**Prevention Policy Disease Management**

Abs. No. AB000R27

**Risk of chronic kidney disease in young adults with impaired glucose tolerance: a retrospective cohort study using electronic primary care records**

_Ferozkhan Jadhakhan, Tom Marshall, Ronan Ryan, Paramjit Gill*

Primary Care Clinical Sciences, Institute of Applied Health Research, University of Birmingham, Edgbaston, Birmingham, 1Social Sciences and Systems in Health, University of Warwick, Coventry, UK.

E-mail: fxj733@bham.ac.uk

Abstract Sub-Theme: Chronic Kidney Diseases

The risk of chronic kidney disease (CKD) is known to be elevated in patients with diabetes mellitus but the risk of young adults aged 18 to 40 years with impaired glucose tolerance (IGT) developing CKD is not well characterised. Furthermore, progression of IGT to diabetes and subsequent CKD development is not well understood.

A matched retrospective cohort study was undertaken using The Health Improvement Network (THIN) database, a large dataset of electronic patient records. Included cases were aged 18 to 40, with a diagnosis of IGT and registered at a practice contributing to THIN between 2000 and 2015. The outcome was a diagnosis of CKD determined from either clinical coding or laboratory results. For the primary analysis the unadjusted and adjusted relative risk of CKD in IGT was compared to age, sex and practice matched controls with normoglycaemia. For the secondary analysis we compared the incidence of CKD before to after a diagnosis of type 2 diabetes (T2DM) in the IGT study cohort.

The Incidence Rate Ratio (IRR) for CKD for IGT compared to normoglycaemia was 4.0, (95% confidence interval (CI) 3.2 to 5.1, P<0.001). The adjusted IRR was 2.6 (95% CI, 2.0 to 3.4, P<0.001). The unadjusted IRR was 8.8 (95% CI, 7.7 to 10.0, P<0.001) after IGT patients had developed T2DM and the adjusted IRR was 6.3 (95% CI, 5.5 to 7.2, P<0.001).

IGT is associated with an increased risk of CKD in young adults. The risk of CKD associated with T2DM is higher than that associated with IGT.

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Abs. No. AB000R105

**The challenges and solutions for engaging patients from ethnic backgrounds in rheumatology care**

_Kanta Kumar, Sheila Greenfield*, Paramjit Gill*, Karim Raza*

Division of Nursing, Midwifery and Social Work, The University of Manchester, Manchester, 1Social Sciences and Systems in Health, The University of Birmingham, Birmingham, UK.

E-mail: kanta.kumar@manchester.ac.uk

Abstract Theme: Adherence to Therapy

Rheumatoid Arthritis (RA) is a condition with no cure and can cause disability. RA affects nearly 1 in 100 adults. Early disease is characterised by pain and other features of inflammation, such as heat, swelling of joints, and loss of function. RA is associated with increased costs of co-morbid conditions (such as cardiovascular (CVD) associated with RA. CVD associated with RA is the most common cause of death in RA patients. The risk of developing CVD is worse in some ethnic groups. Furthermore, RA causes physical damage and social, economic, psychological and cultural problems that impact on all aspects of patient life.

There are effective treatments available for RA; however, non-adherence to medicines (not taking medicines as prescribed) is a significant issue in RA. Patients’ perceptions play an important role in adherence to medicines. Our research in the UK, has showed differences between individuals from ethnic groups on how they view their medicines. These views can potentially impact on medication adherence and patients’ satisfaction with information they receive in clinic.

In the UK, we have recently shown that patients from different ethnic backgrounds with RA were dissatisfied with the information they receive about medicines. Patients beliefs about medicines and illness pereceptions were found to be associated with satisfaction with information received by clinicians. This can impact on the way patients perceive their disease activity and information received on treatments. If we understand the needs of patients from ethnic backgrounds we can help improve the health outcomes. This session will provide the audience with
insight into some solutions from the UK that might be helpful in order to improve satisfaction with information, disease enagement and treatment adherence.

Abs. No. AB00OR122

Prevalence and risk factors of diabetes mellitus in rural Punjab

Anurag Chaudhary, Bibhava Vikramaditya, Mahesh Satija
Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana, Punjab, India.
E-mail: anuragdmc@yahoo.co.in

Abstract Sub-Theme: Diabetes

There has been substantial rise in prevalence of diabetes mellitus in India in recent years and data on prevalence in rural areas of north India is scarce.

The objective of this study was to assess the prevalence of Diabetes mellitus in rural population aged thirty years and above, and to assess distribution of risk factors among the population in rural area of district Ludhiana, Punjab. This community based cross sectional study was carried out on 425 subjects selected by systematic random sampling in fifteen villages of the rural field practice area from 1st March 2015 to 28th Feb 2016. Diabetes status was assessed by fasting capillary plasma glucose examination. The prevalence rate of Diabetes Mellitus was found to be 11.3% (known cases of diabetes- 9.4% while newly diagnosed diabetics- 1.9%). The association of diabetes was found to be statistically significant with positive family history, history of alcohol consumption, physical activity, hypertension, high perceived stress level and central obesity. On multiple logistic regression analysis, positive family history, history of alcohol consumption, and high perceived stress level were found to be independently influencing the risk of diabetes.

There is a high prevalence of Diabetes Mellitus in rural areas and the present study has further substantiated the association of various modifiable risk factors with diabetes. Effective intervention measures if applied at this stage can help to prevent impact of the disease on the individual, family and community.

Abs. No. AB00OR127

Primary care giver involvement in management of diabetes mellitus: A community based cross sectional study from urban Puducherry

Bijaya Nanda Naik, K Yuvaraj, Srikanta Kanungo, T Mahalakshmi, Sitanshu Sekhar Kar
Department of Preventive and Social Medicine, JIPMER, Puducherry, India.
E-mail: drnnbijaya@gmail.com

Abstract Sub-Theme: Diabetes

Primary care-givers plays a crucial role in Diabetes control by influencing adherence to drugs and life style modifications. Current study aimed to describe the involvement of primary care-givers in adherence to drugs, diets and life style changes among T2 Diabetes Mellitus patients in the urban field practice areas of JIPMER, Puducherry. In this community based cross-sectional study, the information on primary care-givers involvement in diabetes management of 311 patients was obtained using a semi-structure pre-tested questionnaire. Diabetes control status was obtained from the family folder available at health centre. About 10% of the patients didn't have care-giver. One third of the primary care-givers felt they can contact diabetes from patient. Nearly 90% of the primary care-givers were involved in either of the life style modification, drug adherence, accompanying for consultation or all. About 60% of the primary care-givers discuss with the doctor about diabetes management of the patient. Majority of the primary care-givers check the type (86%) and frequency (89%) of medicines the patient is taking. About 80% of the primary care-givers remind the patient to take medicines when out of station mainly by phone call/SMS. Majority of the primary care-givers encourages patient not to take unhealthy foods (93%), do exercise/yoga (75%) and physical activity (57%). Primary care giver involvement was found to be significantly associated with adherence to drug (p=0.016) and healthy diet (p=0.027) but not with physical activity (p >0.05). Type of primary care giver was not found to be associated with diabetes control status (p >0.05). Involvement of primary care-givers should be encouraged in management of diabetes and health education intervention should not be restricted to diabetics alone.

Abs. No.AB00OR156

Effect of radio and chemotherapy on the haemoglobin and platelet count of advanced cervical cancer patients

Neha Dahiya, Damodar Bachani, Anita Shankar Acharya, Dayanand Sharma, Subhash Gupta, KP Haresh, Goura Kishore Rath
Department of Community Medicine, Lady Hardinge Medical
Abstract Sub-Theme: Cancer

Cervical cancer is the most frequently diagnosed cancer among women in India. Understanding the effect of chemo radiotherapy on haemoglobin and platelet count will help in introducing interventions for better care and outcomes in these women. Because haemoglobin levels <12 g/dl seem to be associated with tumour hypoxia and poorer outcomes of radiotherapy in a number of patient populations, ignoring even modest anaemia can result in decreased loco regional control, overall survival, and quality of life (QOL). This follow up study was undertaken at Institute Rotary Cancer Hospital, AIIMS, and New Delhi. 67 newly diagnosed women with advanced cervical cancer (stage 2b to 4b) were included to assess the change in haemoglobin after six months of radio and chemotherapy. The mean age of women at the time of detection of cervical cancer was 52.28±11.29 years (Range 30-75 years). Mean haemoglobin level of the study subjects was 10.35±1.72 gm% before treatment and 9.69±1.29 gm% after treatment. This difference was statistically significant. Mean platelet count before and after treatment was not statistically different. Greater awareness of the prevalence and impact of anaemia in patients with cancer is an important goal for all clinicians. Managing anaemia, even mild-to-moderate anaemia, minimizes risk to the patient and reduces undesirable side effects and is imperative if patients are to preserve QOL and improve outcomes of radiotherapy.

Abs. No. AB00OR185

Global implementation status of Article 11 of world health organization framework convention on tobacco control

Shekhar Grover, Dhirendra N Sinha, Prakash C Gupta1, Ravi Mehrotra
WHO FCTC Global Knowledge Hub on Smokeless Tobacco, National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, 1Healis-Sekhsaria Institute for Public Health, Mumbai, Maharashtra, India.
E-mail: shekhargrover84@gmail.com

This paper evaluates the global implementation status of coverage and quality of Article 11 of the WHO Framework Convention on Tobacco Control (WHO FCTC), for Cigarettes (CIG) and Smokeless Tobacco (SLT). A cross-sectional database of policies in FCTC ratified countries was prepared. Information was validated by two sources. World Bank Income groups were used for categorizing countries. Notified warnings were scored according to topics specified at FCTC Warning database website. Data was analyzed using SPSS. By December 2016, more than 90% populations were covered with implementation of 30% and above Health warning (HW) size on CIG and nearly half of global populations on SLT. Population coverage by HW on CIG packages in high income countries (HICs) were highest, followed by middle-income countries (MICs) and low-income countries (LICs), however, such coverage for SLT was less than half populations in all income-group countries. Pictorial health warnings (PHW) of 30% and above size were implemented higher for CIG as compared to SLT. Global population coverage with ‘high content score’ was nearly two-thirds for CIG and only 5% for SLT. High content information on CIG was maximum for populations of HIC, followed by MIC and LIC, however, for SLT it was maximum for LIC, followed by HIC and MIC. There is unequal attention on implementation of Article 11 on different tobacco products. Countries need to provide quality information with equal attention on all tobacco products.

Abs. No. AB00OR197

Association of chronic periodontitis with metabolic syndrome: A cross-sectional study

Deepak Sharma
Himachal Pradesh Government Dental College, Shimla, Himachal Pradesh, India.
E-mail: deepakrajdoctor@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Prevalence of metabolic syndrome (MeS) is high among Asians, including Indians and is rising, particularly with the adoption of modernized lifestyle. Various studies have reported significant relationship between periodontal status and MeS. The objective of this study was to investigate association between periodontitis and MeS.

The study included 259 subjects (130 cases with chronic periodontitis, 129 controls without chronic periodontitis) who underwent medical and periodontal check-up. Five components (obesity, high blood pressure, low and high-density lipoproteins, cholesterol, hypertriglycerideremia, and high plasma glucose) of MeS were evaluated, and
individuals with ≥3 positive components were defined as having MeS. The periodontal parameter was clinical attachment level (CAL) and cases were selected with moderate (CAL loss 3–4 mm) and severe (CAL loss ≥5 mm) generalized chronic periodontitis.

The association of MeS and chronic periodontitis was strong and significant with OR: 2.64, 95% CI: 1.36–5.18, and \( P < 0.003 \). Comparison of mean values of components of MeS between cases and controls revealed that mean waist circumference (mean difference: −4.8 [95% CI: 7.75–−1.84], \( P < 0.002 \)) and mean triglycerides level (mean difference: −25.75 [95% CI: −49.22–−2.28], \( P < 0.032 \)) were significantly higher in cases than in control groups. Although mean systolic blood pressure, diastolic blood pressure, and fasting blood sugar level were higher in cases, it was statistically insignificant.

The results of this study suggest that there is a strong association between chronic Periodontitis and MeS.

Abs. No. AB00OR220
Perceived challenges in diabetic care: A cross sectional study among in-patients of a Tertiary Care Hospital

Sajja Jayashree, SN Manjunatha
Department of Community Medicine, Mysore Medical College and Research Institute, Mysuru, Karnataka, India.
E-mail: jaysaj2056@gmail.com

Abstract Sub-Theme: Diabetes

Globally, the prevalence of diabetes has nearly doubled since 1980, rising from 4.7% to 8.5%. An estimated 422 million adults were living with diabetes in 2014, it is now recognized that it is the low- and middle-income countries that presently face the greatest burden of diabetes. India recognized as capital for diabetes in world accounts for 69.2 million cases i.e. 8.7% as per the 2015 data, being a land of villages, cultural beliefs and traditional practices bears an impact on all aspects of diabetic care. In this study, the objectives are to study socio-demographic profile of the subjects, to identify the socio-cultural, economic, educational barriers in care and the availability of resources for continuum of treatment. A cross sectional questionnaire based study is conducted among the adult diabetic patients admitted in a tertiary care hospital of Mysore, India. Results and conclusion will be presented in the conference.

Abs. No. AB00OR221
Prevalence and factors influencing chronic kidney disease in adults residing in urban slum area of Mysuru city

SRashmi, MR Narayana Murthy, Manjunatha S Shetty, Praveen Kulkarni
Abstract Sub-Theme: Chronic Kidney Diseases

In India, given its population >1 billion, the rising incidence of CKD is likely to pose major problems for both healthcare and the economy in future years. Hence this study is done to estimate the prevalence of Chronic Kidney Disease.

The Objectives of the study were as follows: (1) To estimate the prevalence of Chronic Kidney Disease using estimated-Glomerular Filtration Rates and Urinary abnormalities in people residing in urban slum area of Mysuru. (2) To find out the factors influencing Chronic Kidney Disease. Type of study - cross sectional. Duration-6 months.

All individuals above 18 yrs of age were included in the study. Those who refused to give consent, severely ill and bed ridden patients, pregnant women and women who had just delivered (up to 40 days after delivery) were excluded. Sampling method used was Population Proportion to Size and sample size is 684 (SEEK study). The data is collected using a pre-tested, semi structured questionnaire. Anthropometry is done. Random midstream urine samples are then taken from all individuals and assessed using dipstick for protein, sugar and blood. Serum Creatinine is estimated for all participants with random blood sample. Glomerular filtration rate is estimated (eGFR) and stages of CKD is defined using KDOQI. Data analysed using SPSS 24 version. Descriptive statistics like percentage, mean and standard deviation are applied. Inferential statistical tests like chi square test are applied to find out association. The difference, association are expressed statistically significant at p-value less than 0.05.

Results will be presented in the Congress as study is still going on.

Abs. No. AB00OR239

Systematic review and meta-analysis of the association between smokeless tobacco use and coronary heart disease: A global perspective

Ruchika Gupta, Sanjay Gupta, Shashi Sharma, Dhirendra N Sinha, Ravi Mehrotra
WHO FCTC, Global Knowledge Hub of Smokeless Tobacco, National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, India.
E-mail: ruchika257@yahoo.com

Abstract Sub-Theme: Cardiovascular Diseases

The association of SLT use with risk of coronary heart disease (CHD) is doubted due to conflicting results in the available literature. The present systematic review and meta-analysis of studies was aimed at evaluating the global evidence pertaining to risk of coronary heart disease
Abstract

The analysis included articles retrieved from a systematic literature search for published articles assessing risk of CHD with SLT use. Only those studies were included where smoking was adjusted as a confounding variable or the subjects were non-smokers. Two authors independently extracted risk estimates and study characteristics of the included studies. Summary relative risks were estimated using the random-effect model.

Sixteen (16) studies were included in the analysis. Overall, there was a significantly increased risk of CHD in SLT users compared to non-users in the fixed-effect model (1.06, 95% CI 1.02-1.11) but not in random effect model (1.08, 95% CI 0.98-1.17). The risk was higher among users in Eastern Mediterranean Region (EMR) (1.41, 95% CI 1.13-1.69) compared to users in the other regions. Fatal CHD showed a significantly higher association with SLT use (1.10, 95% CI 1.00-1.21) compared to non-fatal events (1.18, 95% CI 0.85-1.51).

Hence, an overall positive association was detected between SLT use and risk of CHD, especially fatal events. Users in Eastern Mediterranean region were found to be at a higher risk of CHD. The results may come useful to policy makers to assist them in devising appropriate control strategies.

Abs. No. AB00OR240

Community based oral cancer screening program conducted by a Tertiary Cancer Centre in Kerala – A two year audit

Phinse Mappalalayil Philip1,2, Neetu Ambali Parambil1,2, Satheesan Balasubramanian3
1Departments of Community Oncology, Malabar Cancer Centre, 2Malabar Cancer Centre, Thalassery, 3Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute of Medical Science and Technology, Thiruvananthapuram, Kerala, India.
E-mail: phinse1984@gmail.com

Abstract Sub-Theme: Cancer

Cancers of oral cavity and hypopharynx are remarkably frequent in India due to wide spread use of tobacco products. Studies have shown that community based screening has an impact in reducing oral cancer mortality when it is targeted at high risk individuals.

The tertiary cancer centre (TCC) regularly conducts community based cancer screening programs in different community settings in rural, urban and tribal areas. These programs were organized by local self-governing bodies, health department and self-help groups. Free Screening was provided for oral, breast and cervical cancers. Organizers invite people through house to house campaign, distribution of awareness materials, mass media advertisements etc. TCC provides man power and guidance for conducting the camp. A dental graduate performed oral cancer screening through visual examination. Data were extracted from camp records.

During the 2 year period from January 2015 to December 2016, 269 camps were conducted and detected 20 oral cancer cases and 692 oral pre-cancer cases. One fifth of these camps (n=53) were conducted in tribal community setting and identified 45% (n=9) of oral cancer cases (OR 4.5, 95% CI 1.89-11.09, P<0.001) and 30.78% (n=213) oral pre cancer cases (OR 2.5, 95%CI 2.11-2.96, P<0.0001).

Oral cancer screening camps conducted in tribal areas identified significantly higher number of cancers and pre cancers. Communities should be targeted instead of individuals to ensure the participation of high risk groups. In future, oral screening camps and awareness activities should prioritize high risk groups and communities over individuals.

Abs. No. AB00OR258

Status and patterns of internet use among Medical College students: A Cross sectional descriptive analysis

Lovesh Saini, Yashvi Gehlot, Kusum Gaur, Rinku Saini, Priti Saini

Department of Preventive and Social Medicine, SMS Medical College, Jaipur, Rajasthan, India.
E-mail: drlovesh82@gmail.com

Abstract Sub-Theme: Neurological and Mental Health Problems

There has been an explosive growth in the use of internet not only in India but also worldwide in the last decade. The number of internet users in India has grown five-fold since 2005. The understanding that internet use can be a disorder is still in its initial stages in India.

Sothis present study is aimed to study Status and patterns of Internet Use and their associating factors. A descriptive
A cross-sectional study was conducted among 265 postmenopausal women of 40-70 years age group at Karamtola Christian Hospital in the village Karamtola of Gazipur district. Data were collected through face-to-face interview, physical measurements and biochemical examination by using a standardised pre-tested questionnaire. Modified STEPS questionnaire version 3.1 was used to collect the lifestyle related information. The cardiovascular disease risk was estimated by using WHO/ISH risk charts and Framingham risk score.

The concordance rate for both versions of WHO/ISH chart was 77.4% and slight agreement was found among them. Considering Framingham risk score as gold standard, concordance rate was 62.3% for ‘with’ cholesterol and 69.4% for ‘without’ cholesterol version respectively. The ‘with’ cholesterol version was slightly agreed (κ, 0.117; p<0.003) and ‘without’ cholesterol version was fairly agreed (κ, 0.288; p<0.001) with Framingham risk score.

In a low resource setting, ‘without’ cholesterol version of WHO/ISH CVD risk chart is a good option to detect and target the high risk population who are likely to develop CVD.
Abstract

The study was conducted in Gynaecology OPD of Lok Nayak Hospital, Delhi among 200 eligible women using a semi structured questionnaire, followed by Pap smear and visual inspection with acetic acid (VIA). Biopsy was done only in those patients who gave their consent for biopsy. The histopathological diagnosis was considered as gold standard. Sensitivity, specificity of VIA and Pap smear were calculated. Chi-square test was used to find out differences between them.

The sensitivity and specificity of VIA and Pap smear were 83.3%, 44.3%; and 63.0%, 83.6% respectively. There was no difference in the sensitivities of VIA and Pap smear (p=0.21) but the difference between specificities of VIA and Pap smear was significant (p<0.001). The agreement between VIA and Pap smear results was 70.5%.

VIA can be used as an alternative screening modality for cervical cancer screening in low-resource setting but VIA positive cases should be referred to higher centres for confirmation of diagnosis.

Abs. No. AB00OR292

Strengthening multi-stakeholder engagement vital for the indian government to accelerate actions towards meeting its NCDs and SDGs commitments

Amit Yadav, Nisha Yadav

National Law School of India University, Bengaluru, Karnataka, 1National Law University of Odisha, Cuttack, Odisha, India.
E-mail: advocateamit@msn.com

NCDs account for 62% of all deaths in India and one in four Indians are at the risk of dying of NCDs before 70 years of age. Tobacco use, the major risk factor for NCDs, kills nearly one million Indians annually. Despite a decline in smoking among men over recent years, women and youth smoking has remained constant. Nearly 15% of 1315-year-olds use tobacco in some form.

In 2011, at the UN Summit on NCDs, the Indian Government pledged action to tackle the NCD epidemic. India adopted a National Action Plan and Monitoring Framework for Prevention and Control of NCDs with specific national targets. The Government’s immediate focus is the intermediate national targets for 2020, targets for 2025, besides the target to reduce NCDs by a third by 2030 to achieve the UNSDG3 on health. Strengthening multistakeholder engagement besides implementation of the FCTC has been identified as a priority for meeting these targets.

An apprehensive pace of progress and the lack of resources continue to alarm health and development experts in the country, which is yet insufficient to meet the targets. The national budget is less than 20% of that needed for the four ‘best buys’ in tobacco control policy. Furthermore, government efforts to engage civil society and other stakeholders have been piecemeal to date.

It will be vital to ensure that constructive engagement between various governmental and non governmental stakeholders takes place to augment a coordinated effort to meet the NCD and SDG targets.

Abs. No. AB00OR304

Obesity and its relationship with type 2 diabetes mellitus in adult females in a rural area of Delhi

E-mail: shraddhadeokota@gmail.com

Shraddha Deokota, GS. Meena, Rajesh Kumar, Suneela Garg
Department of Community Medicine, Maulana Azad Medical College, New Delhi, India.

Obesity is a key risk factor in the natural history of non-communicable diseases including type 2 diabetes mellitus (T2DM). The prevalence of obesity is increasing at a steady pace globally. This puts individuals at a high risk of developing T2DM and its complications.

A community based cross-sectional study was conducted in a village in Delhi among 385 adult females of age 18-60 years. House to house visits were conducted and eligible study subjects were selected by systematic random sampling method. History of T2DM (self-reported) was taken. Anthropometric measurements including height (cm), weight (kg), waist circumference (cm), and hip circumference (cm) was taken. The criteria for Body Mass Index (BMI) for obesity and overweight as suggested by WHO (WPRO) for Asians was used, the cut-off for waist circumference was taken as >80cm and waist-hip ratio as >0.8. Data was analysed using SPSS 17. Chi-Square/ Fisher’s exact test was used to observe difference between proportions for groups.

It was observed that 13% of the study participants were overweight (BMI 23-24.9) while 44.7% of the women were obese (BMI>25). More than half of the study participants (52.2%) had waist circumference>80cm. More than three-fourths (86.5%) of them had waist-hip ratio>0.8. T2DM was reported by 6.2% of the study participants. There was a significant association of · BMI and waist circumference with reported T2DM (p<0.001).
No association was observed between waist-hip ratio and T2DM (p=0.058).

Since a significant association was observed between obesity and T2DM, BMI and waist circumference can be used as convenient tools for identifying individuals at a high risk of developing T2DM.

Abs. No. AB00OR305

Changes in DNA methylation pattern of macrophage polarization genes of peripheral blood mononuclear cells is associated with CAD

Chetan Bakshi, Rajesh Vijayvergiya1, Veena Dhawan
Departments of Experimental Medicine and Biotechnology and 1Cardiology, PGIMER, Chandigarh, India.
E-mail: chetanbakshi15@gmail.com

Atherosclerosis is a major cause of coronary artery disease (CAD) related mortality in the world. Nowadays, the impact of epigenetic mechanisms in cardiovascular pathophysiology is emerging as a major player in the interface between genotype to phenotype variability. Epigenetic mechanisms including DNA methylation, posttranslational histone modifications and RNA-based mechanisms (miRNAs) control gene expression without any change in actual DNA sequence. A variety of macrophage phenotypes derived from monocytes have also been found in atherosclerotic plaques. Moreover, the regulation of macrophage polarization and function also involve epigenetic modifications. But their role needs to be further defined as investigations till date have primarily focused on post-translational modifications of histones. With this background, in this study the DNA methylation status of JAK1, JAK2, STAT1, STAT6, MHC-II and IL12b in peripheral blood mononuclear cells (PBMCs) of angiographically proven CAD patients (n=10) and healthy subjects (n=10) was compared. DNA methylation levels were determined by Methylation Sensitive-High Resolution Melting (MS-HRM) analysis. Our data clearly indicates that there is difference in the pattern of DNA methylation levels of above mentioned genes in PBMCs of CAD patients as compared to healthy controls. Interestingly, the studied genes in PBMCs showed low levels of DNA methylation in both CAD patients as well as control subjects and in almost all samples heterogeneous type of DNA methylation was also observed. In conclusion, our results suggest that changes in the pattern of DNA methylation of genes involved in macrophage polarization of PBMCs represent a suitable prognostic marker of CAD.

Abs. No. AB00OR321

Mandatory corporate social responsibility provisions in India merits a careful compliance to meet the NCDs and SDGs targets

Nisha Yadav, Amit Yadav1
National Law University of Odisha, Cuttack, Odisha. 1National Law School of India University, Bengaluru, Karnataka, India.
E-mail: advocatenishayadav@gmail.com

In 2013, Parliament passed a mandatory provision under Companies Act 2013 for corporate social responsibility activities and thus India became the first country that adopted legally mandatory provision of CSR. CSR is an organisational obligation to run business in a socially, economically as well as environmentally sustainable mode, while knowing the benefit of its stakeholders.

This paper provides an insight on the legal requirements besides the gaps and challenges in implementing mandate and an analysis of how a careful compliance with the provisions can help achieving the SDGs.

Several thousand corporations in India have been spending billions of rupees on various corporate social responsibility activities. With the 2% mandatory commitment by a company having a turnover of Rs. 1000 Cr or net worth of Rs. 500 Cr or net profit of Rs. 5 Cr. have further increased this pool of resource available for CSR. Organisations working in the field of health and development should tap this great opportunity to collaborate with the corporate India in meeting the NCD targets and thereby achieve SDG2030 as well.

However, it is also important to make note that CSR by companies dealing in demerit goods like alcohol and tobacco may be counterproductive. Companies dealing with such goods should not be allowed to do any CSR activities in violation of the existing regulations under other legislation. Even CSR by companies manufacturing and selling food items laced with sugar and salt should also be strictly regulated.

Abs. No.AB00PO67

Indian diabetic risk score: A tool for predicting risk of undiagnosed type 2 diabetes mellitus

Sheikh Mohd Saleem, S Muhammad Salim Khan
Departments of Community Medicine Government Medical College, Srinagar, Jammu and Kashmir, India.
E-mail: saleem.900@gmail.com

In conclusion, our results suggest that changes in the pattern of DNA methylation of genes involved in macrophage polarization of PBMCs represent a suitable prognostic marker of CAD.
Abstract Sub-Theme: Diabetes

The objective of the study was to assess the performance of the Indian Diabetic Risk Score (IDRS) questionnaire for detecting and predicting risk of type 2 Diabetes mellitus (T2DM) in patients attending a primary health centre. We conducted a cross-sectional study comprising 1530 adult participants, age (> 20 yrs.) attending Outpatient department of a primary health centre located at Harwan, district Srinagar without a diagnosis of T2DM. The risk of developing T2DM was assessed using the validated and widely used IDRS. Total Risk Score of each participant was analysed and compared. Data on 1530 participants with unknown diabetes mellitus were analysed with the mean age of 51.5 years, majority 54% females, 64.18% belonging to nuclear family and majority were from lower middle socio economic status. Around 99.73% were non vegetarian population with 19.15% having smoking habits. According to IDRS score of MDRF the study population were classified to be low, medium and high risk for developing type 2 diabetes were 70.4%, 19.5% and 10.1% respectively. The IDRS questionnaire designed by Madras Diabetic Research Foundation is a useful screening tool to identify unknown T2DM. The questionnaire is a reliable, valuable and easy to use screening tool which can be used in a primary care setup and better convince people at high risk of T2DM to take action towards healthier lifestyle habits.

Abs. No. AB00PO120

Preliminary results from a trial on impact of lifestyle intervention for management of polycystic ovarian syndrome among girls

Ishwarpreet Kaur, Amarjeet Singh, Vanita Suri, SV Rana, Bikas Medhi, Naresh Sachdeva, Nancy
School of Public Health, PGIMER, Chandigarh, India.
E-mail: ishwarpreet814@yahoo.co.in

Abstract Sub-Theme: Nutrition

Polycystic ovarian syndrome (PCOS) is a complex endocrine disorder affecting various body organs. Oligomenorrhea, hirsutism, insulin resistance, obesity and polycystic ovaries are its hallmark features. Usual medicines for PCOS which focus on blood glucose and hormonal regulation. Diet, exercise and lifestyle changes for losing weight provide relief from symptoms. We describe here 30 PCOS cases enrolled in an RCT (Ph.D. thesis). The objective of the study was to ascertain the impact of the lifestyle intervention for management of polycystic ovarian syndrome among girls. PCOS females were called for follow-up every month after advice for healthy diet plans and exercise regime. Anthropometric assessments and biochemical parameters including reproductive hormones, insulin resistance, were performed on at baseline and after 6 months of intervention. Change in their health profile was noted. Menstrual regularity was achieved in 60% cases. The average weight loss was 4.07 kg (range 2.5-14kg). The average BMI reduced from 26.6 to 25.0 and waist circumference from 94.1 to 86.6.
Abstract

At the end of intervention 60% of the cases had normal ovarian size, LH: FSH was normal in 50% cases. One of the subjects said “I am very satisfied with the treatment. Almost all of my problems have been resolved - periods are regular, lab reports are normal, mood has improved. Weight has reduced; other people ask me how I have lost weight.” Simple changes in lifestyle can easily provide relief in PCOS cases.

Abs. No. AB00P0126

Compliance assessment of tobacco vendors nearby educational institutions of Ludhiana city to Cotpa 2003

Pranjl Sharma, Pushapindra Kaushal, Anurag Chaudhary, Sarit Sharma, Sangeeta Girdhar, Vikram Kumar Gupta, Surinder Pal Singh
Department of Community Medicine Dayanand Medical College and Hospital, Ludhiana, Punjab, India.
E-mail: pranjlsharma@gmail.com

Tobacco use has become an epidemic of this era. The Cigarettes and Other Tobacco Products Act (COTPA 2003) Section 6 has recently introduced amendments specially to control this problem. This includes a prohibition on tobacco sale within 100 yards of schools and colleges to stop children and adolescents below 18 years of age from accessing tobacco products.

Objective was to assess compliance assessment of tobacco vendors nearby educational institutions of Ludhiana city to COTPA section 6. A cross sectional study was carried out in Ludhiana district among 30 randomly selected educational institutions. The checklist was prepared based on the section 6 of COTPA. Data was recorded through observing tobacco vendors and educational institutions.

The tobacco vendors had very poor compliance to the COTPA. All (100%) of tobacco vendors were selling single/loose cigarettes. Among these 85% tobacco selling points were permanent and 71% were exclusive tobacco sellers. Only 7.14% of vendors displayed board as per norms depicting prohibition of sale of tobacco products to a person less than 18 years of age. 50% of the vendors displayed tobacco products in a way which gave easy access to minors. 40% of vendors were located within 100 yards of the educational institution and 76.6% of educational institutions had not displayed mandatory signage regarding COTPA on their boundary wall. This study showed that majority of vendors nearby educational institutions are not fully compliant to section 6 of COTPA.

Abs. No. AB00P0200

Impacts of a multi-sectoral intervention on perceptions and practices of pesticide use in Chitwan, Nepal

Abhinav Vaidya, Deepak Gyanwali1, Sundar Tiwari2, Badri Raj Pande3, Erik Jors4
Department of Community Medicine, Kathmandu Medical College, Kathmandu 1Nepal Public Health Foundation, Kathmandu, 2Nepal Project, Chitwan, 3Agriculture and Forestry University, Rampur, Chitwan, Nepal, 4Odense University Hospital Odense, Odense, Denmark.
E-mail: dr.abhinavaidya@gmail.com

Pesticides used for enhancing agricultural production also increase risk of adverse health events, including cancer risk, particularly among farmers. We implemented the Farming, Health and Environment, Nepal Project to address the issue of public health and environmental impacts of occupational and environmental exposure to chemical pesticides due to their rampant and irrational use in agricultural sector. We trained farmers, pesticide retailers and health workers of purposely selected villages of Chitwan district of Nepal. We trained sixty farmers from five intervention villages on safe handling of pesticides and integrated pest management. They were also trained to pass on their knowledge to 100 fellow farmers of their neighbourhood. We also trained pesticide retailers, health workers and female health volunteers of these villages. We chose 100 farmers from another five villages as controls. We conducted a baseline study in 2013-14, the interventions in 2014-15, and a follow-up study in 2015. Endline survey revealed increased level of knowledge in key and fellow farmers, but not among the control farmers. Positive changes in the safety practices during storage, handling and spraying were also noted. Among the trained pesticide retailers, knowledge regarding banned pesticide, colour code, adverse health effects, and pesticide act increased. Further, practice of selling unregistered pesticides was reduced to zero. Training of health workers and volunteers led to increased knowledge, first aid management and reporting of pesticide poisoning cases. This multi-sectoral attempt at the community level has been a successful intervention strategy- at both community and health facility level.

