.A.M.M. Fernando, W.G.M.D.Amarasinghe, D. Ariyaratna, S. Goonewardena
- PP 05            **Factors associated with feeding practices during diarrhoeal diseases among caregivers of 6-12 month old infants**  
M.P.Kumbukage, L.H.M.N.Lansakara
- PP 06            **Knowledge, exposure and responses to passive smoking among adolescents in Thamankaduwa educational zone**  
E. M. Perera, N. Gunawardena
- PP 07            **Correlates of emotional and psychological problems of adolescents aged 12-14 year in Polonnaruwa District**  
P.A.S.Senaratne, S.Sivayagan, S.Kasthriarachchi
- PP 08            **Validation of Household Food Insecurity Access Scale - Sri Lanka**  
H.V.B.S. Wijayatilaka, D.N. Fernando

- PP 09                    **A preliminary analysis of the progression and outcome of dengue haemorrhagic fever (DHF) in adult patients based on readily available laboratory data**  
E. M. Manoj, N.T. Wellappuli, D.L.M. Pullaperuma, G. Ranasinghe, N.D.W Widanapathirana
- PP 10                    **Changes in government and trends in alcohol consumption in Sri Lanka between 1989 and 2013**  
A.Pathmeswaran, D.Hettiarachchi,W.N.Perera
- PP 11                    **Menstrual disorders among adolescent school girls**  
V.P.S.D. Pathirana, K. Jayaratne
- PP 12                    **Lightning injuries among residents in Medical Officer of Health area, Kiriella: Lifetime prevalence, knowledge, attitudes and practices on prevention and associated factors**  
K.C.Kalubowila, H. D. B.Herath
- PP 13                    **Pattern of Facebook usage, attitudes and Face book addiction among a sample of University Students**  
L.H.A.N.M. Lokuhapuarachchi, P.Logapasath,  
A.K.Liyanage, P.D.Ranasinghe
- PP 14                    **Knowledge and practices on prevention and control of hypertension in adults in a selected rural Medical Officer of Health area in Sri Lanka**  
N.R. Liyanage, S.M. Arnold<sup>2</sup>
- PP 15                    **Prevalence and Correlates of Sexual Abuse during Childhood-Experiences from the Gampaha District**  
N.K. Chandrartne, A.D. Fernando, N.S. Gunawardena
- PP 16                    **Assessment of the level of knowledge, attitudes and practices on menstrual hygiene among the grade ten school girls and female teachers and facilities for promotion of menstrual hygiene management at schools in the district of Kalutara, Sri Lanka**  
W.M.P.A. Fernando, P. Jayawardana
- PP 17                    **Export Processing Zone workers knowledge on occupational hazards**  
S.M. Arnold, S.J. Senanayake, R.M.S.D. Fernando, C.J. Denawaka, R.P.P. Karunapema, N.C.Pallawatta
- PP 18                    **Fever detection methods and association of usage of a thermometer with selected outcomes in children treated as dengue fever**  
P.K.B.Mahesh, S.M. Arnold, R.M.S.D. Fernando

- PP 19            **Incidence, Knowledge, Attitude and Practices of Wasp stinging on an Estate in Agarapathana**  
B.S.Chithrananda, S.Dhanapala
- PP 20            **Knowledge and attitudes of food hygiene and food-borne diseases among food handlers in small scale food manufacturing establishments (SSFME) in Medical Officer of Health (MOH) area, Dehiwala**  
R.M.T.D. Rathnayake, I. Suraweera
- PP 21            **Perceptions on responsible dog ownership among persons aged 20-59 years in Medical Officer of Health area, Maharagama**  
L.S.D. De Silva, V. Kumarapeli
- PP 22            **Profile of whole body donors residing in western province registered with department of anatomy, University of Sri Jayewardenepura**  
L.J. De Silva, L.S.D. De Silva, S.G Yasawardene
- PP 23            **Knowledge, Attitudes & Practices of Universal Precautions among Nursing Officers at Accident Service Units in selected Teaching Hospitals**  
J.M.D.C.Jayasinghe, S.P.G.S.Jayasekera, J.A.P.M Jayasinghe, W.D.Y.N. Walpita
- PP 24            **Cardiac rehabilitation (CR) and functional disability among patients after acute coronary syndrome or an intervention for cardiac reperfusion**  
V. Kumarapeli, R. de A. Seneviratne
- PP 25            **Associated factors of occupational stress among executives in the garment industry**  
W.M.S. Weerakoon, S.M Arnold
- PP 26            **Occupational injuries in carpenters in the Moratuwa Medical Officer of Health area**  
H.N.A.Fonseka, S.M.Arnold
- PP 27            **Personal characteristics of teenage pregnancy: findings from Ampara Regional Director of Health Services Division**  
I.A. Talagala, K.K.K.M. Kodithuwakku

PP 28

**History of previous exposure among patients treated for dengue in two tertiary care hospitals in Colombo: 2012-2013**

H.A.Tissera, A. Amarasinghe, J. Weeraman, S. Gunasena, H.M.M.Gunathilaka, P.T.S.Prasanga, A.D.R. Madushanka, Y.T.M. De Silva, B.H.C.T. Hettiarachchi, N.K.P.M. Abeysiri, P. Palihawadana

PP 29

**Serovar pattern and determinants of leptospirosis transmission in Sri Lanka**

J.Amarasekera, M.Kodithuwakku, P.Palihawadana, R.Perera, S.Ginige, R. Wijesinghe, T. Wijayathilaka, S.Agampodi

PP 30

**Field evaluation of measles vaccine efficacy : measles outbreak in Sri Lanka 2013-2014**

P.Palihawadana, D.Gamage, J.Amarasekara, S.Ginige

# Abstracts of oral presentations

## OP 01

### **Maternal Suicides - Do we care enough? An overview of maternal suicides in Sri Lanka from 2002-2013**

K. Jayaratne<sup>1</sup>, S. A. Hewage<sup>2\*</sup>, H. Benaragama<sup>3</sup>

<sup>1</sup>National Program Manager, Maternal and child mortality and morbidity, Family Health Bureau

<sup>2</sup>Medical Officer, Maternal and child mortality and morbidity unit, Family Health Bureau

<sup>3</sup>Director/Maternal and Child Health, Family Health Bureau

\*Corresponding author's email: [avanthish@hotmail.com](mailto:avanthish@hotmail.com)

#### **Background**

Maternal suicides are not adequately addressed both at national and District level. Despite the improvement seen in reducing the direct causes, indirect causes and incidental causes remain high. Maternal deaths due to suicides are a catastrophic event for the respective family hence taking action to prevent all maternal deaths or RAFD should be a primary concern of all of us working in Public health.

#### **Objectives**

To describe the epidemiology of maternal suicides in Sri Lanka from 2002 to 2013.

#### **Methodology**

Notification of maternal deaths occurring during pregnancy and up to one year after termination of pregnancy to national maternal death surveillance and response system is mandatory. Each death is investigated with a view to identify service deficiencies and to formulate recommendations for prevention. In this descriptive cross-sectional study, we analysed all maternal suicides reported to NMDSRS from year 2002 to 2013 quantitatively and qualitatively.

#### **Results**

All reported maternal suicides (n=239) were analysed. Both the number and the rate of maternal suicides have risen over the years from 0.8 (n=3) to 12.1 (n=49) per 100,000 live births. Majority (n=188; 79%) were among women less than 30 years of age with a peak in the 26-30 year age group. Many (n=101; 42%) were primi-parous mothers. Antenatal deaths (n=115; 48%) prevailed deaths during postpartum period. Poisoning (n=91; 38%) was the commonest method of suicide, followed by burns (n=55;23%) and hanging (n=38;16%). Unmet need of family planning was 19% (n=45). Impulsive acts have contributed to most deaths, followed by Gender based violence (GBV) and unavailability of mental health services.

#### **Conclusions and/or Recommendations**

The dramatic increase in maternal suicides over the years signals the need for immediate multi-faceted approach in prevention. Young primi-parous mothers should be especially cared during their antenatal period.

**Keywords:** maternal mortality, suicides, Sri Lanka

## OP 02

### **Birth and Emergency Preparedness and associated factors among postnatal mothers at Base Hospital, Balangoda**

W.N.D.Perera<sup>1\*</sup>, C.S.E.Goonewardena<sup>2</sup>

<sup>1</sup>Additional Medical Officer of Health, Medical Officer of Health Office, Kahatuduwa; <sup>2</sup>Senior Lecturer in Community Medicine, Faculty of Medicine, University of Sri Jayawardenapura

\* Corresponding author's email- [dnadeekaperera@yahoo.com](mailto:dnadeekaperera@yahoo.com)

#### **Introduction**

Birth and emergency preparedness (BAEP) is a strategy which will reduce the three delays, concerned with maternal mortality. The comprehensive BAEP plan had been introduced to the Sri Lankan maternal care package since 2011. Assessing the effectiveness of this component was a timely concern.

#### **Objectives**

To describe the birth and emergency preparedness and associated factors among postnatal mothers at Base Hospital, Balangoda.

#### **Methodology**

A descriptive cross sectional study was conducted among postnatal mothers who had delivered after completion of 37 weeks of amenorrhoea. 427 mothers who had delivered within that period were selected. Data collection was done using a pre tested interviewer administered questionnaire. Chi square test was used to test associations and a probability of less than 0.05 was considered as significant.

#### **Results**

Response rate was 93.9% (n=401). Majority of mothers were in the 25- 34 age group (n=245, 61.1%). Regarding utilization of antenatal care services, 84.3% (n=338) of mothers had registered for antenatal care before 12 weeks, 79.6% (n=319) had participated at antenatal classes and 89.3% (n=358) had received domiciliary care during antenatal period. The majority of the mothers (59.4%, n=238) were well prepared for birth and emergencies. Bivariate analysis was done and factors which showed a significant association with well preparedness for birth and emergencies were; ethnicity (p< 0.001), Buddhists (p<0.001), being married (p<0.05), having attained higher educational qualifications by both partners (p<0.01), received adequate social support (p<0.001), received domiciliary care from PHM (p<0.05) and participation at antenatal classes by mother (p<0.05). The written plan was complete only in 50.6% of mothers.

#### **Conclusions and/or Recommendations**

BAEP is a key area in the new maternal care package. The findings show that BAEP was satisfactory among the study participants, nevertheless the written plan in pregnancy record was inadequate, needing closer program monitoring.

#### **Keywords**

Birth preparedness, Complication readiness, Utilization of antenatal services.



## OP 03

### **Preparedness for birth and related emergencies among pregnant women attending antenatal clinics at Medical Officer of Health (MOH) area Padukka**

U.C.H. Rodrigo<sup>1</sup>, V.Kumarapeli<sup>2\*</sup>

<sup>1</sup>Medical Officer, Epidemiology Unit, Colombo ; <sup>2</sup>Consultant Community Physician, National Institute for Mental Health, Angoda

\*Corresponding author's e-mail: [vindyalk@yahoo.com](mailto:vindyalk@yahoo.com)

#### **Introduction**

Obstetric emergencies need prior preparation. 'Birth Preparedness and Complication Readiness' (BPCR) is a concept that promotes timely maternal care (WHO 2006).

#### **Objectives**

This study assessed BPCR and associated factors among pregnant women attending antenatal clinics (ANCs) in MOH Padukka.

#### **Methodology**

A descriptive cross-sectional study was carried out in 2014, among a sample of 280 third trimester pregnant women, attending ANCs in MOH Padukka, divided proportionately to number registered in previous year in Public Health Midwife areas and selected from each 'Register of expected dates of deliveries'. Data were collected using a pre-tested interviewer administered questionnaire. Satisfactory BPCR was defined: accomplished  $\geq 6$  of 8: desired place of birth, closest health facility, birth-related expenses, emergency expenses, person to accompany, arrangements to look after home and children, transport for birth, transport in emergency.

#### **Results**

Response rate was 95.9% (n=269). Median age was 29 years (IQR; 25-32), 99.8% (n=268) were married, 65.1 % (n=175) passed ordinary level, 75.5% (n=203) were unemployed, 35.4% (n=95) were primiparous, 57.6% (n=255) had  $\geq 1$  child and 8.6% (n=23) had faced an obstetric complication. Pregnancy was planned by 84.0 % (n=226), 81.0% (n=218) registered with PHM  $\leq 8$  weeks, 58.4% (n=157) attended  $\geq 5$  ANCs, 10.8% (n= 29) attended all ante-natal classes, 75.8% (n=204) discussed BPCR plan with health-care provider, 69.5% (n=187) discussed with spouse, 60.2% (n=162) had satisfactory knowledge on pregnancy danger signs, 75.0% (n=207) had favourable attitudes on BPCR and 68.6% (n=185) had favourable perceptions on BPCR services. Of them 86.2% (n=232) had satisfactory BPCR which was significantly associated with planned pregnancy, registration  $\leq 8$  weeks,  $\geq 5$  ANCs,  $\geq 1$  antenatal classes, discussing with healthcare provider, satisfactory knowledge on pregnancy danger signs, and having favourable attitudes/perceptions.

#### **Conclusion and/or Recommendations**

A high proportion of pregnant women had accomplished a satisfactory BPCR but attitudes and perceptions on BPCR services needs to be improved.

**Keywords:** obstetric emergencies, birth plan

## OP 04

### **Perceptions and attitudes towards the state-sector field Maternal and Child health services among clients who do not utilize those in the Pitakotte MOH area and their practices in getting them from the non-state-sector**

W.M. Gunatunga<sup>1</sup>, P.K.B. Mahesh<sup>2</sup>, G.D.N. Samaruthilake<sup>2</sup>, Y.N. Walpita<sup>2\*</sup>, R.U. Mambulage<sup>2</sup>, I.A. Thalagala<sup>2</sup>, D. Jayawardena<sup>2</sup>, R.M.S.D. Fernando<sup>3</sup>

<sup>1</sup>Head, Department of Community Medicine, Faculty of Medicine, University of Colombo; <sup>2</sup>Registrar in Community Medicine, Faculty of Medicine, University of Colombo; <sup>3</sup>Medical Superintendent, District General Hospital, Chilaw

\*Corresponding author's e-mail: [yasaswinw@yahoo.com](mailto:yasaswinw@yahoo.com)

#### **Introduction**

Maternal and Child Health (MCH) service delivery system at field level which primed over decades is a major contributory factor for success of health parameters in Sri Lanka. However with current lifestyle practices, maintaining the good standards of MCH parameters and to preserve the credibility of surveillance system by covering all eligible families through government driven service delivery system is challengeable. Exploring perceptions and attitudes towards the state MCH services is worthy, especially among clients who do not utilize services.

#### **Objectives**

To describe perceptions and attitudes towards field MCH services among clients who do not utilize those from government sector and related practices in obtaining such in Pitakotte MOH area.

#### **Methodology**

Utilizing qualitative methodology, in depth interviews were conducted among the current pregnant mothers and mothers of children under 5, who do not utilize state sector field MCH services in Pitakotte MOH area, selected through purposive sampling. Identification of the sample was done with area PHMs representing all PHM areas. Sample size which was determined at the saturation point was 15 pregnant mothers and 12 mothers of children under 5. Data was collected according to a semi structured format developed by a panel of experts. Thematic analysis of data was performed.

#### **Results**

Analysis of transcripts of both groups demonstrated three main themes related to poor utilization, namely 1) Logistical issues: timing of clinics unfavorable for working mothers, better physical facilities at private sector and having access to tertiary care services directly 2) Staff related factors: lack of respect for clients, lack of quality of home visits and turned back from clinics for minor reasons 3) Lack of awareness: complete unawareness about field MCH services, believe that same/better services could be obtained from private sector, delivery being planned in private sector, and unawareness about Saturday central clinic.

#### **Conclusions and/or Recommendations**

The identified themes revealed that there is lot of room at ground level to improve utilization of state sector field services by pregnant mothers and mothers of children under 5.

**Key words:** Field MCH services, utilization, perceptions, attitudes

## OP 05

### **Knowledge on antenatal care among primi mothers gained through Public Health Midwives in selected three MOH areas in Anuradhapura district**

N.M.C.L. Nishshanka<sup>1\*</sup>, CSE Goonewardena<sup>2</sup>

<sup>1</sup>Medical Officer, Post Graduate MD Trainee in Community Medicine, PGIM; <sup>2</sup>Senior Lecturer in Community Medicine, Faculty of Medicine, University of Sri Jayawardenapura

\*Corresponding author's e-mail: [nmclakshrieni@gmail.com](mailto:nmclakshrieni@gmail.com)

#### **Introduction**

Knowledge on antenatal care gained from Public Health Midwives (PHM) to primi mothers is very important to ensure a good maternal health and safe delivery.

#### **Objectives**

To describe knowledge on antenatal care among primi mothers gained through PHMs and the process of knowledge transfer in three selected Medical Officer of Health areas in Anuradhapura district.

#### **Methodology**

A community based descriptive cross sectional study done among primi mothers (n=402) using a pre tested interviewer administered questionnaire. A sub sample of PHM's (n=18) were selected to assess knowledge transferring process using a non-participatory observational checklist. Chi square test was used to test the significant associations.

#### **Results**

Approximately half (49%) of primi mothers had a good knowledge on antenatal care. High scores for antenatal care knowledge among primi mothers were obtained for the sections; hygiene, nutritional status, immunization and supplementation, awareness on emergency care and plan of delivery. However, lower scores were obtained for medical conditions complicating pregnancy, awareness on basic investigations, physical & mental status. Age more than 25 years and who were educated above GCE A/L was significantly associated with having a good knowledge on antenatal care ( $p < 0.05$ ). However, number of clinic attendance was not significantly associated with the level of knowledge on antenatal care ( $P > 0.05$ ). Almost half of the primi mothers (49.5%) had revealed that they acquired antenatal care knowledge from PHMM. Only the economy was a barrier (70%) to obtained knowledge from PHM. In knowledge transferring process, the PHM's performed well in; introducing themselves (77%), receptiveness (89%), assessing their needs (77%), on the topic to be discussed (55%), used simple language (90%). However, they performed poor (<50%) in stressing the importance of the topic to be discussed, control of voice and giving simple examples.

#### **Conclusions and/or Recommendations**

Knowledge on medical conditions complicating pregnancy, awareness on basic investigations, physical & mental status should be more focused. Adequate time to be allocated at the clinic to conduct antenatal classes.

**Key words:** Primi mother, Public Health Midwife, knowledge transferring, antenatal care

## **Knowledge, exposure and responses to tobacco promotional activities among adolescents in Thamankaduwa Educational Zone**

E. M. Perera<sup>1\*</sup>, N. Gunawardena<sup>2</sup>

<sup>1</sup>Medical Officer, Epidemiology Unit; <sup>2</sup>Professor in Community Medicine, Faculty of Medicine, Colombo

\*Corresponding Author's e-mail: [madhurangiep@gmail.com](mailto:madhurangiep@gmail.com)

### **Background**

Tobacco promotional activities increase the initiation and continuation of smoking among adolescents. Though Sri Lanka has been a pioneer in implementing control tobacco promotional activities, its success of combating tobacco promotional activities has not been objectively assessed.

### **Objectives**

To determine the knowledge, exposure and response to tobacco promotional activities among adolescents in a rural setting in Sri Lanka

### **Methodology**

A cross-sectional study included 500 grade 10 students of seven schools in Thamankaduwa Educational Division selected using a multi-stage cluster sampling method proportionate to the size of the student population. A self-administered questionnaire collected the information. The assessment of how the study units responded to tobacco promotional exposures were based on the personal experiences among those who reported such exposures in the past.

Those who did not report such exposures were presented with hypothetical scenarios and were asked to indicate how they would respond. Using a scoring system, the students were categorized into different levels of knowledge, exposure and responses.

### **Results**

The study included 498 adolescents with a response rate of 99.6% (498/500). Of the study population most knew laws related to the age to sell tobacco products (89.4%, n=445) and the law prohibiting tobacco advertisement (52.4%, n=261). About half knew that the habit is glamourized in media (51.6%, n=256). Assessing overall knowledge on tobacco promotional activities 48.6% (n=242) were categorized as having good level of knowledge. Level of exposure to tobacco promotional activities was low for a majority (64.9%, n=323). However, 85.7% (n=427) had indicated that they would respond positively if exposed to tobacco promotional activities. Higher education level of the mother (p=0.006 and father (p=0.003) and attending a 1AB type school (p=0.018) were significantly associated with knowledge on tobacco promotional activities.

### **Conclusion and/or Recommendations**

The level of knowledge on tobacco promotional activities was inadequate among the adolescents in the rural setting. Though the exposure to tobacco promotional activities is low, the study population indicated that most of their responses to such exposures were/will be assertive. The study recommends that knowledge of adolescents on tobacco promotional activities be improved. Though low, the exposures tobacco promotional activities should be further reduced.

**Keywords:** Tobacco promotion, adolescent, knowledge

## **Prevalence and pattern of alcohol consumption, and associated socio demographic factors among female estate labourers in Medical officer of Health area, Kothmale**

H.W.S.R. Rambukwella<sup>1\*</sup>, D.S.Dissanayake<sup>2</sup>

<sup>1</sup>Medical Officer - Non Communicable Diseases, Office of Regional Director of Health Services, Kandy;

<sup>2</sup>Senior Lecturer in Community Medicine, Faculty of Medicine, University of Peradeniya

\*Corresponding author's e-mail: [roshanrambukwella1@gmail.com](mailto:roshanrambukwella1@gmail.com)

### **Introduction**

Limited documented evidence on alcohol consumption among Sri Lankan estate sector females shows higher prevalence of alcohol consumption among females than rest of the country.

### **Objectives**

The objective was to determine the prevalence and pattern of alcohol consumption and associated socio demographic factors among female estate labourers in Medical officer of Health area, Kothmale.

### **Methodology**

A community based cross sectional study was carried out in a sample of 368 adult (>18 years) female estate labourers in 2014. Sample was collected using multi stage probability proportionate random sampling technique from 15 sub divisions in five estates using pay sheet as the sampling frame. An interviewer administered questionnaire was used.

### **Results**

The response rate was 95.1%. Prevalence of alcohol consumption among estate sector females (ever drinkers) was 31.25% (95% CI, 26.51% – 35.99%). Prevalence of current drinkers, former drinkers and quitters were 16.8% (95% CI, 13.0% – 20.6%), 8.4 % (95% CI, 5.6% – 11.2%) and 6.0 % (3.6% – 8.4%) respectively. Most consumed alcoholic beverage was arrack (74.8%) followed by beer (43.5%) and toddy (28.7%). Home of the drinker was the most preferred place of drinking (57.4%, n=66). Husband was the commonest companion (53%, n=61). Most of the ever drinkers used to drink after work (80%, n=92). Alcohol consumption was significantly positively associated with increased age ( $p < 0.0001$ ) and low level of education ( $p < 0.0001$ ). Consumption of more than one type of alcoholic beverage was significantly associated with increased age ( $p = 0.014$ ) and high family income ( $p = 0.004$ ).

### **Conclusion and/or Recommendations**

Prevalence of alcohol consumption among female estate labourers in MOH area Kothmale is 31.25% and it is higher than for the rest of the country. Patterns of drinking and their unique characteristics observed in this population are needed to be considered when implementing new preventive measures.

**Key words:** Alcohol, Estate, Female, Prevalence, Patterns

## **Incidence, pattern and associated factors of injuries among infants**

N.A.D. Indralal<sup>1\*</sup>, K. Jayaratne<sup>2</sup>

<sup>1</sup>Additional Medical officer of Health, Office of Medical Officer of Health, Biyagama; <sup>2</sup>National Programme Manager - Maternal & Child Morbidity & Mortality Surveillance, Family Health Bureau, Ministry of Health

\*Corresponding author's e-mail: [d.indralal@gmail.com](mailto:d.indralal@gmail.com)

### **Introduction**

Injuries have assumed as an important contributory cause of morbidity and mortality of infants. In a background of unavailability of quality data, the exploration in to incidence and associated factors of injuries of the infants at community level will provide solid information for prevention and mitigate consequences

### **Objectives**

To describe the incidence, pattern and associated factors of injuries among infants.

### **Methodology**

We conducted a retrospective cohort study. A systematic random sampling technique was used to select 427 infants completing age of one year from birth and immunization registers in Medical Officer of Health area, Dompe from October - December, 2014. They were captured at immunization clinics and by home visits for those who did not attend. Data were collected from caregivers with an interviewer-administered questionnaire.

### **Results**

Incidence of injuries infancy reported was 36.8% (95%CI=29.3–38.3). Leading causes were falls 91% (n=143) and blunt trauma 6.4% (n=10). Head 45.8% (n=72) was the commonest site involved. Injury incidence increased in latter part of the infancy with 49.0% (n=99) injuries reported in age 9-12 months. Common places of injuries were either in bed room or living room 85.1% (n=133). Extremes of maternal age (40 years) was a significant risk factor (RR=1.7 CI=1.2–2.4, P=0.001). Maternal chronic illnesses was positively associated with injuries (RR=1.89 CI=1.3–2.7, P=0.001). Working mother was a promotive factor (RR=0.54 CI=0.4–0.8, P=0.002). Infant's sex, birth order and maternal education level failed to show significant association of injuries.