Area of presentation: School, worksite and community interventions and technologies; Multi-sectoral approaches.
Abstract

Abs. No. AB00PO231

Expression of key molecules involved in necroptosis in Er+ and Er-breast cancer cell lines: Insights from real time PCR

Banita A Bhatia
Department of Experimental Medicine and Biotechnology, PGIMER, Chandigarh, India.
E-mail: vanitathakur6@gmail.com

Abstract Sub-Theme: Cancer

One of the problems associated with response to treatment of breast cancer is alterations in apoptotic machinery. In this context necroptosis has attracted attention as a novel alternative cell death pathway because both pathways share their key molecules. Ongoing studies have shown that necroptosis induction in breast cancer may help to promote killing of tumour cells, however, data is scanty. In this work, we aimed to study status of key molecules of TNF-α mediated necroptosis pathway involved in two major subtypes [Estrogen Receptor (ER) positive(+) and negative(-)] of breast cancer. TNF-α can induce three pathways, Cell survival by activating NF-κB molecules like cIAPs1, 2 and IKK-α, β, Apoptosis by recruiting CYLD, FADD and caspase-8 and Necroptosis by the activation of RIPK-1,3 and MLKL depending upon the status of different regulatory molecules. Expression of above mentioned molecules was studied by qPCR in ER+ (T47D) and ER- (MDA-MB-231) cell lines. It was found that expression of key molecules of Necroptosis (TNF-α, RIPK-3 and MLKL) and apoptosis (Caspase-8 and CYLD) was significantly downregulated in MDA-MB-231 as compared to T-47D. However, the expression of prosurvival factors (cIAP1, IKK-α, β) was found to be significantly upregulated in MDA-MB-231 (p-values < 0.05). The results suggest that, like apoptosis, TNF-α mediated necroptosis is also downregulated in more aggressive ER-breast cancer. Therefore, though harnessing this pathway may prove to be a useful alternative strategy in ER+ cancers, it may not be that effective in ER-cancers. However, same needs to be confirmed by more robust studies at translational level.

Abs. No. AB00PO271

Home based Yoga programme for the patients suffering from Malignant Lymphoma during Chemotherapy: A feasibility study

Gurpreet Kaur, Sandhya Ghai, Pankaj Malhotra1, Gaurav Parkash1, Sukhpal Kaur, Mahender Singh2

Abstract Sub-Theme: Nutrition

Yoga has been found to be a promising approach for improving Health related quality of life among the cancer survivors. In the current study feasibility of home based yoga programme was assessed for the patients with malignant Lymphoma undergoing chemotherapy. Patients with Eastern cooperative oncology group performance status scale score from 0-2, planned to receive chemotherapy were enrolled. For each patient one practical yoga session was conducted in the outpatient department at the time of enrolment in the study. Then a video and a booklet showing all the yогic exercises were handed over to all the participants. Telephonic reinforcement was also done to enhance adherence to Yoga practice at home. Health related quality of life, fatigue level, overall sleep quality, depression, anxiety level were also studied in pre and post intervention phase. Fourteen participants were included in the study. Mean age was 39.54 years Nine (64%) were diagnosed with non-Hodgkin`s Lymphoma, five (36%) with Hodgkin`s Lymphoma. Recruitment rate was 93%. Retention rate was 100%, adherence to daily Yoga practice was 78.6% and acceptability to Yoga programme found to be 97%. Reported adherence also improved with proceeding chemotherapy cycles. Significant improvement was found in all the outcome variables. No adverse event following yoga practice was reported. The home based yoga programme was safe and feasible among the patients suffering from malignant Lymphoma receiving chemotherapy.

Abs. No. AB00OP142

Assessment of knowledge of school - students about daily intake of salt, sugars and reading food labels on packed foods

Manu Batta1, Y Bhave Swati2, Shailaja Mane1, Sharad Agarkhedkar1

1Department of Paediatrics, Dr. DY Patil Medical College, 2Adolescent Wellness Clinic, Jehangir Hospital, Pune, Maharashtra, India.
E-mail: battamanu@gmail.com

Abstract Sub-Theme: Nutrition

The study assessed the knowledge of school students about daily intake of salt, sugars and reading food labels on packed foods.
It is well known that the origins of adult NCDs like hypertension and diabetes begins with faulty habits like unhealthy diet and physical inactivity in adolescence. AACCIC conducts school programs to change these modifiable behavioural risk factors. A pre workshop questionnaire is administered and FGDs are done to assess their knowledge. Through short lectures, they are given information: healthy nutrients’ and misleading claims on packed food. Work satiations are conducted for reading food labels and correct food choices. Ethics committee clearance was taken. Sample: 110 school children (60 boys; 50 girls) from 8th grade - Pune School, India. 12 - 15 yrs. (55.5%); 13-14 yrs. (37.3%). Most students (100% girls; 96.7% boys) feel that reading food labels is important. However 96% Boys; 90% girls read them for expiry date only and not to understand the nutritional contents. An analysis to understand their knowledge about salt intake showed: 26.7% boys and 34% girls do not know daily recommended allowance of salt/sodium; 24.2% boys; 54.5% girls wrote 3-4 spoons. 35% boys and 28% girls do not know sodium content of one spoon salt; 60.6% boys and 54.5% girls felt that maximum allowed sugar is 3 spoons per day and were shocked to learn about the amount of sugar in aerated soft drinks. We have persuaded the school authorities to have healthy food in the canteen. This study indicates need for imparting knowledge about daily recommendation of salt sugar and nutrients and learning how to correctly interpret food labels in school.

Abs. No. AB000P150

Vitamin D insufficiency and cardiovascular risk factors: A cross-sectional study among adults in a rural block of West Bengal, India

Shobhit Garg
All India Institute of Hygiene and Public Health, Kolkata, West Bengal, India.
E-mail: shobhit.garggmc@gmail.com

Abstract Sub-Theme: Nutrition

The worsening worldwide trend towards Vitamin D deficiency has been linked to inadequate sun exposure, pigmented skin and insufficient dietary intake. Increasing evidences indicate association of Vitamin D insufficiency with hypertension and other cardiovascular related diseases. This cross-sectional study was done among 192 adults (P=80%, α=5%, relative error=10%, design effect=2) residing in Singur block, West Bengal from May2016 to January2017 to find out the prevalence of Vitamin D insufficiency and elicit its relationship with cardiovascular risk factors. Serum Vitamin D3 status was measured for each participant along with Fasting Blood Sugar, Total Cholesterol, BMI, Systolic and Diastolic Blood Pressure, Physical activity, Smoking and Depression. Data analysis using descriptive statistics, correlation coefficient and forced multiple linear regression (MLR) was done. ShapiroWilk statistics, VIF (Variance Inflation Factor) and Cook’s distance were used for checking the assumptions for MLR. Mean (SD) age of the participants was 42.92 (15.45) years and 95 (49.5%) were females. 131 (68.2%) had insufficient serum Vitamin D3 level (≤30ng/ml). Total Cholesterol (B=0.04), FBS (B=0.04), Physical activity (B=0.00), SBP (B=0.080), BMI (B=0.236) and Depression (B=2.037) were significantly associated with Vitamin D level which predicted 37% of the total variance. These data suggest that Vitamin D insufficiency is associated with cardiovascular risk factors and further studies may be warranted to determine whether correction of Vitamin D insufficiency could contribute to the prevention of cardiovascular disease.

Abstract Sub-Theme: Cardiovascular Diseases

Menstruation is a unique physiological event, considered an indicator of women’s reproductive health. Previous studies have documented the relationship between menstrual irregularities and the future risks for cardiovascular events. The present community based study was done among 172 married women of reproductive age group from May2016 to Feb2017 to elicit the relationship between menstrual abnormalities and dyslipidaemia. Data collection on sociodemographic and behavioural characteristics, menstrual abnormalities, 7dayrecall diet, physical activity and stress was done among women selected randomly from 4 villages of Singur by interviewtechnique. Weight, height and Fasting lipid profile were measured. Mean (SD) age was 34.65 (7.9) years. 95.3% women had at least one abnormal lipid component. 74 (43%) had at least one menstrual abnormality. Out of these 74 women, LDLc (≥ 100mg/dl), HDLc (≥ 130 mg/dl), Total cholesterol (≥ 200 mg/dl), Triglycerides (≥ 150 mg/dl), HDL cholesterol
Abstract

Implementation of diabetic foot quality standards in primary care in India

Abha Mehndiratta Kunal Chhatbar1, Anuradha Chakrabarti1, Prashant Bhandarkar1, Satish Mishra1
Imperial College London, London, UK, 1Medical Division, Bhabha Atomic Research Centre, Mumbai, Maharashtra, India.
E-mail: abha@mail.harvard.edu

Abstract Sub-Theme: Diabetes

Implementation of diabetic foot (DF) care in primary health is effective in preventing foot complications. A pilot implementation of quality standards (QS) on DF is underway at a primary health center (PHC) attached to the Bhabha Atomic Research Centre Hospital, Mumbai. We are using QS from DF guideline developed under a taskforce constituted by Ministry of Health and Family Welfare. The pilot provides first practical application of measurable standards for institution of DF care in primary care in India. The aim is identification of diabetics with ‘foot at risk’ in primary health setting and prevention of ulcers by early podiatry intervention, patient education and scheduled follow up. The study is from January to September 2017. Baseline data showed of 12,017 registered patients, 938 (7.8%) are diabetics. In the planning phase, care pathways were re-designed; DF recording in electronic medical records standardized; primary physicians trained in DF care, and random validation done by experts. In implementation phase, continuous quality improvement is being facilitated by periodic data analysis and addressing issues as they arise. Data is collected on ratio of diabetics receiving foot examination, ratio of diabetics diagnosed with ‘foot at risk’ to diabetics examined; ratio of diabetics with foot at risk presenting for scheduled follow-up; and ratio of diabetics with ‘foot at risk’ referred for preventive podiatry compared to ratio of diabetics having such referrals from another PHC. Final analysis and report is expected by October 2017. The lessons learnt will have wide application for prevention of DF complications in India.

Abs. No.AB00O196

Cardiac rehabilitation delivery in low- and middle-income countries: Availability, characteristics and barriers

Ella Pesah1, Karam Turk-Adawi2, Marta Superviá3, Francisco Lopez Jimenez4, Nevena Bogdanska2, L Sherry Grace4
1Faculty of Health, York University, 2Toronto Rehabilitation Institute, University Health Network, University of Toronto, Toronto, Canada, 3Department of Public Health, Qatar University, Al-Doha, Qatar, 4Department of Cardiovascular Diseases, Mayo Clinic, Rochester, MN.
E-mail: ellap@my.yorku.ca

Cardiovascular diseases are among the leading causes of disability in low- and middle-income countries (LMICs). Cardiac rehabilitation (CR) is an effective secondary prevention program model. This study aims to describe: (1) availability, (2) program characteristics, and (3) barriers to CR delivery in LMICs. In this cross-sectional study, a confidential, online survey is being administered to CR programs around the world. National cardiac associations are engaged to facilitate program identification where available, or local champions. CR programs were identified in 57/139 (41.0%) LMICs; to date programs in 37 (64.9%) LMICs are participating, and 192 (51.2%) surveys have been completed. Results revealed the maximum number of programs/country was 75 (median=10; median=43 in HICs); Programs served a median of 130 patients/year (245 in HICs). Programs are predominantly located in urban areas (n=180; 95.7%). The most frequent cardiac diagnoses accepted were myocardial infarction (n=152; 79.2%), coronary artery bypass graft surgery (n=151; 78.6%) and percutaneous coronary intervention (n=149; 77.6%). Services were most often paid by patients (n=122; 63.5%), followed by government (n=94; 49.0%). The most-frequently offered components were: initial assessment (n=156; 94.5%), exercise prescription (n=156; 94.5%), and physical activity counselling (n=154; 93.9%). Alternative CR delivery models were offered in 41 (24.8%) programs, most commonly home-based (n=23; 12.0%). Lack of patient referral (4.0/5) and lack of financial resources (3.3/5) were perceived as the greatest barriers to CR provision. In conclusion, CR remains unavailable in the majority of
Abstract

LMICs, and where it exists it is largely inaccessible to patients for reasons of capacity, geography, and finance.

**Abs. No. AB00OP241**

**Hospitalization for diabetes among adults in India: Evidences from national sample survey**

*GK Mini, KR Thankappan*¹
Centre for Public Health, Amrita Institute of Medical Sciences, Kochi, ¹Achutha Menon Centre for health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India.
E-mail: gkmini.2014@gmail.com

**Abstract Sub-Theme: Diabetes**

India is home for the second largest diabetics (69 million) after China. National level data on hospitalization due to diabetes are limited in India. We estimated the annual hospitalization due to diabetes and its correlates among adults in India. We analysed data collected by the National Sample Survey Organization in 2014 on Social consumption health in India. The nationally representative sample collected using stratified multi-stage sampling procedure consisted of 3,33,104 individuals out of which 1,40,701 adults aged 30 years and above were included in this analysis (mean age: 47 years, men: 51%) on hospitalization due to diabetes. Proportion (per 1000) of those who were suffering from any disease was 147 (chronic: 98, short term: 53). Annual proportion (per 1000) of hospitalization due to all causes was 50 (urban: 47, rural: 55; men: 42 women: 58). Among hospitalized, proportion of hospitalization due to diabetes was 14 (rural: 11, urban: 21; men: 13, women: 17). Of them, average duration of stay in hospital was eight days. A large majority of them (99.3%) were hospitalized in modern medicine hospitals: 70% in private and 30% in public hospitals. Hospitalization due to diabetes increased with age and was higher among forward caste and higher educated. A substantial proportion of hospitalization in India was due to diabetes. Less than a third of the hospitalization were in public hospitals which provided services free or at subsidized cost. There is a need for increasing the inpatient facilities in public sector for diabetes care and for early diagnosis and treatment of diabetes patients to reduce hospitalization rates.

**Abs. No. AB00OP254**

**Relationship between neighbourhood eating environment and unhealthy diet consumption leading to risk of diabetes and cardiovascular disease occurrence**

*Anandhi Ramachandran, Sumant Swain, Vivek Pathak*
International Institute of Health Management Research, New Delhi, India.
E-mail: anandhi@iihm.org

There is an emerging evidence of increased diabetes and cardiovascular diseases (CVD) occurrences amongst rural populations. Unhealthy diet and physical inactivity are two of the major factors that contribute to this. Our aim is to explore the relationship between presence of fast food restaurants, bakeries, dhabas, open spaces, parks and unhealthy food habits and physical inactivity in rural area.

This study was conducted among rural populations in Seelampur Taluk of North East Delhi. Information related to social economic background, diet patterns, fast food restaurants and dhaba visits, physical activities, awareness to risk factors were collected among 1600 residents aged 18 -65 years using WHO STEPS tool. 15 qualitative interviews with key informants were conducted to understand the relationships between the rural environment and diabetes, CVD health behaviours.

The environment mapped through GIS was found to have number of sweat shops, dhabas and local shops selling fried foods. Very few open spaces and parks were available. Eating frequently at dhabas and having fried foods, sweets were perceived as a risk to diabetes and living close to such places did not influence eating habits. Though physical activity was thought to be important, walking and exercise did not depend upon the availability of open spaces or parks but more on the attitude. Awareness was less to cardiovascular diseases.

The current study by combining environment mapping, quantitative and qualitative data is trying to explore the relationship of neighbourhood characteristics with diabetes, CVD risks that can be used to develop sound community preventive approaches.

**Abs. No. AB00OP265**

**Does body weight affect self esteem? – A study in Delhi Schools**

*Bhalia Latika, Y Bhave Swati¹, S Agarkhedkar², Anuradha Sovani³*
Association of Adolescent and Child Care, Sir Gangaram Hospital, New Delhi, ¹Department of Pediatrics DY Patil Medical College,
Obese /Overweight children can have low self-esteem, due to body image issues and hence would need psychological interventions in addition to weight control. Conversely children with low self-esteem are likely to indulge behaviours that put them at risk for obesity. AACCII does youth surveys in schools and colleges on various adolescent issues and plans customized interventions. The aim of this study was to do survey of school children co-relating BMI with Self Esteem. Ethical clearance taken. Karl Pereira - Self-esteem testing scale used. Self-filled questionnaire after explanation. To promote honest answers No names were asked for – only age, gender and Height and weight to calculate BMI. 712 school children (8th-9th STD) -two schools in Delhi, India -HSE, English Medium, Co-ed. Divided- Younger Group I-10-14 yrs.; Older Group II 15-18 yrs. The total scores range 6.00 -11.13 which is the Low self-esteem category. The younger obese children showed much lower scores as compared to normal weight (p=0.002), especially in School 2-6 vs 11 (p=0.027). Comparison of schools–different results – school 1-higher scores in younger obese - 11.63 vs 6. (p=0.011); school 2-higher scores in older obese 11.60 vs 6 (p=0.011)). In General Low self-esteem scores in this sample makes them vulnerable to high risk behaviour, including junk food and sedentary life style contributing to obesity. The scores of obese children were even lower as compared to normal weight which will further perpetuate obesity.

Abs. No. AB000P266

Increasing access to cervical cancer screening and care through community centric continuum of care initiative in India

Ataur Rehman, Suresh Kumar Rathi, Rishi Garg
MAMTA-Health Institute for Mother and Child, New Delhi, India.
E-mail: arehman80@gmail.com

Abstract Sub-Theme: Cancer

Worldwide Cervical Cancer (CaCx) is the fourth most common cancer amongst women. In India, annually there are estimated 132,000 new cases and 74,000 deaths due to CaCx, which accounts for 1/3rd of the global CaCx deaths. Low health treatment seeking behaviour and lack of knowledge of women also increases the risk. Prevention of CaCx deaths is possible through various strategies including awareness and screening. Hence, we propose to improve CaCx literacy in the community and promote early diagnosis and treatment for preventing CaCx from Dec 2015-Nov 2016.

Through involvement of Government health systems of Delhi and Rohtak, 10,000 women in each site in age group 21-49 had been enrolled for intervention package. AWWs and ASHAs were trained for providing awareness and generating demand in community; similarly health care providers were trained for screening, diagnosis and treatment.

Through education sessions, these women were provided information on CaCx and referred at health facility for screening through VIA (Visual Inspection through acetic acid), recommended by Government of India. Descriptive analysis has been conducted through SPSS.

Till March 2017, in both sites 3759 women were provided education and 2594 were referred for screening, out of which 212 women were screened and 60 were found to be reactive.

Involvement of multi stakeholder and providing awareness through peripheral workers is an effective and sustainable method for increasing awareness and screening for CaCx. VIA is the cost-effective and easily accessible method for screening and identifying symptoms of CaCx.

Abs. No. AB000P280

Effectiveness of a peer-support lifestyle intervention for the prevention of type 2 diabetes in India: A cluster-randomised controlled trial of the Kerala diabetes prevention program

Thirunavukkarasu Sathish1,2, Kavumpurathu Raman Thankappan1, Mojtaba Lotfiyan1, Robyn Jennifer Tapp4,5, Jonathan E Shaw4, Pilvikki Absetz7,4, Ajay Mahal1, Sajitha Balachandran1, Priyanka Sajeev1, Brian Oldenburg and On behalf of the Kerala Diabetes Prevention Programme search group
1Melbourne School of Population and Global Health, The University of Melbourne, 2Department of Optometry and Vision Sciences, The University of Melbourne, 3Baker Heart and Diabetes Institute, Melbourne, Victoria, Australia, 4Leekongchian School of Medicine, Nanyang Technological University, Nanyang Avenue Singapore, 5Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institutefor medical Sciences and Technology, Thiruvananthapuram, Kerala, India, 4Centre for Applied obesity Research, Leedseckett University, Leeds, UK, 5School of Health
Evidence on strategies to reduce diabetes risk that are feasible in low- and middle-income countries are lacking. We evaluated the effectiveness of a peer-support lifestyle intervention in preventing type 2 diabetes among high-risk individuals in India. We conducted a cluster-randomised controlled trialin Kerala state, where 60 polling areas (clusters) were randomised (1:1) to an intervention arm or control arm. Participants (30-60 years) were a high risk for diabetes based on the Indian Diabetes Risk Score ≥60. Peer-support lifestyle intervention was delivered through 11 group sessions over 12 months by trained lay peer leaders, supported by resource materials and education sessions from experts. The primary outcome was diabetes incidence at 24 months, analysed by intention to treat. The trial included 500 participants in the intervention arm and 507 in the control arm. Overall, there was a 11% reduced risk of diabetes in the intervention arm, compared with the control arm (relative risk [RR] 0.89, 95% confidence interval [CI] 0.68-1.18). The reduction in diabetes risk increased to 39% (RR 0.61, 95% CI 0.41-0.92) in those with impaired glucose tolerance (IGT) at baseline, but such an increase was not observed in those with baseline isolated impaired fasting glucose or HbA1c ≤5.7%. While there was a significant reduction in diabetes incidence in those with IGT, this was not observed in the other risk groups. There is a possibility that other outcomes will be discussed along with the potential for scalability of this kind of intervention in India as do other resource-constrained settings.

Abstract Sub-Theme: Diabetes

Prevalence and risk indicators of diabetes and prediabetes among Santal indigenous group in Bangladesh

Sharmin Sultana, SJ Mumu, PC Banik, L Ali
Departments of Noncommunicable Diseases, 1Epidemiology and Biochemistry and Cell Biology, Bangladesh University of Health Sciences, Dhaka, Bangladesh.
E-mail: sharminsultanabristy@gmail.com

Abstract Sub-Theme: Diabetes

Santals are one of the oldest indigenous groups of South Asia who, according to anthropological evidences, are thought to be the origins of the Bengali race. The aim of the present study was to explore, for the first time, the prevalence and risk indicators of diabetes and prediabetes in this relatively isolated and marginalized indigenous group who still live mostly in a traditional style.

Under a cross-sectional analytical design, the study was conducted on the adult (age ≥18 years) Santals (n=389, M/F 184/205, age in yrs., 38±15.3) of a village located in a remote rural area of northern Bangladesh. Subjects were selected by purposive sampling and data were collected by interviewer-administered pretested questionnaire. Anthropometric measurements were done following standard methods. Diabetes and prediabetes were diagnosed and classified following WHO Study Group criteria after 2-sample OGTT. For BMI and waist circumference (WC), WHO classification for Asian population was used. Blood glucose was measured by GOD-PAP method using an auto analyser. The prevalence of diabetes was only 0.7% among the respondents but, in contrast, that of impaired glucose tolerance (IGT) was fairly high (9.0%). The prevalence of impaired fasting glucose (IFG) was very low (0.4%). Females had much higher prevalence (13.8%) of IGT compared to males (3.3%, p=0.01). Among the risk indicators of diabetes and prediabetes overweight was present among 11.8% of all the subjects. High WC was found among 27.5% of the respondents and it was very high among 19% of the subjects. Females had significantly higher WC (p=0.001) compared to males. Proportion of low physical activity was 7.2% among the study population. Further analysis of risk indicators was done only on the IGT group and it showed that they had higher BMI and WC compared to the normoglycemic group. On logistic regression analysis association of IGT with female gender persisted (p=0.02 OR=0.17, CI=0.04-0.7) after adjustment of age, BMI, WC and occupation. Diabetes is still almost absent among the Santal indigenous group in Bangladesh, but IGT is present in a small proportion of males and fairly large proportion of females. Favourable anthropometric features and physically active traditional lifestyle may underlie the extremely low prevalence of diabetes in this population. However, the remarkable difference in the prevalence of IGT among females and males is not explained only by these factors and further studies are warranted in this area.
Evidence based patient education is known to be a critical component of diabetes management for improved blood sugar control. A quality improvement project for improving blood sugar control in patients visiting an urban primary health care centre in Mumbai has been initiated. Baseline data was collected on the process measure percent of adults with diabetes who had a haemoglobin A1C measurement (HbA1c) performed at least once in the past year (2016) was 82%. The patients were divided into 3 groups: a) Diagnosed diabetes with HbA1c levels > 9.0% (poor control) was (n=179); b) 7.1- 9.0 % (needs improvement) was (n=444); and c) ≤ 7.0 percent (optimal control) was (n=198). Outcome data (2017) was collected including the HbA1c (glycated haemoglobin) measures.

To improve blood sugar control in the identified cohort, a structured patient education program had been developed and introduced in the primary care centre. The baseline process and outcome data mentioned above was tracked for evidence of improvement.

The analysis of the data after 3-4 months of introducing the structured patient education program demonstrated a measurable improvement. It was found that 10% of patients with HbA1c levels > 9.0% (poor control) and 7% of the group with HbA1c between 7.1- 9.0 % (needs improvement) showed improvement.

So we conclude that intervention in terms of routine screening and regular counselling helps in improvement of HbA1c levels. The detailed analysis will be complete only by September 2017.

PS. I would like to make an oral presentation for this paper of mine and to be included under Public Health Policy.
and progression of atherosclerosis. But the underlying mechanism how smoking causes atherosclerosis is not known yet. Keeping in view the etiological aspects of the disease, novel markers and mechanisms are needed to be identified. It is well established that NOD-like receptor protein (NLRP3) inflammasome is involved in the cascade of inflammatory response. NLRP3 inflammasome assembly activates due to variety of exogenous and endogenous factors like oxidative stress. NLRP3 inflammasome assembly is facilitated by several intracellular markers including NLRP3, ASC and caspase-1 for the production of pro-inflammatory cytokines i.e. IL-1β and IL-18. This study examines the status of inflammasome assembly markers in subjects with CAD who are smokers (n=10) and non-smokers (n=10) and healthy controls including smokers (n=10) and non-smokers (n=10). PBMCs are used for the assessment of inflammasome markers i.e. NLRP3, pro-caspase-1, caspase-1, pro-IL-1B, IL-1B, pro-IL-18 and IL-18. The study determined that there is increase in the expression of inflammasome activation markers in CAD patients who are smokers compared to CAD patients who are non-smokers. Similarly, the gene expressions were observed in healthy control smokers and non-smokers. This study suggested that smoking is responsible for the activation of inflammasome gene markers, further involved in the progression of atherosclerosis.

Abs. No. AB00OR396

Epidemiological predictors of coronary artery disease in young populations in a tertiary care centre at Bhubaneswar

P Sahoo, Sonali Kar, Gurukrishna Mohapatra, Vishwanath Ghoshal
Department of Community Medicine, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India.
E-mail: vishwanathghoshal@hotmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Coronary artery disease (CAD) contributing to 30% of global mortality and 10% of the global disease burden commonly affected after age 50 years is now changing the trend towards the younger population. As there are limited study and limited data on the frequency of MI in younger subjects, this study aims to assess the prevalence, risk factors and management of young CAD patients attending a tertiary care centre in Odisha.

This is a hospital based cross sectional study conducted more than two years i.e., March 2015-March 2017 where 1200 CAD cases were found out of which 44 were young. The relevant data were collected in structured proforma and analysed.

Among them 12 cases were in the age range of 25 to 30 years, 29 cases of age range of 30 to 40 years and only 3 cases were less than 25yrs, 29cases were male and all very young CAD were males. Smoking, tobacco chewing, hyperhomocysteinemia were associated risk factors. Per cutaneous transluminal coronary angioplasty (PTCA) was done in 5 cases of age range 20 to 30 year and 10 cases were in the age range 30 to 40 years successfully.

Hypertension, smoking, diabetes and tobacco are commonest risk factors in young CAD patients. The youngest case in study population was 20-year-old student who happened to be a smoker as well as Gutkha chewer also a case of hyperhomocysteinemia which clearly depicts changing trend of CAD.

Abs. No. AB00PO386

Extent of multisectoral coordination for the prevention and control of non-communicable diseases in Chandigarh: A stakeholder and situation analysis

Rahul Gogia, JS Thakur¹, Anil Garg²
School of Public Health, PGIMER, ¹Department of Community Medicine, PGIMER, ²NPCDCS, Chandigarh, India.
E-mail: gogiarahul689@gmail.com

Global Action Plan for the prevention and control of Non-Communicable Diseases (2013) and Sustainable Development Goals (2015) with planned monitoring framework came forward having specific targets and indicators for prevention and control of Non-Communicable Diseases but may be still lacking in achieving control on disabling burden mainly due to lack of intersectoral coordination and resource scarcity. Recent National Health Policy (2017) emphasizes intersectoral coordination as key to success in prevention and control of Non-Communicable Diseases; but, without having clear idea of baseline situation of present coordination, effective and strong intersectoral coordination may be a distant reality. Therefore, to find the extent of coordination at present, this study will identify the key stakeholders, extent of their participation, and coordination between different sectors / stakeholders for the prevention and control of Non-Communicable Diseases. A cross sectional study will be conducted in Chandigarh with potential stakeholders from various sectors (government, private, and civil
Diseases  | November 2017 | Vol 2 | Supplement 1

Mean values of adiposity indices, CRP, leptin, resistin, TDEI, EB, BMR, screen-time, leisure-time PA, sleep-time were higher and adiponectin, TDEE, PA level (PAL), walk-time, outdoor-sports/exercise were lower among OW/OB group (p-values<0.001-0.045). On multiple linear regression analysis, with covariate adjustments, BMI (β:0.66, p<0.001), WC (β:0.09, p<0.05), FFM (β:0.10, p<0.05), resistin (β:0.18, p<0.05), adiponectin (β:-0.17, p<0.05) were associated with EB. PA domains: walk-time, outdoorsports/exercise, PAL were negatively and screen-time and BMR were positively associated with adiposity indices and inflammatory markers. Sleep-time was positively associated with adiposity indices and adiponectin (β:0.10, p<0.05); sedentary-activity was positively associated with adiposity indices, resistin (β:0.13, p<0.05), leptin (β:0.13, p<0.05), TNF-alpha (β:0.15, p<0.05) [univariate analysis]. These results highlight the importance of PA among adolescents.

Abs. No. AB00PR365

Tobacco use in Punjab and its correlates: A cross sectional study

Garima Bhatt, Sonu Goel
School of Public Health, PGIMER, Chandigarh, India.
E-mail: garimabh.90@gmail.com

Abstract Sub-Theme: Tobacco Addiction

Tobacco use which is a major preventable cause of Non Communicable Diseases leads to over 5 million deaths worldwide and is expected to rise to over 8 million by 2030. The objective of the present study was to assess the prevalence of current tobacco use in smoked and smokeless form in Punjab, India.

This cross sectional study was conducted in the period of December 2015 till March 2016. A three stage sampling technique was used for collecting data from three randomly selected districts representing three major regions of Punjab, India. A sample size of 510 individuals was divided equally into urban and rural area with proportionate sampling on basis of subsets of age groups and gender. The questionnaire based on Tobacco Questions for Survey (TQS), a subset of key questions from Global Adult Tobacco Survey was used.

Overall, the prevalence of current tobacco use was 11.5 percent. The smoked form was more prevalent (15.2 percent) as compared to smokeless (7.8 percent) form. An antagonistic relationship between education and use of
smoked tobacco was observed as the odds ratio decreased with increasing level of education (OR 0.83-0.13, C.I. 0.23-2.97, 0.02-0.74).

Tobacco use was low in Punjab, India especially in females as compared to other states of the country. Majority of users came from underprivileged groups and people with low literacy levels. More stringent and continuous efforts can make the state a tobacco free state.

Abs. No. AB00OR412

Association between change in weight among adults in different BMI categories and risk of type 2 diabetes

Kanika Agarwal, Roopa Shivshankar1, Mohammed K Alî2, KM Venkat Narayan2, Dorairaj Prabhakaran3, Ravinder Chaudha, Nikhil Tandon4

Department of Food and Nutrition, Lady Irwin College, University of Delhi, 1Centre for Chronic Disease Control, Public Health Foundation of India, 2Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, India, 3???, Rollins School of Public Health, Emory University, Atlanta, United States of America.

E-mail: kanika.agarwal@gmail.com

Abstract Sub-Theme: Diabetes

Anthropometric measurements such as weight have been shown to predict the risk of diabetes. Studies have shown that weight gain increases the risk of diabetes. The aim of the study was to assess the association of change in weight in different body mass index (BMI) categories with the risk of diabetes. Data from 100 adults newly diagnosed with diabetes (fasting blood glucose ≥ 126mg/dl or HbA1c ≥ 6.5%) and 200 controls (diabetes free individuals at baseline and at second evaluation after a gap of 2 years) matched on age and gender, within Cardio-metabolic Risk Reduction in South Asia (CARRS), a prospective study among non-pregnant adults ≥ 20 years, representative of urban Delhi, were used for analysis. Change in weight (over 2 years) was assessed using conditional logistic regression adjusted for age within case-control cluster, BMI categories (using international definitions), tobacco and alcohol consumption, income, family history of diabetes, and physical activity score. Incremental weight impacts risk of diabetes depending upon the individual's BMI category. The findings indicate incremental weight of an underweight individual reduces the risk (OR: 0.075, 95% CI 0.004 - 1.20), while all other categories showed a positive relationship with risk of diabetes (Normal, OR: 1.19, 95% CI 0.88-1.62; Overweight, OR: 1.61, 95% CI 1.06-2.46; Obese, OR: 1.45, 95% CI 0.94-2.25). The study shows that weight gain increases the risk of diabetes and maintaining a stable weight may help reduce the risk.

Abs. No. AB00OR377

Physical Activity Patterns in Non Alcoholic Fatty Liver Disease – A Case Control Study

Swapna Chaturvedi, Neena Bhatia, Naval K Vikram1

Department of Food and Nutrition, Lady Irwin College, University of Delhi, 1Department of Medicine, All India Institute of Medical Sciences, New Delhi, India.

E-mail: swapnaiims@gmail.com

Non-alcoholic fatty liver disease (NAFLD) is a common cause for chronic liver diseases. Several lifestyle factors like physical activity (PA) affect the risk for developing NAFLD. A case control study with 160 NAFLD cases (Males=80, Females=80) and 160 apparently healthy controls (Males=80, Females=80) without NAFLD, with similar age and BMI distribution, was undertaken to assess PA pattern of the two groups. The study was conducted at AIIMS hospital, New Delhi. Subjects with excess alcohol intake, any secondary cause of fatty liver and any severe illness were excluded. Anthropometric measurements included BMI and waist-to-hip ratio using Asian cut-offs. GPAQ Version 2 was used to assess PA, which was categorized into low, moderate and high according to reported frequency and duration of PA in 3 domains: work, travel and leisure. Cases versus controls: 54.1% versus 33.3%; 45.9% versus 51.6%; 5.0% versus 15.0%, were having low, moderate and high level of PA, respectively (p<0.000). MET scores/week for work (vigorous and moderate), travel and recreation (vigorous and moderate) were significantly higher among controls as compared to cases (p<0.05). Sedentary activity (minutes/day) was significantly higher among cases as compared to controls (p<0.05). On logistic regression analysis, moderate level of PA, OR, 95% CI ([0.30 (0.123-0.711), p=0.006]) and vigorous PA ([0.03 (0.005-0.149), p=0.000]) decreased the odds of NAFLD. On adjustment with age, gender, BMI and WHR, moderate ([0.30 (0.117-0.742), p=0.010]) and vigorous level ([0.03 (0.004-0.126), p=0.000]) of PA still remained significant. It can be concluded from this study that higher PA levels may be useful in prevention and management of NAFLD.