### **Conclusion and/or Recommendations**

Injuries among infants are not uncommon. It is an emerging entity which requires public health attention. Home-based prevention strategies targeting falls and external trauma should be included in injury prevention programs. Focus should also be on mothers in extremes of age and those with chronic illnesses. Further research is needed to explore inverse association of injuries and maternal employment.

**Keywords:** Injuries, Infant, Incidence, Association

## **A novel screening tool: Development and validation of household work related musculoskeletal disorder questionnaire**

P.D. Ranasinghe<sup>1\*</sup>, N.S.Gunawardana<sup>2</sup>, I. Atukorale<sup>3</sup>, S.D.S. Illangatilaka<sup>4</sup>

<sup>1</sup> Registrar in Community Medicine, Health Education Bureau ; <sup>2</sup>Professor in Community Medicine, Department of Community Medicine, Faculty of Medicine University of Colombo; <sup>3</sup>Specialist Rheumatologist, University Medical Unit, National Hospital Sri Lanka/Senior Lecturer, Department of Clinical Medicine, Faculty of Medicine University of Colombo; <sup>4</sup>Senior Registrar in Rheumatology and Rehabilitation, National Hospital Sri Lanka

\*Corresponding author's e-mail: [priyangaran@yahoo.com](mailto:priyangaran@yahoo.com)

### **Introduction**

Housework is more energy costing than some other types of paid work and is a significant cause of musculoskeletal problems among females. The burden of this problem is unknown. Lack of a valid screening tool cited as a reason for this shortfall.

### **Objectives**

To develop and validate a screening tool to identify household work related musculoskeletal disorders (HWMSD) in nine anatomical regions; the neck, shoulder, elbow, wrist/hand, upper back, low back, hip/thigh, knee and ankles/feet.

### **Methodology**

An interviewer -administered tool, Household Work related Musculoskeletal disorder questionnaire (HWMQ) was developed in a step wise manner using quantitative and qualitative techniques by a multidisciplinary panel of experts. It assessed the presence/absence of musculoskeletal symptoms and housework-relatedness of these symptoms. HWMQ was designed to identify HWMSD based on a set of absolute and probable criteria and its criterion validity was assessed against the diagnosis of a rheumatologist as the gold standard in a sample of (n=250) Sri Lankan full time housewives in Sri Jayawardanapura Divisional Secretariat division. Test-retest reliability and acceptability were also assessed. .

### **Results**

The response rate was high (n=250, 83.3%) indicating acceptability. Median age of housewives included was 40 years (IQR 35-45 years), 77% were engaged in household work for >10 years with a mean of 11.3 hours ( $\pm 2.8$ ). Most spent daily on household work including cooking (n=240,96%), washing clothes manually (n=209,83.6%), sweeping/cleaning (n=241,96.4%) carrying water/firewood (n= 182,72.8%) and carrying children (n= 62,24.8%). Psychometric properties of the HWMQ showed highest sensitivity (97.6%, 95%CI 95.7-99.5) in ankle/feet and lowest (80%, 95%CI 75-85) in hip/thigh region and neck region. Highest specificity was for neck region (99.5%, 95%CI 98.6-100) and for low back region (99.3%, 95%CI 98.3-100) with lowest (89.7%, 95%CI 85.9- 93.5) for knee. Reliability by Cohen's Kappa was >0.8 for each region. Average time to complete the HWMQ was 12min ( $\pm 3$ min).

### **Conclusions and/or Recommendations**

The HWMQ is a valid and reliable instrument to screen housewives for musculoskeletal disorders related to household work.

**Key words:** Household work related musculoskeletal disorders, housewives, HWMQ

## OP 10

### **Are Sri Lankan children targeted by food and beverage advertising on television?**

R.L. Fernando<sup>1\*</sup>, K. T. A. A. Kasturiratne<sup>2</sup>, H.S.R. Perera<sup>3</sup>, A.R. Wickremasinghe<sup>4</sup>

<sup>1</sup>Medical Officer, Organisation Development, Ministry of Health; <sup>2</sup>Head and Senior Lecturer, Department of Public Health, Faculty of Medicine, University of Kelaniya; <sup>3</sup>Director, Organization Development, Ministry of Health; <sup>4</sup>Professor of Public Health, Faculty of Medicine, University of Kelaniya

\*Correspondence: [rangikafernando@gmail.com](mailto:rangikafernando@gmail.com)

#### **Introduction**

Food promotion influences the food preferences, purchasing behaviours and food consumption patterns of children. Several countries have regulations in place to restrict or totally ban televised advertising of foods and beverages (F&B) to children.

#### **Objectives**

To describe the current pattern of food and beverage advertising on free-to-air state and private television stations in Sri Lanka with special focus on children's viewing times.

#### **Methodology**

A cross-sectional descriptive study of F&B related advertisements telecast on fifteen free-to-air Sri Lankan television stations between 11th to 24th May 2015 (two weeks during the normal schooling period, avoiding public holidays) was conducted. Data on duration, frequency and products advertised were obtained from Nielson, Sri Lanka. There were 109 categories of advertisements of which 22 were related to F&B.

#### **Results**

A total of 37,416 advertisements were telecast during the study period over 15 local free-to-air television stations, of which 17.77% (n=6648) were F&B related. All advertisements comprised 235.20 hours of viewing time, of which 15.56% were F&B related (36.59hours).

Thirty percent of all advertisements telecast during the daily children's viewing hours of 16:00hours to 18:00hours were F&B advertisements (n=1007). Although the percentage F&B advertisements was highest between 16:00hours and 18:00hours, the total number of F&B advertisements (n=1352) was highest between 20:00hours and 22:00hours.

The most frequently advertised product during children's hours (between 16:00hours and 18:00hours daily and 08:00hours and 10:00hours on weekends) was biscuits (n=466, 8065 seconds), followed by milk powder (n=155, 1705 seconds), liquid milk (n=103, 3460 seconds), cheese (n=100, 2100 seconds) and chocolates (n=89, 1520 seconds).

#### **Conclusion and/or Recommendations**

Almost 30% of advertisements during children's television viewing times were related to F&B. Most frequently advertised F&B are less healthy options. Policies to regulate marketing of F&B to children need to be strengthened.

**Keywords:** Children, Food, Marketing, Television advertising



## OP 11

### **Compliance and practices of multiple micronutrient supplementation among mothers of 6 to 24 months old children in 13 Districts of Sri Lanka**

S. Dhanapala<sup>1\*</sup>, H.S. Jayawickrama<sup>1</sup>, C. de Silva<sup>2</sup>, B.V.S.H. Beneragama<sup>3</sup>, N.A.A.S. Thilakarathne<sup>4</sup>, I.S. Nupahewa<sup>4</sup>

<sup>1</sup>Consultant Community Physician, Family Health Bureau, Ministry of Health; <sup>2</sup>Deputy Director, Maternal and Child Health, Family Health Bureau, Ministry of Health; <sup>3</sup>Director, Maternal and Child Health, Family Health Bureau, Ministry of Health ; <sup>4</sup>Medical officer, Child Nutrition unit, Family Health Bureau, Ministry of Health

\*Corresponding author's email: [sapumald@gmail.com](mailto:sapumald@gmail.com)

#### **Introduction**

Multiple Micronutrient supplementation (MMN) was initiated in 2007 in 13 Districts of Sri Lanka. Currently children of 6, 12 and 18 months of age are provided with blanket supplementation with powdered multiple micronutrients in these Districts.

This study was conducted to assess the compliance and practices of MMN supplementation among mothers of 6 to 24 months old children.

#### **Methodology**

Descriptive cross sectional study was conducted in all 13 Districts where the MMN program is being implemented. Three cohorts aged 8-10, 14-16 and 20-22 months and each group consisting of 804 children were recruited to the study, using stratified cluster sampling method. A structured interviewer administered questionnaire was used. Public Health Midwife areas served as the cluster units.

#### **Results**

Response rate was 97.3%. MMN was provided to 41.8 % (n=1025) and 53.2% (n=1304) during the previous 2 and 6 months respectively. The main reason for not receiving MMN was the non-availability with the area midwife (n= 814; 57.7%). In the 20-22 months group, 134 children (16.7%) had received MMN according to the schedule. Out of mothers who received MMN during the previous 2 months, 89.7% (n=920) had fed it to their children. With regard to practices, 72.8% of the mothers had given MMN daily, 79.8% had included the entire packet in one meal, 91.9% added MMN just before feeding and 76.7% added MMN to the first 2 - 3 mouthfuls. Among children who were fed with MMN, 26.6% (n=245) had perceived an increase in weight while 21.0% (n = 193) of mothers reported problems while giving MMN to children.

#### **Conclusion and/or Recommendations**

This study reveals that the MMN intervention coverage is inadequate. Compliance and practices of MMN feeding was good. Logistics of MMN at national and field level needs to be closely monitored while the practices of feeding needs to be further strengthened.

**Key words:** MMN supplementation, coverage, compliance

## OP 12

### Risk factors for neonatal sepsis in a district of Sri Lanka

D.U.C.J.Jayasinghe<sup>1\*</sup>, C. Abeysena<sup>2</sup>

<sup>1</sup>Senior Registrar, Primary Care Services, Ministry of Health ; <sup>2</sup>Professor of Community Medicine, Department of Public Health, Faculty of Medicine, University of Kelaniya

\*Correspondence: [chinthaj@yahoo.com](mailto:chinthaj@yahoo.com)

#### Introduction

Neonatal sepsis is one of the major contributory factor that cause neonatal morbidity and mortality. It is important to find out the risk factors for neonatal sepsis to reduce neonatal mortality and there by child mortality.

#### Objectives

To determine the risk factors of neonatal sepsis.

#### Methodology

A community based case control study was carried out in Gampaha District from August 2010 to February 2011 among 240 neonatal sepsis cases and 240 community controls. The WHO definition for severe bacterial infection in the Integrated Management of Childhood Illnesses (IMCI) was used to select cases for this study. The information was gathered from an interviewer administered questionnaire and data extraction sheets. Multiple logistic regression was applied and the results were expressed as odds ratios (OR) and 95% confidence intervals (95%CI).

#### Results

The majority (405 (84%) of the mothers of neonates were in the age group of 20 to 35 years and 384 (80%) of them were house wives. There were 446 (93.1%) Sinhalese 375(78.3%) Buddhist, 414 (86%) educated more than O/L, and 473 (98.6%) married mothers. The adjusted Odds Ratios for maternal risk factors for neonatal sepsis were, registration of pregnant mothers in the antenatal clinic after eight weeks of gestation (OR=1.9), total antenatal clinic visits  $\leq 4$  (OR=7.2), having a bad obstetric history (OR=6.8), history of maternal fever during the last one week of delivery (OR=2.7), dribbling more than 18 hours (OR=10.0), vaginal examination  $>3$  times (OR=3.3), meconium stained amniotic fluid (OR=10.6), and mode of delivery by caesarean section, forceps or vacuum (OR=2.3). The adjusted OR for neonatal risk factors were being a male neonate (OR=1.7), birth weight  $< 2500g$  (OR=5.2) and time of birth of the neonate (OR=2.1) between 4 pm to 8 am of following day.

#### Conclusion and/or Recommendations

Out of maternal risk factors, six factors namely registration of pregnant mothers after eight weeks of pregnancy, total ante natal clinic visits less than four, dribbling more than 18 hours, number of vaginal examination before delivery, meconium stained liquor and mode of delivery and two neonatal factors, weight of neonates and time of birth are identified as modifiable risk factors. Neonatal sepsis is a major cause for neonatal morbidity and mortality. The modifiable risk factors identified can be easily improved to enhance the overall maternal care.

**Keywords:** Case control, Neonatal sepsis, Risk factors, modifiable

## OP 13

### **Prevalence and Correlates of Physical Abuse during Childhood-Experiences from the Gampaha District**

N.K. Chandrartne<sup>1\*</sup>, A.D. Fernando<sup>2</sup>, N.S. Gunawardena<sup>3</sup>

<sup>1</sup>Registrar in Community Medicine, Department of Community Medicine, Faculty of Medicine, University of Colombo; <sup>2</sup>Department of Paediatrics, Faculty of Medicine, University of Kelaniya; <sup>3</sup>Professor in Community Medicine, Department of Community Medicine, Faculty of Medicine, University of Colombo

\*Corresponding author's e-mail: [nadkamil@yahoo.com](mailto:nadkamil@yahoo.com)

#### **Introduction**

Physical abuse during childhood is a major public health problem worldwide that have adverse health, social and economic consequences

#### **Objectives**

To determine the prevalence and correlates of physical abuse during childhood among young adults aged 18-20 years schooling in the Gampaha District.

#### **Methodology**

A descriptive cross-sectional study was conducted among 1500 schooling young adults selected by a multistage cluster sampling method from Gampaha District. Experiences of specified physical abusive acts before they reached the 18th birthday were inquired using the culturally adapted, translated and validated version of ICAST-R (ISPCAN Child Abuse Screening Tool-Retrospective Version). Severity of abusive experiences was assessed using a scoring mechanism taking into account the nature, frequency and consequences of abuse. A case control study with multivariate analysis was conducted to determine the correlates of being physically abused.

#### **Results**

Prevalence of physical abusive experiences during childhood was 45.4% (95%CI=42.9-47.9) with 0.1% (n=2) being severe. Most abusive experiences had occurred during the ages of 10-18 years. The commonest perpetrators were parents followed by teachers. The adjusted correlates for being physically abused were conduct problems (OR=5.22, 95%CI=2.37-11.50) or emotional problems (OR=3.45, 95%CI=1.36-8.75), 9.17). Among abused, 41.8% had disclosed the incident with majority reaching friends.

#### **Conclusion and/or Recommendations**

Prevalence of physical abusive experiences during childhood was high among schooling young adults. Findings are recommended to be used to advocate for targeted preventive interventions to address the identified modifiable correlates. The identified non-modifiable factors should be used to identify the children at risk of abuse.

**Key words:** Sexual abuse, Prevalence, Correlates

## OP 14

### **Knowledge of Public Health Midwives in the Kalutara district in relation to domiciliary postnatal care**

K.A.T. Navodani<sup>1\*</sup>, P. Fonseka<sup>2</sup>, C.S.E. Goonewardena<sup>3</sup>

<sup>1</sup>Registrar in Community Medicine, National Institute of Health Sciences, Kalutara; <sup>2</sup>Retired Professor in Community Medicine; <sup>3</sup>Senior Lecturer in Community Medicine, University of Sri Jayawardenepura, Nugegoda

\*Corresponding author's e-mail: [tnavodani@yahoo.com](mailto:tnavodani@yahoo.com)

#### **Introduction**

In Sri Lanka Public Health Midwives (PHMM) have the key responsibility in the provision of domiciliary postnatal care (DPNC) at the implementation level. Her performance has a great influence on health of the postpartum mother and her newborn. The PHMM should therefore be competent in their knowledge to deliver quality DPNC.

#### **Objective**

To develop and validate an instrument to assess knowledge of the PHMM on DPNC and to assess knowledge of PHMM on DPNC in the Kalutara district

#### **Methodology**

The study had two phases: 1. Development and validation of an instrument (10 multiple choice and 05 short answer structured questions) to assess knowledge of PHMM on DPNC. This was done through task analysis and expert opinion. 2. Assessment of knowledge on DPNC among PHMM in the Kalutara district. A community based descriptive cross sectional study was carried out among a sample of 272 PHMM.

#### **Results**

The instrument developed was valid and reliable for the assessment of knowledge of the PHMM. PHMM's knowledge on DPNC was not satisfactory with a mean total score of 53.2 (SD±10.09). Lowest mean scores were obtained for 'Normal/abnormal conditions of the newborn' (1.89 ± 1.38), 'postpartum family planning' (1.43 ± 1.01) and 'Postpartum exercises' (3.68 ± 2.50). Knowledge score was statistically significantly higher among PHMM with G.C.E. O/L or above educational level and in those with very good or good level of satisfaction on DPNC (p<0.001). A statistically significant (p<0.001) stepwise decrease in total knowledge score was observed from lower to higher age groups. Service experience and the grade of the PHMM showed negatively significant association (p<0.001) with knowledge.

#### **Conclusions and/or Recommendations**

The instrument can be used to assess the knowledge of PHMM in Sri Lanka. Knowledge of the PHMM was poor in relation to postpartum exercises, postpartum family planning and neonatal care. Capacity building of PHMM is recommended in relation to DPNC through in-service training.

**Key words:** Domiciliary postnatal care, knowledge of Public Health Midwives, Public Health Midwives

## OP 15

### **Quality of the services provided by Public Health Midwives on selected service components, in monitoring weight gain during pregnancy in Kalutara, Beruwala and Agalawatte Medical Officer of Health areas in the Kalutara District.**

S.H.P. de Silva<sup>1\*</sup>, R.B.B.S. Ramachandra<sup>2</sup>, L.T. Gamlath<sup>3</sup>, C.P.G. Liyanage<sup>4</sup>, D.K.A.D.L. Kumari<sup>4</sup>

<sup>1</sup>Consultant Community Physician, Department of Research, National Institute of Health Sciences;

<sup>2</sup>Registrar in Community Medicine, Department of Research, National Institute of Health Sciences;

<sup>3</sup>Director, National Institute of Health Sciences; <sup>4</sup>Medical Officer of Health, MOH Office, Agalawaththa

\*Corresponding author's e-mail: [padmaldes@gmail.com](mailto:padmaldes@gmail.com)

#### **Introduction**

The prevalence of low birth weight in Sri Lanka is 16.3% while the prevalence of body mass index (BMI) <18.5 at booking visit, accounts for 23%. Inadequate weight gain during pregnancy is a documented risk factor for low birth weight.

#### **Objective**

To assess selected quality components in services provided by Public Health Midwives in monitoring weight gain during pregnancy in three Medical Officer of Health areas in Kalutara District.

#### **Methods**

A descriptive cross sectional study was conducted in Kalutara, Beruwala and Agalawatte Medical Officer of Health areas among 420 mothers (140 each) who had delivered the infant during the two months prior to data collection and who had received antenatal care from these health units. A pre-tested, structured, interviewer administered questionnaire and an extraction sheet, was used for the data collection and was undertaken by Public Health Nursing Sister of the area. Information on weight at booking and last visits was obtained from the mother's card, while information pertaining to selected service delivery components was obtained based on recall.

#### **Results**

Some 420 mothers took part in the study. 19.6% mothers (n=83) had BMI < 18.5 while 18.3% (n=77) were found to have BMI > 25 at booking. Percentage of mothers who were made aware of their 'BMI status; was 46% (n=193), while only 36% (n=151) knew about the 'expected weight gain during pregnancy'. Extended family members were made aware of the importance of an 'additional meal' among 61.9% (n=260) mothers, while, 'rest of at least 8 hours per day' among 36.0% (n=151) and 'importance of providing psychological support' among 12.1% (n=51) of mothers. The percentage of children with low birth weight, among mothers who had an adequate weight gain during pregnancy (23.4%, n = 67) was higher than those who failed in getting an adequate weight gain (11.9%, n=16) and was statistically significant at p <0.01 level.

#### **Conclusions and/or Recommendations**

The attention given by Public Health Midwives on increasing maternal weight gain during pregnancy is poor. More attention needs to be given for education and supervision on weight gain during pregnancy to the midwives.

**Keywords:** Pregnancy, Weight gain, BMI

## OP 16

### **Emotional and Psychological problems among schooling adolescents aged 12-14 years in Polonnaruwa District**

P. A. S. Senaratne<sup>1\*</sup>, S. Sivayagan<sup>2</sup>, S. Kasthriarachchi<sup>3</sup>

<sup>1</sup>Senior Registrar, Nutrition Co-ordination Division, Ministry of Health and Indigenous Medicine; <sup>2</sup>Professor in Community Medicine, Faculty of Medical sciences, University of Sri JayawardanaPura; <sup>3</sup>Professor in Psychiatry, Faculty of Medical sciences, University of Sri JayawardanaPura

\*Corresponding Author's e-mail: [arundikapass@gmail.com](mailto:arundikapass@gmail.com)

#### **Introduction**

Adolescent emotional and psychological problems have attracted global attention during past few decades. It has been revealed that one in five adolescents in Sri Lanka is suffering from mental health problems.

#### **Objectives**

The study was aimed to describe the Emotional and psychological problems among schooling adolescents aged 12-14 years in Polonnaruwa District.

#### **Methodology**

A descriptive cross sectional study was carried out among 1901 adolescents attending grade 7, 8 and 9 classes of Sinhala medium government schools. Multi-stage cluster sampling with probability proportionate to size was used to identify the participants. The study sample consisted of 78 clusters representing three education zones and the cluster size was 20. The self reported Sinhala version of Strength and Difficulties Questionnaire (SDQ) was used to determine the emotional and psychological problems. Sri Lankan cut- off values were used in analysis.

#### **Results**

The study results revealed that, 6.6% (95% CI 5.5-7.8) of adolescents were having emotional and psychological problems and 9.5% (95% CI 8.3-10.9) were having borderline symptoms. Peer problems were prevalent among 13%, while emotional, conduct and hyperactivity problem sub scales accounted for nearly 5% each in abnormal range. The mean total difficulty score of SDQ was 10.5 (SD 4.93). There was a statistically significant difference between mean total score of males and females ( $p < 0.001$ ). Conduct, hyperactivity, peer and pro-social subscale mean values were significantly higher among males compared to females ( $p < 0.05$ ). Peer problem subscale revealed a statistically significant difference with age ( $p < 0.001$ ).

#### **Conclusion and/or Recommendations**

The emotional and psychological problem is an emerging issue that needs attention.

**Keywords:** Adolescents, Emotional and psychological problems

## OP 17

### **Selected childhood experiences, current psychological status and its associates among imprisoned Sinhala speaking women in Welikada prison Colombo, Sri Lanka**

W.M.B.G.Jayathilake<sup>1\*</sup>, N. Lansakara<sup>2</sup>

<sup>1</sup>Additional Medical Officer of Health, Medical Officer of Health Office, Biyagama

<sup>2</sup>Consultant Community Physician, Family Health Bureau

\*Corresponding author's e-mail: [gimhanijayathilake@gmail](mailto:gimhanijayathilake@gmail)

#### **Introduction**

Women imprisonment is rising in the world. Imprisoned women who had psychological problems had more adverse childhood experiences than the prisoners who didn't have psychological problems. The psychological problems of imprisoned female is worth seeking along with its associates since they need others assistance to make their life adjusted. It is important to study the imprisoned women psychological status and their childhood experiences to find the magnitude of the problem in Sri Lanka. The study was conducted "To describe selected childhood experiences, current psychological status and its associates among imprisoned sinhala speaking women in Welikada Prison, Colombo Sri Lanka"

#### **Methodology**

A descriptive cross sectional study was done .Using simple random sampling technique, 270 women were interviewed. General Health Questionnaire 30 was used to assess the psychological distress. Odds ratio was used to calculate the associations between the psychological distress and the selected socio demographic characteristics, selected childhood experiences.

#### **Results**

Mean age of the imprisoned women were 41.28years (SD ±11.86yrs).Nearly one fourth (22.6%) of the imprisoned women had attempted suicide during their life and more than half (55.7%) of them had attempted before the age of 18 years. Similarly of the 258 women who had been sexually active during their life, half (50.0%) of the women had exposed to sexual activities during first eighteen years of life. Nearly three forth (73.7%) of imprisoned women were psychologically distressed in the study sample. Being a women of aged less than 25 years ((OR=4.51, 95% CI=1.035-19.64)), previous history of suicidal attempts (OR=2.10,95%CI =1.00-4.41),and absence of someone to tell worries (OR=0.355, 95% CI =0.113-0.945) during childhood were significantly associate with psychological distress.

#### **Conclusion and/or Recommendations**

Nearly three forth of the imprisoned women were psychologically distressed and younger age, history of suicidal attempts and absence of someone to tell their worries during childhood were risk factors for psychological distress. Need to strengthen the rehabilitation and mental health services to the imprisoned women.

**Key words:** Imprisoned women, Adverse childhood experiences, Psychological distress

## OP18

### **Household work related musculoskeletal disorders: A hidden burden among housewives**

P.D. Ranasinghe<sup>1\*</sup>, N.S. Gunawardana<sup>2</sup>, I. Atukorale<sup>3</sup>

<sup>1</sup>Registrar in Community Medicine, Health Education Bureau; <sup>2</sup>Professor in Community Medicine, Department of Community Medicine, Faculty of Medicine University of Colombo; <sup>3</sup>Specialist Rheumatologist, University Medical Unit, National Hospital Sri Lanka/Senior Lecturer, Department of Clinical Medicine, Faculty of Medicine University of Colombo

\*Corresponding author's e-mail: [priyangaran@yahoo.com](mailto:priyangaran@yahoo.com)

#### **Introduction**

Household work is significant cause of musculoskeletal pain, particularly in the South Asian setting where household work is labour intensive and manually performed.

#### **Objectives**

To determine the prevalence of household work related musculoskeletal disorders (HWMSD) among 20-50 year old housewives in the Colombo District.

#### **Methods**

A community based descriptive cross-sectional study was among fulltime housewives (n=1150) in Colombo district selected using multi-stage cluster sampling and presence of HWMSD in nine regions of the body was determined using a locally developed and validated screening tool administered by trained data collectors.

#### **Results**

The median age of the sample of housewives was 38 years (inter-quartile range 32-44 years) with approximately half (n=597, 54.2%) have been housewives for  $\geq 10$  years. Average time spent on household work on a typical weekday was 10.2 hours ( $\pm 2.9$ ). Prevalence of HWMSD in any region of the body was 62% (95% CI 58.9%-65%). Prevalence estimates by broad regions, lower body inclusive of the regions 'back/lower limb or both' showed higher prevalence (51.5%, 95%CI 48.5%-54.6%) compared to upper body inclusive of the regions 'neck/upper limb or both' (25.3%, 95%CI 22.9%-27.9%). The highest prevalence reported in the region of low back (36%, 95% CI 33.1%-39%) while the lowest prevalence recorded for the region of hip/thigh (2.4%, 95% CI 1.5%-3.4%). More than one tenth of housewives were affected by HWMSD in the regions of knee (15.1%, 95%CI 12.9%-17.3%), ankle/foot (12.6%, 95%CI 10.7%-14.6%), wrist and hand (11.6%, 95%CI 9.8%-13.6%), shoulder region (10.3%, 95% CI 8.4%-12.2%). The prevalence was 9% (95% CI 7.3%-10.8%) in neck region, 7.6% (95% CI 6.1%-9.3%) in upper back and 5.6% (95% CI 4.3%-7.2%) in elbow region.

#### **Conclusion and/or Recommendations**

The study uncovered that HWMSD among housewives is a disorder of public health importance needing attention of relevant authorities to plan services and its prevention.

**Key words:** MSD, household work, low back



## **Achieving Global Voluntary NCD Targets By 2025: Baseline assessment of Mortality due to NCDs in Sri Lanka**

R.P. Karunapema<sup>1\*</sup>, R.M.S.D. Fernando<sup>2</sup>, D. Ediriweera<sup>3</sup>

<sup>1</sup>Consultant Community Physician, Rehabilitation Hospital, Ragama; <sup>2</sup>Consultant Community Physician, Base Hospital, Chilaw; <sup>3</sup>Lecturer, Faculty of Medicine, Ragama

\*Corresponding author's e-mail: [palitha\\_66@yahoo.com](mailto:palitha_66@yahoo.com)

### **Introduction**

Monitoring of mortality (unconditional probability of death and age standardized mortality rates) due to major four Non Communicable Diseases (NCDs) is important to evaluate effectiveness of national NCD prevention and control program and included in the World Health Organization NCD global monitoring framework

### **Objectives**

To estimate Unconditional Probability of dying (UPoD) between 30 and 70 years and Age Standardized Mortality Rates (ASMR) due to major NCDs namely; cardiovascular diseases, cancers, chronic respiratory diseases and diabetes in 2010, Sri Lanka.

### **Methodology**

We apply the life table method which allows calculation of the risk of death in the absence of other causes of death, to examine the UPoD between ages 30 and 70 from four major NCDs. ASDRs were obtained for major NCDs by applying age specific death rate to WHO 2000 standard world population. The mortality data for 2010 was obtained from Registrar General Department.

### **Results**

In Sri Lanka, the unconditional probability of death from 4 major NCDs between age 30 to age 70 is 22%. The ASDR due to Major NCDs was 312 per 100,000 populations. ASDRs of major NCDs are 163, 45, 56 and 46 per 100,000 population for cardiovascular diseases, diabetes, cancer and chronic respiratory diseases respectively.

### **Conclusions and/or Recommendations**

In Sri Lanka, the unconditional probability of death due to NCDs is higher compared to other developed countries. Therefore, it is vital to further strengthen preventive and curative strategies to prevent and control NCDs.

**Keywords:** unconditional probability of death, NCD

## **Mental health problems and associated factors among grade five students preparing for scholarship examination**

D. Peiris<sup>1\*</sup>, K. Jayaratne<sup>2</sup>

<sup>1</sup>Medical Officer- PG trainee in MD Community Medicine,; <sup>2</sup>National Programme Manager- Maternal & Child Morbidity and Mortality Surveillance, Family Health Bureau

\*Corresponding author's e-mail: [dimuth.peiris@yahoo.com](mailto:dimuth.peiris@yahoo.com)

### **Introduction**

Mental health disorders among children are common. However they go undetected and thus untreated. Grade five scholarship examination has been considered to have adverse effect on mental health of children

### **Objectives**

To describe selected Mental Health Problems and associated factors among grade five students preparing for scholarship examination

### **Methodology**

A descriptive cross sectional study was conducted among 557 grade five children using multi stage cluster sampling method from 12 schools in Moratuwa MOH area. We used Multi informant Strength & Difficulties Questionnaire and computerized algorithms in assessing mental health status. Socio-demographic and other related variables were obtained from parents using self-administered questionnaire. Academic performance was assessed by scholarship examination results.

### **Results**

Prevalence of likely (probable and possible) psychiatric disorder 48.1% (n=268) with conduct disorder (45.6%, n=254), emotional (9.2%, n=51) and attention deficit hyperactivity disorder (4.8% n=27). Males showed higher prevalence in any psychiatric disorder (p=0.024) and conduct disorder (p=0.026). Lowest median scholarship marks (83) were observed among probable psychiatric disorder category compared to highest marks (121) among unlikely category. Possibility of passing the scholarship examination in “unlikely” category of having psychiatric disease was higher among both males (p=0.017) and females (p=0.002). Possibility of a psychiatric illness was lower when father is a professional (p=0.002) and parents educational level is high (p<0.001). Psychiatric illness was higher with parental attitude of passing the examination in order to be successful in future (p<0.05) and when children were frequently advised or reprimanded regarding studies (p<0.001). Summary score of each item; total Difficulties Score, according to parent (r=0.341), teacher (r=0.334) and child (r=0.216) correlated (p<0.001) with scholarship marks.

### **Conclusion and/or Recommendations**

Grade five children preparing for scholarship examination show high levels of mental health disorders. Such disorders adversely affect academic performance. Mental health promotive activities targeting these children are recommended.

**Keywords:** Mental health, Child psychiatric disorder, Grade five scholarship

## **Population level measles immunity in Sri Lanka: are we maintaining herd immunity threshold for measles to protect infants?**

D. Gamage<sup>1\*</sup>, G. Galagoda<sup>2</sup>, S. Ginige<sup>1</sup>, P. Palihawadana<sup>3</sup>

<sup>1</sup>Consultant Epidemiologist, Epidemiology Unit; <sup>2</sup>Consultant Virologist, Medical Research Institute; <sup>3</sup>Chief Epidemiologist, Epidemiology Unit

\*Corresponding author's e-mail: [deepagamage@gmail.com](mailto:deepagamage@gmail.com)

### **Introduction**

Sri Lanka is experiencing an outbreak of measles since 2013 to date, despite high vaccination coverage (ages 1 and 3 years). Though maternal antibodies expected to provide protection for infants, high proportion of reported cases were among 6-11 month infants. In this background Measles serological survey was carried out to assess population level measles immunity.

### **Objectives**

To assess community level serological protection to measles virus among different age categories

### **Methodology**

Descriptive cross sectional study (Colombo, Monaragala, Anuradhapura and Vavuniya) conducted among total of 800 (expected prevalence 90% except 50% for 30-39 years, precession 7%, design effect 1.5) subjects of selected age groups (6-8 months, 9-11 months, 2 years, 5 years, 15-16 years, 20-29 years and 30-39 years) was carried out using multistage cluster sampling technique. Venous blood sample (2ml) was collected and tested for presence of serum anti-measles Immunoglobulin (Ig)G antibody levels using ELISA method. Socio-demographic and anthropometric information were collected by using interviewer administered questionnaire and by physical examination. Test results of measles IgG antibody level >200mIU/ml were considered as protective levels.

### **Results**

All enrolled (n=800) subjects completed the study. Sero-protective proportion among 6-9 months and 9-11 months groups (prior to measles vaccination) were 2% and 1% respectively indicating unprotected category. Sero-protective proportion among ages 2, 5, 15-16, 20-29 and 30-39 years were 100%, 98% , 84% , 94% and 98% respectively indicating high population protection. After excluding infants, overall population protection was 95.2% (95% CI 93-96.7%) in which required measles herd immunity threshold (92-94%) is maintained to prevent community transmission. Median antibody titre among all study subjects (n=800, including vaccination not recommended population) was 622 mIU/ml (IQR 105.5-1361.2 mIU/ml) and median antibody titre among vaccination due population (n=600) was 735 mIU/ml (IQR 462.9-1667.8 mIU/ml). No significant association of sero-prevalence and nutritional status was observed.

### **Conclusion and/or Recommendations**

Infants of 6-11 months were not adequately protected against measles due to inadequate maternal antibodies. Early measles vaccination before 1 year would require in protecting infants and prevent continuation of the outbreak.

**Key words:** Measles, Immunity

## OP 22

### **Population level Polio immunity before vaccination schedule change at Endgame on Polio Eradication**

D. Gamage<sup>1\*</sup>, P. Palihawadana<sup>2</sup>, O. Mach<sup>3</sup>, W.C. Weldon<sup>4</sup>, S.M. Oberste<sup>5</sup>, R.W. Sutter<sup>6</sup>

<sup>1</sup>Consultant Epidemiologist, Epidemiology Unit; <sup>2</sup>Chief Epidemiologist, Epidemiology Unit; <sup>3</sup>Medical Officer, Polio Eradication Department, World Health Organization, Geneva, Switzerland; <sup>4</sup>Polio and Picorna virus Laboratory Branch, Centers for Disease Control and Prevention, Atlanta, USA; <sup>5</sup>Polio Eradication Department, World Health Organization, Geneva, Switzerland

\*Corresponding author's e-mail: [deepagamage@gmail.com](mailto:deepagamage@gmail.com)

#### **Introduction**

Introduction of Inactivated Polio Vaccine (IPV) to National schedule in only Oral Polio Vaccine (OPV) using countries and shifting over to bivalent OPV is a requirement in Global Polio Endgame strategy of polio type 2 withdrawal plan. Sri Lanka is expected to assess baseline population level polio immunity before this change to ensure protection for poliomyelitis.

#### **Objectives**

To assess population level sero-prevalence of type-1, type-2 and type-3 polioviruses in Sri Lanka

#### **Methodology**

Descriptive cross sectional study [Colombo, Badulla and Killinochchi] among 400 (95% confidence, 20% difference in seroprevalence between two groups with estimated prevalence to be 60% and 80%, cluster effect of 1.5) children with 100 children from each age group (9-11 months, 3-4 years of age, 7-9 years of age and 15 years) were selected by cluster sampling method from the Medical Officer of Health area selected in each district.

Polio neutralizing antibodies were detected at the Polio Laboratory, Centres for Disease Control (CDC), Atlanta, USA. Children with detectable antibody levels at  $\geq 1:8$  dilutions were considered seropositive for each poliovirus serotype. Socio-demographic and anthropometric information were collected by using interviewer administered questionnaire and by physical examination. Venous blood sample (1ml) was collected and separated serum were stored (-70°C) and shipped (dry ice) to CDC laboratory.

#### **Results**

The sero-prevalence for poliovirus types 1 and 2 were above 95% for all selected age groups; for poliovirus type 3 it was 95%, 90%, 77% and 75% in the respective age groups of 9-11 months, 3-4 months, 7-9 years and 15 years. There is no significant difference observed among selected groups. The vaccination coverage was >90% in all age groups and serologically protected children had been vaccinated through routine immunization. The declining sero-prevalence with age for serotype 3 is an expected finding and is likely not correlated with serological protection. No significant association of sero-prevalence and nutritional status was detected.

#### **Conclusion and/or Recommendations**

This ensures adequate population protection for all 3 types of polio viruses. Recommend to re-assess polio type 2 sero-protection few years after polio type 2 withdrawal from the National programme.

**Keywords:** Polio, sero-prevalence, Eradication, Endgame

## **Prevalence, Knowledge and Practice of Family Planning among married male Navy Personnel in Southern Naval Base 'Dakshina', Galle**

A.W.P.I. Gunatilake<sup>1\*</sup>, C. de Silva<sup>2</sup>.

<sup>1</sup>Post Graduate Trainee in MSc Community Medicine, Family Health Bureau, Ministry of Health;

<sup>2</sup>Consultant Community Physician, Deputy Director, Family Health Bureau, Ministry of Health

\*Corresponding author's e-mail: [indumini12@gmail.com](mailto:indumini12@gmail.com)

### **Introduction**

Family Planning (FP) use is influenced by husbands. Men are usually excluded from FP programmes and issues related to FP have not been previously studied among the employees of armed forces. The contraceptive use can be improved through involvement of the male partner.

### **Objectives**

To describe prevalence, knowledge, practice and associated factors of family planning among married male navy personnel's in Southern Naval Base 'Dakshina', Galle.

### **Methodology**

An occupational setting based descriptive cross sectional study was carried out among 424 married male Naval Personnel using the simple random sampling method. Pretested self-administered questionnaire used.

Knowledge was assessed using a composite score comprising 50 knowledge related questions. Good knowledge was taken as above 60%. Data Analysis was done using percentages and associations done by Chi-square test.

### **Results**

Prevalence of FP was (59%;n=250) while(52%;n=221) were modern methods users. The commonest method was condoms (16.3%;n=69) followed by oral pills (12.3%;n=52).

Overall good knowledge was observed in (17%; n=72) of the sample. Knowledge by method showed (85%;n=360) good knowledge on condoms followed by emergency contraception (57%;n=240) while inadequate knowledge was noted on IUD(39%;n=166), pills (24%;n=103), implants (21%;n=90), injectables (18%;n=75) and permanent sterilization (16%;n=68) respectively while (36%;n=154) of the study subjects had good knowledge on traditional methods.

Nearly (73%; n=309) of couples had ever used a regular contraceptive method. Condoms (34.4%; n=146) and pills (31.8%; n=135) were the commonly used methods. Emergency contraceptives were ever used by (10.4%; n=44) of subjects.

There was a significant association between knowledge of the study subjects and the ever use of FP among them ( $\chi^2=21.10$ ;  $df=2$ ;  $p<0.05$ ).

### **Conclusions and/or Recommendations**

Knowledge on FP methods is inadequate in the study population while the current use was around 60%.

More targeted programmes on the entire range of FP methods should be implemented for the male population in their occupational settings.

**Keywords:** Family Planning, Navy, male

## **Prevalence and factors associated with unmet need for family planning among 15-49 year old women in the medical officer of health area Mallavi**

D. C. K. Herath<sup>1\*</sup>

<sup>1</sup>Medical Officer, Health Education Bureau

\*Corresponding author's e-mail: [chandishani11@yahoo.com](mailto:chandishani11@yahoo.com)

### **Introduction**

The concept of unmet need for family planning is defined as discrepancy between women's contraceptive use and their fertility intentions. Mallavi Medical Officer of Health area is situated in the Mullaitivu district in the Northern Province of Sri Lanka. Data on unmet need in the Northern Province are scarce, due to the effects of more than three decades of civil war. Therefore, the findings of this study could help program managers to strengthen the family planning program and further reduce the unmet need in the area.

### **Objective**

To determine the prevalence and factors associated with unmet need for family planning among 15-49 year old women in the Medical Officer of Health area Mallavi.

### **Methodology**

A community based cross sectional study was conducted in the MOH area Mallavi. A total of 500 women between 15-49 years of age were enrolled using cluster sampling, according to probability proportional to size. Data were collected using an interviewer administered questionnaire by trained data collectors from August to September 2014. Univariate analysis was performed to describe the characteristics of the study population and women with unmet need. Factors associated with unmet need were tested using chi-squared test where applicable.

### **Results**

Current contraceptive prevalence rate for any method was 66.6% (n=333), while the prevalence of modern contraceptive methods was 54.6% (n=273). The extent of unmet need was 11.8% (n=59), with (n=38, 7.6%) for spacing and (n=21, 4.2%) for limiting. Among the women with unmet need, only one amenorrheic woman reported her most recent pregnancy as mistimed. Ever users of contraception was 54.2% (n=32). Being employed (OR=1.976; CI: 1.02-3.82; p=0.040) and husband's agreement in fertility goals (OR=0.439; CI: 0.24-0.79; p=0.005) were the factors significantly affecting the total unmet need for contraception. Education level below GCE Ordinary Level was a protective factor (OR=0.452; CI: 0.25-0.81; p=0.006). Age of the respondent, monthly income level, parity and number of living children were not associated with the unmet need. Family planning service related problems were; the distance to the family planning clinic, long waiting in the clinic (n=4, 50%) and lack of privacy (n=2, 25%) were the main reasons cited by women with unmet need.

### **Conclusions and/or Recommendations**

Program planners should focus on increasing the competence of service providers by updating their knowledge in family planning and skills in counseling. Should create awareness on various methods, their probable side effects and increase access to modern contraceptive methods, in order to reduce the unmet need and empower them to make an appropriate choice of contraception.

**Key words:** Unmet need, Family planning, Reproductive age, Mallavi

## OP 25

### **Contraceptive practice and Unmet Need for Family Planning among ever married reproductive age women in the estate sector in the Rathnapura district**

L.I. Malwenna<sup>1\*</sup>, K.B. Kannangara<sup>2</sup>, N.B. Gamini<sup>3</sup>, Chaminda Jayawardana<sup>4</sup>, T.V. Indralal<sup>5</sup>

<sup>1</sup>Consultant Community Physician, National Institute of Health Services, Kalutara; <sup>2</sup>Acting Provincial Director of Health Services, Sabaragamuwa; <sup>3</sup>Medical Officer of Health, Municipal Council, Rathnapura; <sup>4</sup>Medical Officer, Planning, Office of the Provincial Director of Health Services, Sabaragamuwa; <sup>5</sup>Senior House Officer, Surgery, Provincial General Hospital, Rathnapura  
\*Corresponding author's e-mail: [indrani.malwenna@gmail.com](mailto:indrani.malwenna@gmail.com)

#### **Introduction**

Estate sector in Sri Lanka is considered as having the lowest contraceptive prevalence and being the least privileged group in the country

#### **Objectives**

To determine the contraceptive prevalence, unmet need for family planning among 15 - 49 year old ever married women in the estate sector in the district of Rathnapura

#### **Methodology**

Community based descriptive cross sectional study was conducted to assess contraceptive prevalence and its sub categories and unmet need for family planning among 818 ever married females in 15-49 years age group in the estate sector in the Rathnapura district, selected by cluster sampling technique. Data was collected from 80 clusters, using Interviewer Administered Questionnaire by trained data collectors from all the estates of the district. Each prevalence was expressed as a percentage with its 95% confidence intervals

#### **Results**

The overall contraceptive prevalence for the study group was 67.7% (95% CI: 64.5-71.5) with a prevalence of 65.4% (95% CI: 62.0-68.7) for modern methods of contraceptives and 2.3% (95% CI: 1.5-3.4) for natural and traditional methods. Prevalence of unmet need for any method of family planning was 16.3% (95% CI: 13.8 – 18.7) [n=133] while that of for spacing was 6.6 % (95% CI: 5.4-7.8) [n=53] and for limiting was 9.7% (95% CI: 8.2-11.2) [n=80]. Unmet need for modern methods of family planning was 18.6% (95% CI=15.9 – 21.3) [n=152]. The main reasons for not using family planning were infrequent sex (21.5%), fear of side effects (18.6%) and low perceived risk of pregnancy (16.6%).

#### **Conclusion and/or Recommendations**

Although contraceptive prevalence is high in the district, existence of high prevalence of unmet need indicates the need of identifying characteristics of those women to prevent unplanned pregnancies and their consequences

**Keywords:** prevalence, family planning, unmet need, modern methods, married females, reproductive age, estate sector

## **Knowledge, attitudes and practices related to contraception among pregnant teenagers in the Regional Director of Health Services division-Ampara**

I.A. Talagala<sup>1\*</sup>, K.K.K.M. Kodithuwakku<sup>2</sup>

<sup>1</sup>Registrar in Community Medicine, Faculty of Medicine, Colombo: <sup>2</sup>Medical Officer, National Eye Hospital

\*Corresponding author's email: [drishanka@gmail.com](mailto:drishanka@gmail.com)

### **Introduction**

Pregnancy during adolescence poses direct health risks to both the mother and child.

### **Objectives**

To describe the knowledge, attitudes and practices related to contraception among pregnant adolescents in a rural setting

### **Methodology**

A community-based, cross-sectional study was conducted in 2013 among all adolescents (aged <20 years) registered for field antenatal care in the Regional Director of Health Services division-Ampara (n=157). Knowledge, practice based on weighted scores and attitudes on contraception were assessed using an interviewer-administered questionnaire. Descriptive summary statistics were used for analysis.

### **Results**

Mean age was 18.2 years (SD=0.85). Nearly 90% (n=141) had heard of contraceptive methods, 21% (n=33) could name 4 different methods but 33% (n=52) failed to identify the method when shown. Only 63.7% (n=100) claimed that contraception was suitable for sexually active girls. Of them, 41.6% (n=37) selected oral contraceptive pills (OCP) as the most suitable method. Of the 12.7% (n= 20) who claimed contraception was not suitable, 44.4% (n=8) said that its consequence would be subfertility. Based on 12 marks as cut off (range -3 to 26), 73.2% (n=115) were with poor knowledge on contraception. Overall positive attitudes towards contraception was seen in 50.4% (n=79).

In 65% (n=103), current pregnancy was unplanned. Among them, 65% (n=67) were not using any contraceptive method. Of the rest (35%, n=36), 68.4% (n=36) used OCP. Main reasons for their failure in contraceptives included forgetfulness (60.5%, n=23) and partner not supportive (26.3%, n=10). Majority (95%, n=97) had never used emergency contraceptive pills. Based on 6.00 marks as cutoff (range -5 to 7), 73% (n=75) had poor contraception practices among unplanned pregnant adolescents.

### **Conclusions and/or recommendation**

Despite having positive attitudes towards contraception, knowledge and practices related to it among pregnant adolescents was poor. Since adolescence was identified as a vulnerable group in Ampara for unmet need in contraception, mechanisms should be further developed to reach-out to them.

**Key words:** Teenage pregnancy, Contraception, RDHS division



## OP 27

### **Incidence, immediate consequences, associated factors and health seeking behaviour related to falls among elderly in Medical Officer of Health area Elapatha**

B.M.I. Gunawardana<sup>1\*</sup>, R.D.S. Ranasinghe<sup>2</sup>

<sup>1</sup>Medical Officer - Public Health, Provincial General Hospital – Rathnapura; <sup>2</sup> Consultant Community Physician, Provincial Director of Health Services Office

\*Corresponding authors email: [bmigunawardana@gmail.com](mailto:bmigunawardana@gmail.com)

#### **Introduction**

Rapid population ageing is predicted in Sri Lanka. Elderly people are more vulnerable to falls and it is the most common cause of mortality and morbidity in the elderly. The consequences of falls may affect the quality of life of elderly as falls can lead to long term disability.

#### **Objectives**

To describe the incidence, immediate consequences, associated factors and health seeking behaviour related to falls among elderly in Medical Officer of Health (MOH) area Elapatha.

#### **Methodology**

A community based descriptive cross sectional study was conducted in MOH area Elapatha. A cluster sampling technique was used to select the people, 60 years and above. A total of 510 elderly were selected using the probability proportional to the size of the population technique. Respondents within each cluster were selected randomly. An immediate consequence of falls was defined as physical, psychological and social changes that occur following the last fall of respondents. Retrospective data on falls during previous three months were collected using an interviewer administrated questionnaire.

#### **Results**

Overall, 64 participants had falls within the three months of study. Cumulative incidence during past three months was 12.7 (95% CI = 10.0 - 15.9) falls per 100 elderly. Higher age (75 years and above) (OR = 2.8; 95% CI = 1.2 - 6.7, p = 0.014), females (OR = 1.8; 95% CI = 1.0 - 3.0, p = 0.042), and elders with education level less than grade five were significantly associated with falls (OR = 1.8; 95% CI = 1.0 - 3.0, p = 0.035). Hazardous environmental conditions were associated (e.g. Uneven floor, slippery surfaces, unsafe stairways etc.) with most (59.4%; n = 38) of the falls. Injurious falls occurred in 35.9% (n = 23) of cases and out of all injuries 8.7% (n = 2) had fractures. Most (41.4%; n = 12) of the fall victims had received western treatment.