Abs. No. AB00OR148

Factors influencing glycemic control among diabetes patients in a tertiary care centre in Delhi
Saurav Basu, Suneela Garg, Nandini Sharma, M Meghachandra Singh, Sandeep Garg
Department of Medicine, Maulana Azad Medical College, New Delhi, India.
E-mail: saurav.basu1983@gmail.com

Abstract Sub-Theme: Diabetes

Persistent hyperglycaemia in diabetics has deleterious effects on the vascular tree leading to microvascular and macrovascular complications which cause significant morbidity, premature mortality, high economic costs and the lowering of patient quality of life. However, poor glycaemic control is a major public health challenge. Globally Objective of this study was to assess the glycaemic control and factors influencing it among diabetics attending the special OPD clinics of a tertiary care centre in Delhi.

We assessed the adherence to self-care practices in 350 DM patients attending the Diabetes and the Endocrinology OPDs at a government tertiary care hospital in Delhi during FebJuly’ 2016. Adult DM patients 18-65 years of age were included in the study while those suffering from other serious illnesses were excluded. Furthermore, all the study subjects were capable of reading text messages in the local language, Hindi since the study objective was followed by a prospective mHealth study. The subjects were enrolled by consecutive sampling. Glycated haemoglobin (HbA1c) < 7% was defined as good glycaemic control.

A total of 190 men and 160 women diabetics were enrolled in the study. Eight nine subjects were assessed to have good glycemic control. Poor glycemic control (HbA1c ≥ 7%) was significantly associated with lower socioeconomic status (p < 0.05), low educational attainments (p < 0.01), overweight and obesity (p < 0.01).

However, no significant association was found between age, gender, modality of treatment and presence of comorbidities.

Poor glycemic control is a major challenge in Indian healthcare settings.

Abs. No. AB00OR437

Characterization of food intake and nutritional status of children in North Indian rural homes: A policy concern for multi-sectoral action

Neha Gupta1, S Verma1, S Puri2, N Tandon4, Laurette Dube4, NK Arora1 on behalf of INCLEN B-t-S Foundation Project Team

1The INCLEN Trust International, 2Department of Food and Nutrition, Institute of Home Economics, University of Delhi, 3Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, India, 4McGill Centre for the Convergence for Health and Economics. E-mail: neha@inclentrust.org

Co-existing underweight and overweight/obesity among children with rapidly changing lifestyle and economic transitioning the need for a multi-sectoral approach to better comprehend the challenge. The present community based cross-sectional study was conducted to assess associations between lifestyle behaviour and food environment at household, neighbourhood and school with the BMI of 612 children (6-12 year old) residing in 9 villages of the INCLEN SOMAARTH surveillance site, Palwal district, Haryana. The children had almost 1/5th of their energy intake from unhealthy foods, engaged in high levels of physical activity and were exposed to significantly different food environment at home/ neighbourhood/ school level. Despite consumption of adequate energy intake, 22.5% of the recruited children were thin/severely thin and 3% were overweight / obese as per BMI-for-age. Multivariate logistic regression analysis was done at three-tier hierarchy (individual, household and community). Variability in the risk of getting thinness among subjects was significantly explained by: age (>10years) (OR: 2.1), interaction between children from minority community with poor SES households (OR: 4.4), household availability of sweets/cereals (OR:0.9) and poor street conditions (OR:0.3). Although the homogeneity of community food environment appeared to dilute the heterogeneity in individual lifestyles and home environment, the risk of under-nutrition amplified with the interplay of factors at multiple levels.

Conclusion: Transition at all levels in the society and associated nutritional environment is a staggered and complex process that needs to be accounted for devising policy actions.

Abs. No. AB00OR427

Prevention of hypertension: a study on knowledge and attitudes of women of childbearing age

Anisha Aggarwal, Anshu Mittal, Harshpreet Singh
Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Ambala, Haryana, India. E-mail: ane.aggarwal@gmail.com
Abstract Sub-Theme: Cardiovascular Diseases

The act of health promotion and disease prevention is economical. The benefits are seen many years later. The increasing prevalence of hypertension in developing countries is of great concern. According to the World Health Organization (WHO 2013) 36% of adults aged 25 years and above had raised blood pressure in South-east Asia. 32.5% population suffered from raised blood pressure in India (2008). High blood pressure is related to high mortality and morbidity. Research reveals that women with pre-existing or chronic high blood pressure are more likely to have complications during pregnancy. Primary prevention of hypertension provides an opportunity to interrupt and prevent the continuing costly cycle of managing hypertension and its complications. It is the cheapest and most effective way of controlling high blood pressure. The Objectives of this study were as follows: (1) The kind of knowledge women have about preventive measures of hypertension. (2) The attitude of women towards preventive measures of hypertension.

This hospital based study was conducted on women between the age 19-49 years visiting The Rural Training Health Centre, Barara, Maharishi Markandeshwar Institute of Medical Sciences and Research, Mullana, Ambala, Haryana between June 1, 2016 to April 1, 2017.

Most of the respondents (82%) had the knowledge that high blood pressure was high level of stress; tension or over thinking. A high percentage of participants showed low level of knowledge on the symptoms of hypertension. This study showed that participants have limited knowledge regarding the etiology of hypertension. 45% of the participants had the knowledge that high blood pressure could result to stroke. Results suggested that most participants had a positive attitude towards preventive measures of illnesses in general as well as HBP.

Abs. No. AB00OR439

Rapid assessment of availability of tobacco dependence pharmacotherapy in pharmacies in selected states of India- A telephonic survey

Gunjan Kumar, Palanivel Chinnakali, Sitanshu Sekhar Kar, S Manikandanesan, Arvind Kumar, Jency Antony, S Krishnendu, P Stephan
Department of Preventive and Social Medicine, JIPMER, Puducherry, India.
E-mail: gunjan25_87@yahoo.com

Abstract Sub-Theme: Tobacco Addiction

Smoking is the single most important cause of preventable illness and premature deaths worldwide. Pharmacotherapy and behavior change are the two key interventions to reduce the usage of tobacco. A cross sectional telephonic survey was done to assess the availability of Tobacco dependence pharmacotherapy (TDP) at pharmacies in selected states of India. The study was conducted among randomly selected pharmacies and all medical colleges of Delhi, Chandigarh, Tamil Nadu, Kerala and Puducherry to assess the availability, demand and sale of tobacco dependence pharmacotherapy that included nicotine preparation in the form of gum, patch or inhaler, and oral drugs including bupropion, vernacilline and nortryptyline. A total of 1883 pharmacies were included in the survey. The most widely available TDP was nicotine chewing gum, which was available in total 59% of the pharmacies; 94.2%, 90.8%, 41.4%, 38.4% and 10.6% in Chandigarh, Delhi, Tamil Nadu, Kerala and Puducherry respectively. Similarly, the demand was also higher among Delhi (74.3%) and Chandigarh (93.4%) as compared to Kerala (39%), Tamil Nadu (35.3%) and Puducherry (10.6%). Bupropion was not available in Kerala and Tamil Nadu, while it was available in 0.4%, 2.4% and 48.5% of pharmacies in Puducherry, Chandigarh and Delhi respectively. Availability of vernacilline and nortryptyline also showed a similar picture as bupropion. Thus, the availability of TDP remains low in these states and further interventions are needed to ensure a wider availability.

Abs. No. AB000R415

Prevalence of obesity among school going children in district Ambala, Haryana

Harshpreet Singh, Parul Jain, Anisha Aggarwal, Muzamil Nazir, Sandeep Kumar, Anuj Bishnoi
Department of Community Medicine, Maharishi Markandeshwar University, Ambala, Haryana, India.
E-mail: harsh.eternity2012@gmail.com

Abstract Sub-Theme: Obesity

The term overweight refers to excess body weight for a particular height whereas the term obesity is used to define excess body fat. Overweight and obesity primarily happen either due to excess calorie intake or insufficient physical activity or both. Childhood obesity is a forerunner of metabolic syndrome, poor physical health, mental disorders, respiratory problems and glucose intolerance, all of which can track into adulthood. Developing countries
like India have a unique problem of ‘double burden’ wherein at one end of the spectrum we have obesity in children and adolescents while at the other end we have malnutrition and underweight. Globally, the prevalence of childhood obesity has risen in recent years. WHO has recently referred childhood obesity to an exploding nightmare?

The Objectives of the present study were to determine the prevalence of obesity among school going children in Ambala district. To find out the determinants of childhood obesity in study population.

It was a population based cross sectional study conducted in govt and private schools of Ambala. A total of 30 clusters were taken and 23 subjects were included in each cluster. The sample size calculated for the study was 682. Equal no. of males and females were included.

Prevalence of obesity and overweight was found to be 8.6% and 18.4% respectively. Among those whose mothers were graduates and post graduates or professionals 23% were obese as compared to –6% among those where mothers were homemakers. Among the obese 81% took junk food more than three times in a week and 70% had carbonated drinks almost every day. Among those who play more than 2 hours a day only 6% are obese.

The study highlights the worrisome and neglected trend of obesity among school going children in the urban area possibly due to decline in physical activity and changing food habits among children and adolescents.

Abs. No. AB00OR444

Blood pressure profile of school going adolescents (13-15 yrs): Relation with anthropometric variables

Sonika Sharma, Neena Bhatia, Swati Jain
Department of Food and Nutrition, Lady Irwin College, New Delhi, India.
E-mail: sonikasharma0112@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Raised blood pressure in adolescents is an emerging public health problem and is recognized as one of the most important predictors of adult hypertension. The present study investigated the prevalence of pre-hypertension, hypertension and hypotension in adolescents (n=500) of a public school in East Delhi, India; along with an association of blood pressure profiles with obesity indicators- BMI, % BF and WC and family history. Adolescents were screened for blood pressure, height, weight, BMI, % BF and WC.

Prevalence of prehypertension, hypertension and hypotension was found to be 9.4%, 7.8% and 9.8%, respectively. The study showed an association of hypertension and prehypertension with body weight and body fat indices. A positive correlation was found between SBP/DBP and WC, BMI and % BF. SBP and WC showed strongest correlation, indicating role of WC in adolescent hypertension. By BMI categorization, obesity and overweight taken together, was present in 51% of pre-hypertensive and 48.6% of hypertensive adolescents while the hypotensive group had the highest percentage of thin adolescents (12.2%). Similarly with % BF categorization, obesity was highest among the hypertensive individuals (25.6%), followed by pre-hypertensive (19.1%). Hypotensive group had the highest percentage of underfat adolescents (34.6%). Further, hypertensive and pre-hypertensive individuals had the highest mean waist circumference. Family history of abnormal blood pressure levels was more in pre-hypertensive (36.1%) and hypertensive group (35.8%) than hypotensive and normotensive adolescents. These results substantiate an evolving endemic of cardiovascular risk in youth, as evidenced by the prevalence of hypertension and its association with obesity indicators.

Abs. No. AB00OR440

Body mass index and its determinants among geriatric population of East Delhi

Kriti Vaish, S Patra, P Chhabra
Department of Community Medicine, University College of Medical Sciences, New Delhi, India.
E-mail: drkritivaish@gmail.com

Abstract Sub-Theme: Nutrition

India is in a state of demographic transition resulting in increased proportion of people >60 years of age, whose health status is not currently monitored. Malnutrition (underweight and overweight) is an alarming public health problem all over the world. The aim of the study is to assess the Body Mass Index (BMI) and its determinants among geriatric population residing in urban area of East Delhi. A cross-sectional study was conducted in 2 areas of East Delhi including 360 participants. Study participants were selected by Systematic Random Sampling and were interviewed using a pre-tested questionnaire to record socio-demographic details. Height and weight were recorded using standard tools to calculate the BMI. Only
Abstract

Diabetes is a chronic disease, requiring a multipronged approach for its management. Therefore diabetic patients must follow certain self-adherence practices for their medications in order to achieve an optimal glycaemic control and prevent complications. Almost 50% medications for diabetes are not taken as prescribed. Using a cross sectional survey, 168 known diabetic patients 20 years and above were selected in NandNagri, a resettlement colony in East Delhi to find out their self-adherence to medications using the revised version of SDSCA along with a pre tested semi-open ended questionnaire for information on their socio-demographic profile, disease history and treatment profile. The study period was from November 2014–April 2016. The mean age of study participants was 54years. 52.4% subjects were females. 91.1% of study subjects were prescribed oral hypoglycemic drugs as treatment for diabetes by their physicians while 14.3% subjects were prescribed insulin, one or two times a day by their doctors. 89.3% of study subjects resorted to lifestyle modifications in order to control diabetes. However, only 69% study subjects took the prescribed treatment for all 7 days in a week. About 20% didn’t take the medication even for one day in last 1 week. The intake of other forms of natural medicines (‘desi-dava’) was observed in 16.7% of study subjects. The modest level of self-adherence regarding medication emphasises the need for one to one counselling along with community based IEC activities to ensure that patients strictly adhere to the medications prescribed for their glycemic control.

Abs. No. AB00PO287

Development of an educational intervention for the prevention of shoulder dysfunction and lymphedema following surgery amongst breast cancer patients

Sukhpal Kaur, Gurpreet Singh1, Amarjeet Singh2, Parul Sharma, Sunita Malhotra3, Sangeeta Singh4
National Institute of Nursing Education, PGIMER, Departments of 1General Surgery and 2Dietetics and 4Physiotherapy, 3School of Public Health, PGIMER,Chandigarh, India.
E-mail: sukhpal.trehan@yahoo.in

Abstract Sub-Theme: Cancer

Breast cancer survivors are at risk of developing varied complications in the form of shoulder dysfunction and lymphedema. In order to meet the growing needs of these patients an educational intervention was developed. Detailed in-depth interviews with the breast cancer survivors were undertaken to gain understanding of their experiences and their problems following breast surgery. Available evidences from systematic reviews were explored. A panel of ten experts from the fields of general surgery, public health, nursing education, dietetics, and physiotherapy was selected. Delphi rounds were conducted amongst the experts till they reach at the consensus regarding the contents of the intervention. The educational intervention was named as ‘Care of breast cancer patients after surgery’. It consisted of a booklet and a DVD for the management of physical disabilities following breast cancer treatment. It is a guidebook for the women with special emphasis on prevention of shoulder dysfunction and arm lymphedema. ‘Care of breast cancer patients after surgery’ is an innovative intervention which is also being tested not just for its feasibility and acceptability but also for its clinical and cost-effectiveness through rigorously designed, randomised clinical trial. It is very important to test this intervention in the country like India where the rehabilitation and information needs of the breast cancer survivors seems to be substantial and largely unmet.
Abstract

Abs. No. AB00OR467

‘Know your numbers' - Awareness of own health parameters amongst home makers in Delhi, India

Rahul Sharma, Vikas Kumar, Dinesh Raja
Department of Community Medicine, UCMS and GTB Hospital, New Delhi, India.
E-mail: studycorner@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

With the rising trend of non-communicable diseases globally, awareness about one’s own health parameters can be an important step in reducing disease burden and preventing complications. The study aimed to study awareness about selected own 'health numbers' among female home makers in a part of Delhi, India. Interviews were carried out with the women in representative residential colonies in a part of east Delhi. The study participants were 754 homemakers aged 18 years and above. A pre-tested questionnaire was used to collect information. The women were asked about their awareness about five selected own health parameters. Among the women, 22.7% were illiterate while 19.7% had done college graduation or higher studies. Among the parameters asked about, awareness was highest about own blood group (36.3%), then for blood pressure (24.4%), haemoglobin level (11.5%), blood glucose (11.1%) and only 2.3% were aware of their cholesterol level. Of total, 407 (54.0%) were aware of none of the five asked about, 186 (24.7%) aware of just one and 161 (21.4%) aware of two or more values. The self-awareness was found to be significantly associated with higher residence colony type, higher education level, higher socioeconomic status, and preventive health check-up visits in past. In conclusion, it was seen overall there was low self-awareness about important 'health numbers'. The awareness was inversely correlated with socioeconomic status markers. Population-wide as well as target group specific measures are needed to improve the awareness among the at-risk group.

Abs. No. AB00OR465

Type 2 diabetes mellitus among the beneficiaries of ESIC scheme in Puducherry

Palash Kumar Sanyal
Department of Health (ESI), Government of Puducherry, Puducherry, India.
E-mail: pk.sanyal2011@gmail.com

Abstract Sub-Theme: Diabetes

Prevalence of type 2 diabetes is on the rise among the beneficiaries of ESIC scheme in Puducherry. However the magnitude of the problem and the economic costs to the Government have not been assessed. This cross-sectional survey tries to address this lacuna.

Cross-sectional survey related to the patients attending service dispensaries under the ESIC scheme in Puducherry. The data was collected from the diabetes registers available in the dispensaries, patient interviews with respect to the variables of interest, referral slips to the ESI Hospital, investigation reports.

The prevalence of type 2 Diabetes is on the rise. The study showed that non-compliance to treatment and follow-up was a major issue. Patient education with respect to treatment was a major determinant in the diabetes control. A large number of patients required more than one anti-diabetic agent to control diabetes. One important finding was that simple medications used judiciously could control diabetes without resorting to expensive new medications. Oral health of the diabetics reflected increased prevalence of periodontitis, calculi, and caries. However it could not be ascertained if oral health complications were due to diabetes alone or lack of oral hygiene.

Effective diabetes management at primary health care level requires patient sensitization, availability of medications, simple diagnostic procedures, and patient education more than any new designer antidiabetic agent.

Abs. No. AB00OR354

Reversal of hyper methylation and reactivation of GSTP1 gene by curcumin in breast cancer cell line

Umesh Kumar, Ujjawal Sharma, Garima Rathi
Molecular Oncology Division, Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi (North Campus), New Delhi, ‘Department of Biochemistry, Postgraduate Institute of Medical Education and Research, Chandigarh, India.
E-mail: umeshkumar82@gmail.com

Abstract Sub-Theme: Cancer

One of the mechanisms for epigenetic silencing of tumor suppressor genes (TSGs) is hyper methylation of cytosine residue at CpG islands at their promoter region that contributes to malignant progression of tumor. Therefore, activation of TSGs that have been silenced by promoter
methylation is considered to be very attractive molecular target for cancer therapy. Epigenetic silencing of GSTP1, a TSG, is involved in various types of cancers including breast cancer. Epigenetic silencing of TSGs can be reversed by several molecules including natural compounds such as polyphenols that can act as a hypomethylating agent. Curcumin has been found to specifically target various TSGs and alter their expression. To check the effect of curcumin on the methylation pattern of GSTP1 gene in MCF-7 breast cancer cell line in dose dependent manner. To check the reversal of methylation pattern of hypermethylated GSTP1, MCF-7 breast cancer cell line was treated with different concentrations of curcumin for different time periods. DNA and proteins of treated and untreated cell lines were isolated and methylation status of the promoter region of GSTP1 was analyzed using methylation specific PCR assay and expression of this gene was analyzed by immunoblotting using specific antibodies against GSTP1. A very low and a nontoxic concentration (10 µM) of curcumin treatment was able to reverse the hypermethylation and led to reactivation of GSTP1 gene expression in MCF-7 cells after 72 h of treatment, though the IC₅₀ value of curcumin was found to be at 20 µM. However, curcumin less than 3 µM of curcumin could not alter the promoter methylation pattern of GSTP1. Treatment of breast cancer MCF-7 cells with curcumin causes complete reversal of GSTP1 promoter hypermethylation and leads to re-expression of GSTP1 suggesting it to be an excellent nontoxic hypomethylating agent.

Abstract

Demographic and clinical features of CKD patients attending nephrology out-patient clinic in JIPMER, Puducherry during January February 2015. The diagnosis of CKD and etiology was performed by nephrologists. Among the 1007 patients studied, the mean age was 50.9 ± 13.2 years and 75% were male. Amongst the CKD patients who had a GFR of less than 8 (31.3%), who should undergo dialysis, were not undergoing dialysis due to poor financial background. Majority (85%) of the patients had advanced CKD; 54.6% were in stage V while 30% were in stage IV. Undetermined etiology emerged as the most common (73.6%) cause for CKD. This was the highest proportion of CKDu reported among all published CKD studies conducted in India, which reported CKD etiology. This observation raised the question whether there is an unrecognized endemic of Chronic Interstitial Nephritis in Agricultural Communities (CINAC) among the underprivileged population engaged in agricultural labour in the coastal northern region districts of Tamil Nadu. Further, the clinical and demographic profile of this study’s patient population match that of patients with CINAC reported from areas in Sri Lanka and South America where CKDu is endemic which reinforces the chances of such a phenomenon.

Abs. No. AB00OR463

Perceptions of hypertension among patients and healthcare providers: Implications for provision of patient centred care

CP Anusha, Yuvraj B Chavan, Ratnendra R Shinde, Aritra K Bose, Milind Rasal
Seth G.S.Medical College and KEM Hospital, Mumbai, Maharashtra, India.
E-mail: anusha168@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Patient centred care and shared decision making are crucial for improving effectiveness and efficiency of Hypertension treatment. The objectives of this research were to compare and contrast perspectives of Hypertension among patients and their healthcare providers and to assess the implication of these perceptions on the provision of hypertension care services. Data was collected using multiple qualitative methods in a chronic OPD of an Urban Health and Training Centre. Free list technique was used in patients and their care providers to elicit the elements of cultural domain. Participants were recruited using non probability convenient sampling. Participants listed
words reflecting their understanding of 1. Hypertension  
2. Healthcare needs of Hypertensive patients 3. Role of Healthcare providers in care of Hypertensives. Salient indices were calculated and analysed using anthropac. Focused Group Discussions were conducted with patients and In-depth interviews with healthcare providers to further understand individual perspectives. Data collected till saturation was reached. Data was transcribed and analyzed using Grounded Theory. Results are awaited.

Abs. No. AB00OR477

**Identifying cross-sectoral barriers to healthy behaviours: A healthy cities approach**

*Amanda Pomeroy-Stevens, Asheesh Jain*

John Snow, Inc./John Snow Private Limited, JSI, Arlington, Virginia, USA.

E-mail: apomeroy@jsi.com

The environment in which we live shapes our behaviors and influences our health. Barriers to healthy choices on our environment increase risk of non-communicable diseases (NCDs). John Snow, Inc. (JSI) has collected evidence on the barriers to healthy behaviors in one “Smart City” in India to better understand how to incorporate NCD prevention into urban planning activities.

JSI completed a needs assessment in Indore, Madhya Pradesh in 2017. JSI completed interviews with 22 municipal and six national government, civil society, and private sector stakeholders representing health and seven other non-health sectors. Interview data were collected with a structured interview tool and analysed in NVivo and Excel alongside results from an online citizen’s survey, which asked about individual behaviours and barriers to access.

The Smart City initiative has created major improvements in Indore, but health has not yet been engaged as a key sector, and does not sit on the city management committee. There was however an interest to incorporate more urban health promotion activities. Among providers, staff at the city’s two NCD clinics had latest guidelines for care, but did not have the human resources to counsel patients on healthy behaviours to prevent disease. Within the community, limited time and mobility combined with low risk perception minimized demand for preventive care seeking.

We need to make healthy choices the easiest choices. JSI’s findings highlight opportunities for making this a reality in one fast growing Indian city. JSI is working with government partners to identify cost-effective interventions based on these results.

Abs. No. AB00PO212

**Comparison of visceral and body fat indices and anthropometric measures associated with chronic kidney disease among Chinese adults**

*Ying Dong, Zeng-wu Wang, Lin-feng Zhang, Zuo Chen, Xin Wang, Min Guo, Ye Tian, Lan Shao, Man-lu Zhu, Run-lin Gao.*

Division of Prevention and Community Health, National Center for Cardiovascular Diseases; Fuwai Hospital, PUMC and CAMS, Beijing, China.

E-mail: 437956809@qq.com

**Abstract Sub-Theme: Chronic Kidney Diseases**

The aim of the study was to compare the efficiency of various adiposity indices (body mass index, BMI; waist circumference, WC; waist-to-height ratio, WHtR; percentage body fat, PBF; visceral fat index, VFI) on determining chronic kidney disease in Chinese adults aged 35 years or older.

A total of 29,516 participants aged 35 years or above were selected from a stratified multistage random sampling scheme across China during 2012-2015. Chronic kidney disease was defined as estimated glomerular filtration rate (eGFR) <60 ml/min/1.73m².

The overall prevalence of chronic kidney disease was 5.34%. Moreover, in both genders, the prevalence of decreased eGFR tended to increase with age ($P$ for trend <0.001). The AUCs for PBF was almost significantly larger than other adiposity indices ($P$<0.001). Additionally, in both genders, PBF yielded the highest Youden index in identifying chronic kidney disease (male: 0.15; female: 0.20). Optimal cut-offs for PBF were 26.90/35.70 in male and female, respectively. Furthermore, PBF had the highest crude ORs in both male (1.819) and female (2.268). After adjusted for covariate variables, the ORs on PBF were significant for both genders ($P$<0.05).

PBF was the best predictor for identifying chronic kidney disease. Furthermore, it may be as an alternative to some traditional adiposity indices (such as BMI and WC) of obesity in distinguishing persons with chronic kidney disease.
**Abstract No. AB00OR493**

To assess the knowledge, attitude and practices regarding complications among diabetics having diabetes for more than 10 years of duration from the field practice area of GMC Amritsar

Anamika Soni, Mohan lal, Shyam Sunder Deepti, Tejbir Singh
Department of Community Medicine, Government Medical College, Amritsar, Punjab, India.
E-mail: docanamikasoni@gmail.com

Abstract Sub-Theme: Diabetes

Diabetes mellitus is a major non-communicable disease that contributes to the risk of premature death. In India 69.2 million people live with diabetes and more than 50% individuals remain unaware of having diabetes as well as the complications of diabetes therefore KAP study has been conducted regarding complications among diabetics having diabetes for more than 10 years of duration. A sample size of 40 diabetic patients was taken from field practice area of GMC Amritsar in 2016. The purpose of study was explained to the patients and informed written consent was taken. Those patients who gave the consent were interviewed using a pretested semi-structured questionnaire. The collected information was compiled and analysed to draw the valid conclusions. Out of 40 respondents, 47.5% diabetic patients knew about the complications. Out of 47.5%, (10%) had knowledge about all five, 47.3% had knowledge about 3-4, 42.1% had knowledge about 1-2 complications of diabetes respectively. 32% diabetic patients got knowledge about the complications from physicians. Out of total, 1/4th diabetic patients did physical activity regularly. Only 22.5 % diabetics who had no complications and they were regular in treatment and follow up and were regular in physical activity. Awareness and lifestyle changes to prevent the complications at earlier stage is the key.

**Abs. No. AB00OR500**

Effectiveness of a culturally appropriate nutrition educational intervention delivered through health services to improve growth and complementary feeding of 6 months to 1 year old infants in Chandigarh

Nikita Sharma, M Gupta, AK Aggarwal, M Gorle
Departments of Community Medicine and 'Dietetics, PGIMER, Chandigarh, India.

Abstract Sub-Theme: Nutrition

Under-nutrition among under five year old children is a public health problem in India. The objective of the study is to ascertain the effectiveness of a culturally appropriate nutritional education intervention delivered through health services to improve growth and complementary feeding of infants of age 6 to 12 months in Chandigarh; and to develop a child under-nutrition tracking module for health workers to monitor child growth. A quasi-experimental study will be conducted in two urbanized villages in Chandigarh. The study will be conducted among vulnerable, migrant population usually belonging to lower/lower middle socioeconomic groups. The study population will be mother infant dyad with the age of infants between 4-6 months. The sample size for the study is calculated as 202 mother infant dyads per arm. Prior formative research in the form of focus group discussions will be conducted with mothers, health workers and community workers to explore culturally appropriate foods, affordability and knowledge regarding feeding practices. The duration of intervention is one month and mother infant dyad will be followed up for 6 months after initiation of the intervention. The ANMs will be trained to give nutrition counseling and conduct a fortnightly home visits to counsel and support mothers for infant feeding practices. The mothers will be provided nutritional education through talks and video demonstration about culturally appropriate, easily available, and affordable low cost foods that they will feed their children. The primary outcome (mean change in weight for age) and secondary outcomes (mean change in weight for length, length for age, change in level of maternal knowledge and practices, proportion of children consuming foods from 4 or more food groups) will be assessed 6 months after intervention. Effectiveness of the intervention will be measured by calculating the repeated measure ANOVA between the intervention and control group. Conclusion: Nutrition education delivered through health services will reach more people and intervention will likely to be sustainable in a community. The study will help to explore the novel concept of tracking for under-nutrition among infants.

**Abs. No. AB00OR417**

Determinants of adherence to anti hypertensive medication in rural and urban field practice area of Department of Community Medicine, MMIMSR, Mullana, Haryana

Muzamil Nazir, AK Mukherjee, Anisha Aggarwal

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Department Of Community Medicine, MMIMSR, Ambala, Haryana, India.
E-mail: drmuzamil786@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Hypertension is a silent killer as it often shows no symptoms. Thus, it is more difficult to convince and motivate a patient to continue taking the therapy over a long period, which in most cases is life-long. Adherence is defined as the extent to which a patient continues an agreed-on mode of treatment without close supervision. Non-compliance to medication is a challenge in the public health field, and appropriate control of blood pressure is of utmost importance in reducing morbidity and mortality. Despite showing desirable results of blood pressure control, non-compliance remains a major concern amongst the physicians regarding hypertensive patients. Objectives of this study were as follows: (1) To find out the adherence to hypertensive medication in the study population. (2) To determine the various factors influencing adherence.

This study was conducted at the Rural and Urban areas of Ambala district, Haryana between Jan 1, 2016 to 31st Dec, 2016. A total of 700 adult patients suffering from Hypertension were enrolled under this study. Morisky Medication Adherence Scale 4 (MMAS 4) was used to determine adherence. Among 700 patients who participated in this study, 57.3% showed adherence to Anti-hypertensive medications. Good adherence was seen in age group of less than 55 years (62.2%) with a p value (0.004) and in male population (61.2%) compared to female participants (52.8%). Adherence was more in participants who were taking only one anti-hypertensive tablet in a day (77.6%) with a p value of (0.009).

Abs. No. AB00OR501

Effectiveness of breast cancer awareness programme in changing knowledge, attitude and practices among educated women in Raipur

Anjali Pal, Niraj Srivastava, Sunita Singh1, Pushpavati Thakur2
Department of Community and Family Medicine, AIIMS, 'RIMS, Raipur, Chhattisgarh, India.
E-mail: aluja38@yahoo.com

Abstract Sub-Theme: Cancer

Breast cancer is a leading cause of mortality among women. Early detection and treatment leads to improved survival. Studies show that knowledge and perception of women about breast cancer directly influence their acceptance of screening and treatment. Majority of patients present late to the hospital because of lack of knowledge of early signs and symptoms of breast cancer.

This was a study to evaluate the effectiveness of structured awareness programme on knowledge, attitude and practices regarding early detection and treatment of breast cancer among educated women in Raipur.

The study subjects were 5000 women studying in various educational institutions of Raipur District. Information on their current knowledge attitude and practices regarding breast cancer was collected by pretext questionnaire followed by an awareness program in which information was given on breast cancer, its signs and symptoms, misconceptions, screening methods, preventive measures and treatment modalities and the correct technique of breast self-examination. Then post-test questionnaire was administered.

Significant improvement was noted in the knowledge, attitude and practices score of participants after administration of structured awareness programme.

There is a need to spread awareness among the women about early detection and treatment of breast cancer.
Abstract

Diabetes mellitus and quality of life among urban middle aged Indian population

Manpreet Kaur, Anjali Rathi1, Mohd. Muntafa Rajput2
Department of Food and Nutrition and 2Biochemistry, Institute of Home Economics, University of Delhi, 1Department of Dietetics, Guru Tegh Bahadur Hospital, New Delhi, India.
E-mail: manpreetk2488@gmail.com

Abstract Sub-Theme: Diabetes

Type 2 Diabetes Mellitus (T2DM), a public health outbreak adversely affects the overall quality of life (QoL) leading to high rates of morbidity and mortality. Existing literature quotes Health Related Quality of Life and T2DM, but studies associating diabetes specific QoL among Indian diabetics are limited. Thus, this study attempted to associate QoL among urban middle aged (35-50 years) Type 2 diabetics, using a validated Quality of Life Instrument for Indian Diabetic Patients (QOLID). Participants from GTB Hospital, Delhi (n=70) with at least one year of diagnosed T2DM and no severe morbidty self-rated their QoL on a five point Likert Scale under 8 domains: Role limitation due to Physical Health, Physical Endurance, General Health, Treatment Satisfaction, Symptom Botherness, Financial Worries, Emotional/Mental Health, and Diet Advice Tolerance. Chi-square, Pearson's correlation and multiple logistic regressions applied at 5% level of significance. Majority of the participants (62.8%) were not Completely Satisfied with their overall QoL, with “General Health” perceived to be most dissatisfied (65.7%). Only 11.4% were Completely Satisfied with their “Treatment” and 35.7% reported financial worries “Sometimes”. No gender differences existed among any QoL domains, except males reported better at “Role Limitation due to Physical Health”. Overall QoL significantly decreased with increase in fasting plasma glucose (r=-0.5506, p<0.001), post-prandial blood glucose (r=-0.5026, p<0.001) and triglycerides (r=-0.2370, p<0.05). Further, those not “Completely Satisfied” had higher odds of impaired fasting glucose (1.1times), impaired glucose tolerant (0.13times) and diabetic (5.2 times). These findings alarm the need of multi-disciplinary approach to limit the burden of co-morbidities among T2DM.

Medical emergency admissions due to medication related problems

Gautam Kumar, N Shafiq, S Malhotra, N Sharma1, A Bhalla1

Abstract Sub-Theme: Cardiovascular Diseases

Out of 6050 patients screened in the emergency, 180 (2.97%) cases were related to medication related problems. Diabetic keto-acidosis and cerebrovascular accidents constitute the two most prominent presentation at diagnosis. The maximum number of cases were due to non-adherence (71%) followed up by suboptimal dosing (11.7%), adverse drug reaction (10.5%) and about 7% of those admitted were directly or indirectly related to complementary and alternate medicine use. 103 (57.2%) belonged to severe cases. 59 cases (32.8%) were classified as definitely preventable while 92 cases (51.1%) were possibly preventable and remaining 29 (16.1%) were not preventable.

The study estimated cost of medication per patient per day which roughly translated to median cost of 11.70$, range (0.32 $ to 253.6 $). Medication related problems account for considerable number of medical emergencies with large majority of them being preventable.

Abstract Sub-Theme: Adherence to Therapy

Patients’ adherence with their medication regimen is an essential component for the success of any medical therapy; especially for the non-communicable diseases. The study was planned to estimate the incidence, severity, preventability, cost associated with medication related illness and classify patients admitted based on causative factors. All admitted patients in medical emergency were screened for recognition of those admitted with medication related problems. Modified Hall’s criteria was used for causality assessment and modified Canadian Acuity Triage and Emergency Department scale was used for classification of severity of illness of the patients.

Development of dosing algoritm for warfarin

Navjot Kaur, Pandey Avaneesh, Shafiq Nusrat, Gupta Ankur1, Das Reena2, Ahuwalia Jasmina2, Singh Harkant1, Malhotra Samir

Abstract Sub-Theme: Cardiovascular Diseases
Warfarin is most commonly used oral anticoagulant throughout the world. Managing patients within optimal anticoagulation with warfarin is challenging. This is due to large inter-individual variation in drug response, narrow therapeutic index and potential for a large number of drug-drug interactions. Various clinical factors (such as age, BMI) and genetic polymorphisms (CYP2C9 and VKORC1) have been found to account for varying warfarin dose requirements among individuals.

The objective of this study was to develop a dosing algorithm using pharmacogenetics and clinical variables for optimizing anticoagulant therapy in patients on warfarin. Patients with atrial fibrillation (AF) and those undergoing valve replacements were considered for potential eligibility. Demographic details were recorded at enrolment visit. The genotype analysis was done by restriction fragment length method (PCR-RFLP). Demographic variables were summarised using descriptive statistics. Difference of warfarin doses among different SNP subgroups was compared by using one way ANOVA. Multivariate linear regression analysis was undertaken to model relationship of studied variables with warfarin dose.82 patients were included in analysis dataset. Multivariate regression analysis identified CYP2C9*3 genotype, VKORC1 genotype and Body Mass Index as significant factors that influence warfarin dose. Prediction equation based on these variables could explain 47.5% of dose variation among study subjects.

We developed a dosing algorithm for warfarin which can be used for individualization of warfarin therapy in future.

Abs. No. AB00OR568

Low paraoxonase 3 activity, circulatory concentration and A99A variants in North West Indian Punjabis; A predictive risk for angiographically proven CAD

Kumari Priyanka, Surjit Singh¹, Yash Paul Sharma², KDGill, Indu Verma²
Departments of 1Cardiology and 2Biochemistry, PGIMER, Chandigarh, India.
E-mail: ku.priyanka@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Paraoxonase cluster on 7 (q21, 22) has been extensively involved in various cardiovascular pathologies. Considering antioxidant potential and atheroprotective functions of HDLC

Associated human PON3, the present case control investigation (n=300 each) was carried out in North West Indian Punjabis. The aim of the study was to find out the distribution of PON3 genetic variants, their influence on PON3 activity and circulatory concentration to determine the development of Coronary artery Disease (CAD) risk. Amongst four genotyped SNPs of PON3 gene, the frequency obtained was in the order of 133C/A; AA (22%), CA (52%), CC (26%) and A99A; AA (61%), GA (33.5%), GG (5.5%) respectively. However, D107N and G324D variants were absent in the study population. A99A coding region polymorphism (AA) was associated with increased risk of CAD (Odds ratio 2.84; 95% CI 1.345.99, p≤0.01), along with heterozygous variants (GA) (Odds ratio 2.70; 95% CI 1.245.89, p≤0.01). Similarly, PON3 concentration was dependent on AA (p≤0.001) and GA (p≤0.01) genotypes of A99A polymorphism along with HDLC (p≤0.05) levels. Multiple logistic regression analysis for all the variants showed that GA genotype of A99A was found to be significantly associated with CAD risk (Odds ratio 5.78, 95% CI 0.4574.20, p≤0.05). These findings suggest that decrease PON3 activity/concentration can be taken together as a valuable marker for assessing the CAD risk in the current study group.

Abs. No. AB00PO588

Gestational weight gain and its related outcomes among Indian and other Asian Women: A systematic review

Priyanka Arora, Bani Tamber Aeri
Department of Food and Nutrition, Institute of Home Economics, Delhi University, New Delhi, India.
E-mail: priyanka.512019@gmail.com

In 1990, Institute of Medicine (IOM) recommended gestational weight gain (GWG) ranges for the women in the United States, with the primary goal of improving infant birth weight. Gradual change in key aspects of reproductive health of women of child bearing age, increase in advanced maternal age, a rising prevalence of obesity and non–communicable diseases prompt the revision of IOM guidelines in 2009. But, there is no such GWG recommendation available for the Asians. However, present review was performed to assess the utility of these guidelines among the pregnant women of India and other Asian countries. The review was conducted using PubMed and Google Scholar and identified 624 citations, out of which 14 were included. It was based upon the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Prospective/Retrospective studies of
healthy Asian women with a singleton pregnancy which specifically examined foeto-maternal outcomes relative to the IOM, 2009 guidelines were included. Macrosomia and gestational diabetes mellitus were associated with excessive GWG women. Low birth weight, small for gestational age and pre-term birth were associated with inadequate GWG whereas gestational hypertension and intrauterine growth retardation were higher among adequate GWG women. This evidence highlights the need of appropriate GWG limits across the different BMI levels specifically for Indians and other Asian population. However, the included studies had, on average, a low quality. Results from this systematic review implicate that higher-quality research is needed in future to further validate the findings of present review.

Abs. No. AB00OR669

The diagnostic and prognostic potential of circulatory miRNAs as biomarker for metastatic triple negative breast cancer

Seema Thakur1,2*, Rajesh Kumar Grover4, Sanjay Gupta4, Bhudev C Das1,2

1Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi, 2Delhi State Cancer Institute, 3Department of Surgery, Guru Tag Bahadur Hospital, New Delhi, 4Stem cell and cancer research Lab, Amity Institute of Molecular Medicine and stem cell Research, Amity University, Noida, Uttar Pradesh, India.

E-mail: seemathakur04@gmail.com

miRNAs play a key role in cancer initiation, progression, metastasis and drug resistance in triple negative breast cancer. We have done expression profiling of selected miRNAs in paired serum and tissue samples of metastatic TNBC (triple negative breast cancer), in order to identify serum miRNA biomarkers for detection and prognosis of metastatic TNBC. A total of 78 paired tumour tissues and sera with an equal number of adjacent normal tissue and normal sera were used for miRNA expression and were analysed by Real-Time PCR. Blood serum was also collected from same patients after treatment. Five selected microRNAs- miR-21, miR-221, miR-210, miR-145 and miR-195 were analysed in four subtypes (i) ER+/PR+/Her2neu+, TPBC (triple positive breast cancer); (ii) ER+/PR+/Her2neu-, (single negative breast cancer, SNBC); (iii) ER/PR+/Her2neu+ (double negative, DNBC); (iv) ER+/PR+/Her2neu-, TNBC) of breast cancer patients. Out of them miR-21; miR-221 and miR-210 were consistently upregulated whereas miR-145 and miR-195 were downregulated in metastatic breast cancer tissue and serum samples. When these three miRNAs miR-21, miR-221 and miR-210 which were highly expressed in metastatic triple negative breast cancer subtype compared with metastatic TPBC, SNBC and DNBC patients, it exhibited significantly highest expression. When we compared these miRNAs expression level in all four subtypes after treatment of metastatic breast cancer patients with that pre-treatment metastatic patients, three miRNAs miR-21, miR-221 and miR-210 were found to be reduced expression, whereas miR-195 and miR-145 were found to be increased. In conclusion, circulating specific miRNAs could also be indicators of metastasis and therapy response for TNBC.

Abs. No. AB00PO571

Oral cancer care: Understanding barriers regarding screening, diagnosis and treatment among oral cancer patients in South India

A Reshma, Ramadas Kunnambath1

Department of Preventive and Social Medicine, JIPMER, Puducherry, 1Department of Radiation Oncology, RCC, Thiruvananthapuram, Kerala, India.

E-mail: dr.reshma04amrita@gmail.com

Oral cancer is an important public health problem worldwide and India contributes one third of the global burden of oral cancer. A major problem for the prevention and treatment of the oral cancer is late diagnosis in advanced stages. No much research has addressed the specific barriers that people face from the stage of screening to treatment.

The Objective of this study was to determine the major barriers that affect people’s access to oral cancer care in India and factors associated with the barriers. Study was conducted among the oral cancer patients attending the OPD of a tertiary care hospital in South India.

A hospital based cross-sectional study conducted among the oral cancer patients attending the OPD of a tertiary cancer centre in South India during September-October 2015. Participants were randomly selected and interviewed using a pre-tested questionnaire. The details regarding demographics and behaviours; knowledge and attitude; access to care; health seeking behaviour; and treatment were collected.

Majority of the participants were over 40 years (92%) and males (74%). The poor knowledge on the warning signs, risk factors and early detection was the main barrier. Regarding diagnosis, lack of knowledge regarding the screening services and facilities in the health care settings
Abstract

were the main barriers. Expense of transport (56%) and side effects of the treatments (74%) were the important factors for the patients to complete the recommended treatment.

Understanding barriers to screening, diagnosis and treatment is need of the hour to provide a better care for oral cancer patients.

Abs. No. AB00PO537

A Study of Red Cell Distribution width as an independent and potential marker of Left Ventricular Dysfunction

K Indhuja, N Chidambaram, S Periasamy, A Nanjil kumaran
Department of General Medicine, Rajah Muthiah Medical College, Annamalai University, Chidambaram, Tamil Nadu, India.
E-mail: gkmini.2014@gmail.com

The aim of the present study was to study potentially novel laboratory marker as a risk of heart failure, evaluate the haematological, clinical and echocardiographic profile of heart failure and assess correlation between red cell distribution width and severity of left ventricular dysfunction and heart failure. 100 subjects admitted to department of Medicine, Rajah Muthiah Medical College and Hospital, Chidambaram with clinical evidence of heart failure were selected after applying exclusion criteria. All cases were subjected to a detailed history taking and clinical examination based on a simple questionnaire. NYHA functional class was applied and patients were classified into 4 classes of heart failure. For complete blood count including red cell distribution width, blood samples were collected from antecubital vein, transferred to an EDTA test tube and analysed in an automated cell analyser. Blood glucose, fasting lipid profile, serum electrolytes, renal and liver function tests were measured. ECG, X-ray chest, USG abdomen and 2-D echo were taken. The RDW-SD is more sensitive than RDW-CV. Hence it has been used for comparison in this study.

The mean RDW among the 4 different groups based on EF values were compared. Mean RDW was higher in the group with EF < 30% (56.1) when compared with moderate and mild LV dysfunction and was normal in the group where EF > 54%. Our study found that increased RDW was associated with increased incidence of heart failure. Elevated RDW is a predictor of all cause morbidity and low ejection flow in HF patients.

Abs. No. AB00PO527

Prevalence and significance of anemia in coronary artery disease

P Sankara Thiagarajan, S. Balasubramaniyan1, N Paari1
Department of Medicine, Rajah Muthiah Medical College, 1Department of Medicine, Annamalai University, Chidambaram, Tamil Nadu, India.
E-mail: saran.param90@gmail.com

The Aim of present study was to investigate the prevalence of anaemia in coronary artery disease and to analyse its significance as a risk factor. The population studied comprised 50 patients with coronary artery disease and 50 age and sex matched control. The patients of coronary artery disease include unstable angina, stable angina and myocardial infarction. A standard anaemia workup was conducted in all patients with coronary artery disease and in control group. Haemoglobin levels of < 13 g/dl in men and < 12 g/dl in women was considered to be anaemia.

The prevalence of anaemia in coronary artery disease patients was found to be 49% whereas in control group it was 18%. The mean haemoglobin value in study group was 9.8 g/dl and in control group it was 10.9 g/dl. Iron deficiency anaemia was the most common type in both groups.

Anaemia was found to be significantly higher in coronary artery disease population. Hence prevention and treatment of anaemia in general population will help in reducing the incidence of coronary artery disease and improve its prognosis. Causative role of anaemia in coronary artery disease needs further evaluation.

Abs. No. AB00OR672

Flavouring - A Marketing tool for smokeless tobacco sale

Priyanka Ravi, Dhirendra N Sinha1, Ravi Mehrotra1
Division of Clinical Oncology, National Institute of Cancer Prevention and Research, 1WHO Global Knowledge Hub on Smokeless Tobacco, National Institute of Cancer Prevention and Research Noida, Uttar Pradesh, India.
E-mail: priusarav@gmail.com

Flavouring of Smokeless Tobacco (SLT) is banned in only in few countries worldwide. There is scant literature on the use of flavouring agents in SLT products and their marketing through internet.
The objectives of this paper are to evaluate the online market of SLT products and flavours for SLT globally.

The current study was conducted in May-July 2017; online search was done for the sites selling SLT products through Google browser. First 20 pages of the Google results were visited for each country using the key words “flavoured tobacco”, “chewing tobacco”, “flavoured snuff”, “flavoured snus”, “smokeless tobacco” and “oral tobacco” in combination with general terms “tobacco sale”, “online sale” etc. Data was obtained for the number and type of product sold and flavours mentioned for each product and deceitful terms used for selling the product.

Our search showed that there is a wide spread internet sale of flavoured SLT products most of the sites are situated in India, Sweden, UK and USA. Online sale of flavoured SLT product sale has been used widely for various groups’ especially young adults and women. Most commonly mentioned specific flavours were sweet, spice, flower, fruit, alcohol flavours and various other non-specific flavours.

The need of the hour is to reduce the sale of SLT products by formulating a policy to control addition of flavours in SLT and use of deceitful terms for SLT advertisements.

Abs. No. AB000R683

Determinants of low back pain among women employees of a University of Chandigarh

Neha Chanana, Amarjeet Singh1, RK Kanojia1, Babita Ghati2, Sukhpal Kaur2
Post Graduate Institute of Medical Education and Research, 1School of Public Health, PGIMER, Departments of 2Orthopaedics and 3Anaesthesiology, PGIMER, 4NINE, PGIMER, New Delhi, India.
E-mail: drneha.mph@gmail.com

To ascertain the determinants of prevalence of low back pain among women employees of a University in Chandigarh. Women in India bear the dual burden of house work as well as office work. This makes them more vulnerable to suffer from this morbid condition. However, only a few studies have investigated the prevalence of low back pain and its associated determinants among university women employees. A cross sectional study was conducted among non-teaching women employees of Panjab University Chandigarh. The study population consisted of 400 women employees engaged in clerical and administrative work. The presence or absence of low back pain was ascertained among the respondents. The effect of factors such as socio demographic variables; individual factors such as age, weight, BMI; occupational and household activities on low back pain were also established. The overall point prevalence of low back pain was 51%. The mean (+/- SD) age was observed to be 39.9 (+/- 10.7) years. Significant association was observed between age and low back pain. Prevalence of LBP was lower among single women than those married or divorced/widow/separated. The proportions of sufferers were more in the group with BMI > 25. Prevalence of LBP was significantly higher among women who washed utensils, cooked, washed clothes and were involved in dusting in comparison with those not doing these household chores. However, contrary results were found with regards to mopping. Working on computer was observed to have significant effect on low back pain. The prevalence of LBP was high among women employees of the University. Age, marital status, BMI and few household activities were reported to have significant effect on low back pain.

Abs. No.AB000R522

Study of the levels of cardiac enzymes (CK MB/TROPONIN T) and its association with myocardial damage in acute stroke

Mohana Priya, S Sudharsan
Department of General Medicine, Rajah Muthiah Medical College, Annamalai University, Chidambram, Tamilnadu, India.
E-mail: drmohanapriya82@gmail.com

The objective of this study was to study the serum cardiac enzymes level in 50 patients who were admitted at RMMCH with the history of acute stroke within 72 hrs after the onset of symptoms in correlation with ECG and ECHO Findings. All patients with acute stroke who got admitted in the Department of Medicine, RMMCH, Annamalai university for the years 2015-2017 were included in the study. These selected cases after applying inclusion criteria were subjected to a detailed history and clinical examination. CK-MB and Troponin T levels were assessed from their venous samples. ECG, ECHO and CT-brain imaging was done for all patients.

This study shows that both ischemic and haemorrhagic stroke may be accompanied by acute myocardial ischemia or infarction with raised serum cardiac enzyme levels and associated arrhythmias. These findings were correlated with echo and showed the possibility that acute cardiac abnormalities in stroke patients may be a direct consequence of neurological lesion. It also reflects that unlike CK-MB, Troponin T does not increase after ischemic stroke. Hence, elevated CK-MB levels do not always
Abstract

Key NCD risk behaviours are typically initiated or established in adolescence and young adulthood. Tackling these risk behaviours among youth requires broad-ranging multi-sectoral efforts. Within health care settings, one way to better reach youth with NCD services is to integrate them into existing sexual and reproductive health (SRH), HIV/AIDS, and maternal and child health (MCH) services, which are typically key entry points to the health system for young people. We conducted an extensive review of literature on integration of NCD services and other health services targeting young people to gain an understanding of its impact on efficiency, effectiveness, and cost-effectiveness of service delivery. We identified success stories that illustrate how integrating NCD services, particularly those targeted at prevention and early intervention, with other health services for young people can have a number of benefits. More young people can be reached with NCD services, limited resources can be pooled to gain cost and other efficiencies, and young people receive more comprehensive services that are essential for healthy growth and development. Although there is a growing number of cases showing successful integration results, more research is needed to identify which integration strategies have the most potential for improving efficiency and effectiveness of service delivery. There is an urgent need to develop guidelines and operational plans for integrating NCD services with other health services targeting young people in LDCs. There is also a need to develop evaluation frameworks to assess complex, integrated programs, so the impacts of integrated services can be rigorously evaluated.

Abs. No. AB00OR702

The effective non-pharmacological interventions for prevention of hypertension in LMICs: Protocol for a systematic review and meta-analysis

KM Saif-Ur-Rahman, Md Hasan, Shahed Hossain, Sohana Shafique 1, Md Khalequzzaman, Fariha Haseen, Aminur Rahman, Iqbal Anwar, Shariful Islam 1
Health Systems and Population Studies Division, ICDDR, 1Department of Public Health and Informatics, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh.
E-mail: s.rahman2312@yahoo.com

In current days, hypertension has become one of the major public health problems in both developed and
Global cerebral ischemia is a condition where blood flow to the brain is reduced, commonly triggered by cardiac arrest.

*Vitex negundo* is an important medicinal plant enlisted in Ayurvedic literature as “Nirgundi” with many miraculous properties. Negundoside is one of the major chemical constituents found in the leaves of this plant, which is characterized as an iridoid glycoside. The present investigation was based on the hypothesis to evaluate the putative neuroprotective role of Negundoside in order to assess its capacity and potency in overcoming stress mediators under neurobehavioral and motor disorders of brain. In pursuit of the above plan of work, a study on global cerebral ischemia and reperfusion-induced injury was undertaken in Balb/C mice which led to the development of oxidative stress, manifested in the brain leading to cognitive deficits and motor incoordination in the sham group animals. Negundoside at *i.p.* doses of 1-15 mg/Kg significantly (*p* < 0.001) attenuated free radical overload and exhibited its putative antioxidant potential and also improved cognitive and motor performances in mice. Global cerebral ischemia of 10 min followed by reperfusion for 24 h significantly increased the percentage change in transfer latency time (TLT).

Administrations of Negundoside (3, 5, 10 and 15 mg/Kg, *i.p.*) 60 min before ischemia significantly prevented ischemia and reperfusion-induced increase in the percentage change in TLT, but, 1 mg/Kg did not show any significant effect when compared to the sham group.

Global cerebral ischemia of 10 min followed by reperfusion for 24 h produced a marked impairment of motor performance. Administration of Negundoside (3, 5, 10 and 15 mg/Kg, *i.p.*) 60 min before ischemia significantly prevented ischemia and reperfusion-induced impairment of motor performance, but, 1 mg/Kg did not show any significant effect when compared to the sham group, and also decreased percentage of mice demonstrating resistance to lateral push noted after 24 h of ischemia. Moreover, Negundoside 1 and 3 mg/Kg did not show any significant effect when compared to the sham group. Global cerebral ischemia of 10 min followed by reperfusion for 24 h produced a marked impairment of motor coordination. Administration of Negundoside (3, 5, 10 and 15 mg/Kg, *i.p.*) 60 min before ischemia significantly prevented ischemia and reperfusion-induced impairment of motor performance, but, 1 mg/Kg did not show any significant effect when compared to the sham group.
impairment of motor coordination however, 1 mg/Kg did not show any significant effect when compared to the sham group. Global cerebral ischemia of 10 min followed by reperfusion for 24 h produced significant increase in TBARS concentration in brain supernatant fractions. Administration of Negundoside (3, 5, 10 and 15 mg/Kg, i.p.) 60 min before ischemia significantly decreased ischemia and reperfusion-induced increase in TBARS concentration in brain supernatant fractions but 1 mg/Kg did not show any significant effect when compared to the sham group.

Abs. No. AB00PO528

Prevalence and prognostic importance of hyponatremia in acute ST-elevation myocardial infarction

Ajeeth Fera Maria Michael, S Balasubramaniyan1, N Paari1 Department of Medicine, Rajah Muthiah Medical College, 1Department of Medicine, Annamalai University, Chidambaram, Tamil Nadu, India.
E-mail: feragrand66@gmail.com

The Aim of this study was to determine the prevalence and prognostic implications of hyponatremia in the setting of acute ST-elevation myocardial infarction.

The study sample consists of 50 patients presenting with acute ST-elevation myocardial infarction. Plasma sodium concentrations were obtained on admission and at 24, 48, and 72 hours thereafter. patients with ckd stage 3 and 4, CCF patients on diuretics, previous history of head injury and stroke, known case of hypothyroidism, nephrotic syndrome were excluded in this study.

Hyponatremia, defined as a plasma sodium level <135 mmol/L (<135 mEq/L), was present in 20 patients within first 72 hours of hospitalization.30% patients developed arrhythmia,35% patients developed reinfarction, 25% patients died. In rest of 30 patients,3% developed arrhythmia,6% developed reinfarction,3% of patients died.

Hyponatremia on admission or early development of hyponatremia in patients with acute ST-elevation myocardial infarction is an independent predictor of mortality and prognosis.

Abs. No. AB00PO709

Tertiary care overweight and obesity management in Bangladesh: An exploration of the level of awareness and common barriers of physicians

Kamrun Nahar Koly, Saimul Islam, Aliya Naheed Health System and Population Studies Division, ICDDR,B, Dhaka, Bangladesh.

E-mail: koly@icddrb.org

Overweight and Obesity is escalating and a leading risk factor for morbidity by Non-Communicable diseases throughout the world. A cross sectional survey was done among 155 physicians aiming to assess the knowledge, attitudes and identify the barriers to manage overweight and obesity from 3 selected governments and 1 private hospital of Dhaka city in Bangladesh. Mean age of the 155 physicians was 32 (5.92). 80 (51.60%) were unable to answer the correct prevalence of overweight but a 75 (48.40%) could mark the right answer. 71 (46.70%) physicians mentioned that they do not have role in controlling weight problems in Bangladesh context. Majority of the physician’s 148 (95.5%) use BMI to measure weight problems whereas only 13 (8.4%) practice waist circumference as diagnostic tool. As weight management strategies, most of the time 122 (85.3%) physicians advice to modify the life style while 93 (68.4%) occasionally refer to dietician. 74 (47.7%) of the physicians reported lack of motivation, 73 (47.1%) mentioned short consultation time and 60 (38.7%) said that lack of national policy or management guideline are few barriers to treat weight problems. Again, perceived barriers like lack of parental support, lack of a national policy were statistically significant (p<0.05) with their occupational designation. This present study being the first one in country reports that there is limitation in knowledge among physicians to manage overweight and obesity and recommend the need of incorporating this issue in the academic curriculum and also to identify.

Strategies to screen weight problems within general practice of the physicians.

Abs. No. AB00PO731

Can chemopreventors aide prévention in oral cancer!

Deepak

Independent researcher, Dental Surgeon.
E-mail: deepak_jurangal@yahoo.co.in

Abstract Sub-Theme: Cancer

Chemopreventors or bioactive compounds consider as a strategy to block or reverse carcinogenesis from the very early stage. Several epidemiological studies highlight
the role of vegetables and fruits in reducing the risk of cancer. Recently, the focus has shifted to the micronutrient and nonnutrient sources of chemopreventors which abundantly possess anti-oxidants, anti-carcinogenesis and anti-mutagenic properties. Over production of free radicals causes oxidative damage to cell membrane lipids, proteins and DNA leading to cancer production. To prevent or slow down the oxidative stress induced by free radicals, sufficient amounts of antioxidants should be consumed.

Dietary Chemopreventors/Phytochemicals maintaining the balance with free radicals result healthier health. Phytochemicals have a complementary and overlapping mechanism of action like scavenging of free radicals, regulation of gene expression in cell proliferation and differentiation, inhibition of expression of oncogenes, induction of tumor suppressor gene expression, modulation of enzyme activity in detoxification and regulation of hormone metabolism.

This review article written after studying 112 articles including the Clinical and Non-clinical studies with using the keywords as “Chemopreventors”, “micronutrients” and "phytochemicals" and of all the specific researches which has been carried out to find the relation between chemopreventors and the prevention of oral cancer with the aim to educate many of the researchers who may wish to explore further the promising chemopreventive strategy and The aim of this Poster is to highlight the current pre-clinical and clinical researches on micronutrients and nonnutrients chemopreventors and their role in the prevention of the oral carcinogenesis.

Abs. No. AB00OR740

Frailty in Indian elderly

Majida Shaheen, Seema Puri, Nikhil Tandon
Department of Food and Nutrition, Institute of Home Economics, University of Delhi, 1Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi, India.
E-mail: majidashaheen@yahoo.com

Abstract Sub-Theme: Osteoarthritis and Musculoskeletal disorders

Malnutrition (both undernutrition and obesity) plays a key role in the pathogenesis of frailty and sarcopenia. Our aim was to identify frailty among older individuals above 60 years of age living in Delhi and to assess their nutritional status. A cross-sectional community-based study was carried out on 304 free-living elderly individuals aged ≥ 60 years. Frailty was assessed as meeting 3 or more of the 5 Fried’s phenotype criteria (weight loss > 4.5kgs in the past year, self-reported exhaustion (2 items of the CES-D scale), low gait speed (5m), low grip strength (using hand dynamometer) and low physical activity using Global Physical Activity Questionnaire). The MNA (short form) was used to assess nutritional status in the elderly subjects.

Abs. No. AB00PO629

To assess the dietary fiber intake pattern among coronary heart disease patients: A comparative study

Nisha Golia, Kewal Krishan
Department of Anthropology, Panjab University, Chandigarh, India.
E-mail: nishagulia@gmail.com

In India, prevalence of CHD is increasing rapidly. Urbanization with sedentary lifestyle, poor dietary habits, dependence on processed foods has increased the risk of CHD to many folds. Several studies have reported the correlation between fiber rich diet and reduced risk of CHD. However, DF intake has been drastically reduced in Indian populations. This study was aimed to evaluate DF intake pattern among CHD patients and control groups. The present cross-sectional study was conducted on (N=100) confirmed coronary heart disease disease patients comprising men (N=50) and women (N=50), aged between 45-70 years. Age and gender matched clinically healthy asymptomatic volunteers (Male N=50, Female N=50) were included as controls for comparison. DF intake pattern was assessed by using 3-daydietary recall method in both groups. Results revealed that total DF intake among overall CHD patients, male CHD patients, female CHD patients, overall control group, male control group and female control group was 12.9±4.2, 11.8±3.1, 14.0±4.8, 24.4±5.9, 22.9±4.2 and 25.8±7.0 g/day respectively. However; insoluble fiber intake among female control group was significantly (p<.001*) higher (18.7±5.5) than the female CHD patients (10.1±3.4). Similarly, insoluble fiber intake among male control group was significantly (p<.001*) higher (16.4±3.1) than the male CHD patients (8.7±2.3). Similar tendency was observed in soluble fiber intake pattern. The results were correlated with RDA for Indians. The study concluded that overall DF intake among CHD patients was significantly low. The dietary fiber requirements of CHD patients are high therefore; consumption of whole grains, fresh fruits and green leafy vegetables should be promoted from the early stages of life.
of frailty was found to be 19.7%. Majority of the elderly were at-risk of developing frailty (73%) while only 7.2% were found to be robust/non-frail. The demographic, health and nutritional characteristics of non-frail, pre-frail and frail elderly are given in Table 1. Majority of the frail elderly were obese (68.3 %), faced sleeping difficulty (80%) and were moderately depressed (83.3%) (p < 0.05). None of the frail elderly were malnourished or dependent on others for carrying out their Activities of Daily Living (ADL) while 1.8% of pre-frail elderly were malnourished and were dependent on others for carrying out their Activities of Daily Living. We did not find any significant differences in the frail and non-frail elderly individuals in terms of health and nutritional status.

Abs. No. AB00OR732

Effect of passaging on physio-morphological properties of breast cancer cell lines

Sumit Goel, Alka Bhatia
Department of Experimental Medicine and Biotechnology, PGIMER, Chandigarh, India.
E-mail: sumitgoelmicrobio@gmail.com

Abstract Sub-Theme: Cancer

Long term passaging may result in alteration of characteristics of malignant cell lines. Although, changes in various properties like cell density, growth rate, cytoskeleton proteins expression and senescence have been observed in different cell lines upon passaging, the data is scanty. So, we wanted to study the effect of passaging on general physiomorphological parameters of breast cancer cell lines. Two breast cancer cell lines (MDA MB 231 and T47D) were taken and categorised in three passage ranges (PRs) (Early, Middle and Late). Various properties like proliferation, cell cycle, adhesion, migration and senescence were examined in both cell lines within the selected PRs. We observed increased proliferation in middle PR (MPR) as compared to early PR (EPR) whereas no significant difference was found between MPR and late PR (LPR) in both cell lines. Cell cycle analysis showed decreased S-Phase fraction in MPR of both cell lines however no change was observed in EPR and LPR in MDA MB 231. With increased passaging, adhesion was augmented in T47D whereas MPR of MDA MB 231 showed reduction. T_scratch assay showed no change in migration in both cell lines. Senescence was found to be decreased with increase in passage number in case of MDA MB 231 while in T47D it was found to be decreased in MPR. The above data suggests that results of experiments performed on different cell lines may vary with repeated passaging which may hamper the authenticity and reproducibility of the data generated in the experiments involving the above parameters.

Abs. No. AB00OR744

Effectiveness of interventional questionnaire in deglamourizing the image of tobacco users and analysing the knowledge on company strategies among adolescents in Mihinthale, Sri Lanka

Dilshani Karunarathne, Hansamali Wickramasooriya, Chalani Dilrukshi, Binasara Malshan, Hima Madhushika, Saman Kumara, Duminda Guruge
Health Promotion Division, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: dildoc14@gmail.com

Abstract Sub-Theme: Tobacco Addiction

Teenagers are vulnerable in using smokeless tobacco which causes oral cancers. They try adventures and smoking is a prominent mean because tobacco image inspires them. Tobacco Company attracts teenagers using diverse strategies. This study reveals the effectiveness of interventional questionnaire in deglamourizing the image of tobacco uses and analysing the knowledge on company strategies to prevent future oral cancer burden among adolescents in Mihinthale. The study located in a rural area where educational facilities are least and school dropout rate is high. The sample size was 40 students who lived in same area. This is an interventional study where questionnaire itself behaves as an intervention. The students answered an interviewee administrative questionnaire which focused their knowledge and attitudes on company strategies and smokers. Changes were gathered using focus group discussion and structured observations after the intervention. Qualitative assessment was analysed Content analysis. Students have changed their positive attitude on tobacco company strategies. They have started criticising tobacco substance users openly and the image is deglamourized. Their knowledge has increased. Smokeless tobacco usage has decreased. Thus, interventional questionnaires can be used to deglamourize the image of tobacco use. Students’ curiosity can be inspired which can lead it in a beneficial way to the collective actions and make supportive environment to quit tobacco substance usage to reduce future oral cancer burden among adolescents in Mihinthale.
Abstract

**Effectiveness of a health promotion intervention to address determinants of non-communicable diseases among security service personnel in Sri Lanka**

_Saman Kumara, Duminda Guruge_

Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Mihinthale, Sri Lanka.
E-mail: samanbibile@gmail.com

**Abstract Sub-Theme: Behavioural approaches**

Military groups are considered as being physically healthier than others. But they may have a higher risk towards non-communicable diseases due to smoking, alcohol use and dietary practices and even physical fitness. Our study explored perceived determinants and the impact of a health promotion intervention to address these among military personnel in Wanni area of Sri Lanka. A qualitative assessment was made among officers and other rankers using group discussions and group activities to elicit identified determinants. A health promotion intervention was designed and implemented based on health promotion logical frame work developed with the participation of service personnel. An intervention was designed to address selected determinants. Group discussions, video clips on successful health promotion interventions, planning individual and group activities, demonstrations were used. Innovative measurement tools such as a ‘happiness calendar’ were developed. The process was sustained through the interest of the service personnel. Poor knowledge of NCDs, smoking, alcoholism, dietary pattern, psychological factors and external influences were the major perceived determinants elicited from the qualitative study. The intervention study showed a significant improvement in knowledge related to Non Communicable Diseases, attitudes and social climate in the military camp. Noteworthy changes in health related practices were documented. The developed health promotion intervention was effective in changing selected determinants of Non Communicable Diseases among military personnel. It can be recommended that determinants of Non Communicable diseases be addressed among military personnel in similar contexts.

**Abs. No. AB00OR748**

**Effectiveness of health promotion interventions for addressing determinants of risk to non-communicable diseases among adolescents in Mihinthale, Sri Lanka**

_Tharuka Hansamali, Dilshani Karunarathne¹, Hansamali Wickramasinghara⃣, Chalani Dilrukshi², Bimasara Malshan¹, Himali Madhushika², Saman Kumara¹, Duminda Guruge¹_

Rajarata University of Sri Lanka, ¹Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Mihinthale, Sri Lanka.