#### **Conclusion and/or Recommendations**

This study shows a high cumulative incidence of falls among the elderly for a three months time period. Most of the falls in this study setting is preventable, which happened due to hazards in the environment. Community based awareness programmes are timely necessity to address these issues and a community level system should be implemented to review the home environment for the safety of elders.

**Key words:** elderly, falls, incidence, injuries, associated factors

**The cost effectiveness of Fluticasone and Salmeterol metered dose inhaler (MDI) versus Beclomethasone alone MDI in the long term management of adult patients with uncontrolled asthma, in Sri Lanka**

S. Perera<sup>1\*</sup>, J. Karnon<sup>2</sup>

<sup>1</sup>MD Trainee (Community Medicine), Post Graduate Institute of Medicine, University of Colombo; <sup>2</sup>Professor of Health Economics, University of Adelaide, Australia

\*Corresponding author's email: [sathira\\_perera@yahoo.com](mailto:sathira_perera@yahoo.com)

**Introduction**

The cost of combined beta agonist and corticosteroid inhalers remains to be considerably greater than steroid only inhalers in Sri Lanka. With the low availability of inhaled devices in public hospitals, the patients are more likely to purchase them outside, contributing to higher out of pocket expenses. A strong justification with regard to the cost effectiveness of combined inhaler is required either to publicly fund them or for outside prescription.

**Objective**

The objective of this study was to perform a cost utility evaluation of the combined Fluticasone and Salmeterol metered dose inhaler (MDI) versus Beclomethasone alone MDI in the long term management of adult patients with uncontrolled asthma, in Sri Lanka.

**Methodology**

A decision analytic model was developed using Microsoft Excel 2010. Relative risk reduction of acute events related to asthma via the short and long term impact on FEV1% predicted was captured in the model. Probability distributions were generated around the input parameters to assist the synthesis of an aggregate measure of cost effectiveness, while representing uncertainty around the mean incremental cost effectiveness ratio (ICER). A probabilistic model calibration process was used to validate the estimates to the specific study setting.

**Results**

It was evident that the use of combined inhaler is a cost effective strategy for Sri Lanka, with a very low mean ICER of 182.12 USD per quality adjusted life year (QALY). However when the affordability of the patient is low, steroid only MDI is still cost effective substitute with an ICER of 123.02 per QALY.

**Conclusions and/or Recommendations**

This model provides health policy makers new evidence required for a rational and scientific redistribution of available funding to the most cost effective treatment modalities.

**Key words:** cost effectiveness, metered dose inhaler, asthma

## OP 29

### **Mothers' perception on quality of care: A satisfaction survey on care received during hospital stay among postpartum mothers at a tertiary care center, Colombo**

S. A. Hewage<sup>1\*</sup>, D. Rowel<sup>2</sup>

<sup>1</sup>Medical officer, Family Health Bureau; <sup>2</sup>National program manager, intranatal and newborn care unit, family health bureau, Family Health Bureau

\*Corresponding author's e-mail: [avanthish@hotmail.com](mailto:avanthish@hotmail.com)

#### **Introduction**

The World Health Organization's new framework for "health system performance assessment" has health, responsiveness and fairness of financing as the three goals of the health system. The greater the responsiveness of the health system to the expectations of individuals' regarding the non-health enhancing aspects of care, the higher will be the level of welfare achieved. Patient satisfaction with non-medical aspects of care is often associated with better compliance with treatment instructions, prompt seeking of care and a better understanding of medical information. However, this seems to have been largely ignored by health care providers in developing countries.

#### **Objectives**

To assess the level of satisfaction on different dimensions of care received during hospital stay and associated factors among postpartum mothers at Castle Street Hospital for Women (CSHW).

#### **Methodology**

A hospital-based descriptive cross-sectional study was conducted among 422 postpartum mothers from all five wards at CSHW, selected by consecutive sampling method. An interviewer-administered questionnaire was used to assess the recipients' satisfaction on variety of service aspects, in participant's conversant language.

#### **Results**

Mean age of study sample was 29.7 (SD=5.6) years. Majority (n=368; 89.6%) were satisfied with care they received. Cleanliness of wards received highest percentage of satisfied mothers (n=388; 91.9%). Bed availability received highest level of dissatisfaction (n=97; 2%), followed by sanitary facility availability (n=83; 19.7%). Above 85% mothers were satisfied with inter-personal manner of all categories of health care staff. Majority (n=419; 99.3%) would come back to same hospital for similar services in future. Mothers with secondary education (p=0.037; OR= 2.4; 95%CI=1.1-5.5), multiparity (p<0.001; OR=0.3; 95%CI=0.1-0.6) and not having antenatal complications (p=0.022; OR=0.5; 95%CI=0.3-0.9) were significantly associated with being satisfied, while age or mode of delivery were not.

#### **Conclusions and/or Recommendations**

Dimensions with higher dissatisfaction like bed and sanitary-facility availability should be improved. Primi-parous, less educated and mothers with antenatal complications should be cared more in the continuum of care to further improve the health system responsiveness.

**Keywords:** satisfaction, intra-natal care, postpartum mothers

## **Economic impact on households of Rheumatoid Arthritis patients seeking care at rheumatology clinics in the district of Colombo**

A.C.M. Basnayake<sup>1\*</sup>, A. Pathmeswaran<sup>2</sup>, A. Kasturiratne<sup>3</sup>

<sup>1</sup>Consultant Community Physician, Family Health Bureau, Ministry of Health; <sup>2</sup>Professor in Public Health, Faculty of Medicine, University of Kelaniya; <sup>3</sup>Head, Department of Public Health, Faculty of Medicine, University of Kelaniya

\*Corresponding author's e-mail: [anomamb@gmail.com](mailto:anomamb@gmail.com)

### **Introduction**

Rheumatoid arthritis has immeasurable impact on patients in terms of their physical, mental and social functioning while causing financial burden on their households.

### **Objectives**

To determine the economic impact of rheumatoid arthritis (RA) on patients seeking care at the specialist based rheumatology clinics in the Colombo District.

### **Methodology**

A descriptive cross sectional study was carried out in rheumatology clinics at Tertiary care Hospitals in the district of Colombo. Sample of consecutive, 850 RA patients from four clinics at three teaching hospitals in Colombo were included in the study using probability proportionate to the size of the average monthly clinic visits. Data was collected using a pretested interviewer administered questionnaire prepared with expert opinion. Cost incurred on patients and households was calculated for a period of one month previous to the study.

### **Results**

Proportion of direct cost in this study sample was approximately 96%. More than one fifth (21.5%) of the direct cost was spent on medicine for treatment of rheumatoid arthritis while more than one third (32.5%) was spent for medicines bought for the patient including for co morbidities. Approximately another one third of the direct cost incurred in this study sample was for cost incurred on laboratory investigations (28.9%). Proportion of the indirect cost for the study sample was only four percent and it consisted of total income lost for the household.

The mean cost burden of the study sample was 21.15% (SD-1.6, range - 2.8% to 69.25%). However, 70% of the sample was over the catastrophic level of 10% of the household income.

### **Conclusions and/or Recommendations**

Rheumatoid Arthritis causes profound economic impact for poor households increasing debts and poverty. It is better to take possible measures to reduce out of pocket expenditure among rheumatoid arthritis patients of vulnerable households seeking care at government hospitals.

**Keywords:** Rheumatoid Arthritis, Economic impact, household cost burden

## **Comparison of client satisfaction for the Family Clinic and the Traditional Medical Clinics at Base Hospital Horana**

S.H.P. de Silva<sup>1\*</sup>, R.B.B.S. Ramachandra<sup>2</sup>, H.S.G. Wijesekera<sup>3</sup>, V. Kaluarachchi<sup>3</sup>, P. Kariyawasam<sup>3</sup>, M. Samarasinghe<sup>3</sup>

<sup>1</sup>Consultant Community Physician, National Institute of Health Sciences; <sup>2</sup>Registrar in Community Medicine, National Institute of Health Sciences; <sup>3</sup>Medical Officer, Base Hospital Horana

\*Corresponding author's e-mail: [padmaldes@gmail.com](mailto:padmaldes@gmail.com)

### **Introduction**

Traditionally medical clinics cater for chronic medical conditions and are associated with long waiting times and poor client satisfactions. The “Family medical clinic” was introduced at Base Hospital Horana to counter these problems. It functions separately and is managed by four Medical Officers designated for this clinic and see on average fifty patients daily. Each patient is given an appointment and is followed by the same Medical Officer continuously.

### **Objective**

To assess and compare the client satisfaction among the participants attending the Family medical clinic and the traditional medical clinics at Base Hospital Horana.

### **Methodology**

A descriptive cross sectional study was conducted among 400 participants who had attended the Family Medical Clinic and the Traditional Medical Clinic at Base Hospital Horana (200 each) for at least one year. A pre tested structured interviewer administered questionnaire was used for data collection and was administered by a trained pre intern Medical Officer during November 2014. The participants selected on a systematic manner, were requested to rate selected service components on a five point scale (1 least satisfactory to 5 most satisfactory). Overall satisfaction was calculated based on 14 components and transferred to a 0 – 100 scale for comparison.

### **Results**

Some 400 patients completed the study. The age, sex and other demographic characteristics, the medical conditions and distant to hospital did not demonstrate a statistically significant difference between the two groups. The average waiting time ranged from 26 minutes (SD = 6.3) for the Family clinic to 117 minutes (SD = 18.5) for the traditional clinic. Average consultation time was 11 minutes (SD = 2.5) for the Family clinic to 5.0 minutes (SD = 1.5 min) for the traditional clinic. The Family Medical clinic demonstrated a higher level of satisfaction of 84% (95% CI: 81.4-86.6) as compared to 36% (95% CI: 34.2-37.8) for the traditional medical clinic statistically significant at  $p < 0.001$ .

### **Conclusions and/or Recommendations**

The client satisfaction for service components at the Family Medical Clinic was statistically higher than that for the traditional medical clinic and has proven its effectiveness as a model for other hospitals.

**Keywords:** Family clinic, Quality of care, Client Satisfaction, NCD clinic

## **Gaps in tobacco packaging regulation: A comparison of South Asian countries and Australia**

S.H.P. de Silva<sup>1\*</sup>, S. Barraclough<sup>2</sup>, S. Wijesinghe<sup>1</sup>

<sup>1</sup>Consultant Community Physician, Department of Research, National Institute of Health Sciences; <sup>2</sup>School of Public Health and Human Biosciences, La Trobe University, Australia

\*Corresponding author's e-mail: [padmaldes@gmail.com](mailto:padmaldes@gmail.com)

### **Introduction**

One-fifth of the world's population and one-third of the estimated one billion smokers reside in South Asia. The significance of packaging in tobacco product brand identity and consumer appeal, especially to youth, as well as tobacco corporations using packaging for marketing purposes is well known.

### **Objective**

To compare cigarette packaging regulations of South Asian nations with those of Australia, which has pioneered tobacco product plain packaging legislation.

### **Methodology**

Current tobacco packaging regulations of South Asia were reviewed against the recommendations of Article 11 of the Framework Convention on Tobacco Control: packaging and labelling of tobacco products, and compared with Australian legislation.

### **Results**

Afghanistan, Bangladesh, Maldives, and Nepal had only written health warnings while India, Pakistan and Sri Lanka had both written and pictorial versions. Health warnings were not provided in the local language in India and Nepal. Display of a 'Quit line' number was not mandatory in any country. 'Tobacco information hotlines' for the promotion of tobacco products were not prohibited. None of the countries surveyed had regulations for the colour, consistency and the texture of the packs or for modification of the cigarette packs to wallet or slide-in packs. By contrast, the Australian regulations embraced all these concerns under its plain packaging regulations, which prohibited the use of logos, colours, brand images or promotional information on packaging. The packs must be of a standard, shape, size and colour and the brand names must be written in a designated font style and colour. The regulations prohibited the inclusion of quantitative information on emission yields and product expiry dates. It was mandatory to display Quit line number.

### **Conclusions and/ or recommendations**

South Asian tobacco regulations fell short of those recommended under FCTC. Since overt advertising has been prohibited, packaging is the last remaining vehicle for tobacco product promotion and should be regulated in a globally consistent way. Tobacco packaging regulations in South Asia need to be strengthened.

**Keywords:** tobacco packaging,

## **Compliance of health and nutrition related claims of beverages to the Sri Lankan Food Labelling Regulation**

S.M. Arnold<sup>1\*</sup>, M.S.K. Wickramatilake<sup>2</sup>, R.M.S.D. Fernando<sup>3</sup> C.J. Denawake<sup>4</sup>, W.Y.J. Fernando<sup>5</sup>, K.C.P. Aluthge<sup>6</sup>, P.J. Suraweera<sup>7</sup>

<sup>1</sup>Medical Superintendent, Infectious Disease Hospital;<sup>2</sup>Consultant Community Physician, Quarantine Unit, Ministry of Health; <sup>3</sup>Medical Superintendent, District General Hospital, Chillaw; <sup>4</sup>Medical Officer of Health, MOH Office, Battaramulla;<sup>5</sup>Medical Officer, Base Hospital, Panadura;<sup>6</sup>Medical Officer, Infectious Disease Hospital;<sup>7</sup>Senior Lecture in Community Medicine, Faculty of Medicine, University of Peradeniya;

\*Corresponding author's email: [mahendra\\_arnold@yahoo.com](mailto:mahendra_arnold@yahoo.com)

### **Introduction**

The main legislation governing food labelling in Sri Lanka is the Food Act which is implemented by health authorities. Food labels provide information to help consumers make healthier and safe food choices. Further these labels could provide false, misleading information to the consumer.

### **Objectives**

To assess the compliance of health and nutrition claims of beverages with food labelling regulation.

### **Methodology**

A descriptive cross sectional study was carried out in all 18 supermarkets in the Kandy Municipal Council area. Supermarkets were selected as the study setting since wide variety of beverages is available under one roof. Pre tested check list containing provisions of the labelling regulation was used as the study instrument.

### **Results**

Of the 214 beverages assessed 5.1% (n=11) did not have the common name in two languages. Claims or pictures to the effect that the beverage is recommended by medical practitioner or professional association was present in 8.1% (n=19). Of the 56 milk products and health drinks 8.9% (n=5) made claims that dietary fats benefits heart patients. Claim of food being an aid for slimming or weight reduction was found in 14% (n=9) of the 64 milk products, health drinks and green tea surveyed. Of the 36 beverages which made special claims, 30 (83%) did not have declarations that the natural food item also has the same characteristic. All 23 beverages claiming for enriched food did so when beverage did not contain added nutrients in addition to what is naturally contained in the beverage. The above percentages indicate the non - compliance with the regulation.

### **Conclusion and/or Recommendations**

Labels of considerable proportion of beverages contravene the provisions of the food labelling regulation. This indicates the need of enhanced implementation of the regulation by health authorities to ensure the beverages are properly labelled and health and nutrition claims are consistent with the law.

**Keywords:** Food labelling, Health claims, Nutrition claims

## **Patterns of occupational eye injuries and knowledge and practices on their prevention among the patients attending the outpatient department of National Eye Hospital in 2014**

M.N.J.Gunathilaka<sup>1\*</sup>, D.B.D.L.Samaranayake<sup>2</sup>

<sup>1</sup>Medical Officer, Health Education Bureau; <sup>2</sup>Senior Lecturer, Consultant Community Physician, Department of Community Medicine, Faculty of Medicine, Colombo

\*Corresponding author's email: [nilukagunathilaka@yahoo.com](mailto:nilukagunathilaka@yahoo.com)

### **Introduction**

Occupational Eye Injuries (OEIs) cause substantial morbidity, disability and economic loss globally. Local studies on OEIs and their prevention are scarce.

### **Objectives**

To describe socio-demographic, occupational and clinical characteristics, knowledge and practices on prevention and first-aid among patients presenting with OEIs to National Eye Hospital, Colombo.

### **Methodology**

A descriptive cross-sectional study was conducted. Sample size 218 was calculated using a previous prevalence study. Patients presenting with OEIs to OPD, National Eye Hospital, Colombo on working days from 8.00am to 5.00p.m.were selected, using the consecutive sampling technique. Data was collected using an interviewer-administered questionnaire and clinical records. Knowledge on identifying hazards, preventive measures and first-aid were assessed and total scores were calculated.

### **Results**

Mean age was 34 years (SD=±11.5).Majority (97.7%, n=213) were male breadwinners (58.3%, n=127). Most affected were welders (29.8%, n=65) and construction workers (19.7%, n=43). Majority had foreign bodies (57.3%, n=125) in eye. Majority (55.5%, n=121) had previous OEIs. Cut off values were selected using median value as all the results were skewed. Majority (91.7%,n=200) scored 8 out of 14 for knowledge on identifying hazards (Median9.7,IQR=9-11)and 45.9%(n=100) scored full marks for knowledge on prevention(Median4.2,IQR=4-5).Personnel Protective Equipment (PPE) usage was compulsory in 63.3%(n=138) workplaces but only 16.5%(n=36) were using PPE during injury. Main reasons for non-use were unavailability (22.5%, n=49) and low priority (20.6%, n=45).Majority (73.4%, n=160) scored8 out of 11 for first-aid knowledge (Median8,IQR=7-9). Only 59.2% (n=129) received first-aid at workplace. Lack of interest (22.5%, n=49) and lack of facilities (7.8%, n=17) were main reasons for not receiving first-aid. Better knowledge was associated with better practices of first-aid (p=0.049) and treatment-seeking (p=0.024).

### **Conclusions and/or Recommendations**

Knowledge on identifying hazards, prevention of OEI and first-aid were somewhat satisfactory. However, availability and utilization of PPE was poor. Practices on first-aid were unsatisfactory. Better knowledge was associated with better practices of first-aid and treatment-seeking. Legislation with provision of PPE and worker education targeting a behavior change on prevention and first-aid are recommended.

**Key words:** Occupational eye injuries, Personnel Protective Equipment (PPE), Knowledge, Practices, Prevention, First aid



## **Occupational stress associated factors and coping strategies among bus drivers in buses commencing from Maharagama Municipal Council area**

D.K.Illangasinghe<sup>1\*</sup>, S.M.Arnold<sup>2</sup>

<sup>1</sup>Medical officer, Family Health Bureau ; <sup>2</sup>Director, Consultant Community Physician, Infectious Diseases Hospital, Angoda.

\*Corresponding Author's e-mail: [ghananjachami@gmail.com](mailto:ghananjachami@gmail.com)

### **Introduction**

Work related events can affect workers and occupational stress is one such key work related factors. Occupational stress has bad influence on worker's health and performances as well. It may have an influence not only on drivers themselves, but would put passengers, pedestrians and other road user's lives at risk, becoming a contributory factor to road traffic accidents. Therefore it is important to organize a mechanism to address occupational stress in public transport industry.

### **Objective**

To assess the prevalence of occupational stress associated factors and coping strategies among bus drivers of buses commencing from the Maharagama Municipal Council area.

### **Methodology**

A descriptive cross sectional study was carried out during August and September 2014. It included 422 bus drivers from Sri Lanka Transport Board and private buses commencing journey from Maharagama Municipal Council area. Subjects were chosen by convenient sampling technique. Pre-tested interviewer administered questionnaire was used to collect data. Prevalence of occupational stress was measured by two scales of Job Content Questionnaire (JCQ) namely 'high job strain' and 'iso-strain. Associations were tested by Chi Square test with a significant value at the level of 0.05. Odds Ratios and 95% Confident Interval were calculated.

### **Results**

Prevalence of high job strain and iso-strain among bus drivers were 34.1% (95% CI: 29.6-38.8) and 33.1% (95% CI: 26.7-35.6) respectively. Factors significantly associated with high job strain were, working sector [Sri Lanka Transport Board and private bus service, (OR=0.2, 95% CI: 0.10-0.36)], level of education (P<0.001), monthly income (P=0.006), and disease conditions (OR=2.9, 95% CI: 2.58-3.39). Factors significantly associated with iso-strain were, working sector (OR=0.2, 95% CI: 0.11-0.39), monthly income (P=0.006), job satisfaction (OR=0.3, 95%CI: 0.22-0.52), and methods of managing salary inadequacy (P=0.01). Majority (96%, n=394) of drivers practiced all methods of appraisal-focused coping strategy.

### **Conclusions and/or Recommendations**

Over one third of bus drivers are undergoing occupational stress. Several factors, contributed to the fact. Establishment of a surveillance system to detect stressors, programmes to achieve good coping mechanisms, life skills among drivers should implement, by relevant authorities.

**Key words:** Occupational stress, high job strain, iso-strain, bus drivers, coping strategies

## **Victimization to workplace violence and its correlates among medical officers in the Galle district.**

A.M.S Niranjala<sup>1\*</sup>, N. Gunawardana<sup>2</sup>.

<sup>1</sup>Registrar in Community Medicine, Regional Director of Health Services Office-Matara; <sup>2</sup>Professor in Community Medicine, Senior Lecturer, Dept. of Community Medicine, Faculty of Medicine, Colombo

\*Corresponding author's e-mail: [niranjalamudalige@yahoo.com](mailto:niranjalamudalige@yahoo.com)

### **Introduction**

Though there had been many reporting of serious incidents of violence among Sri Lankan medical officers in their workplaces, the magnitude has not been studied in Sri Lanka.

### **Objectives**

To determine the proportion victimized to workplace violence and their correlates for being victims among medical officers (MOs) in the Galle district.

### **Methodology**

The 'Workplace Violence in the Health Sector- Country Case Studies Research Instrument', a self administered questionnaire, was adapted and validated to the Sri Lankan setting, assessed victimization. Total population of MOs in hospitals in Galle district (n=549, males=297) were included. Correlates were identified using comparative cross sectional study.

### **Results**

Proportion victimized to workplace violence within a year among MOs was 37.0% (n=203). Among them majority (57.6%, n=117) were females. Victimization to physical workplace violence was 6.2% (n=34), psychological workplace violence was 31.9% (n=175) and sexual workplace violence was 4.0% (n=22). The commonest perpetrators for physical workplace violence were unknown persons. Psychological and sexual violence were perpetrated by superior medical officers and fellow medical officers respectively. Physical injury following physical workplace violence was 23.5% (n=8). Keeping off work following incident of physical (20.6%, n=7), psychological (8.6%, n=14) and sexual (9.0%, n=2) violence was not uncommon. Reporting the violent incident to an authority was high regarding physical workplace violence (55.8%, n=19) but not for other types. According to multivariate logistic regression analysis, being impulsive (physical- OR=45.4; 95%CI: 9.0-227.2, psychological OR=20.3; 95%CI: 6.9-59.6), working experience less than ten years (physical- OR=31.1; 95%CI: 1.81-533.7, psychological - OR=19.1; 95%CI: 4.1-88.5), being a victim of domestic violence (physical- OR=40.8; 95%CI: 11.0-543.9, psychological- OR=3.7; 95%CI: 1.7-107.7) and evidence of 'job stress' (physical- OR=4.8; 95%CI: 1.8-26.6, psychological - OR=24.3; 95%CI: 7.7-76.4) were significant correlates of both physical and psychological workplace violence among MOs. Study also identified correlates of being a victim to either physical or psychological workplace violence.

### **Conclusions and/or Recommendations**

Victimization to workplace violence among MOs was high. Psychological workplace violence was commonest while sexual violence was least common. The study recommends advocating the relevant authority for a comprehensive workplace violence prevention programme.

**Key words:** Medical officers, workplace violence, correlates of violence

## **Effectiveness of occupational therapy for shoulder joint after neonatal brachial plexus injury**

W.P.K. Hemalatha<sup>1</sup>, R.B.B.S. Ramachandra<sup>2\*</sup>, S. Kurukulasooriya<sup>3</sup>

<sup>1</sup>Occupational Therapist, Plastic and Reconstructive Unit, National Hospital Sri Lanka; <sup>2</sup>Registrar in Community Medicine, Department of Research, National Institute of Health Sciences; <sup>3</sup>Consultant Rheumatologist, Rehabilitation Hospital, Ragama

\*Corresponding author's e-mail: [samantharamachandra19@gmail.com](mailto:samantharamachandra19@gmail.com)

### **Introduction**

Brachial plexus birth injuries (NBPI) occur during difficult labour mostly in large babies. Many children with brachial plexus birth injury develop shoulder problems with subsequent joint deformities of upper limb without treatment. Occupational Therapists assess, plan and intervene the therapeutic management to prevent contractures and deformities and improve the active range of motion to promote the clients activities of daily living and instrumental activities of daily living.