**Abstract Sub-Theme: Behavioural approaches**

Non communicable diseases (NCD) cause for morbidity, mortality and disability in Sri Lanka. As army corps vulnerable for NCD, healthy army healthy nation programs implemented. There is no any health promotion process implemented with them. The purpose of this study is to evaluate the effectiveness of health promotion programs in improving wellbeing including preventing risk to NCD of military corps. Military service providers of 62 Division in Walikanda, comprised the sample with every rank. Family wellbeing, early childhood development, non communicable disease prevention, tobacco, alcohol prevention and sexual wellbeing topics were deeply discussed. Determinants for each topic were identified and prioritized with them by health promotion facilitators. Interventions like successful evidences through video clips, health promotion tools (Mirror tool, happy calendar) used. Demonstrate sugar, rice consumption amount with a representative in sample. Appropriate flat plates and spoons were discussed using equipments. Packets of sugar used to demonstrate sugar amounts in soft drinks. Body shapes discussed by posters. Waist hip ratio measuring method demonstrated. Action plans built for camps and progress followed out for three months by telephone conversations, letters and emails. Enthusiasm, knowledge increased on topics. Soft drink, beetle consumption has been reduced in canteen. Cigarette consumption has been reduced from 30% within three months. Sugar and salt amounts issue for camp reduced. Health promotion programs effective in improving the knowledge, enthusiasm to control over the wellbeing including changing practices, behaviors to prevent NCD.

**Abs. No. AB00OR748**

**Health promotion programs elicits prevent risk of non-communicable diseases and enhance wellbeing of military corps in Sri Lanka**

_Tharuka Hansamali, Dilshani Karunarathne¹, Hansamali Wickramasinghara⃣, Chalani Dilrukshi², Bimasara Malshan¹, Himali Madhushika², Saman Kumara¹, Duminda Guruge¹_

Rajarata University of Sri Lanka, ¹Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Mihinthale, Sri Lanka.
Abstract Sub-Theme: Behavioural approaches

Non-communicable diseases (NCD) are multifactorial. Tobacco usage and unhealthy diets are two of major contributors for NCD. Image of tobacco use and the school culture empower teenagers to use smokeless tobacco. As another aspect, instant foods contain chemicals named as E numbers and high level of sugar which are unhealthy. This study located in a rural area where school dropout rate is high. This study reveals the effectiveness of health promotion interventions for addressing two selected determinants, tobacco consumption and high consumption of instant food which cause NCD among adolescents in Mihinthale. The sample size was 40 students who had same geographical area. This is an interventional study which the questionnaire itself behaves as an intervention. Students answered an interviewee administrative questionnaire which is focused on their knowledge on industrial strategies and their attitudes on smokers. 3 focus group discussions were taken with students on E numbers. Changes were gathered using structured observations and focus group discussions and analysed using content analysis. Positive attitudes of children on smoking have changed. They criticize tobacco substance use openly. Tobacco image is deglamourized. Students’ knowledge has increased on company strategies and E numbers. Their concern on food security is increased. Thus, health promotion approach is effective for reducing risk to NCD by deglamourizing the image of tobacco uses and by reducing the consumption of instant food. It can be used to inspire students’ curiosity and lead it in a beneficial way to the community action.

Abs. No. AB000R749

Effectiveness of health promotion approach to reduce the risk to Non-Communicable Diseases among university cleaning service staff in Rajarata University, Mihinthale, Sri Lanka

Nadeesha Sewwandhi, Maheshika Manathunga, Hashani Ananda, Sonali Gunasekara, Malika Senevirathne, Dilanka Sandaruwan, Saman Kumara, Krishani Jayasinghe, Duminda Guruge

Health promotion division, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka. E-mail: nadeeshaswgamage@gmail.com

Abstract Sub-Theme: Behavioural approaches

A health promotion program which was held for soldiers in Wanni SF Head Quarters was helped to empower them about the Non-Communicable Diseases (NCD). It was done during this day and it helps to do a continuous process to reduce this issue in the camp. During the first day of the program there were many groups who liked to do interventions for NCD problem in this camp. Through discussions the underlying factors which are effect to NCD were discussed. From the underlying factors, they found high consumption of sugar and salt was a major determinant in this camp. At the beginning, there was a big consumption of sugar and salt in army camp canteens. The cooks in these canteens were used big bottles for salt and sugar without measuring the amount. They decided to reduce salt and sugar by innovative methods. As results of this program there were many changes in the camp as well as in their families. So, they replaced big bottles of sugar and salt into small bottles. The knowledge about the prevention of non-communicable diseases was getting improved among soldiers. Apart from that the awareness about the salt and sugar consumption also increased. Informal discussions about NCD problem were held everywhere in the camp. Through a health promotion program about NCD can change the behavioural patterns of people and the culture of a community. And also by reducing sugar and salt level can reduce the effect of NCD problem.

Abs. No. AB000R749

Intervention for non-communicable diseases prevention in Wanni SF headquarters

Nadeesha Sewwandhi, Saman Kumara, Duminda Guruge

Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka. E-mail: nadeeshaswgamage@gmail.com

Abstract Sub-Theme: Behavioural approaches
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of mothers who reduced the sugar consumption as a percentage is 29.65%, oil consumption as a percentage is 42.8% and no. of mothers who work actively at homes as a percentage is 30.43%. The knowledge of women about overweight and its consequences increased by 21.6% within two years. Within a target group of women, 56.52% were overweight initially but that was reduced to 39.13% with the interventions. Health promotion approach empowers women to take actions by themselves to address the selected determinants of high NCD prevalence.

Abs. No. AB000R750

Reducing risk to non-communicable diseases by identifying and addressing determinants with health promotion approach

Oshani Kanishka, Nadheeka Rathnayake, Paboda Rathnayake1, Manjula Padmakumara, Janarthani Navaratnam1, Ruwanmali Karunarathne, Anushka Wanninayake, Thilini Rishani Saman Kumara, Duminda Guruge
Health Promotion Division, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: nadeeka93rathnayake@gmail.com

Abstract Sub-Theme: Behavioural approaches

Non-communicable diseases (NCD) cause for mortality, mobility and disability within Sri Lankan communities. WHO have identified tobacco use, physical inactivity, unhealthy diet and alcohol use as major risk factors for the NCD. Health promotion program was conducted at a semi urban village. We initiated a process to reduce NCD risk by improving the community understanding on NCD. Overweight and obesity are contributory factors for NCD. We assumed that the community members with overweight and obesity has higher risk to NCD. Then body mass index (BMI) was calculated. 62.1% was the prevalence to NCD within the defined village. We facilitated community as groups. Discussions were guided by a facilitator. Determinants were identified within the discussions by using checklists and observations. Determinants were identified as visible and invisible by the community. Then they prioritized determinants. Activities, video clips, innovative tools, discussions were used as interventions to address the determinants. Process was continuously followed up through field visits. Having extra meals and foods, Physical inactivity, high consumption of oil, high consumption of sugar high consumption of salt, high consumption of tobacco and alcohol, over eating were the major determinants identified by the community. Determinants of determinants were identified and addressed by the community. Then the high consumption of sugar, salt, and oil was reduced. Physical activities have improved. Interventions carried within the health promotion approach were effective to change determinants effect on risk to NCD.

Abs. No. AB000R751

Effectiveness of health promotion approach to reduce the risk to non-communicable diseases among military community in Mannar army camp, Sri Lanka

Sonali Gunasekara, Krishani Jayasinghe, Saman Kumara, Duminda Guruge
Health Promotion Division, Faculty of Applied Sciences, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: psdgunasekara93@gmail.com

Abstract Sub-Theme: Behavioural approaches

Measures to reduce disability and mortality among military community due to non-communicable diseases are being implementing with the focus of clinical aspects. Cost effectiveness and empowerment of the community is much lower in those health education and screening mixed programs. This study focuses on how camp based health promotion interventions can be used to reduce the risk to NCDs among military community in Sri Lanka. Five units were selected under 54 division of Mannar army camp and groups were formed including soldiers from all ranks and facilitators from Rajarata University of Sri Lanka. Unhealthy dietary patterns, low happiness and tobacco and alcohol consumption were identified by themselves as major determinants affect for NCDs through the discussion. BMI posters, demonstrations on measuring daily sugar consumption, plates and spoons to change serving amount of vegetables and rice, exhibition on E-numbers, happiness measuring calendars, discussions and videos on tobacco and alcohol related physical harm and community level expenditures, industrial strategies to promote tobacco and alcohol were used as interventions. Follow-up was conducted through telephone conversations and letters exchanged with the participants. Zero tobacco consumption inside 02 units and another 02 units showed 90% and 85% reductions. One unit has stopped alcohol consumption inside the camp. Thirty-three percent reduction in soft drink usage in one unit, 50% and 20% reduction in oil consumption within two units have occurred within 03 months. Therefore, military community based interventions can be successful
when process ownership is given to them with continuous follow up by facilitators.

Abs. No. AB000R751

Reduce risk for non-communicable disease through health promotion intervention

Sonali Gunasekara, Asinsala Wijerathne, Saman Kumara, Duminda Guruge
Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: psdgunasekara93@gmail.com

Abstract Sub-Theme: Behavioural approaches

This paper describes about the non-communicable disease program which was conducted by senior lecturer Duminda Guruge for army soldiers in Mannar. This is a continuous process empowering themselves while they are increasing their wellbeing. In this program, firstly discussed about what is NCD, which factors effect for NCD and how to reduce risk. At the end of the program, divided several groups according to their division. Then, students who are health promotion undergraduate in Rajarata University were grouped as a facilitator for each group. This paper described 54 division group.

Discussed with them and identified underlying factors which are effecting for NCD. Some of them are high consumptions of alcohol and tobacco, high consumption of salt, sugar and oil and stress etc. After getting the baseline for salt consumption, sugar consumption, oil consumption and tobacco alcohol usage from 5 questions we started to follow up this process. The changes in this program have been quite remarkable. As a result of this, salt intakes and sugar intakes were decreased, BMI range could be succeed by 50%, tobacco usage have decreased by 90% and alcohol usage have also decreased by 50%. In addition to knowledge was increased. Also, they were able to save their money and happiness level also increased. Quality of life can be increased by this kind of program. By considering this program, risk factors of NCD can be decreased by themselves.

Abs. No. AB000R755

Address knowledge, attitude and practices for prevent non-communicable diseases of people in Thammennawa village within 18 months

Madhubasini Balasuriya, BAN Madubashinii, S Anojan1, S Thurka1, NMCJ Nawasinghe1, WMIS Weerako01, GAS Milanga1, IDN Ihalahewage1, Saman Kumara GGNGuruge1

Abstract Sub-Theme: Behavioural approaches

This community based Health Promotion intervention implemented for improve knowledge, positive attitudes, behaviors and family support on food consumption, tobacco consumption, measuring BMI cause to prevent NCD. 160 people from 19-55 years participated for the intervention. Questionnaires, interviews, formal and informal Discussions, Recordings were used to collect Quantitative and qualitative data. Community identified reduces overweight and tobacco usage is their felt needs after BMI campaign and discussion in funeral welfare society. Children and two cluster groups of adults were empowered to measuring BMI and worked for reduce tobacco usage. They identified and prioritized determinants for overweight by “determinant tool”. Consumption of salt, sugar, oil was measured and reduced, expenditure for junked food and tobacco usage calculate by “expenditure box” and “Engalanthe puthata box” and reduced. Several group discussions, exercise sessions and sports events were held and Posters, video clips were used to demonstrate community. Comparing pre-and post data, significant increase of activities for overweight was seen 36% (n=70) from the participants. Numbers of overweight women reduced BMI value significantly was seen 27%. 49% of overweight used measuring tools for sugar, oil, salt. Unhealthy food patterns decreased by 36%, 54% increase skill of measuring BMI 54%, Exercised for reduce weight increased by 48%. Number of shops sell zigurat by 67%. Results showed improvement in reduce overweight and tobacco consumption, changes in knowledge, attitude and behaviors with compared to pre-stage. Therefore, this intervention can effectively use to other settings with same characteristics in the world to prevent NCD successfully.
Abstract

Non-communicable diseases (NCD) cause for morbidity, mortality and disability in Sri Lanka. As army corps vulnerable for NCD, healthy army healthy nation programs implemented. There is no any health promotion process implemented with them. The purpose of this study is to evaluate the effectiveness of health promotion programs in improving wellbeing including preventing risk to NCD of military corps. Military service providers of 62 Division in Walikanda, comprised the sample with every rank. Family wellbeing, early childhood development, non-communicable disease prevention, tobacco, alcohol prevention and sexual wellbeing topics were deeply discussed. Determinants for each topic were identified and prioritized with them by health promotion facilitators. Interventions like successful evidences through video clips, health promotion tools (Mirror tool, happy calendar) used. Demonstrate sugar, rice consumption amount with a representative in sample. Appropriate flat plates and spoons were discussed using equipments. Packets of sugar used to demonstrate sugar amounts in soft drinks. Body shapes discussed by posters. Waist hip ratio measuring method demonstrated. Action plans built for camps and progress followed out for three months by telephone conversations, letters and emails. Enthusiasm, knowledge increased on topics. Soft drink, beetle consumption has been reduced in canteen. Cigarette consumption has been reduced from 30% within three months. Sugar and salt amounts issue for camp reduced. Health promotion programs effective in improving the knowledge, enthusiasm to control over the wellbeing including changing practices, behaviors to prevent NCD.

Health promotion programs elicits prevent risk of non-communicable diseases and enhance wellbeing of military corps in Sri Lanka

Anushka Wanninayake, Saman Kumara, Duminda Guruge
Health Promotion division, Faculty of Applied Science, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: anushkawanninayake123@gmail.com

Abstract Sub-Theme: Behavioural approaches

A total of 56 million deaths occurred worldwide during 2012, of these, 38 million of deaths were due to NCDs. Percentage of deaths from NCDs in Sri Lanka was 75%. This is a community based health promotion intervention, aim to empower the community reduce the NCDs risk.
through reduce the tobacco usage, improve healthy diet and physical activity.

The study was conducted in Thammennawa village in the north central province of Sri Lanka. Determinants of NCD were identified by the community and the intervention were planned by the community partnership with the health promotion facilitators. To reduce the tobacco usage among the villagers the tool “Engalandhuputtada” was introduced to shops who sold cigarette in the village. To improve the physical activities exercise and volleyball grouped formed in the village. To reduce the usage of salt, oil and sugar consumption introduced sugar, oil and salt meters. The data were collected from the community through observation, questionnaires and discussions. Both thematic and proportion analysis were used to measure the effectiveness of the interventions.

Shops which sold cigarettes, reduced by 67%. 27% overweight or obese women aged 18-5 reduced BMI value, over weight among villagers reduced by 5%. It was observed that number of women aged 18-55 engaged in physical activities improved by 48%. And also, the number of families who self-monitored the activities to reduce sugar consumption improved by 21%.

In conclusion, “Engalandhuputtada” is an effective tool in reducing the tobacco usage in the community and can use in the family level also.

Abs. No. AB00OR757

Reduce risk for non-communicable disease through health promotion intervention

Asinsala Wijerathne, Saman Kumara, Duminda Guruge
Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.
E-mail: asinsalawijerathne@gmail.com

Abstract Sub-Theme: Behavioural approaches

This paper describes about the non-communicable disease program which was conducted by senior lecturer Duminda Guruge for army soldiers in Mannar. This is a continuous process empowering themselves while they are increasing their wellbeing. In this program, firstly discussed about what is NCD, which factors effect for NCD and how to reduce risk. At the end of the program, divided several groups according to their division. Then, students who are health promotion undergraduate in Rajarata University were grouped as a facilitator for each group. This paper described 54 division group. Discussed with them and identified underlying factors which are effecting for NCD. Some of them are high consumptions of alcohol and tobacco, high consumption of salt, sugar and oil and stress etc. After getting the baseline for salt consumption, sugar consumption, oil consumption and tobacco alcohol usage from 5 questions we started to follow up this process. The changes in this program have been quite remarkable. As a result of this, salt intakes and sugar intakes were decreased, BMI range could be succeeding by 50%, tobacco usage have decreased by 90% and alcohol usage have also decreased by 50%. In addition to knowledge was increased. Also, they were able to save their money and happiness level also increased. Quality of life can be increased by this kind of program. By considering this program, risk factors of NCD can be decreased by themselves.
BMI levels and waist to hip ratio were measured monthly. Self-administered questionnaire was given to assess their knowledge, attitudes and practices on identified determinants. Thirty three percent of overweight workers had reduced their weight. Average happiness level of participants at work has increased by 40%. Sixty percent of workers have reduced their daily sugar consumption. Participants have empowered to facilitate others to change their lifestyle risk factors in order to reduce risk to NCDs. Therefore, health promotion can be used as an effective and efficient way of reducing risk to NCDs among marginalized workers through giving control over to improve their health.

**Abs. No. AB00PO762**

**Prevalence of malnutrition and its associated factors among elderly population: A community based cross-sectional study from rural Puducherry**

Yuvraj Krishnamoorthy, M Vijayageetha, S Ganesh

Department of Preventive and Social Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India.

E-mail: yuvii.1130@gmail.com

Abstract Sub-Theme: Nutrition

Nutritional status of elderly is an important issue but often gets neglected. There is need to address this issue which will help to plan strategies to improve their health status. Hence, the current study was done to determine the prevalence of malnutrition and its associated factors among elderly population in rural Puducherry. This community based cross-sectional study was conducted during December 2016 in rural Puducherry. 279 individuals were covered in four villages. Information on socio-demographic characteristics and nutritional status of elderly was collected using validated Mini-Nutritional Assessment questionnaire with score < 17 considered malnourished and score between 17 and 23.5 considered at risk of malnutrition. Body Mass Index was used to report obesity based on Asia-Pacific guidelines. Among 279 participants, 178 (63.8%) were in the age group of 60-70 years, 190 (68.1%) were females, 208 (74.6%) had no formal-education. Around 43.4% had severe decline in food intake and about 38.4% had inadequate fruit and vegetable intake. Prevalence of malnutrition among elderly was found to be 17.9% (95%CI: 13.7-22.7) and about 58.8% (95%CI: 52.9-64.4) were at risk of malnutrition. Prevalence of obesity (BMI>25) was found to be 32.5% (95%CI: 27.3-38.3). Malnutrition status were found to be almost similar between males and females but with respect to age group, risk of malnutrition increases as age increases (p value >0.05). Risk of malnutrition was also higher among illiterates (p value >0.05). Since, almost one fifth of elderly were malnourished and more than half were at risk of malnutrition, there is need to address about healthy dietary practices among geriatric population.

**Abs. No. AB00OR761**

**The psychosocial impact of oral cancer on the patients: A hospital based cross-sectional study**

Sourav Goswami, Subodh S Gupta

Department of Community Medicine, Mahatma Gandhi Institute of Medical Sciences, Sevagram, Wardha, Maharashtra, India.

E-mail: drsouravagt@gmail.com

Abstract Sub-Theme: Cancer

Oral Cancer is one of the most important life-threatening diseases all over the world and is a major health problem in our country. In India, oral cancer contributes to 30% of all the cancers as a whole. Surgery and radiotherapy are the main modality of treatment, though in advanced cases, chemotherapy is also used. As a result of the treatment, the oral cancer patients suffer from gross disfigurement apart from the other harmful effects of radiation and chemotherapy, which has a negative psychosocial impact on the patient suffering from oral cancer. This study is conducted with 100 oral cancer patients who have completed their treatment and came for follow up after two months. Socio-demographic characteristics of the patients were noted and EORTC QLQ-C30 and QLQ-HandN35 modules were used in the study. We saw the correlation between the different variables mentioned in EORTC (European Organization for Research and Treatment of Cancer) questionnaire, both for QLQ-C30 and QLQ_HandN35. A linear model multivariate analysis of variance was used to analyze the prognosticating factors, which has a psychosocial impact on the quality of life of the patients. By multivariate analysis, the variables of gender, annual family income, cancer stage and sex of patient were found to be the prognosticators for QLQ-C30 results, so was the tumor stage and site of oral cancer for HandN35. So, psychosocial impact of oral cancer should be kept in mind and must be taken care of while treating the disease.

**Abs. No. AB00OR764**

**A study of the status of oxidative stress in breast cancer patients undergoing mastectomy and chemotherapy**
Abstract

**Jagruti Bhattacharjee, Sangita Jogdand**
Department of Pharmacology, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra, India.
E-mail: jagrutib@yahoo.com

Abstract Sub-Theme: Cancer

Breast cancer is the most common cancer among women in both the developed and the developing countries in the World with an estimated 1,671,149 new cancer cases diagnosed in 2012, which accounts for 25 % of all the cancers. Breast cancer is now the most common cancer in most cities in India, and the second most common in the rural areas. Development of cancer produces oxidative stress, which increases with the progression of the disease process. Now, the balance between the oxidant and the antioxidant level in blood is an important prognostic marker for breast cancer treatment. So, we have studied the SOD (Superoxide dismutase) and MDA (Malondialdehyde) levels in serum of 30 breast cancer patients at three different stages, namely, before surgery, 6 hours after mastectomy and after completion of chemotherapy with CAF (Cyclophosphamide, Vincristine and 5 Flurouracil). The study also included 30 healthy age matched female controls that did not suffer from any illness. Appropriate statistics was applied in this study, which showed the SOD activity in the breast cancer patients, was significantly lower than control groups. Activity of Malondialdehyde (MDA) was significantly greater in the breast cancer patients compared with the control group, which reflected the increased oxidative stress in the patient of breast cancer. In the results, we got a higher reactive oxygen species (ROS) production and decreased SOD activities, which supported the oxidative stress hypothesis in carcinogenesis. So, these enzymes may be considered as important prognostic biomarkers for early detection of the disease or its recurrence.

Abs. No. AB00OR766

Retrospective (one year) study of cases of ca cervix

**Aman Dev Singh, ParmjIt Kaur, Surlnder K BhuPal, RuBy BhataI, Inder Dhir Gill, Karanveer Singh**
Department of Community Medicine, Government Medical College, Patiala, Punjab, India.
E-mail: adSingh44rssb@gmail.com

Abstract Sub-Theme: Cancer

Cervical cancer is the most common cause of cancer in India. It is considered a preventable disease by WHO because it can be diagnosed in its precancerous stage. But in India women come much too late when the cancer is incurable and no treatment is available. However mass screening is not feasible in resource poor settings as it is expensive. But opportunistic screening and down staging can go a long way in controlling the disease. Objective: To evaluate causative factors and stage of cancer so as to assess strategies to control the disease.

One-year retrospective analysis of cases of carcinoma cervix was done to evaluate incidence, parity, rural/urban, sexual and reproductive factors, socioeconomic factors, contraceptive usage, and disease stage. Total number of gynae admissions was 175 out of which 39 (22.28%) cases were of Ca cervix. Most cases (25.64 %) were in 60-64 years age group, followed by 35-39 years (20.51%). Majority (51.28%) were para four and above. Maximum cases (84.61%) belonged to rural background. Discharge per vaginum with pain lower abdomen was commonest presenting symptom (58.97%) followed by postcoital bleeding and irregular bleeding (41.03%). Median age at first sexual contact was 18.9 years. No history of contraceptive usage in 53.84%. Three cases were HIV positive. No patient had screening for cervical cancer. 18 (46.15%) cases were of advanced stage, 15 (38.46%) stage II and 6 (15.38%) to stage I.

Main factors responsible were early onset of coitus, absence of contraceptive use, multiparity, poor socioeconomic status, rural background and no cervical cancer screening. In India, women come too late when the cancer is incurable. As mass screening is not feasible in poor resource settings, opportunistic screening and downstaging can go a long way in controlling the disease.

Abs. No. AB00PO767

Resveratrol: Anti-inflammatory and anti-oxidative effects in lupus management

**Naveet Pannu, Archana Bhatnagar**
Department of Biochemistry, Panjab University, Chandigarh, India/
E-mail: naveetpannu@gmail.com

Abstract Sub-Theme: Nutrition

SLE is an autoimmune inflammatory disease characterised by production of autoantibodies. Oxidative stress has been associated with lupus disease activity and severity. Resveratrol, a naturally occurring polyphenol has a range of pharmacological properties attributed to its anti-oxidative and anti-inflammatory effects. The present
study aims to exploit these properties of resveratrol in lupus management. Female Balb/c mice were divided into 3 groups. The first served as control while the remaining groups were injected with 0.5ml of pristane intra-peritoneally. The second group comprised the disease model. After 2 months from pristane administration the third group was orally gavaged with 25mg/kg body weight of resveratrol, daily for the next 4 months. All groups were sacrificed to obtain liver and lungs. The Post Mitochondrial supernatant of the organs was assessed to determine the levels of reduced glutathione and lipid peroxidation. Haematoxylin and eosin (H&E) stained sections of lung and liver were examined for histopathological analysis. Liver and lungs in pristane induced mouse model of lupus showed a significant decrease in reduced glutathione levels and an increase in lipid peroxidation. Histopathological examination of lungs showed heavy lymphocytic infiltration after pristane administration, while the liver showed fatty changes with focal perivascular mononuclear cells infiltration. Resveratrol treatment decreased oxidative stress in these organs, as witnessed by an increase in reduced glutathione levels and decrease in lipid peroxidation. Haematoxylin and eosin (H&E) sections showed decrease in inflammation in both the organs. Hence, Resveratrol treatment holds potential in the successful management of lupus by combating oxidative stress and inflammation.

Abs. No. AB00P0768

Sustained delivery of nanoparticulate protein and Cell encapsulation for application in diabetes

Kumari Anupam, Sakshi Anand, Archana Bhatnagar
Department of Biochemistry, Panjab University, Chandigarh, India.
E-mail: kanupam87@gmail.com

Abstract Sub-Theme: Diabetes

Diabetes is recognized as an important cause of premature death and disability. It is one of four priority noncommunicable diseases (NCDs) targeted by world leaders in the 2011 Political Declaration on the Prevention and Control of NCDs. Polymeric biocompatible three-dimensional networks have been employed for various drug delivery applications especially for sustained drug delivery. Such crosslinked networks act as bio-links for cell encapsulation and drug delivery.

In the present work, we have synthesized formulation using biocompatible polymers for encapsulation of the nanoparticulate drug of therapeutic importance in diabetes and live cells encapsulation. Formulations were characterized using different techniques such as Fourier transform infra-red spectroscopy (FTIR), X-ray diffraction (XRD), scanning electron microscopy (SEM). Nanoparticles were characterized using dynamic light scattering (DLS), zeta-potential and transmission electron microscopy (TEM). In-vitro drug release profile of nanoparticulate drug from nanocomposite matrix was studied. It was found that drug release profile of the nanocomposite matrix showed sustained drug release for prolonged duration. Phase contrast microscopy of cells encapsulated in polymeric scaffold using CFSE labelling showed live cells. Maintaining the cells in live artificial microenvironment has a promising application in cell transplants and regenerative medicine. These results points towards the future perspective of combining these formulations for drug delivery and cell encapsulation for emerging therapeutic options for Diabetics, hence improving their quality of life.

Abs. No. AB00P0727

Double burden of under nutrition and over nutrition among school age children in Bangladesh

Sabrina Ahmed, Aliya Naheed1, Saimul Islam1, Dewan S Alam1, Nazarun Monalisa1, Louis Niessen1, Abdullah Al Mamun1
Initiative for noncommunicable diseases, ICDDR,B, Dhaka, Bangladesh.
E-mail: sabrina.judy@gmail.com

Abstract Sub-Theme: Obesity

Obesity is emerging as a double burden on the top of under nutrition in South Asia. There is limited evidence of double burden malnutrition among school age children. We conducted a survey in seven urban cities in Bangladesh for assessing double burden of malnutrition among children 5 to 18 years of age. We recruited 4,140 children from 207 wards (smallest administrative unit of divisional cities) following a written voluntary consent from parents, obtained data on socio demographic characteristics and assessed anthropometry to categorized children in to normal weight, under weight, overweight and obese following the definition of Internationals Obesity Task Force. Ninety six percent children were enrolled in school with an average age 11±3 years, including 50% girls 68% pre-adolescent. One third children were underweight and 14% was overweight including obesity without any sex disparity. Prevalence of overweight was significantly higher among children living in Dhaka division (21%) than other divisions, (P<0.001). Underweight (OR:1.78; 95% CI: 1.53-
Abstract

2.08) and overweight (OR:1.35; 95% CI: 1.11-1.64) were more prevalent in pre-adolescents compared to normal weight children. Prevalence of overweight was significantly higher among children who had a parent completed a college degree (OR:6.05;95%CI:3.99-9.18), belonged to a higher socioeconomic class (OR:1.81;95%CI:1.33-2.46), and if mother had obesity, which was not observed among underweight children. The double burden of underweight and overweight is alarmingly high among school age children in Bangladesh. Situation demands an urgent need of school based intervention for prevention and control of malnutrition in younger children.

Abs. No. AB00P0771

Spirometry parameters in a multi-ethnic society. How different are they?

Guwani Liyanage
Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.
E-mail: guwanil@yahoo.co.uk

Ethnic origin affects spirometric prediction values. However, many countries use pulmonary function prediction equations, which are not ethnically tailored. We have a multiethnic society. Thus, our aims were to investigate the effect of ethnicity on spirometry parameters in children aged 10-14 years.

We enrolled healthy boys between 10-14 years old from Western province. Demographic details and anthropometric measurements were collected to a pretested questionnaire. Spirometry was performed according to ATS/ERS 2005 guidelines. Between three to six tests were performed for each subject until two reproducible and acceptable error-free tests were obtained. We compared measurements of height, weight, forced expiratory volume in 1 s (FEV1), forced vital capacity (FVC) and Forced expiratory flow rate at 25-75% (FEF 25-75%) and peak expiratory flow rate (PEFR) among the three main ethnic groups.

The questionnaire was completed by 1433 subjects. Questionnaire responses excluded 296 subjects, leaving 1137 that provided spirograms. After excluding 173 unacceptable spirograms, final study cohort included 964 males. Majority were Sinhalese (596). There were 268 Tamils and 100 Muslims. The mean values for height (p=0.821), weight (p=0.126), FVC (p=0.218), FEV1 (p=0.213), FEF 25-75% (p=0.106) and PEFR (p=0.85) did not differ significantly.

Spirometry parameters are comparable among, 10-14-year-old boys belonging to main ethnic groups, in Sri Lanka. Possible explanation could be similarities between physical built and other factors such as socioeconomic, nutritional and environmental conditions. Further, same spirometry reference equations could be shared among boys of this age group of all ethnic groups.

Abs. No. AB00OR775

Assessment of dietary habits and nutritional status among adolescent girls in rural area of Puducherry – A community based cross-sectional study

Deepika Chandar, N Bijay, T Gautam, S Sonali
Department of Preventive and Social Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India.
E-mail: drdeepikachandar@gmail.com

Abstract Sub-Theme: Nutrition

Adolescence is crucial period for growth and dietary habits formation among females for leading a healthy life. Hence the current study was done to assess the dietary habits and nutritional status (using BMI) among adolescent girls of rural Puducherry. This community based cross-sectional study was conducted during February 2017 among 252 adolescent girls in rural Puducherry. Married adolescent girls and those on dietary therapy were excluded from the study. A semi structured pre-tested interview schedule was used to obtain information on dietary habits from adolescent girls. Height and weight were measured by standard techniques recommended by World Health Organization (WHO). Nutritional status was assessed according to WHO BMI for age for 5-19 years. The mean age of the participants was 13.79+2.11 years and 91.3% were non-vegetarians. Majority of adolescent girls eat cereals (97.4%), pulses (54%) regularly (>3 times a week). Comparatively fewer adolescent girls consume fruits (13.1%), vegetables (8.3%) regularly. Only <2% and 10% had regular consumption of iron-rich foods (drumstick leaves and jaggery) and milk respectively. Regular consumption of junk food items like fried and salty food, fast-food was 13%. Prevalence of thinness among adolescent girls was found to be 10.7% (95%CI: 7.3-15) and overweight or obesity was 13.5% (95%CI: 9.7-18.1). In this study, only cereals and pulses were consumed regularly compared to other food items. About one third of participants had abnormal nutritional status. Hence focussed nutritional and health-education intervention should be given among adolescent girls and parents to encourage healthy dietary practices and improve nutritional status.
Abstract

**Abs. No. AB00OR776**

**Burden of diabetic retinopathy among ambulatory patients treated at medicine OPDs in hospitals in Bangladesh**

*Sabrina Ahmed, Dipak NAG¹, Saimul Islam, Shahnaz Chowdhury², Aliya Naheed*

Initiative for noncommunicable diseases, ICDDR, B, ¹Department of Community Medicine, Bangladesh University of Health Sciences, Dhaka, Bangladesh, ²Department of Vitreo-retina, National Institute of Ophthalmology, Pune, Maharashtra, India.

E-mail: saimul.islam@icddrb.org

**Abstract Sub-Theme: Diabetes**

Diabetic retinopathy (DR) is a major micro vascular complication of Diabetes mellitus (DM) leading to permanent blindness if uncontrolled. The burden of DR and relationship to DM have not been explored in Bangladesh. We determined the prevalence and risk factors of DR among the diabetic patients attending tertiary level hospitals in Bangladesh.

A cross-sectional study was conducted among patients who walked in an outpatient department (OPD) of three large tertiary level hospitals in three districts in Bangladesh. Patients were assessed by the regular physician at the medicine OPD of the respective hospital and patients. Those who had reported to have diabetes were referred to the DR clinic set by the research team at a location close to the OPD. The research medical doctor trained to operate a fundus camera obtained medical history, examined the patient for associated co morbidities including hypertension, neuropathy, retinopathy and obtained history of cardiovascular event. Blood sample was obtained for assessing cholesterol and HbA1C. For every diabetic patient with DR two diabetic patient without DR were recruited. Bivariate and multivariate analyses were done by the statistical software SPSS version 20.

Mean age of the respondents was 49 (±11) years, 56% females, 51% respondents had diabetes for more than 5 years, 18% reported an eye problem and 78% had an uncontrolled diabetes when walked in to an OPD. The prevalence of DR was 24%, and 90% had mild to moderate non-proliferative diabetic retinopathy (NPDR). None of the patients was aware of the condition until tested by the research team. Following a regression analysis DR was significantly associated with middle income group (OR 2.4, CI: 1.31-5.27), low vision (OR 1.9, CI 1.16-3.37) and duration of DM (OR 0.38; CI: 0.22-0.65).

The burden of DR among ambulatory diabetic patients is substantial. However, patients were not aware of the complications due to lack of eye screening at the medicine OPD and missed the opportunity to have counseling for prevention of permanent blindness due to DR. Establishing routine fundus screening for DR while treating a patient with diabetes in a hospital setting may enhance management of DM in diabets.

**Abs. No. AB00PO778**

**Optical therapy in breast cancer**

*Darakhshan Qaiser, Anurag Srivastava, Sanjeev Soni¹*

¹Department of Surgery, All India Institute of Medical Sciences, New Delhi, ²Central Scientific Instrumentation Organisation, Chandigarh, India.

E-mail: qaiser.d@gmail.com

**Abstract Sub-Theme: Cancer**

Breast cancer is the most common cancer among the women and it is the leading cause of death. In India breast cancer trends has been increasing trend towards younger age group (below 40 years). Conventional and targeted therapies have improved the survival rate but still challenges are there. Current challenges in radiotherapy and surgery are pain, bleeding, seroma, infection, skin burn, ulcer, and necrosis, and increased chance of spread of cancer. Optical detection is the new modality for the detection of tumours. Fluorescein is a fluorescent tracer because of high quantum yield. It has a broad clinical experience. In the present study, we studied the interaction of light (high intensity xenon light) on the breast cancer cell line MBMDA-231. High intensity xenon light supplied through optical fiber. When light falls on the cell line suspension. Temperature of cell line increases. But temperature of cell line suspension increases rapidly and reaches up to 40 ºC -45 ºC within 15 minutes when we added the 1 ml of 20% fluorescein in the cell line suspension. This may be due to quenching effect of fluorescein because when light falls on the cell line solution fluorescein molecules get excited and release photon. These large number of photon get quenched by the nearby fluorescein molecule and heat generates. Generated heat damage the cancer cells in the tumour.

**Abs. No. AB00OR808**

**Existence and evolution of a novel mutant klf4 in paediatric t-cell acute lymphoblastic leukemia**

*Deepti Malik, Deepak Kaul*
Acute lymphoblastic leukemia (ALL) is the most common hematological malignancy in paediatric patients. In this context, the gene for apoptosis antagonizing transcription factor (AATF) and kruppel like factor 4 (KLF4) have assumed importance. AATF provides a critical link between cell cycle progression, check-point control, and apoptosis, and also encodes novel microRNA (miRNA) miR-2909, which regulates genes involved in inflammation, cell cycle and immune response. The transcription factor KLF4 gene acts as both an oncogene and tumor suppressor, depending on its genetic and cellular contexts. It is characterized by three highly conserved C2H2-type zincs-finger motifs at its carboxyl terminus, which are crucial for its interaction with its target DNA and genetic aberrations in any of its zinc-finger motifs potentially destroy its DNA-binding affinity. The study identified KLF4 mRNA as direct target of miR-2909 as detected by pMIR-GFP reporter assay and its reduced expression resulted in loss of KLF4 tumor suppressor activity in paediatric B-ALL potentially responsible for their immortality. The study discovered two novel mutations in the KLF4 gene in T-ALL: a mutation in the 3'UTR resulted in loss of miR-2909-mediated regulation, and mutation in the first or third zinc finger (Zf1/Zf3) motif rendered KLF4 transcriptionally inactive. Homology models, docking studies, promoter activity of its target gene P21, cell cycle and apoptosis assays confirmed the lack of function of the mutant KLF4 protein in paediatric T-ALL. Comprehensive sequence analysis of KLF4 identified the predominance of isoform 1 (~55 kDa) in most patients with paediatric B-ALL, while those with paediatric T-ALL expressed isoform 2 (~51 kDa). Based upon our results, the identification and characterization of a novel KLF4 mutant protein is a step forward in understanding the oncogenic basis of paediatric T-cell ALL. However further clinical studies are required to exploit the full utility of our findings.

A clinical study of glycaemic profile of non-diabetic individual with acute ischemic stroke and its short-term prognostic significance

Gopathiraj Rajendran, N Chidambaram, S Periasamy, A Nanjil kumaran
Department of General Medicine, Raja Muthai Medical college, Annamalai university, Chidambaram, Tamil Nadu, India.
E-mail: gopaathi@gmail.com

The aim of the present study was to study the clinical profile and clinical outcome of cerebral infarction in relation to glycaemic status on presentation.

Total 50 subjects admitted to the department of medicine, Rajah Muthiah Medical College and Hospital, Chidambaram with acute ischemic stroke were selected after applying exclusion criteria. All cases were subjected to detailed history taking and clinical examination and then clinical diagnosis was arrived. The severity of stroke in each patient calculated based on the NIH stroke scale. Investigations including CT Brain plain, random blood sugar within 24 hours of admission, fasting and post prandial blood sugar, HBA1C, complete blood count, urine routine, ecg and fasting lipid profile was done.

Among the study group, those who had blood glucose value less than 180mg/dl at their admission showed better clinical outcome during the course of stay in the hospital.

Our study concluded that the tight glycaemic control during the admission of acute ischemic stroke in non-diabetic individuals associated with good short-term prognostic significance.

Histomorphometric and immuno-histochemical study of anterior and posterior tibial arteries

Venumadhav Nelluri, T Ramesh Rao, Antony Sylvan D’ouza
MMMC, Manipal University, Manipal, Karnataka, 1Department of Anatomy, DM WIMS Medical College, Wayanad, Kerala, India, 2Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine, Trinidad, West Indies.
E-mail: nelluri.venumadhav@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Advanced Atherosclerosis with extended arterial lesions is seen in tibial arteries. The conditions like Chronic Critical Limb Ischemia (CLI) and Chronic Occlusive Arterial Disease (OAD) are common in Diabetes. Infragenicular Atherosclerotic is the common cause of CLI and OAD that is due to multilevel and diffuse Arterial Disease. There is no proper histological evidence for this. In this study total each 50 arterial samples of
proximal, middle and distal segments from 50 human cadavers were collected. The samples were divided into Group 1 (19 – 40 years), in Group 2 (41 – 60 years) and Group 3 (61 years and above). Arterial samples were embedded and processed to histomorphometric analysis with the help of Haematoxylin and Eosin and Verhoeff-Van Gieson Stain and confirmed with Immunohistochemistry procedures (Ham 56 and Anti SMA). This study revealed that changes in the arterial wall is due to irregularity arranged of elastic fibres and smooth muscles in the tunica media and the intimal hyperplasia is because of encroachment of smooth muscles tunica media (Tm) to tunica intima (Ti) especially in group 3. The Ti / Tm ratio has shown increase in ratio with age, significant differences were observed in the thickness of the tunica intima when comparing group 2 with group 3 (p = 0.024) and group 3 with group 1 (p = 0.003). Our study confirmed that hyperplasia of tibial arteries is due to smooth muscle encroachment from tunica media to tunica intima and shows calcification of tunica media. These conditions exaggerated in diseases like diabetes.

Abs. No. AB00OR838

Prevalence of neck ailments among computer users in Panjab University, Chandigarh

Meenal M Thakare, Naveen K Goel, Jyoti Hudia
Department of Community Medicine, GMCH, ‘Centre for Public Health, MPH, Panjab University, Chandigarh, India.
E-mail: meenalthakare@rediffmail.com

Abstract Sub-Theme: Osteoarthritis and Musculoskeletal disorders

Computers have become an electronic device of almost every day use for individuals of every age. However, its use is not free from health hazards. Musculoskeletal discomforts are also increasing among computer users. It is very important that these problems are evaluated in terms of their impact. Such study was not conducted in Chandigarh. So, this study was conducted to study prevalence of neck ailments, its consequences and correlates among computer users in Panjab University, Chandigarh.

It was a cross sectional study conducted during January-April 2016 based on a self-administered questionnaire in 400 randomly selected computer users in Panjab University. Questionnaire was based on NECK PAIN DISABILITY INDEX QUESTIONNAIRE consisting of questions regarding socio-demographic profile, posture, breaks during work, physical activities, neck ailments and its associated symptoms and measures taken to relieve it. Data was entered in Microsoft Excel and was analyzed to calculate frequencies and percentages.

61.1% of computer users were suffering from some sort of neck ailments. 33.6% were suffering for more than 1 year. 48.4% were suffering from numbness/tingling sensation. 20.5% from nausea and vertigo. Neck ailments were highest among those who spent 3-5 hours daily on computers. Laptop users had more prevalence of neck ailments (67.2%). 27% sufferers did not take up any curative measure.

Prevalence of neck ailments was very high among computer users. Bad posture, long working hours and lack of physical activity were most frequent causes of neck ailments. Severities of ailments being mild to moderate, physicians’ consultations were not practiced.
enquired about. Anthropometric measurements were done as per WHO criteria.

The Results of this study showed that 44% of the study population was high risk whereas 47.6% and 8.4% of subjects were classified as moderate and low risk respectively. 14.6% of the subjects were known diabetics. Among high risk groups, 25.7% of subjects were found to be diabetic whereas only 6.5% and 2.5% were identified as diabetic in moderate and low risk groups respectively as per IDRS. The prevalence of high risk group among subjects having waist circumference >100 cm was 93.4%.

IDRS is an easy to use tool in the hands of field workers to screen the population. Its sensitivity can be further increased by measuring fasting blood glucose levels in the population. These two stages can make it a cost-effective screening method and can detect the diabetics in the incipient stage.

Abs. No. AB00PO852

Awareness regarding the socio-demographic risk factors of type II diabetes mellitus among individuals of an urban area Sunsari, Nepal

DK Yadav, S Singh, V Manandhar, DD Baral, A Ghimire, N Jha
School of Public Health and Community Medicine, BPKIHS, Nepal.

Prevalence of type II diabetes mellitus (DM) is increasing throughout the world. Awareness of risk factors is the first step in preventing diabetes among the community people. To assess awareness regarding socio-demographic risk factors and to find the association between socio-demographic characteristics of individuals and their awareness regarding type II diabetes. Community based cross-sectional study was conducted in Inaruwa municipality of Sunsari district. Total of 260 Sample size was included using simple random sampling method by lottery method to select three out of eleven wards. In each ward population proportionate sampling method was used and every 6th household was included. Semi-structured questionnaire was used to collect data by face to face interview with each head of the household. This study showed that 96.5% of the households were aware about a condition called ‘diabetes’, out of which 53.3% were aware about its preventive measures. Out of 14.3% of the diabetic households, 55.6% were aware of its risk factors, while 62.8% of the non-diabetics lacked the same. It was found that ethnicity, literacy status and occupation were significantly associated with the level of awareness. There was a significant lack of information even in the urban areas regarding the risk factors of type II diabetes mellitus. There is need of public health measure for prevention of diabetes and its consequences during disease and treatment.

Abs. No. AB00PO854

Development and validation of composite risk score to assess risks of major non communicable diseases in Northern Indian populations

Ria Nangia, JS Thakur, AK Bhalla¹, Ajay Duseja²
Department of Community Medicine, School of Public Health, ¹Advanced Paediatric Centre, ²Department of Hepatology, PGIMER, Chandigarh, India.
E-mail: rianangia@yahoo.in

NCDs which mainly consists of CVDs, diabetes, cancer and chronic respiratory diseases account for 38 million deaths out of the 56 million deaths globally and 54% of healthy life years lost in 2012. A large percentage of NCDs are preventable through the reduction of their four main behavioral risk factors: tobacco use, physical inactivity, unhealthy diet and the harmful use of alcohol. Risk scores predict the risk of the disease efficiently and an important strategy to prevent or delay the occurrence of chronic diseases is early identification of those with undiagnosed NCDs, yet, universal screening at population level is not a practical approach. Though varied individual risk scores are developed for different NCDs, a composite risk score to assess the risk of the disease is not available despite the fact that they share common risk factors. The present study, therefore provides development of composite tool to integrate the various individual risk scores for major NCDs. Two different population based studies will be used in the analysis. Data from STEPS Survey Punjab will be used to develop the predictive score and will be complemented with the STEPS Survey conducted in Haryana. The existing individual risk scores of NCDs will be reviewed. Multivariate logistic regression model applied and regression coefficient will be used to assign each variable category a score. The coefficients from resulting model will form the risk score. Risk score will be derived from receiver operating characteristic curve. The tool will be further validated. The developed tool will help in risk assessment and successful implementation of NCD programmes.
Abstract

Development and cost estimates of an integrated noncommunicable disease registry in Chandigarh

Ronika Paika, JS Thakur, Dheeraj Khurana1, Sanjay Bhadada2, Rakesh Kapoor3, Rajesh Vijayvergiya4, Shankar Prinja
School of Public Health, 1Department of Neurology, 2Department of Endocrinology, 3Department of Radiotherapy and 4Advanced Cardiac Centre, PGIMER, Chandigarh, India.
E-mail: ronikapaika28@gmail.com

Out of the 56 million estimated annual deaths, 38 million deaths were only due to non-communicable diseases and 54% of healthy life years lost globally in 2012 were due to NCDs which consists of mainly cardiovascular diseases, cancer, diabetes and chronic respiratory diseases as per the global status report 2014. The registries generate high quality data of diseases surveillance for estimating the disease incidence, mortality, trends in population for different geographical regions and with different cultures. The data from registries set a tone for undertaking prevention and control measures which includes working for certain health policies and for further research in areas of epidemiology and health system. As all major non communicable diseases share common risk factors so there is need for having an integrated platform for NCD registries so as to facilitate the policy makers as well as the strengthening of health information system. The baseline assessment and operationalization of individual Non communicable disease registries in Chandigarh will be done by using a pre structured questionnaire and interview with the registry staff. From the baseline data and review of the existing tools of varied registries the integrated tool will be developed and further validated theoretically and empirically. The economic evaluation of the isolated NCD registries will be done so as to find the cost of per case registered, on the basis of which the cost of operationalizing an integrated NCD registry will be developed. The integrated registry would mean integration in terms of uniform reporting system for different NCDs like cancer, young diabetes, acute cardiac events, stroke with a separate portion for each disease and pooling of human resource as well the data for NCDs at one place which will ultimately help in developing integrated evidence-based public health interventions for prevention and control.

An operational study to develop the skill of Anganwari workers in cardiovascular diseases risk assessment among adults in Dhanas, Chandigarh (2015-2017)

Unnas
National Institute of Nursing Education, PGIMER, Chandigarh, India.
E-mail: fareedkhan529@gmail.com

Abstract Sub-Theme: Cardiovascular Diseases

Cardiovascular diseases (CVDs) are the primary cause of death in worldwide and there is paucity of health care providers to prevent and control these diseases. CVD risk assessment is an approach which can be used to identify people at high risk of developing CVDs by using World Health Organization/ International Society of Hypertension (WHO/ISH) CVD risk prediction charts and task shifting can be used to fill up scarcity of health care providers. An operational study was carried out with objective to develop the knowledge and skill of AWW on CVD risk assessment working in Dhanas, Chandigarh. Total 40 AWWs were enrolled by using purposive sampling technique. The study was completed in 3 phases. In 1st phase, questionnaire was administered to assess their base line knowledge. In 2nd phase, they were trained on CVD risk assessment. In 3rd phase each AWW and investigator assessed the CVD risk of minimum 10 adults (aged ≥40) simultaneously. Knowledge and skill of AWWs was significantly increased (p<0.005) after 4 consecutive demonstration and re-demonstration. Inter rater reliability showed almost perfect agreement between investigator and AWWs (k=0.91). Result revealed that mean age of AWWs was 41±7.9, 17 (42%) were graduated and 80% had working experience less than 10 years. After training AWWs were able to identify CVD risk of 414 adults. Subjects were classified as having low (80%), moderate (14%) and high (6%) risk of developing 10 years CVD risk as per WHO/ISH CVD risk prediction charts. Study concludes that AWWs can be trained in CVD risk assessment using WHO/ISH risk prediction charts. So, the task CVD risk assessment can be shifted to AWWs with proper training and supervision.

Dietary Vitamin D intake among lactating mothers and it’s correlation to Vitamin D status of their offspring

K Anusha, Guwani Livanage, UPK Hettiaratchi
Faculty of Medical Science, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.
Abstract

Daily requirement of vitamin D during lactation is controversial. However, Institute of Medicine (IOM) task force recommends safe level of 4000 IU/day of vitamin D though diet. Vitamin D occurs naturally in oily fish, egg yolk and fortified milk/milk products. Most of these food items are less affordable to majority in Sri Lanka. Vitamin D supplementation is not routinely done in state sector clinics in Sri Lanka. Thus, our aim of this study was to assess adequacy of vitamin D intake through diet among a selected population of pregnant mothers and its correlation to vitamin D level of the infant.

Lactating women of 4-6 weeks of postpartum (n=102) were interviewed. Vitamin D levels of food items were calculated using validated software (Nutrisurvey). Weekly intake of vitamin D was assessed and average consumption/day was calculated. Serum vitamin D levels of the infant were analyzed using mini VIDAS and Parathyroid hormone (PTH) using DRG ELISA kits. Vitamin D (25(OH)D) deficiency was defined as <10 ng/mL. Data were analyzed using SPSS version 15.0.

Majority (98%) of infants were exclusively breastfed. Vitamin D deficiency was high (63.1%) among the infants. 25.2% had insufficiency (10-20ng/mL). The total intake of vitamin D from diet was 1297.4±1264.9 IU/day (range32-5400). Main source of their vitamin D in this population was fortified milk powder and small fish. Vitamin D level in the infant correlated significantly with mother’s vitamin D intake in the diet. (r=0.204, p=0.039). Vitamin D deficiency/insufficiency in infants is high. Mother’s vitamin D intake, which is the only source of vitamin for the infant, is not adequate. Thus, we suggest vitamin D supplementation during lactation in state sector clinics in Sri Lanka. Further, larger randomized controlled trials are needed to investigate safe dose of supplementation.

Correlates of Complementary and Alternative Medicine (CAM) Use by Cancer Patients in Chandigarh

Dinesh Kumar, Naveen Krishan Goel, ‘Awadhesh Kumar Pandey, *Ravleen Kaur Bakshi
Department of Community Medicine, Government Medical College, Sector-32, Chandigarh, ‘Department of Radiotherapy, Government Medical College, Sector -32, Chandigarh; ‘Department of Endocrinology and Metabolism, AIIMS, New Delhi, India.

The recent increase in the interest and growth CAM can be attributed to many reasons including technological, economic, cultural and social trends. The present study aims at exploring the correlates of CAM usage by cancer patients in Chandigarh. Present hospital based cross sectional study was conducted among cancer patients attending Radiotherapy Outpatient Department (OPD) of a Government Medical College and Hospital (GMCH). A total of 1,117 cancer patients participated in the study. Statistical methods like normal test of proportions, Chi square ($X^2$) test, and logistic regression analysis for estimation of risk factors of CAM use were applied to carry out the data analyses using SPSS 16 software package. Among 214 new patients 120 (56.1%) were using CAM as compared to 312 (34.6%) among 903 patient who revisited the GMCH. Maximum CAM use was reported among aged 36-49 years (40.9%). CAM user rate was comparatively higher among respondents having family history of disease. Among 432 users, 162 (37.5%) were of the opinion that allopathy was better than CAM. Only 77 (17.8%) patients reported to have faith in CAM therapies. The high utilization of CAM among cancer patients and nondisclosure proportions suggests prioritizing research investigating reasons to use CAM and efficacy/safety of CAM use. There is an urgent need of conducting further in depth epidemiological studies to evaluate the efficacy of various CAM therapies in use for cancer with active participation from CAM providers/healers to attain some logical conclusions.

Abs. No. AB00OP317

Regional Analysis of Non Communicable Diseases Attributed By Occupational Structure and Its Impact as Economic Loss in India

SURENDRA KUMAR PATEL, Sunita Patel
International Institute for Population Sciences, Mumbai.
E-mail: surendra88@ips.net

Industrialization and globalization are changing the occupational morbidity drastically. Work related morbidity is very common in across the world and India is not an exception of that. The growing percentage of service sectors bring another world of stress, hypertension, obesity and other hidden diseases which have long term impact. The objective of the present research is to study the regional pattern...
of occupational morbidity in India also to analyse the economic loss due to this occupational morbidity. For the present research work, two rounds of IHDS data are used. The analysis of these data done with the STATA software, and also analysis is carried with using Bivariate and Multivariate statistical techniques. The results show that cardiovascular diseases (CVDs) prevalence is increased from 2.12 % to 3.78 % in 2005-2011. The prevalence of CVDs in Southern region of India is higher (3.69 percent in 2005 to 5.51 percent in 2011) in compare to all other region. CVDs prevalence is higher among white collar worker (5.19 % in 2005) and the odds of the relative risk of having morbidity is increasing with age, education and wealth quintile (OR – 1.38 CI- 1.17-1.62 for wealthiest quintile for CVDs and OR – 1.53 CI – 1.28-1.84 for white color worker). Due to these diseases on their economic earning is that the white collar worker and other worker loss more than 1000 Rs. of their per day wage just due to morbidity. In conclusion, the white color worker are more prone to non-communicable diseases than the other categories.

Abs. No. AB00OR441

Facility Readiness for Breast, Cervical and Oral Cancer Screening in India: Findings from India’s Fourth Round of District Level Household and Facility Survey (DLHS-4)

P. K. Dhillon, A. Yadav, S. Agrawal, E. A. Van Dyne1, B. Hallowell1, V. Senkomago2, S. Patel2, M. Saraiya1
Public Health Foundation of India (PHFI), Gurugram, Haryana, India, 1Centers for Disease Control and Prevention, 2Emory University, Atlanta, GA, USA.
E-mail: awdesh.yadav@phfi.org

Abstract Sub-Theme: Cancer

India’s National Programme for Cardiovascular Disease, Diabetes, Cancer and Stroke (NPCDCS) recommends screening of breast, cervical, and oral cancers for 30-64 year olds; public healthcare facility readiness to undertake cancer screening has not been evaluated. We examined healthcare facility resources for cancer screening in India’s states and over 545 districts from DLHS-4 (nationally representative cross-sectional multistage cluster-randomized sample) data at 18,367 sub-centers (SC’s), 8,540 primary health centers (PHC’s) and 4,810 community health centers (CHC’s), using India’s Operational Framework for cancer screening against a benchmark IDCCP (Improving Data for Decision Making in Global Cervical Cancer Programmes) Toolkit. DLHS-4 indicators of staffing, infrastructure, equipment and supplies, infection prevention, medications and laboratory supplies, and hospital data management represented IDCCP “Facility Readiness”; a summary score of these indicators was created (max=26). At SC’s, PHC’s and CHC’s respectively, 86%, 74% and 90% of facilities possessed human resources to conduct population-level screening; 30%, 50% and 58% had regular power supply; 67%, 77% and 97% had examination/labor tables; 27%, 69% and 89% had an autoclave/sterilizer; 52%, 83% and 72% with satisfactory (incinerator/pit) bio-waste disposal; and >92% facilities were%, 92% and 92% with >1 indicator for a data management system. Summary scores varied widely across SC’s (mean=9.5, ±3.1SD), were higher in pilot districts of NPCDCS, and in moderate correlation with a state’s socioeconomic development (correlation coefficient=0.44). Though data on specific cancer screening resources are not yet available for assessment, a quantitative readiness tool may help state-level planning for cancer screening as per operational guidelines under the NPCDCS Programme.

Technology and NCDs

AAbs. No. AB00OR227

Efficacy of ‘patient navigator system’ and ‘decision making community education tools’ in diabetes management for rural settings: A concept proof, phase ii non-randomized controlled trial

Rita Isaac, Sam Philip1, Amudha Poobalan1, Bhavya Balasubramanya, Nihal Thomas2, Joy Mammen3, Prakash Abraham1
Departments of Rural Unit for Health and Social Affairs, 2Endocrinology Diabetes and Metabolism and 3Transfusion Medicine, Christian Medical College, Vellore, Tamil Nadu, India, 1University of Aberdeen, Aberdeen, United Kingdom.
Abstract

E-mail: bhavsvortex@gmail.com

Scarcity of physicians, suboptimal patient-physician interaction in overcrowded outpatient departments, variations in health literacy and compounding less than desirable socioeconomic factors make it difficult for providers to offer best of care to their clients with diabetes in rural communities in India. Also unstandardized health information given by different providers and lack of awareness leads to inconsistent management advice. This study is an attempt to test the hypothesis that standardised educational messages and a socially accepted patient navigator system based health monitoring, supported by m-health based clinical decision making tools will address diabetes management issues in rural areas. Four Peripheral Service Units (PSU) in a rural block, serviced by RUHSA in Tamil Nadu, India with two PSUs as control and two as intervention sites and 100 diabetics aged between 30-60 years in each arm have been chosen for a Phase II, nonrandomized controlled trial, starting in June 2017. The trial will compare the efficacy of community health aides functioning as patient navigators to educate communities using paper based, standard messages in an 'Option Grid' and promote early screening, timely referral and investigations, regular follow-up and adherence to treatment assisted by a tablet-based clinical decision making application versus standard of care comprising of voluntary reporting, assessment, monitoring and follow-up at the regular diabetes clinic. We will present the preliminary report of comparative socio-demographics, baseline awareness level, screening rate, number of referrals based on app-based clinical decision tool, compliance to management protocols and outcomes in both arms. Our results will be used to inform design of a phase 3 effectiveness of this novel intervention in rural settings.

Abs. No. AB00OR295

Electronic medical record and factors associated with visit adherence in an NCD clinic in rural area

Latika Rohilla, Har Ashish Jindal, Drishti Sharma, M Sathiabalan, Gursharan Singh, Mona Duggal
School of Public Health, PGIMER, Chandigarh, India.
E-mail: swatirohilla.19@gmail.com

As per National Health Policy-2017, electronic medical records (EMR) in ambulatory care settings have been recommended as a method improving adherence and reducing costs in chronic illnesses. Poor compliance to treatment regime is the most common cause of uncontrolled complications among NCD patients.

The aim of this study was to assess the visit compliance among NCD patients. The NCD OPD at Civil Hospital Naraingarh was digitalized in January 2016. It runs two days a week and caters to the NCD burden of the surrounding rural and semi-urban areas. The EMR data was extracted to assess the compliance among Hypertension and Diabetes Mellitus patients who visited the OPD between October 2016 and March 2017. Patients were advised monthly follow up. They were said to have good compliance if they completed at least 90% of the required visits.

A total of 324 new patients were registered during the time period. The patients were in the range of 35-75 years. 45% of them were above the age of 60 years. 60% of them were females. 62% of the patients had hypertension alone, 20% had Diabetes alone and 18% and both. Higher compliance was seen among patients above the age of 60, males and the ones having both the diseases and among the patients residing within 5 kilometres distance from the clinic.

EMR can be successfully utilized to track the visit compliance of the patients, identify the least compliant and thus enable targeted intervention to improve compliance.

Abs. No.AB00PO162

SPARSH - An NCD home care programme for a rural population of Gujarat, India

Sharvaree Kharsikar, Mahima Taparia, Shyamsundar Raithatha
Department of Extension Programmes, Charutar Arogya Mandal,
1Department of Community Medicine, Pramukhswami Medical College, Anand, Gujarat, India.
E-mail: sharvaree.kharsikar@gmail.com

The burden of Non Communicable Diseases (NCDs) is increasing in India with the epidemiological transition. Patients suffering from NCDs need chronic ongoing care, which is not possible in rural areas. Our Programme aims to develop a model of home based NCD care in a rural setting through a three tier health care system connected virtually consisting of Village Health Workers and a Mobile Health Team at the grass root level, a secondary care or a primary care hospital (Extension Center) at the intermediate level and a tertiary care medical college institution at the highest level. All levels are interconnected for bi-directional referral of patients
Abstract

Improving detection of hypertension through quality standards in Kerala

Abha Mehndiratta TK Suma1, Bipin Gopal2, Francoise Cluzeau, Rajeev Sadanandan2

Imperial College London, UK, 1Government T. D. Medical College Hospital, Alappuzha, 2Department of Health and Family Welfare, Kerala.
E-mail: abm110@mail.harvard.edu

To improve detection and management of hypertension in primary care through implementation of Quality Standards (QS), a pilot study is planned in 10 primary health centres (PHC) in Kerala. The QSs have been prioritized by an expert group constituted by Kerala State Health Department and are derived from standard treatment guideline (STG) on hypertension developed under STG taskforce established by Ministry of Health and Family Welfare, Government of India. The aim is improving identification of new cases of hypertension by opportunistic screening (blood pressure measurement) and improving blood pressure (BP) control in hypertensive patients by setting clinic BP targets. QS Compliance will be monitored by utilizing data recorded in electronic medical records (EMR) created under Kerala Government’s eHealth project. The study is planned for 9 months. Baseline data collected from Kollam district shows for PHCs, average number of patients visiting daily is 160; average number of hypertensive patients visiting monthly is 840; and average number of new hypertensive cases identified monthly is 12. During implementation phase data will be collected on ratio of people over 18 years of age visiting a PHC who had their BP checked; ratio of patients with new diagnosis of hypertension; ratio of hypertensive patients who had clinic BP target set and ratio of hypertensive patients with clinic BP recording below target value. The results will contribute to evidence base on how to translate guideline recommendations into clinical practice, by incorporating QS and clinical indicators into the EMR, for primary care management of non-communicable diseases.

Abs. No. AB00P0460

Development and assessment of acceptability of mobile app for hypertensive patients

Neha Sethi, Shavika Gupta and Neena Bhatia
Department of Food and Nutrition, Lady Irwin College, New Delhi, India.
E-mail: nehasethi185@gmail.com

and support in the form of supervision, monitoring and capacity building. The Mobile Health Team conduct screening and enroll patients in the programme. The VHWs monitors patients enrolled through monthly home visits for assessment of the patient’s condition through basic tests such as Blood Pressure and Capillary Blood Glucose measurement and clinical assessment through a checklist and enters into a tablet device which in turn is reviewed by Medical Officer (MO- Primary Care Physician) at the Extension Center and if found controlled will prescribe the treatment. Home delivery of medicine packet prepared is done by VHW. Outcomes of the programme are increase in the treatment compliance of NCD patients, reduction in treatment costs, reduced morbidity and mortality due to NCD complications. Several challenges due private practitioner’s competition.

Disclosure of Interest: None Declared.

Abs. No. AB00PO257

Computational studies for the development of point of care testing tool for screening of pesticide poisoning

Sheemona Chowdhary, Rajasri Bhattacharyya, Dibyajyoti Banerjee

Department of Experimental Medicine and Biotechnology, PGIMER, Chandigarh, India.
E-mail: sheemona86@gmail.com

Acute pesticide poisoning particularly organophosphorus poisoning is a global concern. The commonly using pesticides inhibit acetylcholinesterase, and erythrocyte acetylcholinesterase is the gold standard biomarker for the detection of the acute pesticide poisoning. Presently, Acetylthiocholine is the popularly used substrate for the detection of acetylcholinesterase activity. However, use of such substrate is not free from limitations. Using tools of computational biology various known ester substrates are explored for the screening of better substrates for acetylcholinesterase. The results of such in silico studies are validated in vitro. Several ester substrates have interacted with active site residues of acetylcholinesterase better than acetylcholine. In vitro experiments with pure enzyme have shown that such in silico results have translational potential. It is possible that the commonly known ester substrates at low concentrations are cleaved by acetylcholinesterase better than acetylcholine/ acetylthiocholine. This fact can be explored for overcoming the limitations of acetylthiocholine as a substrate for acetylcholinesterase activity detection.
Abstract

Hypertension is single most common risk factor for cardiovascular disease. Compliance to dietary recommendations among hypertensive people is a major health care issue. Use of mobile health technology has emerged as an apt nutrition education tool. The content of app was developed from standard references on hypertension causes and complications, diet and lifestyle tips. App had both static and interactive components. The acceptability of the app as a nutrition education tool was assessed using pre-post survey. Forty seven hypertensive subjects (40-60 years) included in the study were divided into two groups i.e. experimental group (n=25) and control group (n=22), where experimental group was provided with the app. Pre data revealed that majority of subjects were in either overweight and obese category. Majority (nearly 80%) of subjects in both groups lie in stage 1 hypertension. There was no significant difference in DBP (NS, t-value = 0.012, p<0.05) and SBP (NS, t-value = 0.667, p<0.05), BMI (NS, t-value=0.377, p<0.05) and waist circumference of men (NS, t-value = 0.21, p<0.05) and women (NS, t-value = -0.72, p<0.05) between control and experimental group. There was no difference in the physical activity level between both the groups. Pre data showed no significant difference in knowledge regarding various risk factors of hypertension (NS, x² = 4.8, p<0.05) between the groups. Post survey conducted after 4 weeks of downloading the app showed marked improvement in knowledge of hypertensive subjects in experimental group (S, x² = 18, p<0.05). Hence, mobile apps can be effectively used to educate about nutrition and lifestyle related aspects.

Abs. No. AB00OR489

Period prevalence of post-stroke complications among stroke survivors at a tertiary care centre: Future perspectives!

Ashok Kumar, Sukhpal Kaur, Sandhya Gaihi, Manish Modi1, Smita Pattanaik2, CK Narayan3, Dheeraj Khurana4
Departments of Neurology, National Institute of Nursing Education, PGIMER, 1Departments of Neurology and 2Pharmacology, PGIMER, Chandigarh, 3Department of CST, IIT, Ropar, Punjab, India.
E-mail: ajangir_27@yahoo.in

Majority of the stable, however dependent stroke patients get discharged from the hospital. The onus of care lies with the caregivers in the home care settings. These patients are at risk of developing various complications. There is need to develop stroke rehabilitation services with the active involvement of family members. The current study was carried out to ascertain pattern of health problems faced by stroke survivors with an aim to develop an intervention. 170 bedridden stroke survivors (and their caregivers) attending Neurology OPD and medical emergency OPD, PGIMER, Chandigarh, were purposely selected. Follow up was done at 3 months and 6 months of enrollment. Mean age of patients and caregivers was 58.64±13.9 years and 35.9±9.5 years, respectively. 57.6% patients and 61.8% caregivers were males. All patients got discharged with Ryle’s tube and Foley’s catheter in-situ, and 13.5% with tracheostomy tube in-situ. At three months follow up, 20.7% developed bedsores, 6.7% aspiration pneumonia, 7.9% catheter associated urinary-tract-infection, 8.5% contracture/frozen shoulder, and 1.8% developed deep-vein-thrombosis. However, at 6 months, 27.6% developed bedsores, 9.1% aspiration pneumonia, 10.5% catheter associated urinary-tract-infection, 24% contracture/frozen shoulder, and 2.6% developed deep-vein-thrombosis. 4.2% died within 3 months and 19.5% within 6 months of their stroke. Significant association was found between post-stroke complications and death. It is concluded that stroke-survivors, fully dependent for self-care, experience a greater number of life threatening complications. Majority of the family members were not trained and competent to provide care to their stroke survivors at home. There is a need to develop various strategies for training the caregivers.