### **Objectives**

To assess the effectiveness of occupational therapy for shoulder joint after neonatal brachial plexus injury

### **Methodology**

This study is a pre and post assessment of function of shoulder joint. Study was carried out in Occupational Therapy Unit, Plastic and Reconstructive Unit, National Hospital of Sri Lanka. 36 patients regularly attending to the unit over 2 years were assessed using "Mallet Scale". A self administered questionnaire also was administered to mothers of above children to identify selected factors that contribute to continuation of treatment.

### **Results**

Children were coming from all over the country and over 95% parents are satisfied with the improvements gained. Parents spend average of Rs.2000/= for one visit and many children are brought to the hospital once a week for exercises. Over 75% mothers are educated over grade 10 and capable of continuing exercises at home. Mean birth weight of affected children was 3617.5 g only 03% of caesarean deliveries are affected. Shoulder abduction, external rotation, hand to nape, hand to back, hand to pocket and hand to mouth all had highly significant improvements when analysed using paired t – test.( $p < 0.000$  in each).

### **Conclusion and/or Recommendations**

Occupational therapy is an effective mode of treatment mode. We recommend expanding the services to all teaching and general hospitals where an occupational therapist is available as the out of pocket expenses are high in attending National Hospital from all over the country and need long term treatment.

**Keywords:** Brachial Plexus, Birth injury, Mallet Scale

## **Prevalence and factors associated with musculoskeletal disorders among ceramic factory workers in the district of Colombo**

P.K.D.C. Perera<sup>1\*</sup>, S.M. Arnold<sup>2</sup>

<sup>1</sup>Registrar in Community Medicine, Office of Medical Officer of Health, Hanwella; <sup>2</sup>Consultant Community Physician, Infectious Disease Hospital, Mulleriyawa

\*Corresponding author's e-mail: [dinushacp@yahoo.com](mailto:dinushacp@yahoo.com)

### **Introduction**

Musculoskeletal disorders are a group of injuries or dysfunction affecting the musculoskeletal system. Musculoskeletal disorders are known to be one of the most common occupational health problems among the work force in ceramic industry in the world and in Sri Lanka is no exception.

### **Objectives**

To estimate the prevalence and factors associated with musculoskeletal disorders among ceramic workers in the Colombo district.

### **Methodology**

A descriptive cross sectional study was conducted in all medium and large scale ceramic factories in the Colombo district. A sample of 422 ceramic factory workers was selected using probability proportionate method. Of the sample 402 workers responded with a 95% response rate. An interviewer administered questionnaire was used to assess the prevalence of musculoskeletal disorders and factors related to socio-demographic and occupation. Ergonomic factors were assessed using a factory inspection checklist.

### **Results**

Prevalence of musculoskeletal disorders among ceramic workers was 57% (n=229) and the commonest body region was lower back with a prevalence of 33.3% (n=134). Factors such as age of the worker (p= <0.001), working in awkward posture (p=<0.001), repetitive hand and shoulder movements (p=<0.001) repetitive neck movements (p=<0.001) lifting or carrying heavy loads (p=<0.005) pushing or pulling heavy loads (p=<0.001), and working with hands above shoulder levels (p=<0.001) were significantly associated with musculoskeletal disorders.

### **Conclusions and/ or Recommendations**

Among ceramic workers 57% were suffering from musculoskeletal disorders. Several work related factors were associated with musculoskeletal disorders. Ergonomic interventions need to be adopted to overcome this situation including development of worker friendly ergonomic setting in the ceramic factories.

**Key words:** Ceramic workers, musculoskeletal disorders, Ergonomics

## Chunnakam Power Plant: A point source of underground water pollution?

N.W.A.N.Y. Wijesekara<sup>1</sup>, V. Murali<sup>2\*</sup>, H.D.B. Herath<sup>3</sup>

<sup>1</sup>Postgraduate Trainee, Disaster Preparedness and Response Unit, Ministry of Health ; <sup>2</sup>Consultant Community Physician, Management, Development and Planning Unit, Ministry of Health; <sup>3</sup>Deputy Director, Environmental and Occupational Health, Ministry of Health

\*Corresponding author's e-mail: vallipurathan.murali@gmail.com

### Introduction

Effluents from Chunnakam Power Plant (CPP) have been suspected as the source of underground water pollution in the surrounding area. Identifying the location of the source of water pollution is important in proposing suitable remedial measures.

### Objective

To determine whether the CPP could be a point source for this contamination.

### Methodology

The secondary data presented in the report of the Regional Laboratory of the National Water Supply and Drainage Board, Jaffna NWSDB was used in this analysis. Two by two tables were developed by calculating the number above or below the MPL using the above results. The Chi Square Statistic ( $X^2$ ) with p value of 0.05 and Odds Ratio (OR) with 95% Confidence Interval (95% CI) between different zones were calculated.

### Results

For the zones within 200m and 200m to 500m  $X^2 = 1.4$  ( $p=0.059$ ), OR = 1.5 (95% CI 0.059-3.7). For the zones 200m to 500m and 500m to 2000m,  $X^2 = 4.5$  ( $p=0.016$ ), OR = 2.7 (95% CI 1.1-6.7). For the zones within 200m and 500m to 2000m,  $X^2 = 10.4$  ( $p=0.0006$ ), OR = 4.0 (95% CI 1.7-9.4).

### Conclusion and/or Recommendations

The proportion of wells exceeding MPL between within 200m and 200-500m did not show significant association ( $X^2 = 1.4$ ,  $p>0.059$ ) (OR=1.5, 95% CI 0.059-3.7). This may be due to within 200m and 200m-500m zones being equally contaminated or being saturated. There was statistically significant decreasing of number of wells with more than MPL from 200m-500m to 500m-200m zones and within 200m and 500m-2000m zones ( $P<0.05$ ). The level of oil contamination appears to be uniform up to 500m from the CPP. However, this appears to be decreasing from there onwards up to 2000m. This analysis favours a point source to be located within the CPP area.

**Keywords:** Water pollution, Power Plant

## **Knowledge, attitudes and practices towards leprosy amongst public healthcare workers in Colombo Municipal Council Area**

M. P. Wijeratne<sup>1\*</sup>, J.I.N.C. Karunaratne<sup>2</sup> , P.S. Hettiarachchi<sup>3</sup> , M.L.S.N, Fernando<sup>4</sup>

<sup>1</sup>Consultant Community Physician, Ministry of Health; <sup>2</sup> Registrar in Community Medicine, Anti Leprosy Campaign, Ministry of Health; <sup>3</sup> Medical Officer , Anti Leprosy Campaign, Ministry of Health; <sup>4</sup> Director, Anti Leprosy Campaign, Ministry of Health.

\* Corresponding author's email - [monika.wijeratne@gmail.com](mailto:monika.wijeratne@gmail.com)

### **Introduction**

Leprosy remains a serious public health problem due to its ability to cause disability. The prevention of leprosy ultimately lies in the early diagnosis and treatment of the individuals having leprosy, thereby preventing further transmission. Forty six percent of new cases identified in year 2013, were late presentations and this caused to 7-8% patients to present with deformities. It has been observed that lack of awareness among health staff has contributed to this late diagnosis.

### **Objectives**

To describe knowledge, attitudes and practices towards leprosy amongst public health care workers in Colombo Municipal Council area

### **Methodology**

A descriptive cross sectional survey was carried out in Colombo Municipal Council area by distributing self-administered questionnaire among all public healthcare workers (15- medical officers, 17-NO/PHNS, 77-SPHM/PHM, 36-SPHI/PHI, 33-other categories) over a period of six weeks from January to February, 2015.

### **Results**

Hundred and fifty three participants (86%) identified 'hypo-pigmented patches', 64 (36%) identified 'skin nodules' and 36 (20%) identified 'thickened nerves' as suspicious signs of leprosy. Sixty six (37%) of participants had never seen a leprosy patient and 39 (22%) thought leprosy is transmitted through touch. Even though a majority, 171 (96.1%) was aware that treatments are available for leprosy, only 38 (2.3%) knew the place to obtain treatment. Sixty one (34.3%) health care workers were scared of leprosy and 77 (43.3%) didn't want to reveal to a friend that if a family member gets leprosy. Another 49 (27.5%) didn't want to share materials with a patient. A significant minority (22.5%) believed that patients should be kept apart from others.

### **Conclusions and/or Recommendations**

Including leprosy in continuous medical education and refresher training is crucial in early diagnosis of leprosy as certain gap in knowledge was identified by this study. An emphasis needs to be placed on education regarding transmission and low rate of infectivity of leprosy as study revealed certain misconceptions and prejudices still exist even among healthcare workers.

**Key Words:** Leprosy, Public Health Care Workers, Knowledge, Attitudes, Practices

## **Knowledge, attitude, practices and associated factors in relation to provision of care for pulmonary tuberculosis patients among nursing officers in Teaching Hospital Kurunegala**

R.M.P.T.D. Rajapaksha<sup>1\*</sup>, S. Samaraweera<sup>2</sup>

<sup>1</sup>Medical officer, Teaching Hospital, Kurunegala; <sup>2</sup>Deputy Director, National Program for Tuberculosis Control and Chest Diseases

\*Corresponding author's e-mail: [thilini.d.rajapaksha@gmail.com](mailto:thilini.d.rajapaksha@gmail.com)

### **Introduction**

Tuberculosis is the second major killer worldwide among infectious agents, with around 9000 new cases notified annually in Sri Lanka. The knowledge, attitudes and practices of Nursing Officers directly affect the quality of care for TB patients.

### **Objectives**

To assess knowledge, attitude, practices and associated factors in relation to provision of care for pulmonary tuberculosis patients among nursing officers in Teaching Hospital Kurunegala.

### **Methodology**

This descriptive cross sectional study was carried out among all nursing officers at Teaching Hospital, Kurunegala. A sample of 389 nursing officers was selected through simple random sampling. Data was collected through a pre-tested, self-administered questionnaire. Knowledge, attitudes and practices were described in frequencies and percentages. Total knowledge and attitudinal scores were calculated and categorized as good or poor. These categories as well as specific knowledge, attitudes and practices were cross analyzed with selected associated factors.

### **Results**

Overall knowledge on Tuberculosis (TB) was good. But the correct period of infectivity of a patient on regular treatment was identified by only 60.9%. Overall attitudes of most (53%) were good. Yet majority (77.7%) believed "most TB patients do not care about others getting infected through them". In practice only 57.3% maintained confidentiality of TB patients within wards. There was a statistically significant ( $p=0.003$ ) association between good levels of knowledge and better attitudes. Participants with "high exposure" displayed a highly significant association ( $p=0.000$ ) with good attitudes but not with good knowledge ( $p>0.05$ ). The knowledge on period of infectivity of a patient on regular treatment had a highly significant association with good attitudes ( $p=0.000$ ). Maintaining the confidentiality of TB patients had a highly significant association with good attitudes ( $p=0.000$ ) but not with good knowledge ( $p>0.05$ ).

**Conclusion and/or Recommendations:** Both knowledge and attitudes were satisfactory. Good attitudes were significantly associated with good knowledge. Regular targeted in-service programs and more exposure to TB patients within their training are needed.

**Keywords:** Knowledge, Attitudes, Practices, Pulmonary Tuberculosis, Nursing officers

**Health seeking behaviour and associated factors of parents of patients treated in-ward for dengue at Lady Ridgeway Hospital for Children, Colombo.**

K.E.S. Fernando<sup>1\*</sup>, H.A. Tissera<sup>2</sup>

<sup>1</sup>Post Graduate Trainee in MD Community Medicine, Post Graduate Institute of Medicine, University of Colombo; <sup>2</sup>Consultant Epidemiologist, Epidemiology Unit, and Director, National Dengue Control Unit, Ministry of Health

\*Corresponding author's e-mail:[enokasonalifernando@yahoo.com](mailto:enokasonalifernando@yahoo.com)

**Introduction**

Parents make choices about the amount and quality of healthcare their children receive during illness. Prompt and appropriate treatment seeking is vital in dengue. Lady Ridgeway Hospital for Children, Colombo is known as a specialized centre for dengue management in Sri Lanka. In year 2012 the number of dengue fever and dengue haemorrhagic fever patients treated at LRH was 2554 and 1055 respectively.

**Objective**

The objective of this study was to describe the health seeking behaviour of parents of patients treated in-ward at Lady Ridgeway Hospital for Children, Colombo.

**Methodology**

A descriptive cross-sectional study was conducted from August 2013 to October 2013 where participants were enrolled from all six general medical paediatric units. A sample size of 222 was obtained by changing the desired precision to 0.075 and addition of 30% nonresponse rate. Consecutive admissions of 222 parents of children who met the inclusion criteria were interviewed using a pre-tested interviewer administered questionnaire. Prompt care seeking was defined as any type of care that was sought within 24 hours of the illness and appropriate care as care sought from qualified medical professionals in government or private health facilities.

**Results**

There were 103 (46.4%) prompt and appropriate care seekers. Among patients who did not seek ambulatory care before admission 17(7.6%) were admitted to hospital on day three and after. The mean of hospital admission time was 2.25 (IQR 1-3) days from detection of fever. Education level above GCE O/L of both parents ( $p=0.001$ ) and middle, upper middle and higher socio-economic level ( $p=0.001$ ) were associated with prompt and appropriate health seeking behaviour. However, monthly income was not associated with the same.

**Conclusion and/or Recommendations**

Prompt and appropriate health seeking behaviour of parents of children suffering from dengue illness was relatively poor.

Information, education and communication on prompt and appropriate health seeking behaviour in childhood dengue should be further strengthened.

**Key words:** Dengue fever, dengue haemorrhagic fever, Health seeking behaviour



## **Treatment non-compliance, stigma and factors associated, among patients treated for pulmonary tuberculosis at the Central Chest Clinic, Colombo**

K.D.S.C. Vijewardane<sup>1\*</sup>, V.Kumarapeli<sup>2</sup>

<sup>1</sup>Additional Medical Officer of Health, Office of the Medical Officer of Health Moratuwa; <sup>2</sup>Deputy Director, National Institute of Mental Health, National Institute of Mental Health, Angoda

\*Corresponding author's e-mail: [samanthachampika@gmail.com](mailto:samanthachampika@gmail.com)

### **Introduction**

Treatment compliance is vital in preventing drug resistant TB. Stigma related to TB is a hidden burden causing non-compliance.

### **Objectives**

To describe the proportion with non-compliance to treatment, extent of perceived disease-related stigma and associated factors, among patients receiving treatment for pulmonary tuberculosis (TB) at the Central Chest Clinic, Colombo.

### **Methodology**

A descriptive cross-sectional study was carried out in Central Chest Clinic, Colombo, among 426 patients with pulmonary TB, >15 years age, on treatment for ≥two months or more, selected by systematic sampling. Pre-tested interviewer administered questionnaire collected data on: socio-demographic and economic factors, clinic visits, knowledge about TB and its treatment, substance abuse, treatment compliance and perception of stigmatization.

### **Results**

Mean age 47.52 (SD=15.55) years, 310 (72.8%) males. Among the participants, 7.3% (n=30; 95%CI=4.8%-9.8%) were non-compliant with treatment, 61.4% (n=261; 95%CI 57.1%-65.7%) reported as having the perception of stigmatized. Residing in urban sector-slums ( $p=0.023$ ), having poor knowledge about TB and its treatment ( $p=0.037$ ), not visiting DOTS provider ( $p=0.045$ ) and spending 500 rupees or more per clinic visit ( $p=0.044$ ) were significantly associated with non-compliance. Male sex ( $p=0.0001$ ), education level less than O/L ( $p=0.0001$ ), being employed ( $p=0.0001$ ), being a current smoker ( $p=0.045$ ) and current alcohol consumption ( $p=0.045$ ) were significantly associated with perception of stigmatized.

### **Conclusion and/or Recommendations**

Non-compliance and perceived stigma among tuberculosis patients were relatively high. Treatment compliance can be improved by giving adequate knowledge about TB and its treatment, encouraging to visit DOTS providers and paying more attention to patients residing in urban sector-slum areas.

**Key words:** Tuberculosis, non-compliance, stigma.

## **Prevalence of depression and associated factors among a Sri Lankan sample of leprosy patients**

S.S. Madawanarachchi<sup>1</sup>, H.H.P.C. Madhuranga<sup>1</sup>, P.T. Madhusankha<sup>1</sup>, P.D. Ranasinghe<sup>2\*</sup>

<sup>1</sup>Undergraduate Medical Student, Faculty of Medicine, University of Colombo; <sup>2</sup>Registrar in Community Medicine, Health Education Bureau

\*Corresponding author's e-mail: [priyangaran@yahoo.com](mailto:priyangaran@yahoo.com)

### **Introduction**

Leprosy is curable disease if treated early. The social stigma associated with the disease could lead to psychological problems.

### **Objectives**

To determine the prevalence of depression and associated factors among leprosy patients attending to central leprosy clinic (CLC) at National Hospital of Sri Lanka (NHSL).

### **Methodology**

Descriptive cross sectional study was carried out among 102 diagnosed leprosy patients above 15 years of age, attending the CLC at NHSL. The data collected at the clinic visit. They were assessed using an interviewer administered questionnaire-validated screening tool for the local context (CES-d scale) to identify depression based on a cutoff value of 16 (minimum score=0, maximum=60).

### **Results**

Response rate was 96.08% (n=98). The majority of the patients studied were males (72.4%, n =71) and married (75.5%, n=74). Only 22.4% (n=22) passed GCE A/L and average monthly income was below Rs.10000 among 28.6% (n=28)of them. The prevalence of depression was 21.4% (95%CI13.4-29.4) among the leprosy patients attending the central leprosy clinic at national hospital of Sri Lanka.

Reduced self-esteem due to the disease showed a significant association ( $\chi^2=14.77$ ,  $df=1$ ,  $p=0.001$ ) with depression among these patients. Majority of them (78.6%, n=77) were reluctant to disclose their disease condition to a third party. Conventional risks of depression as younger age, female gender, chronic co-morbidities, and number of children, low socio-economic status, family support and facing adverse life events failed to demonstrate any significant associations with depression among study units.

### **Conclusion and/or Recommendations**

Prevalence of depression among leprosy patients attending CLC at NHSL, is higher than that of general population. Social stigma associated with leprosy plays a significant role in development of depression rather than the conventional risks of depression in general population. Screening for depression and appropriate treatment is recommended for leprosy patients.

**Key words:** leprosy, depression, screening

## **Knowledge on rabies, treatment following dog bites and associated factors among persons aged 20-59 years in Medical Officer of Health area, Maharagama**

L.S.D. De Silva<sup>1\*</sup>, V. Kumarapeli<sup>2</sup>

<sup>1</sup>Medical Officer, National Dengue Control Unit, Narahenpita; <sup>2</sup>Consultant Community Physician, National Institute of Mental Health, Angoda

\*Corresponding author's e-mail: [sinha.dhanushka@gmail.com](mailto:sinha.dhanushka@gmail.com)

### **Introduction**

Dog bite is considered as a medical emergency due to the risk of acquiring rabies, which is fatal if untreated. In Sri Lanka, Rabies is endemic and the main transmitter is the dog. Post exposure therapy (PET) following a dog bite is one of the main strategies in prevention of human rabies.

### **Objectives**

To describe knowledge on human rabies, treatment following dog bites (TFDB) and associated factors among persons aged 20-59 in Medical Officer of Health area, Maharagama.

### **Methodology**

A community based cross sectional study was carried out among a sample of 340 participants, aged 20-59 years in Medical Officer of Health area Maharagama, selected using probability proportionate to population size cluster sampling. Data were collected using a pre-tested interviewer administered questionnaire and analysed by using descriptive statistics and chi square test.

### **Results**

Response rate was 94.7% (n=322). Among respondents 51.0% (n=165) were females; 94.1% (n=303) Sinhalese; 74.2% (n=239) married; 64.6% (n=208) employed; 11.5% (n=37) dog owners; mean age 38.1 years (SD=11.2 years) and median income Rs.38,000.00 (IQR Rs.31,000.00). Of the participants, 64.9% (n=209) had good overall knowledge on human rabies; 63% (n=203) incurable if acquired; 68.6% (n=221) preventable before acquisition; 99% (n=319), 29.2% (n=94) spread by dog and bat, 61.2% (n=197) had good overall knowledge on treatment following dog bites (TFDB), 89.4% (n=288) on first aid, 99.7% (n=321) seek medical care after stray dog bite, 91.0% (n=293) take dog's vaccine card.

Significant associations were found between: good knowledge on rabies with Sinhalese ethnicity (p=0.01); being employed (p<0.001); owning a dog (p<0.001), Good knowledge on TFDB with being married (p=0.02); having higher level of education (p<0.001); having higher income (p<0.001); being employed (p<0.001) and owning a dog (p<0.001).

### **Conclusion and/or Recommendations**

There are gaps in knowledge on rabies and TFDB with regard to sources of infection and post exposure care. Targeted health education should be done to increase awareness to identified groups.

**Keywords:** Rabies, PET, Dog bites

## **Potential impact of the special dengue control programme on control and prevention of dengue in Kalutara, Sri Lanka, 2014**

P. Liyanage<sup>1</sup>, U.I. Rathnayaka<sup>2</sup>, P. Chulasiri<sup>3\*</sup>, S. Amunugama<sup>4</sup>, P. Palihawadana<sup>5</sup>, H. Tissera<sup>6</sup>

<sup>1</sup>Regional Epidemiologist, Kalutara; <sup>2</sup>Regional Director of Health Services, Kalutara; <sup>3</sup>Senior Registrar, National Dengue Control Unit, Narahenpita; <sup>4</sup>Deputy Director General of Health Services, Ministry of Health; <sup>5</sup>Chief Epidemiologist, Epidemiology Unit, Colombo 10; <sup>6</sup>Consultant Epidemiologist, Director, National Dengue Control Unit, Narahenpita

\*Corresponding author's e-mail: [pubudu.chulasiri@gmail.com](mailto:pubudu.chulasiri@gmail.com)

### **Introduction**

Dengue is a major public health burden in Sri Lanka. More than 55% of national dengue cases are reported in the Western province in which Kalutara is one of the most affected districts. A historical peak was reported in 2014 with an annual incidence of 204 per 100,000 population, with the highest number reported during 25th week of the year. Reduction of the number of mosquito breeding places is the mainstay of prevention and control of dengue. A special dengue control programme was designed and implemented to reduce the breeding places in high risk administrative divisions in the Western province.

### **Methodology**

Dengue high risk administrative divisions were identified based on reported clustering of dengue cases and entomological surveys. In average 100 teams consisting of 3 to 5 persons (health, police and security forces and other inter-sectoral agencies) were trained and dispatched into the selected divisions. Each team inspected premises and mobilized the community to remove potential breeding places at in minimum of 50 premises per day. Intervention continued for 30 days in 10 phases from June to December 2014. Performance was monitored and evaluated at daily meetings conducted by the ministry of health with the participation of all stakeholder agencies.

### **Results**

A total of 109,979 premises were inspected during the intervention; 37,613 (34.2%) premises with potential breeding, and 4,699 (4.2%) with larvae were identified and removed. Higher number of breeding places were found in institutions (25.9%) than in households (3.8%) inspected. Dengue incidence per week reduced to the lowest level by the 12th week of intervention.

### **Conclusions and/or Recommendations**

Well structured, targeted interventions with the contribution of all stakeholders aiming to remove potential breeding places are needed for control and prevention of dengue. Our findings highlight the need for enhanced surveillance and control of breeding sites, particularly at institutions. Continuation of such programmes would improve the community participation and inter-sectoral collaboration for dengue prevention and control activities in Sri Lanka.

**Keywords:** dengue control, inter-sectoral contribution

# Abstracts of poster presentations

## PP 01

### **Knowledge, practices and associated factors regarding responsive feeding among primary caregivers of children aged 6 to 12 months attending child welfare clinics in Homagama Medical officer of Health area**

S.S.Jayarathne<sup>1\*</sup>, S.S.P.Godakandage<sup>2</sup>

<sup>1</sup>Postgraduate trainee in community medicine, Postgraduate Institute of Medicine; <sup>2</sup>Consultant Community Physician, Family Health Bureau

\*Corresponding author's email: [sashini\\_sharmala@yahoo.com](mailto:sashini_sharmala@yahoo.com)

#### **Introduction**

The responsive feeding style has been shown to be of great benefit in improving the nutritional status as well as enhancing the cognitive development of the child in the first two years, which is a critical developmental window.

#### **Objectives**

To describe the knowledge, practices and associated factors regarding responsive feeding among primary caregivers of children aged 6 to 12 months attending child welfare clinics in Homagama Medical officer of Health (MOH) area.

#### **Methodology**

A Descriptive Cross Sectional study was conducted in Homagama MOH area in Sri Lanka from the 1<sup>st</sup> June to the 31<sup>st</sup> December 2013. A pretested interviewer administered questionnaire was used for data collection from 384 primary caregivers of infants attending child welfare clinics. A consecutive sampling method was used.

#### **Results**

Less than 5% and 13% had a satisfactory knowledge regarding the earliest hunger cues and timing of feeds respectively. Only 8.2% were aware that distractions should be minimized while feeding. Out of 90% who had used electronic or print media for obtaining knowledge on feeding, only 28.5% had been educated on responsive feeding within the preceding month. Only one third had been educated on responsive feeding within the preceding month by the PHM. Sixty percent and 50.4% fed children by using distraction and forcefulness respectively. Only 30% were talking lovingly making eye contact while feeding. Statistically significant differences were observed in knowledge among those with a higher versus first birth order child ( $p < 0.01$ ), those who felt that the child ate an adequate quantity versus others ( $p < 0.001$ ) and frequent feeders versus less frequent feeders of the child ( $p = 0.039$ ). Overall, respondents with better knowledge had better practice scores ( $p = 0.001$ ).

#### **Conclusions and/or Recommendations**

The study recommends capacity building of resource personnel at grass root level and utilizing the prominent role of media to increase public awareness on responsive feeding as well as conducting further research, especially with an observational component.

**Key words:** responsive feeding, child nutrition, infant and young child feeding, complementary feeding

## **Awareness regarding treatment, prevention and control of cutaneous leishmaniasis among medical practitioners in the Colombo South and Jayewardenepura teaching hospitals**

H.A.A.S. Weerasinghe<sup>1</sup>, D.H.M. Niluka<sup>1</sup>, H.P.G.T.P. de Alwis<sup>1</sup>, U.S. Weerasena<sup>1</sup>, S.G.V.C. Gunasekara<sup>1</sup>, R. Wickremasinghe<sup>2</sup>, S. Goonawardena<sup>3\*</sup>

<sup>1</sup>Undergraduate Medical student; <sup>2</sup> Department of Parasitology; <sup>3</sup>Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura

\*Corresponding author's email: [sampatha4@yahoo.co.uk](mailto:sampatha4@yahoo.co.uk)

### **Introduction**

Cutaneous leishmaniasis (CL) is an intracellular protozoan parasitic transmitted by the sand fly. Leishmaniasis is a newly emerged and established notifiable disease in Sri Lanka. As CL skin lesions can be misdiagnosed with other skin lesions, it is important for medical practitioners to be able to identify the lesions caused by the parasite.

### **Objectives**

To describe the awareness regarding treatment, prevention and control of leishmaniasis among Medical practitioners at the Colombo South (CSTH) and Sri Jayewardenepura teaching hospitals (SJTH).

### **Methodology**

A descriptive cross sectional study was carried out in CSTH and SJTH. Study population was all the medical practitioners a total of 263 which included senior registrars, registrars, senior house officers, resident house officers and house officers. Data was obtained using a pre tested self- administered questionnaire. SPSS software was used for data analysis. Significance was calculated when  $P < 0.05$ .

### **Results**

Out of 263 doctors who participated 244 (92.8%) responded to the questionnaire and majority were from CSTH (77.9%). Mean age was 34 years ( $SD \pm 6.816$ ). Only 68 (27.9%) medical practitioners have seen and treated patients with CL. Most of the doctors stated that sodium stibogluconate (65%) was the drug used to treat the disease, 65.6% were aware about the modes of transmission and 63.9% were aware regarding prevention and control of the disease. Majority (94.3%) knew that the disease was transmitted by the sand fly. There was a statistically significant difference between the current designation and the level of awareness regarding available investigations ( $P < 0.002$ ), treatment modalities ( $P < 0.001$ ), effective drug treatment ( $P < 0.05$ ) and prevention and control ( $P < 0.05$ ).

### **Conclusions and/or recommendations**

Awareness regarding treatment, prevention and control of cutaneous leishmaniasis is inadequate among the medical practitioners. Appropriate referral should be done to a dermatologist if suspected. Continuous medical education on recent emerging infections is mandatory.

**Key words:** cutaneous leishmaniasis, awareness, practices, medical practitioners, Colombo District

## **Knowledge regarding Filariasis and morbidity control practices among patients who attend the filariasis clinic at Boralessgamuwa MOH area.**

P.M.S.Ayantha<sup>1</sup>, T.S.Dissanayake<sup>1</sup>, M.A.D.L.Munasinghe<sup>1</sup>, K.K.D.M.Ranaweera<sup>1</sup>,  
W.M.Rukshani<sup>1</sup>, S.Ranasinghe<sup>2</sup>, S.Goonewardena<sup>3\*</sup>.

<sup>1</sup>Undergraduate Medical student, <sup>2</sup> Department of Parasitology, <sup>3\*</sup> Department of Community Medicine,  
Faculty of Medical Sciences, University of Sri Jayewardenepura

\*Corresponding author's email: [sampatha4@yahoo.co.uk](mailto:sampatha4@yahoo.co.uk)

### **Introduction**

Sri Lanka completed a Mass Drug Administration (MDA) programme to elimination lymphatic filariasis in 2006. This study was initiated to assess the knowledge, morbidity control practices and awareness about available health services related to filariasis among patients attending an anti-filariasis clinic a decade after completion of MDA.

### **Objectives**

To describe knowledge about the disease, transmission, prevention, complications, prophylaxis and morbidity control practices among patients who attend the filariasis clinic at Boralessgamuwa MOH area.

### **Methodology**

A descriptive cross sectional study was carried out using an interviewer-administered questionnaire among 295 respondents (above 18 years of age) who came to the anti-filariasis clinics at Boralessgamuwa. Knowledge about the disease, transmission, prevention, complications, morbidity control practices, treatment and available healthcare resources were assessed using closed ended questions. Data was analyzed using SPSS version 15.

### **Results**

Out of 295 respondents, 69.5% were above 30 years of age, 55.3% females and 59.7% had education level up to O/Level. All patients knew that filariasis is transmitted by mosquitoes. The overall knowledge about the disease (signs and symptoms), transmission, prevention, complications and treatment was 70%. Significantly higher knowledge ( $P < 0.05$ ) was observed among those who were educated up to A/ Level or above and who were educated by the health care providers regarding the disease. The level of knowledge was not significantly associated with age, sex, marital status or employment ( $P > 0.05$ ). The highest sources of knowledge were from media (71.2%) and health care providers (62.4%). However, only 39% had a good knowledge on the correct practices in lymphoedema management and morbidity control measures. Most (79%) were aware of the weekly night blood screening.

### **Conclusions and/or Recommendations**

Majority of the population has a good knowledge regarding filariasis and most were aware about the available facilities. However, correct practices on lymphoedema management were low.

**Key words:** Filariasis, knowledge, practices, facilities

**Knowledge, attitudes and practices towards Leptospirosis among farmers of Palapathwela Secretariat division in Matale district**

P.C.W.M. Piyadigama<sup>1</sup>, R.M.A.G. Ranasinghe<sup>1</sup>, M.A.S.D.Somasiri<sup>1</sup>, W.A.M.M. Fernando<sup>1</sup>, W.G.M.D.Amarasinghe<sup>1</sup>, D. Ariyaratna<sup>2</sup>, S. Goonewardena<sup>3\*</sup>

<sup>1</sup>Undergraduate Medical student, <sup>2</sup> Department of Forensic Medicine, <sup>3</sup> Department of Community Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura

\*Corresponding author's e-mail:[sampatha4@yahoo.co.uk](mailto:sampatha4@yahoo.co.uk)

**Introduction**

Leptospirosis is a zoonotic disease which is highly prevalent among paddy field farmers and is a fatal disease. Highest incidence of this disease was reported in 2008 in Matale district with 150.5 /100,000 population.

**Objectives**

To describe Knowledge, attitudes and practices towards Leptospirosis, among farmers of Palapathwela area in Matale District.

**Methodology**

A cross sectional descriptive study was carried out in the Palapathwela Secretariat Division in Matale District among randomly selected eight farmers societies. Farmers above 18 years who were registered in the societies and who attended the meetings were randomly selected and were interviewed using a pre-tested interviewer administered questionnaire. Data was statistically analyzed using SPSS software package and significance was calculated as  $P < 0.05$ .

**Results**

A total of 194 farmers were interviewed. Mean age was 52 years  $\pm$  11.732, majority was male (70.1%) and had studied up to O/Level (72.2%). Nearly half the population had good knowledge (50.5%) and main source of knowledge was television (84.0%). About 11.2% had a past history of the disease. Majority (>50%) had good knowledge regarding causes, transmission prevention and treatment. Most farmers knew Leptospirosis is a curable disease and the use of chemoprophylaxis before going to the paddy field is useful in prevention. There was a statically significant difference between past history and good knowledge ( $p=0.008$ ). However, age, sex and educational level were not statistically significant with good knowledge ( $P>0.05$ ). Most (71.7%) stated that using Personal Protective Equipment (PPE) were effective. There was a statistically significant difference between sex and attitudes ( $p=0.001$ ). However only 45% stated that they wore rubber boots or gloves. There was a statistically significant difference in practices with those who had a past history ( $p=0.007$ ).

**Conclusion and/or Recommendations**

The overall knowledge, attitudes and practices were satisfactory among the farmers. Increased community awareness through local and regional levels is important. Farmers who are affected must be advised on transmission, causes and preventive measures since they deliver important message to their community.

**Key words:** Leptospirosis, Knowledge, attitudes, practices, farmers



## **Factors associated with feeding practices during diarrhoeal diseases among caregivers of 6-12 month old infants**

M.P.Kumbukage<sup>1\*</sup>, L. H. M. N. Lansakara<sup>2</sup>

<sup>1</sup>Medical officer, Organisation Development Unit, Ministry of Health;<sup>2</sup>Consultant Community Physician, Family Health Bureau

\* Corresponding author's e-mail: [mpkumbukage@gmail.com](mailto:mpkumbukage@gmail.com)

### **Introduction**

Diarrhoeal disease is a leading cause of child morbidity and mortality in the world. Despite recommendations from various organizations worldwide, caregivers restrict food and liquids to their children during diarrhoea. These malpractices cause serious consequences in children. Factors related to malpractice among caregivers are multifactorial. Therefore it is important to assess current feeding practices of caregivers during diarrhoea to implement targeted interventions.

### **Objectives**

To evaluate practices and associated factors regarding feeding during diarrhoeal diseases among caregivers of 6-12 month old infants presenting to the Out Patients Department (OPD) at Lady Ridgeway Hospital (LRH) with a diarrhoeal disease.

### **Methodology**

A descriptive cross sectional study was carried out at the OPD setting of LRH. Systematic sampling method was used to collect data from 378 caregivers, nursing infants aged 6-12 months affected with diarrhoea. A structured, pre-tested interviewer administered questionnaire was used to assess the feeding practices and associated factors during diarrhoea illness. Data analysis was done by using SPSS Version 17.0.

### **Results**

High response rate of 99% (n=374) was observed. Correct breast-feeding (85.82%, n=321) and liquid feeding (74.86%, n=280) frequency and quantity was observed among the caregivers. Total of 297 (79.42%) were practicing incorrect solid feeding practices, while 32.09% (n=120) of caregivers have stopped solid feeding completely during diarrhoea. Incorrect breast feeding and liquid feeding practices were associated with sociocultural factors such as being non-Sinhalese (p=0.001), non-Buddhists (p=0.002) and educated less than Grade 10 (p=0.026). Correct solid feeding practices were associated with having more than one child in the family (p=0.027) and having more than 6 members in the family (p= 0.032).

### **Conclusions and/ or Recommendations**

Practice of breast-feeding and liquids were satisfactory. Only one fifth of the study population (20.58%, n=81) practiced correct solid feeding during diarrhoea.

**Key Words** – feeding practices, Diarrhoea

## **Knowledge, exposure and responses to passive smoking among adolescents in Thamankaduwa Educational Zone**

E.M. Perera<sup>1\*</sup>, N. Gunawardena<sup>2</sup>

<sup>1</sup>Medical Officer, Epidemiology Unit; <sup>2</sup>Professor in Community Medicine, Faculty of Medicine, University of Colombo.

\*Corresponding author's e-mail: [madhurangiep@gmail.com](mailto:madhurangiep@gmail.com)

### **Introduction**

Passive smoking adversely affects the health of those exposed to it. It causes an array of illnesses among all ages and there is no safe level of exposure. Exposure among adolescents can cause early initiation to tobacco smoking.

### **Objectives**

To determine the knowledge, exposure and response to passive smoking among school going adolescents in a rural setting in Sri Lanka

### **Methodology**

A cross-sectional study was carried out among grade 10 students (n=500) of 7 schools in Thamankaduwa Educational Division selected using a multi stage cluster sampling method proportionate to the size of the student population. A self-administered questionnaire collected the information.

### **Results**

The study included 498 school going adolescents with a response rate of 99.6% (498/500). Only 69.3%, (n=345) had heard of the term passive smoking. Of those who had heard of the term, 83.2%, (n=287) knew the meaning correctly. Assessing in-depth knowledge on the harm caused and health effects on passive smoking, only 2.4% (n=12) of the study population categorized as having a good level of knowledge. Though 28.1% (n=140) were co-habiting with a smoker, quantification of self-reported exposure to tobacco smoke indicated that a majority (81%, n=406) had low exposure levels. A majority of students 92.2% (n=459) provided positive responses indicating that they responded positively or will rescind positively if/when exposed to passive smoking.

### **Conclusions and/or Recommendations**

The level of knowledge on passive smoking was poor among the adolescents in the rural setting in Sri Lanka. Though the exposure to passive smoking is low, the study population indicated that most of their responses to such exposures were/will be assertive. The study recommends that knowledge of adolescents on passive smoking be improved. Though low, the exposures to passive smoking should be further reduced.

**Keywords:** Passive smoking, adolescent, knowledge

## **Correlates of emotional and psychological problems of adolescents aged 12-14 year in Polonnaruwa District**

P A S Senaratne<sup>1\*</sup>, S Sivayagan<sup>2</sup>, S Kasthriarachchi<sup>3</sup>

<sup>1</sup>Senior Registrar, Nutrition Co-ordination Division, Ministry of Health and Indigenous Medicine; <sup>2</sup>Professor in Community Medicine, Faculty of Medical sciences, University of Sri JayawardanaPura; <sup>3</sup>Professor in Psychiatry, Faculty of Medical sciences, University of Sri JayawardanaPura

\*Corresponding Author's e-mail: [arundikapass@gmail.com](mailto:arundikapass@gmail.com)

### **Introduction**

Emotional and psychological status of a person is determined by several modifiable factors such as socio-demographic, individual, family and school related factors. Genetic factors are non-modifiable factors that determine one's mental health status.

### **Objective**

The study was aimed to determine the correlates of emotional and psychological problems of adolescents aged 12-14 year in Polonnaruwa District.

### **Methodology**

An analytical cross sectional study was carried out among adolescents 12-14 years of age attending Grade 7, 8 and 9 classes of Sinhala medium government schools in Polonnaruwa District. Cases and controls were identified using the Sinhala validated, self-administered version of Strength and Difficulties Questionnaire (SDQ). Data pertaining to correlates were collected from the adolescents and their mothers/ female caregivers. Altogether 126 cases and 252 controls were included in the study and they were identified during the prevalence study conducted in the same study setting. The correlates significantly associated with emotional and psychological problems were identified using chi-square test at the level of p value < 0.05 and crude odd ratio (OR) was estimated. Multivariate logistic regression was performed to exclude the effect of confounding and adjusted OR with confidence intervals (CI) were calculated.

### **Results**

In multivariate analysis, alcohol consumption of father/male caregiver (AOR=2.93, 95% CI 1.50-5.71), presence of academic pressure (AOR=3.35, 95% CI 1.20-9.37), none to help with difficulties at school (AOR=2.38, 95% CI 1.01-5.63), poor perception on body appearance (AOR=3.27, 95% CI 1.04-10.29), being bullied (AOR=1.33, 95% CI 1.18-1.49) and being a victim (AOR=1.13, 95% CI 1.01-1.27) were found to be significant correlates of, emotional and psychological problems.

**Conclusion and/or Recommendations:** The emotional and psychological problem is multi-factorial and the need of comprehensive programme involving school, family and community should be emphasized.

**Keywords:** Adolescents, Emotional and psychological problems, Correlates

## **Validation of Household Food Insecurity Access Scale - Sri Lanka**

H.V.B.S. Wijayatilaka<sup>1\*</sup>, D.N. Fernando<sup>2</sup>

<sup>1</sup>Consultant Community Physician, Ministry of Health - Sri Lanka ; <sup>2</sup>Emeritus Professor of Community Medicine

\*Corresponding author's e-mail: [bhanujawijayatilaka@gmail.com](mailto:bhanujawijayatilaka@gmail.com)

### **Introduction**

Until recently, Sri Lanka did not have a validated instrument to assess household food insecurity. Household Food Insecurity Access Scale, developed and used by the United States Agency for International Development's Food and Nutrition Technical Assistance project, was validated for the first time in Sri Lankan context.

### **Objectives**

To adapt and validate the Household Food Insecurity Access Scale in Sri Lanka

### **Methodology**

The tool was adapted to the local setting with the concurrence of both local content experts and target community members and pretested. One hundred and fifty households from different socio-economic levels were purposively identified based on available literature. Validation of the tool was carried out by assessing the convergent validity according to the recommended criteria and approaches. Analysis focused on assessment of internal consistency measured using Cronbach's Alpha, parallelism on question-response curves across socio-economic strata, dose-response relationship with regards to household food insecurity analysed against both socioeconomic strata and food consumption. Socio-economic status was assessed based on the wealth index and household per capita income while food consumption was estimated using a food group frequency questionnaire.

### **Results**

Cronbach's Alpha is 0.879 (95% CI: 0.847 - 0.906) and question response curves are parallel across all wealth index and household per capita income categories. The two extreme levels of households with regards to household food insecurity show a statistically significant dose-response relationship ( $P < 0.001$ ) with categories of both wealth index and household per capita income. Household food insecurity has a statistically significant dose-response relationship ( $P < 0.001$ ) with daily consumption of food from animal sources and fruits.

### **Conclusion and/or Recommendations**

The Household Food Insecurity Access Scale-Sri Lanka can be considered as a valid tool to assess household food insecurity in Sri Lanka.

**Keywords:** Validation, Household Food Insecurity Access Scale, Sri Lanka

## PP 09

### **A preliminary analysis of the progression and outcome of dengue haemorrhagic fever (DHF) in adult patients based on readily available laboratory data**

E. M. Manoj<sup>1</sup>, N.T. Wellappuli<sup>2</sup>, D.L.M. Pullaperuma<sup>3</sup>, G. Ranasinghe<sup>1</sup>, N.D.W. Widanapathirana<sup>2</sup>

<sup>1</sup>Senior Registrar, National Hospital of Sri Lanka

<sup>2</sup>Registrar, Ministry of Health

<sup>3</sup>Registrar, National Hospital of Sri Lanka

\*Corresponding author's e-mail: [nalinda.wellappuli@gmail.com](mailto:nalinda.wellappuli@gmail.com)

#### **Introduction**

Identification of DHF is crucial in reducing morbidity and mortality in Dengue. Current practice of diagnosis of defervescence stage of DHF based primarily on clinical parameters is subjected to misdiagnosis. Substantial evidence on use of laboratory data to support the identification of such patients is limited

#### **Objectives**

To describe the progression and outcome of DHF in adults based on readily available laboratory data.

#### **Methodology**

A descriptive cross-sectional study was conducted in Wards 45, 46 of National Hospital including all serologically confirmed DHF patients admitted between 1.10.2011-31.12.2011. A checklist was used to extract data from Bed Head Tickets.

#### **Results**

N= 31, 12 (38.7%) males, 19 (51.3%) females, mean age - 33.2 years (SD ±14). White Blood Cell (WBC) count was lowest at the onset of critical phase (CP) in 32% and 80.6% had a count ~40000-60000 (n= 19, 61.5%). Mean % rise of hematocrit (HCT) was 8.25 (SD± 6.9). Maximum HCT % change was seen within 36 hours (n= 26, 86.7%).

#### **Conclusion and/or Recommendations**

WBC rose from lowest value in 32% at onset of CP and majority had a WBC at its minimum 12 hours around the onset of CP. This, with the platelet count ≤ 60,000 seen in majority at CP would be useful parameters to determine the onset of CP. Early initiation of intravenous fluid may have lowered the mean %HCT rise compared to the guideline of 20%, indicating that the CP could start well before reaching the 20% change. The constellation of clinical and readily available laboratory parameters rather than individual values is of paramount importance to determine the defervescence phase of DHF.

**Keywords:** Dengue haemorrhagic fever, adults, laboratory investigations

## **Changes in government and trends in alcohol consumption in Sri Lanka between 1989 and 2013**

A Pathmeswaran<sup>1\*</sup>, D. Hettiarachchi<sup>2</sup>, W. N. Perera<sup>3</sup>

<sup>1</sup>Professor in Public Health, Faculty of Medicine, University of Kelaniya; <sup>2</sup> Undergraduatr Medical Student, Faculty of Medicine, University of Kelaniya; <sup>3</sup>Senior Lecturer in Forensic Medicine, Faculty of Medicine, University of Kelaniya

\*Corresponding author's e-mail: [pathmes@gmail.com](mailto:pathmes@gmail.com)

### **Introduction**

Successive governments in Sri Lanka have had policies to decrease alcohol consumption, but the effectiveness of these policies had not been independently assessed.

### **Objectives**

To assess the impact of recent changes of government in Sri Lanka on population alcohol consumption using production data as an indirect measure of consumption.

### **Methodology**

Interrupted time-series regression was performed to assess the impact of changes of government on alcohol production. The data on yearly hard liquor and malt liquor production was obtained from the annual reports of the commissioner of excise for the years 1989 to 2013. Population aged over 14 years for these years was calculated based on the department of census and statistics data. The years 1994 and 2005 in which new executive presidents were elected were taken as the years of changes in government.

### **Results**

Per capita consumption of total absolute alcohol in 1989 and 2013 was estimated as 1.7 and 2.4 litres respectively. There was a significant drop in consumption in 1996 followed by no significant trend till 2005. There was an increase in consumption by 60 ml per year from 2006 and this trend was significant. Per capita consumption of absolute alcohol from malt liquor for 1989 and 2013 was estimated as 50 ml and 600 ml respectively. There was a rise in consumption in 1996 followed by an increase in consumption by 14 ml per year till 2005. There was a 100 ml drop in consumption in 2006 followed by an increase in consumption by 54 ml per year from 2006. All these changes in malt liquor consumption were significant.

### **Conclusion and/or Recommendations**

Though these official data do not cover the large amount of illicit alcohol consumption, they show an overall increase in per capita consumption of 41% in terms of total alcohol and 1100% in terms of malt liquor consumption.

**Keywords:** alcohol consumption, alcohol policy, time-series

## Menstrual disorders among adolescent school girls

V.P.S.D. Pathirana<sup>1\*</sup>, K. Jayaratne<sup>2</sup>

<sup>1</sup>MD Trainee in Community Medicine, PGIM; <sup>2</sup>Consultant Community Physician, Family Health Bureau, Ministry of Health – Sri Lanka

\*Corresponding author's e-mail: [samanpathiranad@gmail.com](mailto:samanpathiranad@gmail.com)

### Introduction

Menstrual problems are common among adolescent girls. Uncorrected menstrual problems may have serious pathological consequences and can adversely affect the daily routine. Seeking care on menstrual morbidities by adolescents is low worldwide.

### Objectives

To determine the prevalence of menstrual disorders, their association with daily activities, sources of information and health seeking behaviour among grade twelve adolescent girls.

### Methodology

A descriptive cross-sectional study was conducted using a self-administered questionnaire. All grade twelve female students (n=348) attending government schools in Seethawaka Educational Division were studied in 2013.

### Results

Overall prevalence of menstrual disorders was 97.7% (n=340). Mean age at menarche was 12.37 (SD+1.37) years. Four (1.2%) cases of precocious puberty and 1 (0.3%) case of delayed puberty were observed. Menstrual disorders reported among study participants were; dysmenorrhoea 234/348 (67.2%), irregular cycles 52/348 (14.9%), premenstrual syndrome (PMS) 51/348 (14.7%), menorrhagia 88/337 (26.1%), hypomenorrhoea 29/337 (8.6%), polymenorrhoea 10/187 (5.3%) and oligomenorrhoea 5/187 (2.7%). Girls with PMS had 3.5 times higher, significant association with disturbance to daily activities compared to those had no PMS (p<0.001). Similarly there was significant association between dysmenorrhoea and disturbance to daily activities (p<0.001).

Main source of information was mother (n=282, 83.9%) while girlfriends and sisters were second and third respectively. Almost an equal preference was observed for both male and female health workers when seeking information.

A larger proportion of girls with menstrual problems perceived them as a normal phenomenon (n=157, 46.7%). More than three quarters did not seek proper treatment (n=243, 87.7%). Only 32 (11.5%) sought western type treatment for menstrual cycle problems.