Abs. No. AB00OR794

Retention of knowledge levels of health care providers in cancer screening through tele-mentoring tool, ECHO

Roshani Babu, Roopa Hariprasad, Latha Sriram, Ravi Mehrotra
National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, India.
E-mail: robabu@gmail.com

Every year more than 4.5 lakhs individuals are diagnosed with cancer and around 3.5 lakhs die of it in India (Globocan 2012 Fact Sheets, India). The Ministry of Health and Family Welfare (MoHFW) has released an Operational Framework for the Management of Common Cancers which highlights population based Cancer Screening Program in primary health care (PHCs) facilities by health care providers (HCPs) and capacity building of HCPs, pan India. The purpose of the study is to present a low-cost training model that is highly suitable for resource deficient settings like that in India, through Extensions for Community Health Outcome (ECHO), a knowledge sharing tool, to bring about high-quality training of HCPs.
An in-person 3 days training program was conducted for 29 HCPs, in the tribal PHC of Gumballi in Southern Karnataka, to teach the basics of cancer screening in oral, breast and cervical cancer. The HCPs were then hand-held on ECHO platform, through the screening process of their community, thus, enabling them to build the much-needed knowledge and skill set to conduct cancer screening in their respective communities. The knowledge level was tracked before, after and 6-months post intervention, which clearly showed acquisition and retention of knowledge progressively. A marked improvement in knowledge from 6.3 to 13.7 on an average was noticed after the initial in-person training. The average knowledge further increased to 14.4, after 6-months due to training on ECHO platform. Thus, ECHO is an economic and effective model to train HCPs I cancer screening in a LMIC like India.

Abs. No. AB000R831

Development of web based heart rate variability analysis platform to establish centralized database of HRV and ancillary cardiovascular health parameters

Dinu S Chandran, Kavita Yadav, Vishal Mane1, Manoj Kumar Asati1, Nicy Kaur Taneja1, Ashok Kumar Jaryal, Kishore Kumar Deepak

Department of Physiology, All India Institute of Medical Sciences,
1Ministry of Electronics and Information Technology, Govt. of India, New Delhi, India.
E-mail: dinu.aiimsnewdelhi@gmail.com

Heart rate variability (HRV) has been shown as a promising non-invasive tool to monitor cardiovascular health, diagnose autonomic dysfunction, stratify the risk of adverse cardiovascular outcomes, predict morbidity and mortality in various non-communicable diseases. Despite its proven potential, usage of HRV in domains of curative and preventive health has largely been limited by inaccessibility to technical resources including costly softwares along with lack of awareness among healthcare professionals. The aim of the project was to establish a centralized web based platform capable of performing HRV analysis and create a structured national database of HRV with demographic, anthropometric, clinical and laboratory data of patients and healthy subjects. A centralized cloud computing platform - cHRV https://chrv.medialabasia.in/ was built on open source platforms to create database management (MySQL) and HRV analytics modules (R platform integrated with Open CPU) enabling every user with easy remote access through world wide web to submit relevant patient data along with RR interval files to perform centralized analysis and derive time domain, frequency domain and non-linear measures of HRV. HRV parameters generated by cHRV platform were validated against commercially available softwares for accuracy of estimation [95% limits of agreement (-6.0 to 5.77 for HF nu)]. Sixty-six users representing 19 institutions have been enrolled till date in the platform. cHRV serves as an effective platform to empower healthcare professionals with easy web based access to HRV analysis and create centralized database of HRV amenable to big data analytics for developing better non-communicable disease risk prediction models.

Abs. No. AB000R835

Hybrid resealed erythrocytes: a novel approach for targeted nanoparticulate drug delivery

Sabya Sachi Das, G Punith Kumar, PRP Verma, Sandeep Kumar Singh, Hasan Ali

Department of Pharmaceutical Sciences and Technology, Birla Institute of Technology, Ranchi, Jharkhand, India.
E-mail: sabya2049@gmail.com

The aim of the study was to prepare hybrid resealed erythrocytes of quercetin loaded nanoparticles. Initially, drug-excipient compatibility studies were performed using FTIR, DSC and XRD, were found to be compatible. Further, quercetin loaded nanoparticles of Eudragit RS 100 were formulated by solvent extraction technique employing, Eudragit RS 100 and Tween 80 as independent variables, and taking particle size, EE and PdI as the responses, using 32 fullfactorial design. Finally, the optimized nanoparticles were incorporated into erythrocyte by employing hypotonic preswelling technique. The average particle size, EE and PdI of the optimized nano formulation was 60.42 ±0.66 nm, 76.87%, 0.278 ±0.008; with %bias +9.59,-7.20 and 8.13, respectively. Combined desirability was found to be 0.856. Zeta potential of optimized nanoformulations was 27.3 ±1.71 mV. The entrapment efficiency of the resealed erythrocytes was found to be 63.55%. The cumulative %drug release kinetics model, with r2 value of 0.994 and 'n' value of 0.4047. Based on 'n' value it follows Fickian diffusion controlled mechanism (n≤0.45). The quercetin loaded hybrid resealed erythrocytes were developed which could have promising application in the targeted treatment of leishmaniasis.
**Abstract**

**Challenges and Innovative use of information technology in Public Sector Hospital, India**

A K Gupta, Shweta Talati, Navin Pandey

Department of Hospital administration, PGIMER Chandigarh, India.
E-mail: Anil1031@gmail.com

One of the core functions of managers is meeting unstructured challenges. This function becomes more complex for hospital administrators in view of typical matrix structure of a hospital. This study presents five out of multitude of unstructured challenges faced by Medical Superintendent's Office (i.e. Hospital Administration) at PGIMER, Chandigarh, a tertiary care teaching hospital in North India. The study details innovations in information technology adopted by hospital administration to meet these challenges and their impact.

The first challenge was checking man hours of specialist doctors and carbon footprints wasted for physically giving evidence in courts. The office collaborated with court authorities to integrate and innovatively use IT (videoconferencing) in dispensing evidence by doctors as expert witnesses in the court of law and set up a system of Tele-Evidence (video conferencing) thus nullifying need for doctors to personally visit far flung courts leading to savings of more than INR 3 crores & 150 tons of carbon footprint. The next challenge was optimizing average length of stay (ALS) of patients in the hospital so that maximum number of patients avail it’s services and cost of treatment per patient is reduced. Innovative use of embedded technology i.e. HIS & SMS was done to generate & send repeated automatic Email/SMS to consultants whose patients exceed stay of specific number of days. This led to a significant fall (p = 0.00) in ALS of patients from 7.9 days in pre intervention phase to 7.1 days in post intervention phase. The next challenge handled was improving success of Hospital Cornea Retrieval Program to benefit scores of corneal blind patients awaiting corneal transplant. A series of interventions including innovative use of available technology led to 93% increase in corneal donation rate (p = 0.001). The office took up the challenge of promoting health by dissuading use of tobacco products in the hospital. A series of checks and fines were rigorously implemented leading to confiscation of huge quantities of tobacco products.

The matrix structure of hospitals makes job of hospital administrators more challenging. This study clearly showed that creative and innovative use of information technology can lead to a win-win situation for all stake holders with immense benefits to patients & society as a whole.

**Problematic Internet Usage Among Students**

Meenu Kalia, NK Goel, KaramjeetKaur

Department of Community Medicine, Government Medical College and Hospital, Chandigarh, India.
E-mail: meenusharma75@gmail.com

Internet Addiction (IA) is defined as a pathological pattern of internet use, which is also described as internet dependence, compulsive internet use, problematic internet use, internet abuse, and pathological internet use. Rapidly increasing use of smart phones, tablets, and computers have made internet an indispensable part in modern society. The negative impact of excessive, maladaptive or addictive internet use has attracted much research attention. Internet addiction (IA) has become a major public health issue worldwide. The user cannot self-control the use of internet, resulting in significant impairments at school, home, work, health or interpersonal relationships. The aim of the study was to assess the prevalence of internet addiction among students. 2) To find out the association between internet addiction and health problems.

Study was conducted in Panjab University. A Cross Sectional Study was done among the 306 university students of various streams between Jan’17 to pr’17. Internet addiction test was used which is pretested scale for internet addiction.

Most common mean to access the internet was mobile phones (88.9%), followed by the laptops. 3.46% of the students used up to 500 Rs. per month to recharge their internet pack. 42% of the total students used spectacles. Eye strain is the commonest symptom reported due to excessive internet usage. 68% used internet to access social sites.

It was also found that with increasing the addiction score, usage of porno, gaming, and social media sites were increasing while the use of educational sites was decreasing which is an area of concern. Research can be done by using other diagnostic criteria like sleep disorder scale, anxiety scale, and depression scale along with the internet addiction test. Hence better co-relation can be made between different variables. Since the use of internet in adolescent was found very high therefore there is a need for developing prevention/interventions strategies, primarily targeting children and adolescents at risk of severe.
Health Promotion

Abs. No. AB00OR80

Epidemiological correlates of hypertension in rural areas of district Dehradun

Ashok Srivastava, Ruchi Juyal, Satpal Singh
Department of Community Medicine, HIMS, SRHU, Dehradun, Uttarakhand, India.
E-mail: drsrivastavaak@gmail.com

The study was conducted in rural areas of district Dehradun and samples were randomly selected from 2 villages of randomly selected Nyayapanchayat and block. The study subjects included were in age group of 20 – 40 years. Blood pressure was recorded as per WHO guidelines and hypertension and prehypertension was classified as per JNC VII criteria. Both behavioural as well as biological factors were studied. Behavioural factor which was significantly associated with hypertension was stress, unhealthy and erratic dietary habits, tobacco and alcohol abuse as well as physical inactivity. Among biological factors significant association of hypertension was observed with overweight/obesity, higher waist circumference and higher waist hip ratio. Comprehensive approach is required for prevention and control of hypertension. Health promotion for healthy lifestyles, easy availability of home available foods, human resource and their capacity building, evolvement of behaviour change communication, focused tobacco control initiatives along with meditation can help in prevention of this modern epidemic. Early periodic screening among youths and primordial prevention among children about adoption of healthy lifestyle is the need of the hour. Restricting salt levels in packaged foods and stopping inappropriate marketing of unhealthy food items and non-alcoholic beverages through legislation is strongly recommended.

Abs. No. AB00OR120

Comparison of eating behaviour among polycystic ovarian syndrome women and controls

Ishwpreet Kaur, Amarjeet Singh, Vanita Suri, SV Rana, Bikas Medhi, Naresh Sachdeva, Nancy
Departments of Community Medicine, Obstetrics and Gynaecology, Gastroenterology, Pharmacology, Endocrinology and ???, PGIMER, Chandigarh, India.
E-mail: ishwpreeet814@yahoo.co.in

Polycystic ovarian syndrome (PCOS) affects 4% to 23% women. Obesity, insulin resistance and uncontrolled eating are usually reported in PCOS. However, there is paucity of data describing associations between eating disorder and PCOS. The study aimed to compare the anthropometric profile, and eating behaviour PCOS cases with that of healthy age-matched women. Eighty-five PCOS cases and 85 controls were selected for the study from Gynae OPD of PGIMER, Chandigarh. Anthropometric assessments were performed on the cases and controls. Three-Factor Eating Questionnaire (TFEQ-R21) was used for determining the eating behaviour. In addition, the frequency of eating processed food from outside was recorded. The average weight of the cases and controls was 72.39 kg and 57.07 kg, respectively. The average frequency of eating processed food in a month was 15 in PCOS women and 4.41 among controls. The average raw score of uncontrolled eating was 23.26 (PCOS) in comparison to 18.97 (controls). Average raw scores of emotional eating were 12.67 in PCOS women and 10.76 in controls. The cognitive restraint average raw scores were 11.34 (PCOS) and 13.62 (controls). The cases had higher BMI than the controls. Monthly consumption of processed food was three times higher than the controls in PCOS cases. Uncontrolled eating and emotional eating scores were significantly higher in PCOS cases. These findings provide an important insight into the nature and prevalence disordered eating behaviours amongst women with PCOS.

Abs. No. AB00OR130

Knowledge attitude and practice regarding dietary salt intake among slum population and possible strategies of salt reduction

Sudip Bhattacharya, JS Thakur, Amarjeet Singh
Department of Hospital Administration and School of Public Health, PGIMER, Chandigarh, India.
E-mail: drsudip81@gmail.com

Hypertension is an important modifiable risk factor for cardiovascular disease (CVDs) and is directly related to high salt intake in diet.

The objective of this study was to assess the knowledge, attitude and practice for dietary salt intake by urban slum populations in Indira Colony, Chandigarh. In 2015, we conducted a cross sectional survey among a
representative sample of 300 adults aged 18 to 69 years using a standardized questionnaire to assess their KAP for salt intake. Variation in the KAPs by gender, and residence location were compared using the Chi-square tests. Logistic regression was applied to examine the relationship between indicators of socioeconomic status, knowledge and attitudes related to salt and hypertension, and practice towards salt reduction, from which odds ratios and 95% confidence intervals (95%CI) were computed. Most of them (95.8%) used to take processed foods and (99.3%) did not bother about the salt levels on the food. More than 95% population used to take added salt on table. Most of them (75.4%) perceived that they are taking right amount of salt, which was not true. Nearly half of them (42.9%) did not know about the harmful effects of dietary salt and one fifth (17.6%) of them having wrong information about dietary salt. Multiple logistic regression analyses indicated that no such relation is present between dietary salt intake and education. It was found that overall awareness level was very poor among the slum residents and we need to educate them. Development of effective public education initiative is the need of the hour for combating NCDs like hypertension.

Abs. No. AB000R154

Assessment of quality of life among females with diabetes mellitus type – 2

**Warisha Mariam, Suneela Garg, M Meghachandra Singh**

Department of Community Medicine, Maulana Azad Medical College, New Delhi, India.
E-mail: warishamariam@gmail.com

Diabetes is the ninth leading cause of death in females globally. In India, an estimated 7.8% of the population above 18 years of age have raised blood glucose levels or are on treatment of diabetes. Having diabetes requires complex, intrusive, highly demanding and strict precaution measures for an individual which may have a negative effect on quality of life. Good quality of life is required for a good glycaemic outcome.

The objective of this study was to study the quality of life in females with diabetes mellitus type-2. This was a cross sectional study conducted among 100 females with diabetes mellitus type-2 attending the Diabetic clinic at a tertiary care hospital in central Delhi over a period of 6 months. A pre tested semi-structured interview schedule was used to collect the data. Data was analyzed using SPSS Pc 17 Version. Quantitative variables were expressed in mean (+SD) while qualitative variables were expressed in percentages. Chi square or Fisher’s test was used to analyze any difference in proportions. ‘P’ < 0.05 was considered statistically significant. There were 100 women from age of 18 years and above, 48.28% were Hindu and 51.72% were Muslim. 63% were illiterate, 100% were housewives/unemployed. About 50% had other co-morbidities like hypertension and hypothyroidism. 90% agreed that it is frustrating for them to take care of their illness.

Almost everyone agreed that they were not able to enjoy life. The mean value of HbA1c was 8.2 ± 1.56. Only 15% had good glycermic control. Quality of life has become an important health outcome representing the ultimate goal of all health interventions. Educational and counseling interventions can be designed to help diabetes individuals to cope up with their diabetes related problems thereby improving their quality of life.

Abs. No. AB000R182

Lifestyle survey of urban middle-class adolescents of Dehradun, Uttarakhand, India

**Rachit Negi**

Johns Hopkins Bloomberg School of Public Health, Dehradun, India.
E-mail: rachitnegi@hotmail.com

The present study investigated the prevalence of lifestyle-related concerns among school adolescents in Dehradun. The information was collected, through a self-administered questionnaire, from 323 school students studying in grades VIII- XII drawn from four different schools of Dehradun. To keep the study gender neutral, the respondents consisted of 168 boys and 155 girls. The adolescents completed the anonymous Adolescent Lifestyle Questionnaire containing 30 simple questions from six environments. The study documents the various concerns of the adolescents related to unhealthy diet practices (fast food consumption, cold drinks, low fruit and vegetable intake), lop-sided sleeping habits, less religiosity, unhealthy daily routine and involvement in different forms of risk behaviours. The survey studied the association of lifestyle with several contextual variables (i.e., home environment, school environment, electronic environment, friend’s environment, recreation environment, sports environment). Elaborative key findings are explained in the paper for each setting.

The survey highlighted prevalence of unhealthy dietary habits, unhealthy food consumption (i.e., bakery items, fast food, cold drink), irregular sleep habits, sedentary leisure time engagement (mobile, video game, TV,
Abstract

Internet) in many students. Average score in the Sports environment is found to be Lowest (4.7) in the survey. It shows that most of our adolescents are not spending sufficient time outdoor playing some sport. They are also not getting sufficient physical exercise. The low average score in the Home environment suggests some alienation of youngsters from the families.. This survey gives a fairly good idea of the life style trend in an urban, cosmopolitan centre. Analysis of the data gives us some insight into the life style deficits of adolescents so that corrective measures can be taken.

It can be concluded, based on the findings of the survey, that adolescents, especially girls, are physically inactive and less opportunist in participating outdoor sports or physical activities. Family cohesion among adolescents is deteriorating as they are pushed to spend less time with their family members due to electronic gadgets affinity, parents’ busy schedule, lack of strict rules at home etc. Friend environment come forth with good scores revealing the fact the youth always need and prefer to have good and supportive friends. Electronic settings were also noted to be at satisfactory level, it could be due to the reason that the school going students have strict rules of using electronic gadgets. Adolescents are found to be less self-oriented towards studies and social reform activities, as observed in the assessment of school environment; however, the level of satisfaction regarding the education they are getting is quite satisfactory. Overall, females comply more than males with various lifestyle settings excepting in sports and recreation.

Abs. No. AB00OR200

Perceptions and practices of cardiovascular health: A population perspective from a peri-urban Nepalese community

Abhinav Vaidya, Natalia Oli1,2, Alexandra Krettek2
E-mail: dr.abhinavaidya@gmail.com
Department of Community Medicine, 1Department of Community Medicine, Kathmandu Medical College, Kathmandu, Nepal, 2Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, Gothenburg, Sweden

Global phenomena such as urbanization and individual traits such as health literacy affect people’s exposure and vulnerability to cardiovascular risk factors. Nepal, a low-income South Asian country undergoing epidemiological transition, has limited data and understanding of cardiovascular health issues, particularly on community’s cardiovascular health literacy, perceptions and practice. We investigated issues of cardiovascular health from a population perspective. We established a health demographic surveillance site in Jhaukhel and Duwakot, two peri-urban villages near the capital Kathmandu. A mixed methods research approach was then used. Quantitative studies assessed cardiovascular health literacy, knowledge and attitude in a sample population. Cardiovascular health behaviour, particularly physical inactivity and fruit and vegetable intake, were studied. Additionally, a qualitative study to explore perceptions and experiences of patients with cardio metabolic diseases was conducted. Forty four percent of the study population had poor knowledge of cardiovascular health. Moreover, only 14.7% and 13.9% of respondents with highly satisfactory knowledge also had highly satisfactory attitude and practices, respectively. Behavioural cardiovascular risk factors were high (low physical activity: 43.3%, inadequate fruit and vegetable consumption: 97.9%) and varied by sociodemographic correlates. Furthermore, patients understood the importance of lifestyle modification only after diagnosis. The study demonstrates the current inadequacy of health literacy in Nepal. In addition, gaps exist between cardiovascular health knowledge, attitude, and practice/behaviour, even among those already affected. The coupling of high behavioural risk burden with low cardiovascular health literacy implies need for multi-sector health promotional strategies in the country.

Improving quality of life of cancer patients reporting at gynaecology opd of an Apex Institute, India: Piloting an innovative approach

Amudeep Singh
School of Public Health, Post Graduate Institute of Medical Education and Research, Chandigarh, India.
E-mail: amudeep@ymail.com

There have been significant advances in treatment modalities of cancers. Patient survival has improved. But Quality of Life aspect of cancer patients has been ignored in a developing country like India. Gynaecology OPDs of tertiary care hospitals are usually overburdened with patients. Doctors are not in a position to counsel cancer patients. This compromises the quality of care. Patients/caregivers have many of their therapy related queries unanswered. This study identifies the information gap among cancer patients reporting at Gynaecology OPD of PGIMER, Chandigarh, India. Problems faced by gynaecological cancer patients (n=10) during and after
Abstract

The annual cost of managing diabetes in India is Rs 25,000 approximately per person subject to wide variation based on complications. Unfortunately insurance schemes in India do not cover the cost of care for diabetes. On the other hand simple life style related interventions modification along with education/awareness and behavioural changes can go a long way bringing sustainable changes in preventing these diseases along with preventing the life threatening complications of these diseases.

Abs. No. AB00OP123

Dietary habits of patients with type II diabetes mellitus – An explorative study in a Tertiary Care Hospital of Eastern India

Lipilekha Patnaik, Sandeep K Panigrahi, Abhaya K Sahu, Anil K Muduli, Saswatika Beura

Department of Community Medicine and Endocrinology, IMS and SUM Hospital, Siksha ‘O’ Anusandhan University, Bhubaneswar, Odisha, India.

E-mail: drlipilekha45@gmail.com

Diet plays an important role in the management of type II diabetes. This study was undertaken with objectives to assess the dietary habits of patients with type II diabetes mellitus. It was a hospital based qualitative study. A total of 100 consecutive, consented OPD patients with type II diabetes were included. Data in respect of age, sex, education, per capita monthly income, dietary intake using 72 hour recall method were collected. The data were analysed using SPSS software.

Out of 100 participants, 58% were males and the mean age was 54.25 + 12.03. The mean BMI was 23.99 + 4.36 and 37% patients were overweight/obese (BMI >25). 28% and 48% participants could not recall all food items they had eaten day before yesterday and 2 days before yesterday respectively. 77% told they could follow the advice of their doctor or dietician, but 67% were taking recommended diet. 51% told that they face difficulties in obeying the diet advice and the difficulties they listed were food craving, travelling, nature of job etc. More than 20% patients could not take their food in time and the reasons they told were nature of job, carelessness etc. 62% patients told that they were avoiding sweets and 77% participants were taking foods with high glycaemic index.

Intervention in the form of intensive diet education during hospital visits will be helpful to increase the awareness about the role of diet in controlling diabetes and preventing complications among these patients.
Abs. No. AB00OP164

Life style analysis and promotion of healthy lifestyle in school children: Through AACCI – NCD workshop

Arjun Kumar, Morishetty Arjun1, Shailaja Mane, Y Bhave Swati, Sharad Agarkhedkar

Department of Pediatrics, Dr. DY Patil Medical College, 1Department of Pediatrics Dr. DY Patil Medical College, Jehangir Hospital, Pune, Maharashtra, India.

E-mail: arjun.m90@gmail.com

The incidence of Non-Communicable Diseases (NCDs) is increasing globally. Adult NCDs’ are mainly caused by four modifiable behavioural risk factors, which begin in adolescence: unhealthy diet, physical inactivity, use of alcohol and tobacco. To begin prevention at this age, AACCI conducts awareness programs in urban schools and also does a survey of adolescents’ lifestyle through customized, self-filled questionnaire, to suggest appropriate changes.

Ethical Clearance and consents taken. FGD and pre-workshops questionnaires are administered to assess their knowledge base. Information is given by short interactive lectures with graphics and images: about importance aspects of healthy lifestyle. Work-stations are then held for smaller groups for hands on experience and interaction to teach: importance of reading food labels, faulty food habits -including eating fast food HSHSF-high salt, sugar, fat and density and importance of physical activity and reduction of sedentary habits. This study presents analysis of 110.8th grade Pune school children (60 boys; 50 girls; 12 - 15 yrs (55.5%); 13-14 yrs (37.3%). 75% eat in front of TV. Boys have healthier habits-88.3% were having daily breakfast vs 68% girls; 65% boys did daily physical activity (walking and / or sports) vs 50% girls; 88% had dinner with family vs 86% girls. However more girls brought home lunch box 98% vs 95% boys and had less junk food consumption 38% vs 67% Boys (p=0.03). School canteen provided junk food. These results show the need of surveys and awareness programs in school children for NCD prevention.

Abs. No. AB00OP204

Process evaluation of a community-based trial among young mothers for healthy diet and physical activity in a semi-urban community of Nepal

Natalia Oli1,2, Abhinav Vaidya1, Gabriele Eiben1, Alexandra Krettek2, Natalia Oli3

1Department of Community Medicine, Kathmandu Medical College, Kathmandu, Nepal, 2Department of Internal Medicine and Clinical Nutrition, Institute of Medicine, Sahlgrenska Academy at University of Gothenburg, 3Department of Public Health and Community Medicine, University of Gothenburg, Gothenburg, 4Department of Biomedicine and Public Health, School of Health and Education, University of Skövde, Skövde, Sweden, 5Department of Community Medicine, Faculty of Health Sciences, UiT The Arctic University of Norway, Tromso, Norway.

E-mail: ofinalitia@hotmail.com

Nepal has high burden of cardiovascular risk factors and linked with urbanization. Our studies with mothers having 1-7 year old children in the peri-urban Jhaukbel-Duwakot Health Demographic Surveillance site in Bhaktapur district revealed misconceptions and poor behavioural practice on diet and physical activity. We therefore developed HARDIC (Heart-Health...
Abstract

Associated Research, Dissemination and Intervention in Community) - a health promotion intervention for these mothers. HARDIC is a community-based, non-blinded, randomized controlled trial. Duwakot (440 mothers) and Jhaukhel (289 mothers) were randomly selected as the intervention and control communities, respectively. The research team trained 47 peer mothers from Duwakot, each of whom took four education classes with 10 fellow mothers of their neighbourhood. Intervention was done in two rounds for both peer and fellow mothers. We simultaneously carried out a process evaluation. In the first round training, the participation and completion rates for peer mothers were both >90%, and 85% and 70% respectively for the fellow mothers. Second round participation rates of was dropped to 68% and 26% for peer and fellow mothers, respectively. Immediate evaluation of the intervention showed improvement of knowledge, attitude and practice on diet and physical activity among both groups of mothers. Further, the mothers also identified barriers for implementation of acquired knowledge in real life situations, and felt empowered to overcome them by enhancement of their self-esteem. The successful implementation of the intervention proves feasibility of health promotional activities in the Nepalese community for improve cardiovascular health.

Abs. No. AB000P294

Innovative and effective capacity building approaches to improve skills of health workers impact NCDs outcomes

Megha Gupta, Cheena Malhotra, Laxmikant Palo
Project HOPE, New Delhi, India.
E-mail: cmalhotra@projecthope.org

Access to better health care by skilled professionals is a challenge in India. Skilled health workers are a critical to address increasing burden of Non-Communicable Diseases (NCDs). They need to be equipped with appropriate knowledge and skills to meet the diverse health-care needs of people with NCDs. Recognizing the criticality of skilled health workforce, the existing efforts are not adequate. The training content, methodology and quality needs to be improved significantly. Project HOPE has developed and tested an innovative participatory 15 days NCD capacity building package supported by Eli Lilly Global Health Partnership. The health workers (n=80) were representatives from two geographically and culturally distinct places: Sonipat, north India, and Vishakhapatnam, south India. The CB program covers contents: addressing patient perceptions; training patients in self-testing/monitoring; encouraging lifestyle change and establishing patient support groups to improve self-care and adherence. Post-test, 92.5% of the study participants (n=74) showed an overall increase in knowledge (95% CI: −8.4 to −7.4, p<0.0001). 99% participants improved their post-training score to excellent (scored >75%). Post-test, 97% male participants versus 100% female participants scored excellent. 100% rural trainees scored excellent on post evaluation versus 97% of their urban counterparts. 100 % Participants (south) scored excellent versus 97% participants (north) who scored excellent. Results indicate that this capacity building package shows promising improvement in knowledge of participants irrespective of their gender, region and culture. Besides that, we provide on-the-job skill development support for continuous improvement. Innovative and need based participatory training approaches helps to improve quality of services.

Abs. No. AB000R383

Healthy food knowledge: A healthy choice for prevention of childhood obesity

Aritra Bhattacharyya, Bobby Paul, Aparajita Dasgupta
All India Institute of Hygiene and Public Health, Kolkata, West Bengal, India.
E-mail: dr.aritra.bhattacharya@gmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

Childhood obesity is currently a public health problem facing challenges like changing trends of dietary habits and lack of physical exercise. It is very important to have correct knowledge about healthy and unhealthy food at early childhood to make a healthy choice which would further influence their dietary preferences in future. In this context this study was done to determine the factors associated with healthy and unhealthy food knowledge. It was a school based cross sectional study done in four primary schools of Kolkata, West Bengal, India, from October to December 2016 among 548 students of 3-11 years of age group. Child’s perception about healthy and unhealthy food were assessed with the help of Healthy Food and Knowledge Activity (HFKA) by picture post cards and life style related questionnaire. Among them, 38% were over nourished and 44.2% and 40.1% had correct knowledge regarding healthy and unhealthy food. Data analysis with SPSS Version 16 revealed on multivariable regression that knowledge of unhealthy food had significant odds of association with age (0.85), PCI (2.24),
mobile gaming (0.58), tiffin preference (0.66) and healthy food knowledge (0.19) with Nagelkarke $R^2$ being 0.318 while model for predicting knowledge for healthy food showed significant association with gender (.68) and unhealthy food knowledge (5.08) with Nagleker $R^2$ being 0.251. Both the models correctly predicted 59.9-73.7% and 55.8-71.5% of dependant variable respectively. Thus correct nutritional knowledge is very important for prevention of childhood obesity and this study showed that unhealthy preferences for tiffin and mobile gaming had detrimental effect on development of healthy food knowledge making the children vulnerable to obesity.

### Abs. No. AB00OR379

**Comparison of health promoting lifestyle among students of different streams of Panjab University Chandigarh**

*Amarjeet Singh, Davinder Kaur*

School of Public Health, PGIMER, ^1^Centre for Public Health, Panjab University, Chandigarh, India.

E-mail: drdavinderkaur89@gmail.com

**Abstract Sub-Theme: School, worksite and community interventions and technologies**

Often the habits adopted by the adolescents persist into the adulthood. It might be health promotive habits (physical exercise, good nutrition) or health destructive habits (smoking, alcohol intake etc.), which manifests their ill effects later on. Thus, there is definite need to investigate the health behaviour of young adults. Moreover, students are in learning phase they can be motivated easily. Students of different stream background might had different health habits based upon their basic knowledge.

The Objective of this study was to compare the health promoting lifestyle among students of different streams of Panjab University Chandigarh and to ascertain the determinants of differences observed in their health promoting lifestyle if any.

It was a cross sectional study among students of Panjab University Chandigarh. 300 students were included in study with 100 from each stream i.e. Humanity, Non-medical, and Life sciences. Equal number of boys and girls were included in study. The information was collected with help of pretested questionnaire regarding their involvement in diet, health responsibility, physical exercise and spirituality.

Overall mean score of health-promoting lifestyle profile of university students was found to be 111.02± 13.43 (maximum attainable score 165). The mean scores for the three stream students were significantly different ($p<0.00$). Male students practiced significantly better physical activity than females. Females had significantly better interpersonal relations than males. Frequency of intake of snacks was high among all.

University students had reasonably good health promoting behaviour (mean score 111.02). Significantly lower score were seen for non-medical stream students.

### Abs. No. AB00OR390

**Awareness regarding hypertension and distribution of its modifiable risk factors among pre-hypertensive and hypertensive females of an urban area of central Delhi**

*Pooja Ahlawat, D Meena, SV Singh, VK Gupta, MM Singh*

Maulana Azad Medical College, New Delhi, India.

E-mail: drpoojaahlawat@gmail.com

**Abstract Sub-Theme: School, worksite and community interventions and technologies**

Hypertension has become one of the greatest challenges of the modern era. In an era of rapidly growing prevalence of pre-hypertension and hypertension among adult females, it is important to explore awareness regarding hypertension among them. This study was done to assess the awareness regarding hypertension among females and distribution of various modifiable risk factors of hypertension among them.

A total of 260 (pre-hypertensive and hypertensive) females residing in an urban area of central Delhi were selected and interviewed using a pre-designed, pre-tested questionnaire.

Out of 260 participants 66.9% were pre hypertensive and rest are hypertensive including both stage 1 and 2. Majority (92.1%) of study participants were aware of term hypertension however awareness regarding hypertension, symptoms, complications, management and role of lifestyle modification was not satisfactory. Most common modifiable risk factors among the study subjects was sedentary lifestyle (76.5%) followed by high salt intake (67.3%) and obesity (including overweight) (23.4%).
Abstract

Present study exposes the lack of awareness regarding hypertension and its risk factors among adult pre-hypertensive and hypertensive females and also shows association between sedentary lifestyle and hypertension as majority of subjects following it. To increase awareness regarding hypertension and its risk factors health education should be provided to control hypertension in pre-hypertensive stage itself.

Abs. No. AB00PO426

Awareness about non communicable disease and its risk factors in school going adolescents in urban and rural area of district Ambala, Haryana

Parul Jain, Amrit Virk
Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Ambala, Haryana, India.
E-mail: dr.pj007@gmail.com

An epidemiological transition phase from communicable diseases to non-communicable diseases is occurring currently in our country. Therefore non-communicable disease also have to be covered besides communicable ones under the aegis of universal health coverage. Health education as primary prevention method is considered to be the best method to control non-communicable diseases. Since risk factors of non-communicable diseases develop in younger age especially the adolescents age group, so their health education about healthy living is very necessary i.e. awareness should be provided among adolescents at the earliest.

The objectives of this study were to assess the awareness about non communicable disease and associated risk factors, among school going adolescents. Cross sectional study was conducted in rural and urban area of district Ambala among 1200 school going adolescents studying in class 8th to 12th. Out of total 1200 study subjects, 870 (72.5%) were boys and 330 (27.5%) were girls. Majority of study subjects (66.7%) were in the age group of 13-15 years. Only 38% boys and 39% girls had heard about lifestyle diseases. Only 29% boys and 45% girls were about the risk factors associated with lifestyle disease/non communicable diseases. Majority (80%) students were about association of smoking with cancers.

Very less number of students were aware about non communicable diseases and their associated risk factors so health education of students is very important and should be given importance under universal health coverage.