### Conclusions and/or Recommendations

Menstrual disorders, as a morbidity entity, were common among this study population. Knowledge and utilization of available reproductive health services were very low. Further research to explore need of context-specific health education measures and adolescent friendly healthcare services is recommended.

**Key Words:** Menstrual Disorders, Adolescence, Daily activities, Health Seeking Behaviour

**Lightning injuries among residents in Medical Officer of Health area, Kiriella: Lifetime prevalence, knowledge, attitudes and practices on prevention and associated factors**

K.C. Kalubowila<sup>1\*</sup>, H.D.B.Herath<sup>2</sup>

<sup>1</sup>Medical Officer, Epidemiology Unit, Colombo 10; <sup>2</sup>Consultant Community Physician, Disaster Preparedness and Response Division, Ministry of Health

\*Corresponding author's e-mail: [kckalubowila@yahoo.com](mailto:kckalubowila@yahoo.com)

**Introduction**

Lightning is a bright flash of electric current which originates in a charged cloud. Deaths and injuries due to lightning are commonly reported in Sri Lanka.

**Objectives**

To describe the lifetime prevalence of lightning injuries, knowledge, attitudes and practices on prevention of lightning related adverse effects and to determine the associated factors among residents in Medical Officer of Health area Kiriella.

**Methodology**

A descriptive cross-sectional study was conducted. Study unit was the head of the household. Sample size was 510. Sample method was cluster sampling method. A pre-tested interviewer-administered questionnaire and checklist were used to collect data. A descriptive cross-sectional study was conducted. Sample size was 510. The selection of the sample was done using cluster sampling with probability proportionate to size. A pre-tested interviewer-administered questionnaire and checklist were used to collect data. Lightning injuries were reported as a percentage with 95% confidence interval. Knowledge was categorized as 'good' or 'poor'. Attitude and practices were described in frequencies and percentages. Overall knowledge score and overall attitude score were calculated. Associations between calculated overall knowledge and overall attitude scores were compared with selected socio-demographic factors separately using chi square test and a probability value of less than 0.05 was considered as statistically significant.

**Results**

The response rate was 98.4%. The reported lifetime experiences of lightning injuries was 3.6% (95% CI 2.21-5.5%). Among those who had experience with lightning, most (55.5%, n=10) were in the age group 35-44 years and males (72.2%, n= 13). During the period from 2005 to 2014 most injuries (38.8%, n=7) were reported. High incidence (66.7%, n=12) of injuries has been due to lightning strikes outdoors. Of the population 12.4% (n=62) had a 'Good Knowledge' to protect themselves from lightning strikes. A majority (87.5%, n=439) had positive attitudes towards issues related to prevention of lightning injuries. Most houses (64.9%, n= 326) had functioning earth wires and earth rods. The association with reported and the observed practices on the availability of functioning earth wires and earth rods was found to be statistically significant (p<0.05).

**Conclusion and/or Recommendations:** A fewer of the study participants had a good knowledge on prevention of lightning injuries but part of them lacked the knowledge on safe body posture to be adopted when they were outdoors during lightning strikes. It is important to educate people not to stay outside during the period of lightning.

**Keywords:** Lightning injuries, associated factors, residents



## Pattern of Facebook usage, attitudes and Face book addiction among a sample of University Students

L.H.A.N.M. Lokuhapuarachchi<sup>1</sup>, P.Logapasath<sup>1</sup>, A.K.Liyanage<sup>1</sup>, P.D.Ranasinghe<sup>2\*</sup>

<sup>1</sup>Undergraduate Medical Student, Faculty of Medicine, University of Colombo; <sup>2</sup>Registrar in Community Medicine, Health Education Bureau

\*Corresponding author's e-mail: [priyangan@yahoo.com](mailto:priyangan@yahoo.com)

### Introduction

Facebook which is the most popular social media at present has been questioned since its origin in Sri Lanka owing to several issues raised time to time among young generation.

### Objectives

To identify the pattern of Facebook usage, Facebook addiction, attitudes towards Facebook and factors associated with increased usage among university students of a selected faculty in University of Colombo.

### Methodology

A university based descriptive cross sectional survey was carried out with a systematic sample of 118 students of second academic year from the Faculty of Management and Finance, University of Colombo and the data were collected using self-administered questionnaire. Facebook addiction was assessed using Bergen Facebook addiction scale.

### Results

The response rate was 84.7%. The majority were males (70%, n=70), mean age 22.3 years (SD=1.083). Ninety percent (n=90) used Facebook at some point in their life. Median duration of Facebook usage per week was 175min (IQR 82.5-240 min). Facebook was accessed with mobile phones by a majority (71.1%, n=64), 23.8% (n=21) experienced privacy issues and 'profile hacking' was faced by 39.13% (n=9). It was perceived as an unsafe mode to socialize by 36.7% (n=33) and 43.3% (n=39) stated its usefulness for academic purposes. Of them 70% (n=70) perceived as 'it did not reduce their interest in other hobbies' and 25.6% (n=23) perceived as 'Facebook had reduced their interest in group activities'. One quarter (24.4%, n=22) of Facebook users stated that interest got reduced with time.

Only a minority (2.22%, n=2) identified as addicted to Facebook and approximately one third (35.56%, n=32) were identified as increased Facebook usage. Accessing Facebook to spend time ( $\chi^2=4.333$ ; df=1; p=0.03) and to communicate with the partner ( $\chi^2=4.774$ ; df=1; p=0.028) was significantly associated with increased usage.

### Conclusion and/or Recommendations

Majority of the university students of the selected faculty are Facebook users and are not addicted to Facebook. Educating relevant groups on issues related to Facebook and safe usage should be given priority to prevent unexpected psychological trauma.

**Keywords:** Facebook, addiction, University students

## **Knowledge and practices on prevention and control of hypertension in adults in a selected rural Medical Officer of Health area in Sri Lanka**

N.R. Liyanage<sup>1\*</sup>, S.M. Arnold<sup>2</sup>

<sup>1</sup>Medical Officer, National Cancer Institute; <sup>2</sup>Director, Infectious Disease Hospital

\*Corresponding author's e-mail: [nadeejaro@gmail.com](mailto:nadeejaro@gmail.com)

### **Introduction**

Hypertension which is a major non communicable disease and a global public health problem has infiltrated the rural population of Sri Lanka. Since a majority of the Sri Lankan population living in rural areas the knowledge and practices on hypertension in the rural population is important for implementation of successful prevention and control strategies.

### **Objective**

To assess the knowledge and describe the practices on prevention and control of hypertension in adults in a rural population in Sri Lanka.

### **Methodology**

A descriptive cross sectional study was carried out among males and females 18 years and above who were permanent residents in the Beliatta Medical Officer of Health area in the Hambanthota District. Multistage cluster sampling method was used to select the required sample of 266 subjects from 12 Public Health Midwives areas. Interviewer administered questionnaire was used as the study instrument.

### **Results**

The mean knowledge score was 69.5 (SD=18.2) out of 100 and 88.4% (N=235) of the sample had a satisfactory knowledge. Among the 54 hypertensives 33.4% (N=18) were undiagnosed at the time of blood pressure measurement during the study. During the past three months 72% (N=26) of the 36 already diagnosed hypertensives had their blood pressure checked at least once. Only 50% (N=18) of the diagnosed hypertensives had a controlled blood pressure level. Of the diagnosed hypertensives 22.2% (N=8) were currently not on treatment. More than 50% of already diagnosed hypertensives had following practices: regular physical activity or exercise 58.3% (N=21), reduced salt intake 69.4% (N=25), recreational activities to reduce stress 80.6% (N=29), Meditation 50% (N=18), reduced consumption of fast food 97.2% (N=35) and checking the blood pressure regularly 83.3% (N=30).

### **Conclusion and/or recommendations**

Although majority of participants had a good knowledge score a considerable percentage of people with high blood pressure were undiagnosed and had poor control. Policy makers should take this fact into consideration when planning and implementing population strategies to prevention and control of hypertension.

**Key words:** Hypertension, Knowledge, Practices

## **Prevalence and correlates of sexual abuse during childhood-experiences from the Gampaha District**

N.K. Chandrartne<sup>1\*</sup>, A.D. Fernando<sup>2</sup>, N.S. Gunawardena<sup>3</sup>

<sup>1</sup> Registrar in Community Medicine, Department of Community Medicine, Faculty of Medicine, University of Colombo.; <sup>2</sup>Department of Paediatrics, Faculty of Medicine, University of Kelaniya; <sup>3</sup>Professor in Community Medicine, Department of Community Medicine, Faculty of Medicine, University of Colombo  
\*Corresponding author's e-mail: [nadkamil@yahoo.com](mailto:nadkamil@yahoo.com)

### **Introduction**

Sexual abuse during childhood is a human tragedy leading to lifelong adverse health, social, and economic consequences for survivors.

### **Objectives**

To determine the prevalence and correlates of sexual abuse during childhood among young adults aged 18-20 years schooling in the Gampaha District.

### **Methodology**

A descriptive cross-sectional study was conducted among 1500 schooling young adults selected by a multistage cluster sampling method from Gampaha District. Experiences of specified sexual abusive acts before they reached the 18th birthday were inquired into using the culturally adapted, translated and validated version of ICAST-R (ISPCAN Child Abuse Screening Tool-Retrospective Version). Severity of abusive experiences was assessed using a scoring mechanism taking into account the nature, frequency and consequences of abuse. A case control study with multivariate analysis was conducted to determine the correlates of being sexually abused.

### **Results**

Prevalence of sexual abusive experiences during childhood was 9.1% (95% CI=7.6-10.5) with 0.2% (n=3) being severe. Most abusive acts experiences had occurred during the ages of 13-18 years. The commonest perpetrators were neighbours. Adjusted correlates for being sexually abused were ever watched pornography (OR= 3.96, 95%CI=2.1-7.48), conduct problems (OR=5.80, 95%CI=1.79-18.74), father with disability limiting activities of daily living (OR=15.15, 95%CI=1.56-146.69) and mother's low education (OR=2.30, 95%CI=1.23-4.35), poor communication with father (OR=2.84, 95%CI=1.35-6.01), and poor alienation with peers (OR=3.25, 95%CI=1.08-9.77) and frequent physical aggression between siblings (OR=2.06, 95%CI=1.12-3.77). Among abused, 29.6% (n=40) had disclosed the incident with majority reaching friends.

### **Conclusion and/or recommendations**

Prevalence of sexual abusive experiences during childhood was high among schooling young adults. Findings are recommended to be used to advocate for targeted preventive interventions to address the identified modifiable correlates. The identified non-modifiable factors should be used to identify the children at risk of abuse.

**Key words:** Sexual abuse, Prevalence, Correlates

**Assessment of the level of knowledge, attitudes and practices on menstrual hygiene among the grade ten school girls and female teachers and facilities for promotion of menstrual hygiene management at schools in the district of Kalutara, Sri Lanka**

W.M.P.A. Fernando<sup>1\*</sup>, P. Jayawardana<sup>2</sup>

<sup>1</sup>Senior Registrar in Community Medicine, National Institute of Health Sciences Kalutara.; <sup>2</sup>Professor in Community Medicine, Department of Public Health, Faculty of Medicine, University of Kelaniya.

\*Corresponding author's e-mail: [asanthib68@yahoo.com](mailto:asanthib68@yahoo.com)

**Introduction**

Menstruation is a natural phenomenon surrounded with misconceptions. Menstrual hygiene management (MHM) is a poorly acknowledged problem and most female adolescents lack proper knowledge and attitudes on correct MHM practices.

**Objectives**

To assess the level of knowledge on menstruation and knowledge, attitudes and practices on menstrual hygiene among adolescent school girls, and assess knowledge on menstruation and knowledge and attitudes on menstrual hygiene among female teachers of grade ten classes and assess the human resource and physical facilities available at schools for promotion of menstrual hygiene in the district of Kalutara, Sri Lanka.

**Methodology**

Descriptive cross sectional study was conducted by using multi stage stratified cluster sampling technique. Computed sample sizes were 720 female students and 282 female teachers. Forty eight clusters were selected from 47 schools and each cluster comprised with 15 students/cluster and 6 teachers/cluster. Data was obtained by applying self-administered questionnaires for students and teachers and check list for assessing the availability of supportive environment for MHM in schools. Data entry and entire data processing was done using SPSS Version 16.

**Results**

Satisfactory overall, knowledge, and practices among students were 25% (95%CI: 21.9%-28.3%) and 17.3% (95%CI: 14.7%-20.3%) respectively. Proportion of students with satisfactory attitudes was 67.5% (95%CI: 64.0%- 70.9%). Satisfactory overall, knowledge and attitudes among teachers were 89.3% (95% CI: 85.4%-92.6%) and 89.4% (95%CI: 85.4%-92.6%). Supportive environment was present only in 48.9% (95%CI: 34.9%-63.1%) of the schools.

**Conclusion and/or recommendations**

Except for teachers, the knowledge and practices among students were poor and the schools equipped with facilities to provide menstrual hygiene practices were low in number. Recommended to develop and implement an intervention apply by female teachers to promote the MHM among the adolescent school girls.

**Keywords:** Menstrual hygiene, female adolescents, knowledge, attitudes, correct MHM practices.

## PP 17

### Export Processing Zone workers knowledge on occupational hazards

S.M. Arnold<sup>1\*</sup>, S.J. Senanayake<sup>2</sup>, R.M.S.D. Fernando<sup>3</sup>, C.J. Denawaka<sup>4</sup>, R.P.P. Karunapema<sup>5</sup>, N.C. Pallawatta<sup>6</sup>

<sup>1</sup>Consultant Community Physician, Infectious Disease Hospital; <sup>2</sup>Registrar in Community Medicine, Family Health Bureau; <sup>3</sup>Consultant Community Physician, District General Hospital, Chillaw, <sup>4</sup>Medical Officer of Health, MOH Office, Battaramulla;; <sup>5</sup>Consultant Community Physician, Rehabilitation Hospital, Ragama; <sup>6</sup>Consultant Community Physician, National Programme for Control of Tuberculosis & Chest Diseases  
\*Corresponding author's e-mail: [mahendra\\_arnold@yahoo.com](mailto:mahendra_arnold@yahoo.com)

#### Introduction

Globally over 317 million workers are affected by occupational injuries and diseases every year. A majority of workplaces are in-built with hazards. This fact applies to industries established in Export Processing Zones in Sri Lanka under state patronage. Workers' knowledge on occupational hazards would reduce risks from the hazards and unsafe work practices.

#### Objective

To assess the knowledge of workers of Export Processing Zone on common occupational hazards

#### Methodology

A descriptive cross sectional study carried out among the Export Processing Zone workers in the Biyagama Medical Officer of Health area. Pre tested interviewer administered questionnaire was used as the study instrument. A sample of 200 workers, selected using systematic sampling method, was included in the study.

#### Results

A total of 188 workers participated with a response rate of 94%. The fact that occupation can be hazardous to health was known by 68.6% (n=129) of the workers. However, only 50% (n=94) knew that exposure to chemicals used in industries could give rise to long term harmful health effects. Nearly half (49.5%, n=93) knew that excessive heat affect work performance and increases the risk of accidents. The fact that excessive noise can cause hearing loss was known by 69.7% (n=131). Only 42% (n=79) knew that poor lighting give rise to increased risk of accidents. Minimizing risk of adverse health effects due to exposure to hazards by using personal protective equipment was known by 75.5% (n=142) of workers.

#### Conclusion and/or Recommendations

Although satisfactory knowledge was seen in many areas, lack of knowledge was observed on certain key occupational hazards. These areas should be addressed in the future training and awareness programmes for workers together with improving working conditions.

**Keywords:** Occupational hazards, Export Processing Zone, Knowledge

## **Fever detection methods and association of usage of a thermometer with selected outcomes in children treated as dengue fever**

P.K. Buddhika Mahesh<sup>1\*</sup>, S.M. Arnold<sup>2</sup>, R.M.S.D. Fernando<sup>3</sup>

<sup>1</sup>Registrar in Community Medicine, Ministry of Health; <sup>2</sup>Consultant Community Physicain, Medical Superintendent, Infectious Disease Hospital; <sup>3</sup>Consultant Communy Physician, Medical Superintendent, District General Hospital, Chillaw

\*Corresponding author's e-mail: [buddhikamahesh@ymail.com](mailto:buddhikamahesh@ymail.com)

### **Introduction**

Fever is the main symptom in dengue which is a major public health problem in Sri Lanka. Accurate detection of fever is vital for timely management of dengue. There is diversity in the methods used to detect fever among the public.

### **Objective**

To describe the methods used by parents to detect fever and association of usage of a thermometer with selected outcomes in children treated as dengue fever

### **Methodology**

A descriptive cross sectional study was carried out at the Lady Ridgeway Hospital for Children, Colombo. Systematic sampling was done to select a sample of 425 children. Response rate was 99.5% (n=423). Methods used by parents to detect fever were assessed using an interviewer administered questionnaire which was administered to the parent. Associations between usage of a thermometer and selected outcomes were evaluated.

### **Results**

Of the respondents 50.4 % (n=213) touched the forehead, 1.9% (n=08) touched the feet, 0.7% (n=03) sensed a warmth near the child to detect fever. A thermometer was available in 201 (47.3%) families. Thermometer was used only by 32.2% (n=136) to detect fever. The Mercury-in-glass thermometer was kept for less than 2 minutes by 25 (22.3%).A quarter did not use the thermometer between drug doses. Those who used a thermometer had associations with; duration of hospital stay (OR=0.5, CI=0.3 to 0.8), elevation of liver enzymes (OR=0.9, CI=0.6 to 1.4) need of intense monitoring (OR=0.8, CI=0.5 to 1.3) out of which the former was statistically significant (p=0.005).

### **Conclusions and/or Recommendations**

Practice of unreliable methods of fever detection as well as incorrect thermometer-related practices are common. Usage of a thermometer to detect fever provides favorable outcomes especially in relation to duration of hospital stay. Strengthening health education programs on fever detection using thermometers would be helpful in reducing the morbidity and mortality from dengue.

**Keywords:** Dengue, Fever detection, Thermometer

## Incidence, knowledge, attitudes and practices on wasp sting in an Estate community in Agarapathana

B.S.Chithrananda<sup>1\*</sup>, S.Dhanapala<sup>2</sup>

<sup>1</sup>Medical Officer, DH Bandaragama, RDHS Kaluthara; <sup>2</sup>Consultant Community Physician, Family Health Bureau

\*Corresponding author's e-mail: [surangamo2@gmail.com](mailto:surangamo2@gmail.com)

### Introduction

Wasps are important in natural bio-control and in preserving an ecological balance in agriculture. In the Nuwaraeliya District, wasp stings are a common emergency among the estate community. During a single episode 20-50 workers get stung and are rushed to the local hospital.

### Objective

To assess the incidence, knowledge, attitude and practices onwasp sting among estate workers on Balmoral estate, Agarapathana.

### Methodology

A community based descriptive cross sectional study was conducted among the adult population of 18 years and above. A sample of 422 estate workers were selected using probability proportional to size sampling technique from the 3 estate Divisions. Structured interviewer administered questionnaire was used for data collection.

### Results

The response rate was 95.7 % (n = 404). Incidence of wasp sting during the past one year was 34.2% (n=138). Overall 70.3% (n= 284) of the sample reported a history of ever being stung by wasps.

Overall knowledge was classified as good in 65.8 % ( n=266)of the sample. The knowledge between the estate divisions  $\chi^2$  11.073 (p= 0.004) and previous experience of wasp sting  $\chi^2$  8.89 (p= 0.003) was statistically significant. A good attitude was seen in 75.2% of the study population.

The practices reported by respondents who were ever stung showed that 78.2% (n=222) reported removing of the sting, 26.8% (n=76) reported taking some type of medicine, while only 2.8% (n=8) and 9.9% (n=28) reported using ice and removing of bangles/ring respectively. Of the respondents who were ever stung, 56% (n=159) reported that the first contact hospital was Agarapathana Divisional hospital while 37.7% (n=107) reported it as the estate hospital. Out of the patients who had taken initial treatment from the estate hospital, 71.9% (n=77) had been given first aid while 26 (24.8%) patients were provided with transport facilities to Agarapatana hospital. The estate did not have disaster preparedness and response plan.

### Conclusion and/or recommendations

Wasp sting among the estate community is a health problem. Programs to improve knowledge, first aid practices and having a preparedness and response plan is recommended.

**Key words:** Incidence, estate, wasp sting

## **Knowledge and attitudes of food hygiene and food-borne diseases among food handlers in small scale food manufacturing establishments in Medical Officer of Health area, Dehiwala**

R.M.T.D. Rathnayake<sup>1\*</sup>, I. Suraweera<sup>2</sup>

<sup>1</sup>Medical Officer, National Dengue Control Unit, Narahenpita; <sup>2</sup>Consultant Community Physician, Environmental and Occupational Health Unit, Ministry of Health, Colombo

\*Corresponding author's e-mail: [imdulanjani@gmail.com](mailto:imdulanjani@gmail.com)

### **Introduction**

Small scale food manufacturing establishments (SSFME) cater to a considerable number of clients and could have significant effect on food safety and hygiene. SSFME (food factories and bakeries) were defined as work settings with worker strength of 50 or less than 50, which were registered in Business Registers (having trade licenses) at the local authority (Municipal Council). Food safety in SSFME is a key to promoting good health among consumers. Food handlers play a major role in this regard.

### **Objectives**

To describe the knowledge and attitudes of food hygiene and food-borne diseases (FH & FBD) among food handlers in SSFME in Medical Officer of Health (MOH) area, Dehiwala.

### **Methodology**

A descriptive cross-sectional study was conducted among all food handlers in SSFME in MOH area, Dehiwala (n=320) by using a pretested interviewer administered questionnaire. Knowledge and attitudes on FH&FBD were assessed based on pre decided allocation of marks and Likert scale respectively. Data was analyzed by using descriptive statistics and chi square test.

### **Results**

The response rate was 94.1% (301/320). Mean age of the study population was 33.2 years (SD=12.2 years) and the majority were males 84.7% (n=255). A total of 46.5% (n=140) food handlers had passed GCE O/L. Of the study population, the mean duration of service in food related field was 9.4years (SD=8.7 years) and 35.5% (n=107) of food handlers had received awareness on FH& FBD. The overall knowledge on FH&FBD was poor in 96.0% (n=289) of the food handlers. Of the study population, 58.5% (n=176) unaware of any FBD, 12.6% (n=38) unaware of any water purification method, 14.3% (n=43) unaware of any personal hygienic methods, 42.5% (n=128) unaware of hand washing as a hygienic practice but 99.0% (n=298) aware on clinical features of gastro enteritis. Favorable attitude towards usage of personal protective equipments and utensils among food handlers was 71.95%, and 80.7% (n=243) had a favorable attitudes towards receiving of in-service training on food safety. Significant associations were found between knowledge on FH & FBD with level of education (p=0.005) and awareness received on FH & FBD (p=0.03).

### **Conclusion and/or Recommendations**

The majority of the food handlers in SSFME had poor knowledge on FH & FBD. The majority of the food handlers had favorable attitude towards practicing personal hygienic measures. Health education programmes to be carried out covering these aspects regularly.

**Keywords:** Small scale food manufacturing establishments, food hygiene, food borne diseases



**Perceptions on responsible dog ownership among persons aged 20-59 years in Medical Officer of Health area, Maharagama**

L.S.D. De Silva<sup>1\*</sup>, V. Kumarapeli<sup>2</sup>

<sup>1</sup>Medical Officer, National Dengue Control Unit, Narahenpita; <sup>2</sup>Consultant Community Physician, National Institute of Mental Health, Angoda

\*Corresponding author's e-mail: [sinha.dhanushka@gmail.com](mailto:sinha.dhanushka@gmail.com)

**Introduction**

In Sri Lanka, the main transmitter of human Rabies is the dog. One of the strategies of preventing human Rabies is through promotion of responsible dog ownership (RDO). RDO includes provision of food and water, shelter, immunization against common diseases, regulation of breeding, de worming, veterinary care and safe environment to live.

**Objectives**

To describe knowledge attitudes and practices on RDO among persons aged 20-59 in Medical Officer of Health area, Maharagama

**Methodology**

A community based cross sectional study was carried out among a sample of 340 participants, aged 20-59 years in Medical Officer of Health area Maharagama, selected using probability proportionate to population size cluster sampling. Data were collected using a pre-tested interviewer administered questionnaire, good knowledge and favourable attitudes were assessed by a predetermined marking scheme and a 5 point Likert scale respectively, analysed by using descriptive statistics and chi square test.

**Results**

Response rate was 94.7% (n=322). Among respondents 51.0% (n=165) were females; 74.2% (n=239) married; 64.6% (n=208) employed; 11.5% (n=37) dog owners; mean age 38.1 years (SD=11.2 years) and median income Rs.38,000.00 (IQR Rs.31,000.00). Of the respondents: 69.3% (n=223) had good overall knowledge; 99.1% (n=319) knew about rabies vaccination; 78.0% (n=251) knew frequency of rabies vaccination, 73.3% (n=236) had overall favourable attitudes. Among dog owners: 94.6% (n=35) had immunized dog against rabies and 32.4% (n=12) had adapted breeding control measures.

Significant associations were found between: good knowledge on RDO with younger age (p=0.02), higher level of education (p<0.001), being employed (p<0.001), owning a dog (p<0.001); Favourable attitudes on RDO with younger age (p<0.001), being unmarried (p=0.01), higher level of education (p=0.02); Practice of putting a collar with higher level of education (p<0.01); Practice of regulation of breeding with owner being unmarried (p=0.02).

**Conclusion and/or Recommendations**

There are gaps in knowledge, attitudes and practices with regard to RDO and targeted health education should be done to promote it.

**Keywords:** Responsible dog ownership

**Profile of whole body donors residing in Western Province registered with Department of Anatomy, University of Sri Jayewardenepura**

L.J. De Silva<sup>1</sup>, L.S.D. De Silva<sup>2\*</sup>, S.G Yasawardene<sup>3</sup>

<sup>1</sup>PG Trainee, Faculty of Medicine, Colombo; <sup>2</sup>Medical Officer, National Dengue Control Unit; <sup>3</sup>Professor of Anatomy and Dean, Faculty of Medical Sciences, University of Sri Jayewardenepura

\*Corresponding author's e-mail: jayamalidesilva@gmail.com or sinha.dhanushka@gmail.com

**Introduction**

Knowledge of gross anatomy has evolved through and continues to be subsisted on the human cadaveric dissections. Bodies are received from public as donations according to their will made by them while alive. All the body donors are registered in a register maintained by Department of Anatomy, University of Sri Jayewardenepura

**Objectives**

To describe the profile of the whole body donors from Western Province registered with Department of Anatomy, University of Sri Jayewardenepura

To determine the differences between the study sample and population of Western Province

**Methodology**

A descriptive cross sectional study was done among all the donors residing in Western Province registered with Department of Anatomy, University of Sri Jayewardenepura. Data was collected by using a pre tested interviewer administered questionnaire via telephone interviews and analyzed using descriptive statistics and Z test of difference between two proportions.

**Results**

Response rate was 94.7% (n=125). Majority of body donors were females (57.6%, n=72), Sinhalese (99.2%, n=124), Buddhist (98.4%, n=123), ever married (88.4%, n=111) and educated (56.8%,n=71). Their mean age was 58.8 years (SD=14.6 years) and median income was Rs.17000.00 (IQR-Rs.18, 000.00).Majority had decided to donate as altruism towards medical profession (83.2%, n=104).There were significant differences between study sample and population of western province (source population) with regard to being Sinhalese (p<0.001) and being Buddhist (p<0.001).

**Conclusion and/or Recommendations**

Majority of body donors were Sinhalese and Buddhist and this composition was significantly different from composition of the Western Province (source population).

**Keywords:** body donor, profile

## **Knowledge, attitudes & practices of Universal Precautions among nursing officers at Accident Service Units in selected Teaching Hospitals**

J.M.D.C Jayasinghe<sup>1</sup>, S.P.G.S. Jayasekera<sup>1</sup>, J.A.P.M Jayasinghe<sup>1</sup>, W.D.Y.N. Walpita<sup>2\*</sup>

<sup>1</sup>Undergraduate Medical student, Faculty of Medicine, University of Colombo; <sup>2</sup>Registrar in Community Medicine, Faculty of Medicine, University of Colombo

\*Corresponding author's e-mail: [yasaswinw@yahoo.com](mailto:yasaswinw@yahoo.com)

### **Introduction**

Universal precautions are an approach to infection control from human blood and body fluids as if they were known to be infectious at all times. It reduces the risk of transmission of infection from both recognized and unrecognized sources. Practice of universal precautions is mandatory for health care workers as they are at high risk of acquiring above infections through blood and body fluids.

### **Objective**

To describe the knowledge, attitudes & practices of universal precautions among Nursing Officers (NOs) at Accident service units in selected hospitals.

### **Methodology**

A descriptive cross sectional study was done among the NOs currently working at accident service units of National Hospital & Colombo South Teaching Hospital. Convenient samples of 122 NOs, working at the same setting for more than 3 months were selected. A Self administered questionnaire was used to obtain the information. Knowledge was assessed under 6 main themes namely, diseases prevented by universal precautions, hand washing, use of gloves and other personal protective equipment (PPE), managing an accidental needle prick and disposal of sharps, using 29 stems. Attitudes towards universal precautions was assessed using 7 stems and expressed practice was assessed under 4 main themes; hand washing, use of personal protective equipment and handling of sharps using 17 stems. Knowledge, attitude and practice scores were calculated. More than 75% score levels were categorized as good in all 3 aspects. Association between knowledge and practices was assessed using chi square test of significance.

### **Results**

When assessing the overall knowledge, 108 (88.5%) NOs were found to have good knowledge on universal precautions. On analyzing the specific questions on hand washing 113-(92.6%) had good knowledge. The overall attitude towards adhering to universal precautions was favorable in 92(76.2%) NOs. However a significant proportion (67-54.9%) had unfavorable attitudes towards using proper PPE in handling blood. In contrast to the overall knowledge and attitudes only 24 (19.7%) NOs had good practices. A statistically significant relationship between knowledge and practice of universal precautions was found.

### **Conclusions and/or Recommendations**

According to the results, knowledge and attitudes regarding universal precautions were satisfactory, but the practice of universal precautions was inadequate. Main recommendations were improvement of facilities needed to practice universal precautions, implementing measures to remind and monitor practice of universal precautions and implementing measures to minimize the harm from accidental needle stick injuries.

**Key Words:** Universal Precautions, Nursing Officers, Knowledge, attitudes and practice

## **Cardiac rehabilitation (CR) and functional disability among patients after acute coronary syndrome or an intervention for cardiac reperfusion**

V. Kumarapeli <sup>1\*</sup>, R. de A. Seneviratne <sup>2</sup>

<sup>1</sup>Consultant Community Physician, National Institute of Mental Health, Ministry of Health; Professor of Community Medicine, Faculty of Medicine, Kothalawela Defence University

\*Corresponding author's e-mail: [vindyalk@yahoo.com](mailto:vindyalk@yahoo.com)

### **Introduction**

Ischemic Heart Disease is the leading cause of mortality in government hospitals in Sri Lanka since 1998. Cardiac rehabilitation (CR) is offered to patients after Acute Coronary Syndrome (ACS) or interventions for cardiac reperfusion (ICR, includes advice/action on regular medication, management of an acute cardiac event in future, control of risk factors (unhealthy diet, physical inactivity, high BMI/blood pressure/sugar/lipids).

### **Objectives**

To describe CR received, functional disability and access to CR services among patients after ACS or ICR

### **Methodology**

A community-based cross sectional survey was carried out in the District of Gampaha, among 2420 persons, aged  $\geq 30$  years selected by cluster sampling with male:female (1:1). Collected data using a pre-tested interviewer administered questionnaire: advice on medication and management of future acute cardiac events; measured blood pressure, assessed sugar and lipid levels by clinic records; used food frequency questionnaire, IPAQ-short version, Access to Ambulatory care Questionnaire for CHD, WHODAS2.0.

### **Results**

Out of the 61 diagnosed with ACS/ICR: 62.3% (n=38) males, co-existing hypertension 62.3% (n=38), DM 32.8% (n=20), dyslipidaemia 55.7% (n=34). Discharge advice given to: 83.7% (n=51) regular medication, 93.4% (n=57) management of future cardiac events, Of them 78.7% (n=48) consumed sub-optimal diet, 73.8% (n=45) low physical activity, 11.5% (n=7) current smokers, 62.3% (n=38) BMI $>23.0$ , 18.0% (n=11) blood pressure $\geq 140/90$  mmHg, 16.4% (n=10) blood sugar $\geq 125$ mg/dl, 31.1% (19) dylipidaemia. CR services reported as: 91.8% (n=56) available, 13.1% (n=8) accessible, 62.3% (n=38) acceptable, 65.6% (n=40) accommodative, 36.1% (n=22) affordable; disability level: 49.2% (30) mild, 37.7% (n=23) moderate, 4.9% (n=3) Severe/Extreme.

### **Conclusions and/or Recommendations**

Level risk factor control was not satisfactory for diet, physical activity and BMI. Although CR services were available always or most of the time, they were not accessible and affordable.

**Key words:** cardiac rehabilitation, Ischemic Heart Disease Acute Coronary Syndrome, functional disability, access

## **Associated factors of occupational stress among executives in the garment industry**

W.M.S. Weerakoon<sup>1\*</sup>, S.M Arnold<sup>2</sup>

<sup>1</sup>Medical Officer of Health, MOH office Horana; <sup>2</sup>Consultant Community Physician, Medical Superintendent, Infectious disease hospital

\*Corresponding author's e-mail: [wms.weerakoon@gmail.com](mailto:wms.weerakoon@gmail.com)

### **Introduction**

The socio-economic and health related burden on occupational stress is an underestimated factor globally. Understanding the determinants of occupational stress in a highly competitive sector such as the garment industry is important to face the future challenges successfully.

### **Objective**

To describe factors associated with occupational stress among executives in garment factories in Horana and Ingiriya Medical Officer of Health areas.

### **Methodology**

A cross sectional descriptive study was conducted among 474 executives in the garment factories in the Horana and Ingiriya MOH areas. A self-administered questionnaire was used as the study instrument. The Job Content Questionnaire (JCQ) was used to assess the level of occupational stress and association with different factors was tested by chi square test.

### **Results**

The factors significantly associated with high job strain included age above 45 years ( $P=0.049$ ), being a female, (OR =1.7 95% CI: 1.06-2.8), not having a degree (OR =2.55, CI: 1.3-4.8), income less than Rs.50,000.00 (OR = 1.7, 95% CI: 1.05 - 2.7), paying for pawning loans (OR =2.4,95% CI =1.27-4.42), being a junior executive (OR =2.04 95% CI= 1.07-3.9), using public transport ( $P=0.001$ ), the engagement in physical exercise less than two hours per week (OR =2.5, 95% CI=1.1-5.7) and hypertension (OR =2.39, 95% CI=1.24-4.6). The prevalence of high job strain and iso-strain was 22.1% (95%CI=20.04-24.16) and 17.8%(95% CI=19.70-15.90) respectively.

### **Conclusion and/or Recommendations**

Occupational stress among executives in garment industry is associated with multiple factors. A program should be introduced targeting executives to minimize stress with special attention on the identified associated factors.

**Keywords:** Occupational stress, Garment industry, Associated factors, Executives

**Occupational injuries in carpenters in the Moratuwa Medical Officer of Health area**

H.N.A. Fonseka<sup>1\*</sup>, S.M. Arnold<sup>2</sup>

<sup>1</sup>Additional Medical Officer of Health, Office of the Medical Officer of Health –Ratmalana; <sup>2</sup>Director, Infectious Disease Hospital, Infectious Disease Hospital- Angoda

\*Corresponding author's e-mail: [fony\\_14@yahoo.co.in](mailto:fony_14@yahoo.co.in)

**Introduction**

Occupational injuries represent a considerable part of the injury burden of the population. Carpentry is a common industry in Sri Lanka. There are many hazards associated with carpentry and injuries can occur due to multiple factors.

**Objectives**

To determine the incidence, describe type of occupational injuries, and work practices among carpenters in the Moratuwa Medical Officer of Health area

**Methodology**

A community based retrospective, descriptive, cross sectional study was conducted to determine the incidence of occupational injuries during three month period preceding the survey using a sample of 352 carpenters. Multistage sampling method was used. Twenty one Grama Niladhari divisions were selected randomly, in which clusters were selected using probability proportional to population size method. From each selected carpentry workshop, one carpenter was selected randomly. A pre tested interviewer administered questionnaire was used as the study instrument. A probability of less than 0.05 was selected as the significant level. Results were expressed as Odds Ratio (OR) and 95% Confidence Interval (CI) using bivariate analysis.

**Results**

Cumulative incidence of occupational injuries for a period of three months was 255.5 per 1000 carpenters (95% CI: 209.8-305.7). The commonest type of injury was superficial cuts (44.6%, n=42). Hands and fingers were commonly affected (64.9%, n=61). Carpenters who do not check machines (OR 2.85; 95% CI: 1.105-7.22, P=0.032), use personal protective equipments (OR 2.14; 1.087-4.21, P=0.025), work without rest (OR 2.3:95%, CI: 1.08-4.94, P=0.034) and work with vibrating equipments continuously (OR 1.9: 95% CI: 1.11-3.37, P=0.024) were significantly associated with occurrence of occupational injuries.

**Conclusion and/or Recommendations**

Incidence of occupational injuries observed is considerably high. Therefore proper mechanism for implementation of regulations, increase awareness and provision of training is required. Focus should be made to conduct prospective longitudinal studies in future.

**Keywords:** Carpenters, Occupational injuries, Incidence, Work practices

**Personal characteristics of teenage pregnancy: findings from Ampara Regional Director of Health Services Division**

I.A. Talagala<sup>1\*</sup>, K.K.K.M. Kodithuwakku<sup>2</sup>

<sup>1</sup>Registrar in Community Medicine, Faculty of Medicine, Colombo; <sup>2</sup>Medical Officer, National Eye Hospital

\*Corresponding author's e-mail: [drishanka@gmail.com](mailto:drishanka@gmail.com)

**Introduction**

Teenage pregnancy causes various negative consequences for the mother and newborn.

**Objective**

To describe personal attributes of adolescents in pregnancy in a rural setting

**Methodology**

A community-based, cross-sectional study was conducted among all adolescents (aged <20 years) registered for antenatal care in the Regional Director of Health Services division-Ampara in 2013 (n=157). Data were collected using an interviewer-administered questionnaire. Descriptive summary statistics were used for analysis.

**Results**

Mean age was 18.2 (SD=0.85) years. Majority (82.8%, n=130) had studied up to grades 6-11 while they discontinued it mainly due to: failing GCE Ordinary Level examination (47.8%, n=75); not interested (16%, n=25) and financial problems (8.3%, n=13). Most (92.4%, n=145) had not received any vocational training. Majority (83.4%, n=131) were unemployed in the previous year, 31% (n=49) were from poor families and in 26% (n=41), either or both parents had not undergone formal education.

Mean age at menarche was 13 (SD=1.6) years, with 90% (n=141) being sexually active in the next 2-6 years. Mean age at their first sexual intercourse was 17.5 years (SD=1.1) and of the partner was 22.3 (SD=2.8), it was after the marriage in 63% (n=99), and 3.2% (n=5) following sexual abuse. Marriage/cohabiting was initiated following an unplanned decision in 45.2% (n=71).

Only 35% (n=55) had planned the current pregnancy, majority based on spouses' wish (41%, n=23). Of the rest (65%, n=102), 65% (n=66) had not used any contraception, following spouses' opposition (22.4%, n=15). Among those on a method (35% n=13), 68.4% (n=9) had used OCP with 60.5% (n=5) incorrectly using it. Almost all never used emergency contraceptive pills (95%, n=149) and never considered abortion (98%, n=154).

**Conclusions and/or Recommendations**

Being school drop-outs, poor parental socio-economic and educational background and poor decision making on family planning characterize the teen pregnancies in Ampara. Reproductive health programmes targeted to school drop-outs at community level is recommended.

**Key words:** Teenage pregnancy, Personal attributes, RDHS division

**History of previous exposure among patients treated for dengue in two tertiary care hospitals in Colombo: 2012-2013**

H.A. Tissera<sup>1</sup>, A. Amarasinghe<sup>1</sup>, J. Weeraman<sup>1</sup>, S. Gunasena<sup>2</sup>, H.M.M. Gunathilaka<sup>1\*</sup>, P.T.S. Prasanga<sup>1</sup>, A.D.R. Madushanka, Y.T.M. De Silva, B.H.C.T. Hettiarachchi, N.K.P.M. Abeysiri, P. Palihawadana<sup>1</sup>

<sup>1</sup>Epidemiology Unit, Ministry of Health, Sri Lanka; <sup>2</sup>Medical Research Institute, Borella

\* Corresponding author's e-mail: minirisigunathilaka@gmail.com

**Introduction**

Dengue is an infection which has become a major public health problem in Sri Lanka over the last few decades. Secondary infection of dengue with a different serotype can lead to dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS). Testing for elevated serum IgG levels can be used together with NS1 antigen and IgM antibody to identify patients with secondary dengue infection.

**Objectives**

The objective of our study is to identify a relationship between secondary dengue infection and the serological results, NS1 antigen, IgM and IgG antibodies.

**Methodology**

Blood samples from a total number of 969 dengue suspecting patients were collected from two sentinel sites of the Colombo district (Lady Ridgeway hospital and Infectious disease hospital) from 2012 March to 2013 November. Dengue NS1 rapid test, IgM and IgG antibody tests were done. Dengue patients with acute infection (NS1 and/or IgM positive) were selected and further analyzed for the presence of IgG antibodies. (secondary dengue infection).

**Results**

Out of 969 total patients, 564 had serologically confirmed acute dengue infection. Of them, 239 (42.4%; n=564) were IgG positive as well. From IgG positive patients, 87 (36.4%; n=239) were less than 15 years old and 152 (63.6%) were 15 years or older.

**Conclusion and/or Recommendations**

According to our study, results of IgG antibody correlate with secondary dengue infection. Past surveys done in the community setting earlier revealed that 50 percent of the children aged less than 12 years had seroconversion, thus vulnerable for secondary infection and its consequences, mainly DHF. Our study shows that more adults are developing secondary infection than primary infection which reflects better dengue control than before.

**Keywords:** Secondary dengue infection, NS1 antigen, IgG antibody, seroconversion



## Serovar pattern and determinants of leptospirosis transmission in Sri Lanka

J.Amarasekera<sup>1</sup>, M. Kodithuwakku<sup>2</sup>, P. Palihawadana<sup>1</sup>, R. Perera<sup>1\*</sup>, S. Ginige<sup>1</sup>, R. Wijesinghe<sup>1</sup>, T. Wijayathilaka<sup>2</sup>, S. Agampodi<sup>3</sup>

<sup>1</sup>Epidemiology Unit, Ministry of Health, <sup>2</sup>DAPH, Ministry of Livestock , <sup>3</sup>Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka

\*Corresponding Author's e-mail: [ruwanikaushalya@hotmail.com](mailto:ruwanikaushalya@hotmail.com)

### Introduction

Knowledge on seropositivity of leptospirosis patients is important in determining species diversity and diagnostic panel in local context. Details on exposure to animal reservoirs should also be an important component in disease investigations.

### Objective

To assess the sero-positivity and factors associated with leptospirosis transmission.

### Methodology

A descriptive study with clinically diagnosed leptospirosis patients based on the leptospirosis case definition, reported to the sentinel surveillance hospitals in 7 hyper-endemic districts, was conducted from June 2013 to February 2014. Serum was obtained from 266 cases at acute stage. However convalescent samples could be obtained only from patients attending clinics two weeks after admission (n=45). A regionally optimized Microscopic Agglutination Test (MAT) panel with 11 serovars was used for testing. The serovar pattern, environmental and animal determinants were assessed for the laboratory confirmed and probable cases.

### Results

A total of 80(30%) patients were laboratory confirmed (n=19,7%) or probable (n=61,23%) cases. The mean age was 43years (SD=13.7) with male predominance(69,86%).All 11 serovars in the MAT panel reacted and the highest seropositivity was observed against *Leptospira interrogans* serovar pyrogenes(18%) followed by icterohaemorrhagiae (15.3%) and australis (14.8%). Of the 11 serovars included, 10 serovars showed diagnostic titres. Animal exposure during previous four weeks was present for rodents in the vicinity (n=68,87%), Dogs (n=30,37.5%), buffaloes (n=10,12.5%) and cattle (n=7,9%). Assisting in animal birthing (n=3,4%), handling animal waste (n=9,11%) and handling animal abortions(n=3,4%) were present in some patients. Environmental determinants included working in the paddy field(n=52.65%), exposure to marshy land(n=50,62.5%), wet soil(n=47,59%), other agricultural lands(n=40,50%), bushes(n=35,44%), gardening(n=35,44%), forest(n=27,34%) and flooding(n=14,18%).

### Conclusions and/or Recommendations

This study confirms the high leptospira serovars diversity in Sri Lanka and need for wider MAT panel for diagnosis. Diverse animal and environmental exposures need to be addressed in implementing control measures in Sri Lanka.

**Key words:** Leptospirosis, Microscopic Agglutination Test

## Field evaluation of measles vaccine efficacy: measles outbreak in Sri Lanka 2013-2014

P.Palihawadana<sup>1</sup>, D.Gamage<sup>1\*</sup>, J.Amarasekara<sup>1</sup>, S.Ginige<sup>1</sup>

<sup>1</sup> Epidemiology Unit, Ministry of Health, Sri Lanka

\*Corresponding Author's e-mail: deepagamage@gmail.com

### Introduction

Field evaluation of measles vaccine efficacy was identified as a more feasible method than more expensive methods of testing vaccine potency or testing serology, during measles outbreaks, once high vaccination coverage is achieved by a known high efficacy vaccine.

### Objective

To evaluate the field level vaccine efficacy of measles vaccination in outbreak situation in Sri Lanka, 2013-2014.

### Methodology

Descriptive cross sectional study was carried out among age group of 1 to 28 years. Those who have received at least one dose of Measles Containing Vaccine (MCV) were selected. Those who were at the age of 9 months in vaccine introduced year (1985) were considered in selecting the upper age limit. Outbreak cases(2013-2014) were identified through routine notification system and vaccination status of selected cases was identified in field special investigations. Cases without documented/adequate history of vaccinations considered as unvaccinated. Census population data and compatible year national vaccination coverage data were used to calculate relevant vaccinated and unvaccinated populations in assessing attack rates.

### Results

A total of clinically confirmed (fever, maculopapular rash with one of cough, corhyza or conjunctivitis) measles cases of 674 in 2013 and 526 in 2014 were included in the study. Laboratory testing rate of clinical cases were around 20-30% and none with documented vaccinated history were laboratory confirmed for measles.

Attack Rates for Vaccinated (ARV) and Attack Rates for Unvaccinated (ARU) were used in calculating field level Vaccine Efficacy (VE) in 2013 and 2014. In 2013, field level VE ( $ARV-ARU/ARU \times 100$ ) among 1-2 years, 3-15 years, 16-28 years were 99.2%, 95.6% and 89.2% respectively. In 2014, field level VE among 1-2 years, 3-15 years, 16-28 years were 99.8%, 94.7% and 92.3% respectively.

### Conclusions and/or Recommendations

Based on clinical measles cases, 8-11% of vaccinated, 16-28 year age group was susceptible for measles. This could be an effect of waning antibodies with advancing age who received a single MCV dose at 9 months of age. It is important to achieve laboratory confirmation of all clinical cases to avoid possible case ascertainment bias.

**Key words:** Measles, Vaccine efficacy

## **Reviewer Acknowledgment**

The Editorial Board of the Journal of the College of Community Physicians acknowledges with gratitude the following for having completed reviews:

Prof Rajitha Wickramasinghe  
Prof. Pushpa Jayawardena  
Prof. Chrishantha Abeysena  
Prof. Nalika Gunawardena  
Prof A. Pathmeswaran  
Dr. Ayesha Lokubalasooryaa  
Dr. Ayendra Balasuriya  
Dr. Deepika Attygalle  
Dr. Sapumal Dhanapala  
Dr. M. Arnold  
Dr. Vindya Kumarapeli  
Dr. Carukshi Arambepola  
Dr. Palitha Karunapema  
Dr. Inoka Suraweera  
Dr. Upul Senarath  
Dr. Padmal De Silva

Dr. Renuka Jayatissa  
Dr. Sampatha Goonawardena  
Dr. Thushara Ranasinghe  
Dr. Ruwan Ferdinando  
Dr. Sheenika Weliange  
Dr. Supun Wijesinghe  
Dr. Shamini Prathapan  
Dr. Manjula Danansuriya  
Dr. Deepa Gamage  
Dr. Samitha Ginige  
Dr. Kapila Jayarathne  
Dr. R. Surenthirankumaran  
Dr. Gamini Jayakody  
Dr. Sriyani Ranasinghe  
Dr. Sugandhika Perera  
Dr. Nirosha Lansakara

## **Online abstract submission system**

The Editorial Board of the Journal of the College of Community Physicians acknowledges Dr. Chaminda Weerabaddana for establishing the online abstract submission system at the [www.ccpsl.lk](http://www.ccpsl.lk) website.

## **Compiled by**

Dr. Upul Senarath  
Dr. Sumal Nandasena  
Dr. Hemali Jayakody  
Dr. Yasara Samarakoon  
Dr. Buddhisha Edirisinghe  
Dr. Mayuri Palihakkara