Abs. No. AB00OR431

Burden of family carers in stroke care and rehabilitation

Sam Sangeeth
Bishop Heber College, Trichy, Tamil Nadu, India.
E-mail: samboyg001@gmail.com

The aim of this study is to know the burden of family carers in stroke care and rehabilitation. Stroke is said to be brain attack which is considered to be serious illness. Stroke is one among the leading cause of death. According to WHO (2017), Stroke is said to be non-communicable disease. It is projected that 40 million die every year due to prevalence of NCD globally. NCD’s manifest themselves by amalgamation genetic, physiological, environmental and behaviours factors. These NCD’s are due to fast unplanned urbanization, globalization of unhealthy practices and population ageing. Irregular and unsafe diets and a sedentary lifestyle may give raise to BP, High sugar levels and escalated cholesterol levels leading to obesity. Strokes are due to cerebrovascular diseases. Strokes are mainly caused by a blockage that prevents blood from flowing to the brain. It is due to build-up of fatty deposits on the inner walls of the blood vessels that supply to the brain. Strokes can also be caused by bleeding from a blood vessel in the brain or from blood clots. The study conducted is descriptive research. The simple random sampling is used. Sampling size was 30 family carers of strokes care and rehabilitation. The stroke patients enrolled in pain and palliative care were the respondents. The research setting was Kumarapuram panchayat in Alappuzha district at Kerala. The inclusion criteria was the older adults above 60 years. It was found that family carers were experiencing high burden in stroke care and rehabilitation.

Abs. No. AB00PO452

Scenario of hearing impairment in India

Preeti Sahu, Abhiruchi Galhotra, Abhishek Mishra
Department of Community and family Medicine, AIIMS Raipur, Chhattisgarh, India.
E-mail: preetisahu50@gmail.com

It is an indeed surprising statistics that 360 million people in the world suffer from disabling hearing loss. This constitutes a substantial 5.3% of the world’s population. The WHO definition of “Deafness” refers to the complete loss of hearing ability in one or two ears. The cases included in this category will be those having hearing loss more than 90 dB
Abstract

in better ear (Profound impairment) or total loss of hearing in both the ears. Hearing impairment is a serious but grossly neglected condition in India. The prevalence and incidence of hearing impairment in India also are substantially high, which is largely preventable and avoidable.

Various studies have shown that the major causes of hearing loss/impairment and ear diseases in India have been listed by the WHO survey. Ear wax (15.9%) was the most common cause of reversible hearing loss. Non-infectious causes such as aging and presbycusis are the next most common causes of auditory impairment in India (10.3%).

The Government of India has launched the National Programme for Prevention and Control of Deafness (NPPCD). Since the program is also being implemented at the primary healthcare level, it envisages a reduction in the burden of deafness and prevention of future hearing loss in India. Indian Council of Medical Research (ICMR) is currently conducting multicentric studies across the country to address the real prevalence of existing hearing impairment to boost the actual Non Communicable Disease program.

Abs. No. AB00PO456

Pharmacological and non-pharmacological treatment improves quality of life in patients with non-alcoholic fatty liver disease

Mukesh K Ranjan, Manu Mehta, Ajay Duseja1, Sandeep Grover2, Sunil Taneja1, Radha K Dhiman1, Yogesh Chawla1

Departments of Internal Medicine, 1Hepatology and 2Psychiatry, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

E-mail: ajayduseja@yahoo.co.in

Abstract Sub-Theme: School, worksite and community interventions and technologies

Quality of life (QOL) is affected in patients with non-alcoholic fatty liver disease (NAFLD). There is no data on improvement of QOL with pharmacological treatment in these patients. Present study assessed the QOL in patients with NAFLD before and after pharmacological and non-pharmacological treatment.

One hundred patients with diagnosis of NAFLD on ultrasound were included in the prospective study after a written informed consent. Study had the approval of the Institute’s Ethics Committee. Patients were treated for 6 months with either life style modifications alone (n = 75, no NASH) or life style modifications + vitamin E (800 U/daily) [n = 25, NASH based on liver stiffness measurement > 7 kPa]. Chronic liver disease questionnaire (CLDQ), impact of weight on quality of life-lite version (IWQOL-Lite), health promoting life style profile II (HPLP II) and body weight, image and self-esteem evaluation (B-WISE) scores were used to assess the improvement in QOL after treatment.

Baseline QOL was affected in 69 (69%) and 95 (95%) patients as assessed by CLDQ and HPLP II scores which improved to 20% and 64% patients respectively after treatment. Overweight/obese patients and those with NASH had worse baseline QOL. After treatment, QOL improved from 4.63 ± 0.69 to 5.39 ± 0.52 (p < 0.001) in CLDQ, 2.10 ± 0.24 to 2.43 ± 0.22 (p < 0.001) in HPLP II, 1.89 ± 0.83 to 1.60 ± 0.62 (p < 0.001) in IWQOL-lite and from 1.61 ± 0.23 to 1.71 ± 0.26 (p < 0.001) in B-WISE questionnaire. As per CLDQ and IWQOL-lite scores, improvement in QOL was significantly more in the overweight/obese patients who were able to reduce body weight. None of the scores showed any difference in the improvement of QOL between patients managed with lifestyle modifications alone and lifestyle style modifications + vitamin E.

QOL is affected in majority of the patients with NAFLD which improves significantly after 6 months of pharmacological and non-pharmacological treatment.

Abs. No. AB00PO461

Cytokeratin – 18 (CK-18) is a useful biomarker in differentiating between NASH and No-NASH amongst patients with nonalcoholic fatty liver disease

Manu Mehta, Suvradeep Mitra1, Ajay Kumar Duseja, Ashim Dass1, Sunil Taneja, RK Dhiman, YK Chawla

Departments of Hepatology and 1Histopathology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

E-mail: ajayduseja@hotmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

Differentiation between non-alcoholic steatohepatitis (NASH) and no - NASH is important for prognosis and treatment in patient with non-alcoholic fatty liver disease (NAFLD). There is paucity of data on the use of various biomarkers in differentiating NASH and no-NASH. In the present study three biomarkers cytokeratin-18 (CK-18), C-reactive protein (CRP), interleukin - 6 (IL-6) were used to differentiate between NASH and no-NASH amongst patients with NAFLD.
Forty biopsy proven patients with NAFLD were categorised into NASH (NAS≥5) and no-NASH (NAS<5) as per the NAFLD activity histology score. CK-18, CRP, IL-6 were analysed in all patients by sandwich ELISA. Utility of three biomarkers in differentiating NASH and no-NASH was studied using unpaired t-test.

Out of 40 patients with NAFLD (19 males, mean age 38.12±8.6 years, mean BMI 26.8±4.16 kg/m²) 11 patients (27.5%) has histological NASH whereas 29 patients (72.5%) has no-NASH. CK-18 was significantly different between patients with NASH (3.755±1.000 ng/ml) and no-NASH (2.307±0.572 ng/ml) (p=0.0001). However there was no difference between the mean values of CRP (1.557±0.032pg/ml vs. 1.549±0.056pg/ml, p = 0.676) and IL-6 (1.371±0.0372 pg/ml vs. 1.364±0.056 pg/ml, p = 0.710) between patients with NASH and no-NASH.

Cytokeratin-18 (CK-18) is a useful biomarker in differentiating between NASH and no-NASH in patients with NAFLD.

Abs. No. AB00OR172

Designing multi-component school based intervention program to prevent bullying perpetration and victimization among students in Chandigarh

Monica Rana, Madhu Gupta, Prahhjot Malhi¹, Sandeep Grover², Manmeet Kaur
School of Public Health, PGIMER, ¹Departments of Paediatrics and ²Psychiatry, PGIMER, Chandigarh, India.
E-mail: monicarana@ymail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

Bullying is a prevalent public health issue which is harmful physically and psychologically for school students globally. There are few intervention programs to prevent bullying in South East Asia, and none in India. The objective of the study is to design a multi-component bullying prevention program for school students. Data review of existing literature of intervention studies done globally to prevent bullying was done. A qualitative study was done in which six focus group discussions (FGDs) were conducted two each among teachers, students and parents using a pre designed guide, to explore their beliefs and perceptions of a bullying prevention program. Based upon the findings, a draft bullying intervention program was designed which was shared with stakeholders (school principals, students, counsellors, teachers and public health experts) in a consultation workshop to finalize its contents. Literature review provided the evidence that whole school intervention program based on socio-ecological model was most effective. Participants of FGDs reported the need of such programs but did not know what should be there in such programs. The recommendations given by the consultation workshop were to include school counsellors and all school administrators in the program. Hence, a multicomponent school program was finalised at three levels i.e. student level, school administrators and teachers level and parents level.

Abs. No. AB00PO554

Nutritional status of free living elderly and its association with cognitive functioning

Anku Malik, Kumud Khanna
Institute of Home Economics, Delhi University, New Delhi, India.
E-mail: aanyas@hotmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

The present study was designed to assess the nutritional status of the free living elderly and its association with cognitive functioning. Ninety elderly subjects (35 males and 55 females), aged 65-85 years from three different socioeconomic groups, participated in the study. Diet and nutrient intake was measured using 24-hour recall and food frequency questionnaire. Anthropometric parameters were obtained, according to standard procedures. Activities of Daily Living (ADL) and Instrumental Activities Daily Living (IADL) schedules evaluated functional ability. Cognitive performance was measured using Mini Mental State Examination (MMSE).

There was positive and significant association between MMSE and higher education (r = .703), physical activity (r = .288), energy (r = .294) and nutrients like protein (r = .271), vitamin C (r = .234), β carotene (r = .268), riboflavin (r = .295) and folic acid (r = .359). A significant negative correlation was obtained between MMSE and the ADL scores (r = - .335).

The results of the study indicated that there is an association between cognitive functioning and nutritional status among elderly. Longitudinal studies have proved that nutrient intake promotes changes in the performance of cognitive functioning. Given that the study is a cross-cut investigation, it is not possible to confirm casual
relationships. However, it can also be said that cognitive functioning may affect nutrient intake since better cognition means more awareness and knowledge leading to better nutritional and lifestyle practices. There was also an association between cognitive performance and functional capacity for the activities of daily living.

Abs. No. AB00PO104

Stress management skill training program for medical students: an exploratory study from North-Western India

*Mamta, Naresh Nebhinani*

College of Nursing, All India Institute of Medical Sciences,  
1Department of Psychiatry, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India  
E-mail: mamta_rajput45@yahoo.co.in

Abstract Sub-Theme: School, worksite and community interventions and technologies

Medical curriculum recommends mastery on multiple domains, which generates significant stress and pressures. This study was aimed to assess the impact of stress management skill training among first year medical students. After ethical approval and informed consent, 100 first year medical students were recruited and imparted Comprehensive stress management skill training. Outcomes were evaluated through serial measurements of their stress, stressors, burnout, and coping at baseline, one and three months. Baseline stress was higher among girls (academic, interpersonal, teaching-learning, group activities related stressors and total stress score), and students from nuclear family and urban locality. The comprehensive stress management skill training has significantly reduced their stress scores (in academic, intrapersonal, interpersonal, and teaching-learning related stressors), and burnout levels (for exhaustion) at 1 and 3 months after skill training.

The comprehensive stress management program was effective in reducing medical students’ stress and burnout in a short-term period.

Abs. No. AB00PO555

Mobile health: innovations in reaching children in high-risk populations

*Holli A Seabury, Nancy K. Mann*

McMillen Health, 1Indiana University Fort Wayne, Indiana, USA.

E-mail: hseabury@mcmillenhealth.org

Abstract Sub-Theme: School, worksite and community interventions and technologies

New mobile phone technologies offer opportunities to use multimedia text messaging (text messages with short video) to deliver health messages. The approach of delivering multimedia text messages, aimed at both parents and children, shows promise in reaching rural and low-income audiences and those with lower levels of literacy.

This project built on the results of our initial study examining the feasibility and effectiveness of a 5 week multimedia text messaging intervention, which delivered messages to both parents and children, with the goal of increasing twice daily tooth brushing in preschool-aged children. In this mixed methods study, based on Social Cognitive Theory, low-income parents were recruited from rural Head Start preschool centers in Indiana, USA. Intervention group parents received two weekly multimedia text messages; the first text message and video focused on parent education, the second was addressed to their child and featured a child-friendly text and video on oral health. At baseline there was no difference in children’s rate of tooth brushing between control and intervention groups. Post-intervention, 22% more text group parents brushed their children’s teeth twice daily (P=.008).

In the second phase of this project, animated messages are being sent to children age’s three to five who are enrolled in Tribal Head Start locations on Native American reservations in the southwest USA. Tribal children have the highest rates of dental decay of any group in the USA. Building on the results of the initial study, messages are being only delivered to children and have transitioned to animated messages featuring animal characters.

Abs. No. AB00PO87

Factors affecting the use of public parks by the residents of Chandigarh – An exploratory study

*Harmanjeet Kaur, A Singh, Manoj Kumar*

School of Public Health, PGIMER, 1Centre for Public Health, Panjab University, Chandigarh, India.  
E-mail: shinharman@gmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies
Non communicable diseases have already become major killers worldwide. Physical inactivity is major contributor to these problems. People’s participation in physical activity is influenced by the built environment in which they live, by social environment and by personal factors such as gender, age, ability and motivation. Parks provide built environment for people to engage in physical activity to experience nature, and relax. Public parks have potential to influence population health because they intend to serve the whole community. We took this community based exploratory study to examine the potential use of public parks by the residents of Chandigarh as an effective and affordable health promotion intervention.

Out of total 280 participants we observed that frequent users of parks were males above 65 years of age. About 60 % of people coming to the parks were having health problems, mainly hypertension, diabetes and obesity. About 23 % of participants were member of support group i.e. Yoga group, runners club, laughter group etc. Main perceived benefits of park visits were happiness (96 %), mind relaxation (90%), increased social connections (81%) fitness (75%) weight reduction (13%). Respondents perceived many health related benefits from using parks and these public parks seem to have significant role in promoting the health of people of Chandigarh.

Abs. No. AB00OR577

Strengthening adolescent friendly health clinics and promoting health in adolescents in Haryana

Amrita Gill, Nidhi Chaudhary, Deepika Gupta1, Rajni Wadhwa
IPE Global, Vriddhi Project Haryana, 1NHM Haryana, Chandigarh, India.
E-mail: amrita.201187@gmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

NHM Haryana in collaboration with USAID supported Vriddhi project is strengthening 15 AFHCs in 4 high priority districts- Mewat, Palwal, Jind and Panipat. These reach out to 28,000 adolescents in Haryana. The key areas of focus are health promotion through clinics, improving infrastructure of AFHCs and capacity building of AFHC counsellors. A baseline was established through cross sectional survey of AFHCs (15) (September-October 2016). Standard operating procedures (SOPs) were developed. Facility wise AFHC strengthening action plans were formulated along with a monitoring framework. Regular follow up is being carried out. Communication framework was developed based on a school based student school health survey conducted in Haryana. In the first phase, NCDs and nutrition would be targeted. District level trainings would be conducted along with facility level mentoring of AFHC counsellors to improve skills to measure and manage NCDs. Infrastructure of AFHCs was strengthened through orientation of staff, improving supply chain and ensuring supportive supervision. Designated space is now available in 12 facilities and privacy has been ensured in 7 facilities. Essential equipment’s for measuring BMI are now available in 12 facilities compared to six in baseline. IEC has been developed to prevent NCDs (food habits and physical activity) and nutrition (Balanced diet, hygiene and anaemia). In order to promote the clinics rebranding has been done. A logo has been developed and all IEC material, job aids have been customized. Strengthening AFHCs and capacity building of AFHC counsellors are important in preventing NCDs and promoting health in adolescents.

Abs. No. AB00OR638

Dietary adequacy of Indian national adolescent swimmers: development of home based snacks and recipe booklet

Garima Gupta, Priti Rishi Lal
Department of Food and Nutrition, Lady Irwin College, New Delhi, India.
E-mail: garimag284@gmail.com

In the present study dietary profile of national adolescent swimming trainees was assessed and cost-effective home-based snacks filling gaps in nutrient intake developed. The National Swimming Academy, Sports Authority of India, was the locale and 100% trainees (8 girls and 10 boys) aged 11 to 15 years comprised the sample. Physical Activity Level, 24-hour nutrient intake, food frequency and general dietary parameters were assessed using standardized tools. Results were compared with national recommendations and gaps in dietary intake identified. Home based snacks with 4 weeks shelf-life were formulated using standardized procedures and recipes presented in a booklet. Shelf-life was assessed using chemical and microbial analysis. The percentage adequacy for consumption of cereals (60.7%; 70.4%), meat and meat products (38.5%; 48.2%), other vegetables (26%; 21%) and green leafy vegetables (5.8%; 0%) by girls and boys respectively were inadequately lower than recommendations. Pulses (201%; 178%), milk and milk products (150%; 202.6%), fruits (275%; 255%), fats and oils (108.5%; 103.7%) and sugar (253.5%; 300.6%)...
intake of girls and boys were higher than recommended amounts. Sugar cravings were observed in 50% swimmers. Iron (94%; 92%), total dietary fibre (73.8%; 79.7%), vitamin B6 (31.7%; 36.7%), β-carotene (48%; 32%) were lower than recommendations in girls and boys respectively. Consumption of micronutrients calcium, vitamin C, vitamin A, thiamine, riboflavin, niacin, folic acid, vitamin B12, zinc and magnesium were adequate. Majority (83.3%) of the swimmers consumed no dietary supplement, while 16.6% consumed Gatorade, Extra Charge and whey protein regularly. Based on gaps in dietary intake, five recipes namely Rajgira ladoos, baked mathri, multigrain chips, cookies and nutribar were developed using vegetable powders, millets and dried fruits as key ingredients to make snacks rich in micronutrients and antioxidants. Post 4 weeks all products were within BIS specifications for rancidity (Free Fatty Acid and Peroxide Value) and microbial parameters. Consumer acceptability using ANOVA and Tukey’s post hoc tests revealed higher acceptability of Rajgira ladoos, baked mathri and cookies (p<0.05) than nutribar and multigrain chips. Elite adolescent swimmers’ diet can be enhanced with micronutrient rich snacks for which the developed recipes could be high quality, acceptable solutions.

Abs. No. AB00PO625

Prevalence of overweight and obesity among the affluent school going girls in selected schools of Shillong

Star Pala, Ophelia Mary Kharmujai, Wallambok Lynrah, B. Himashree, Amrita Sarkar; Kaushik Talukdar; Pallavi Boro, GK Medhi

Department of Community Medicine, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.

E-mail: starpala@gmail.com

Overweight and obesity is increasing rapidly globally and also in India. Few studies have shown that overweight and obesity is also increasing among school children from this region with low prevalence. In this study, we aim to explore the prevalence of overweight and obesity among school going girls in Shillong. A cross sectional study was conducted as part of annual school health check in the first week of April 2016. All students attending school during the one-week period were included in the study from Nursery to class X. Height, weight, completed age in years and months and other parameters were collected by trained staff. Nutritional statuses were calculated using WHO growth chart and table. A total of 1044 students were included in the study. A total of 816 (78.2%) of the study participants were having normal nutritional status. The prevalence of overweight, obesity and under nutrition was 17.4%, 0.6% and 4% respectively. Overweight was highest in the upper primary class (24.1%) followed by Secondary (20.2%) and lowest in the pre-primary class (4.5%). Thought the prevalence obesity is <1%, overweight is quite high among school going girls in Shillong which may turn to obesity if intervention is not done at the right time.

Abs. No. AB00PO865

Counselling services for diabetes care in public health facilities in India- A situational analysis

Archna Trivedi, Sarabjit S Chadha1, Srinath Satyanarayana1, Karuna Sagili, Kathirvel Soundappen1, Sharath Burugina Nagaraja1, Om Prakash Bera1, Kiran Kumar Reddy2, *Jaya Prasad Tripathy1

USEA The Union, 1International Union against Tuberculosis and Lung Disease, The Union South East Asia Office, New Delhi, 2ESIC Medical College and PGIMSR, Bengaluru, Karnataka, India.

E-mail: atrivedi@theunion.org

Abstract Theme: Health promotion and lifestyle Management

Studies have shown that poor quality of medical care especially for those requiring chronic treatment was associated with non-compliance to treatment and discontinuation of care. This calls for a structured mechanism of counselling services.

A study was conducted to assess diabetic care services provided at public health facilities across six districts at three states (Delhi, Karnataka and Maharashtra) in India using a mixed methods approach. The objective was to describe the availability of counselling services at public health facilities and identify challenges and interventions needed to strengthen them.

A total of 30 public health facilities were assessed. Five were tertiary; eight secondary and 17 primary health facilities. Dietary counselling service was available in all tertiary facilities and most (75%) of secondary level facilities. Smoking cessation counselling, yoga/exercise and patient education was available in few of the tertiary (40%) and secondary care (25%) facilities only. Advice and patient support for dietary modification, physical activity and tobacco cessation were limited to advice given by treating medical doctors as part of routine OPD care.
Abstract

However, there was no mechanism to provide customised or structured counselling and health education to patients and track patients’ response to these advices.

Lifestyle modification support for diabetic care like self-management education, nutrition counselling, exercise prescription, and screening are sub-optimally delivered. A holistic diabetic care package including counselling services is of paramount importance to improve compliance to treatment and quality of life of diabetic patients.

Abs. No. AB000R673

Effectiveness of a school-based educational intervention on knowledge and attitudes related to cardiovascular risk factors among rural high school students in Karnataka, India

Shailendra Kumar B Hegde, Twinkle Agrawal1, Farah N Fatima1, Shilpa Ravi2, Prem Mony3, Dominic Misquith1

Piramal Swasthya Management and Research Institute, Hyderabad, Telangana, 1Department of Community Health, St. John’s Medical College, St. John’s National Academy of Health Sciences, 2Division of Epidemiology, Biostatistics and Population Health, St. John’s Research Institute, St. John’s National Academy of Health Sciences, Bengaluru, Karnataka, 3Health Spring Community Medical Centres, Mumbai, Maharashtra, India.

E-mail: doctwinkle@gmail.com

Cost-effective interventions to reduce cardiovascular risk factors during adolescence must be promoted in India with increasing cardiovascular disease burden. Schools offer an ideal setting of a captive population of adolescents for these interventions. We developed a school-based educational intervention program to increase knowledge and improve attitudes towards cardiovascular risk reduction. Two government high schools under Lakur Primary Health Centre in Kolar district, Karnataka took part in the study. After obtaining consent and assent, baseline assessment on knowledge and attitudes focusing on cardiovascular risk factors was carried out. Post baseline assessments, the schools were randomly allocated to either intervention or control arm. The intervention group underwent two educational programmes (at intervals of 16 weeks) involving components such as discussions, role-plays, storytelling, etc., focusing on three cardiovascular risk factors - dietary behaviors, physical activity and tobacco consumption. Follow-up assessments were administered after 1 year of baseline. Results indicated that a total of 652 students consented, of which 517 students completed both baseline and follow-up assessments. Mean age was 13 years and 47% were girls. At baseline, 26.8% of intervention and 34.3% of control group had good knowledge on cardiovascular risk reduction. At the end of 1 year, the proportion of adolescents with good knowledge increased by 11.8% in the intervention group. Control group with no intervention also showed improvement by 7.5%. Intervention did not seem to have a significant impact in improving knowledge and attitudes. Probably a longer intervention program with more number of sessions could provide more insights and evidence.

Abs. No. AB000R630

Assessing the current level of compliance with section 5, and 6 of cigarettes and other tobacco products act in an urban area of Puducherry, India

Parthibane Sivanantham, Vinoth Kumar Kalidoss1, Sitanshu Sekhar Kar2

1Buxar District, WHO, 2Department Preventive and Social Medicine, JIPMER University, Puducherry, India.

E-mail: Parthibane42@gmail.com

Tobacco use is the single most preventable cause of death in the World. In India, the sections 5 and 6 of COTPA prohibit any form of tobacco advertisements at Point of Sales (POS), selling of tobacco to and by minors, and sales within 100 yards around educational institutions. The study’s objective is to measure the level of compliance with the provisions of sections 5, and 6 of COTPA.

The survey was conducted in the ‘White town’ area of urban Puducherry (Oct-Nov 2015) using observational checklists developed by The Union, South-East Asia, New Delhi. POS and educational institutions were geocoded, and then compliance assessment was carried out. Data were entered into EpiData software (version-3.1) and analysis was done using SPSS (Version-22), and ArcGIS (Version-10.1).

Tobacco advertisements were present in majority 34/42 (81%) of surveyed POS. At each POS, a median number of 4 (2-6) advertisements were present. Stickers 27 (79.4%), posters 22 (64.7%) and boards 21 (61.7%) were commonly used for advertising. Section 5 was violated by more than half of surveyed POS in one or more forms (illuminated or back lit, displayed brand name/pack shot, displayed promotional message/picture/absence of health warning). Tobacco products were predominantly
Cluster randomized trial on the effectiveness of a multi-component school based health promotion intervention targeting physical activity and dietary behavior among adolescents in Chandigarh

Supriya Thapar, M Willeboordse\textsuperscript{1}, J Thakur, A Vreugdenhil\textsuperscript{2}, CP Schayck Van\textsuperscript{1}

\textsuperscript{1}School of Public Health, Post Graduate Institute of Medical Education and Research, Chandigarh, India, \textsuperscript{2}Department of Family Medicine, School CAPHRI, Maastricht University, \textsuperscript{3}Department of Pediatrics, Maastricht University Medical Centre, Maastricht, The Netherlands

Abstract Sub-Theme: School, worksite and community interventions and technologies

Noncommunicable diseases are closely associated with risk factors which are preventable by improving lifestyle behaviors. Physical inactivity accounts for 6% of global deaths making it fourth leading cause of mortality. Only 30% of school children in India are physically active for at least 60 minutes on all days of the week. The aim of this study is to design an effective school based intervention to improve physical activity and dietary behaviors of adolescents, thereby decreasing the risk of noncommunicable diseases during adulthood. This will be met by collecting baseline information on physical activity levels and dietary behavior, devising a school-based health promotion intervention using the intervention mapping approach, and by evaluating its effectiveness using a cluster randomized trial. 990 adolescents divided over 18 schools (both public and private) in Chandigarh will be recruited for this cluster randomized trial. Nine schools will be randomly allocated to the intervention arm, and nine to the control arm. The intervention will be spread over one academic year in the form of different health activities implemented by the school authorities. A participatory approach will be adopted to design tailor-made intervention for and by the students and school staff. The primary outcome of the study is to measure the physical activity behavior and levels of adolescents; while dietary behaviors and BMI is the secondary outcome of the study. The findings of this study will pave the way for a school health policy to increase the physical activity levels and promote healthy eating habits among adolescents.

Abs. No. AB000R633

Effectiveness of community based health promotion approach to empower the military community in order to identify, address and change most influential determinants on non-communicable diseases within military army, Wanni headquarters, North central province, Sri Lanka

Chamil Senevirathna, Salika Ruvanmali Karunarathne, Saman Kumara, Duminda Guruge

Health Promotion Division, Faculty of Applied Science, Rajarata University of Sri Lanka, Anuradhapura, Sri Lanka.

E-mail: cpchamil@yahoo.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

NCDs are keen contributors to premature deaths in Sri Lanka even the medical approach continuing successfully. Existing evidence proved that military army, Sri Lanka has a higher risk towards non-communicable diseases if physical exercises practice by them. They received less understanding on NCD prevention. Health promotion approach was directed to empower them to identify and address influential determinants through a community discussion. Wanni Headquarters, North central province, Sri Lanka was assorted as camp. One hundred four (104) people, representing all the ranks comprised the sample. They were given basic understanding on health, wellbeing and NCDs. Discussion was carried out within groups formed including all ranks officers, soldiers. Each group was given a facilitator to assist discussions. Influential determinants for NCDs were elicited within discussions. High consumption of artificial foods, sugar, oil, salt, happiness, alcohol and tobacco use uncovered as influential determinants by themselves. Video clips, discussions, and innovative tools were used as interventions to address identified determinants. Changes were obtained from a three month (3) follow up via telephone conversations. Understanding on NCDs among military community has improved. The way of identifying hidden determinants...
was seized by them. Consumption of sugar, salt and flour was reduced. Camp’s canteen has stopped selling cigarettes. Smoking behavior of people had decreased. They negotiated with interventions for reducing NCD risk, with family members. Community based health promotion approach was effective to identify, address and change determinants such as dietary practices, (high consumption of sugar, salt, flour), tobacco smoking, alcohol consumption without interference of medical approach.

Abs. No. AB00PO789

“He had to take the cigarette, but he didn’t smoke it.”: Context and impact of a school-based tobacco control intervention in India

JK Lakshmi, Radhika Shrivastav¹, Kiran Saluja², Monika Arora²
The George Institute for Global Healt, Hyderabad, Telangana, ¹Health Related Information Disseminationamongst Youth, ²Public Health Foundation of India, Gurugram, Haryana, India.
E-mail: jklakshmiip@gmail.com

Abstract Sub-Theme: School, worksite and community interventions and technologies

A 2-year school-based behavioral intervention, to build awareness and advocacy for tobacco-control policies, was conducted in 1440 schools (720 intervention and 720 control) in Andhra Pradesh and Gujarat, India, as part of Project STEPS (Strengthening of Tobacco Control Efforts through innovative Partnerships and Strategies).

Total 46 focus group discussions were conducted with 94 teachers, 105 parents, and 138 students in intervention schools in 5 districts of Gujarat, and 2 districts of Andhra Pradesh, to understand tobacco-use patterns, and the impact of the intervention in the community. The findings are described in the framework of the social ecological model of health.

The social, economic, and cultural context was highly influential in the initiation and perpetuation of tobacco-use in members of the community: in the health beliefs; the easy availability, widespread social acceptance, and role-models for tobacco-use; and the entrenchment of tobacco in the customs of hospitality. Positive health beliefs, the economic importance of tobacco, and cultural practices related to tobacco were at variance with the mounting information on the adverse outcomes of tobacco-use. Positive behaviour change, related to tobacco-use, was observed in the participating students, teachers, and their families. However, the wider community was not as influenced by the interventions.

School-based interventions can affect significant health behaviour change in students and families, and promote health in communities. Health promotion interventions need to acknowledge, harness, and address the powerful influences of cultural norms, economic pressures, and policy implementation on the initiation and perpetuation of health behaviours.

Abs. No. AB00OR91

Impact of non-communicable diseases on Indian women

Susheela Venkataraman, Deepa Prahalad, Nalini Saligram
Arogya World India Trust, Bengaluru, Karnataka, India, ¹Board Member, Arogya World
E-mail: nalini@arogyaworld.org

Though NCDs are the #1 killer of women, data on women's views on NCDs are scarce. Data are critical for informing actions and interventions both locally and globally. To gather these data, Arogya World conducted a 10-country study of 10,000 women, reaching 1000 women in each country (including India), online or via mobile phones, asking them about the impact of NCDs on their lives.

In India, 86% of the women said someone in their household suffers from an NCD, up from the global 62%. 3 in 5 women in India provided care for that person, some 40% saying they had to quit their job to do so. About 60% of the women said NCDs created a financial burden for the family. Almost half the women said they pay the doctor out of pocket and 14% said they must borrow money from friends or family to cover healthcare expenses. 1 in 4 women stated that not having enough money was the biggest obstacle to receiving medical treatment. And Indian women lag behind on medical care for themselves – some 50% have never even had their blood pressure tested. In the SDG era, we must do better.

This study showed that women bear the brunt of NCD prevention and care including in India. These data must be used to move policymakers to action, address unpaid care and universal health coverage, and spur women-centered prevention programs and empowerment tools.
like MyThali to help women steer their families towards healthy living.

**Abs. No. AB00PO292**

**Education, communication, training and public awareness on smokeless tobacco**

*Amit Yadav, Dhirendra N Sinha, Chandan Kumar, Anshika Chandra, Harleen Kaur, Ravi Mehrotra*

National Law School of India University, Bengaluru, Karnataka, 1National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, India.

E-mail: advocateamit@msn.com

Article 12 creates an obligation for the Parties to “promote and strengthen public awareness of tobacco control issues, using all available communications tools, as appropriate.”

Global FCTC Implementation Progress Report 2016 indicates that 70% of the reporting Parties have implemented Article 12 in their jurisdictions. WHO Global Tobacco Epidemic Report (2015 and 2017) indicates that nearly 39% Parties in 2014 and 36% Parties in 2016 had conducted at least one anti-tobacco national mass-media campaign. Neither report provides any specific information on implementation of Article 12 with respect to SLT.

Low resource countries like India, Bangladesh, Nepal, Myanmar, Pakistan and several high resource countries including USA, have implemented some kind of national and sub-national mass-media campaign on SLT prevention and control. Parties have also gained earned-media from various events and activities highlighting the hazards of SLT. Among high SLT burden Parties, only India has implemented a dedicated national mass-media on anti-SLT awareness.

School Personnel Surveys indicate that curricular and co-curricular activities on tobacco are almost negligible; school personnel wish to have training on youth tobacco prevention and cessation but they do not have access to teaching and learning material and they have not been formally trained on tobacco cessation. Surveys also indicate that people are unaware about the harmful effects of SLT use, rather believe in myths regarding its use.

There is an urgent need to implement dedicated national mass-media and social-media campaigns focused on reducing SLT use.

**Abs. No. AB00OP26**

**Prevalence of Hemodynamic Steal in Symptomatic Internal Carotid Artery Occlusions**

*Mukesh Kumar, Dheeraj Khurana, Chirag Kamal Ahuja, N. Khandelwal, Nisha Rani, Badjinder Singh, Manju Mohanty*

Departments of Neurology, 1Radiodiagnosis and Imaging, 2Nuclear Medicine and 3Neurosurgery, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

Paradoxical intracranial hemodynamic steal is a known phenomenon in patients having persistent middle cerebral artery (MCA) or internal carotid artery (ICA) complete occlusions. To describe prevalence of hemodynamic steal, risk factor profiling and outcomes in symptomatic patients with complete occlusion of internal carotid artery (ICA).

Patients of acute ischemic stroke within three month of stroke were prospectively recruited. The major inclusion criteria were; Age > 18 years, TIA/Stroke < 3 months, ICA complete occlusion [on Ultrasound/CT angiogram (CTA)/MR angiogram (MRA)] and patients having good temporal window for Doppler insonation. Bilateral transcranial doppler (TCD) monitoring for assessing Vasomotor reactivity (VMR) by breath holding method was done. Steal magnitude (%) was defined as mean flow velocity reduction in the ipsilateral middle cerebral artery (MCA) while simultaneous velocity increase in contralateral MCA.

Patients found to have hemodynamic steal were followed up for symptom recurrence. Total 21 symptomatic patients (age 57±12 years; 19M:2F) with ICA complete occlusion (7Lt:2Rt) underwent TCD monitoring at median time 17 days [interquartile range (IQR), 8-28 days] from symptom onset and the prevalence of hemodynamic steal was 9 (43%) having median steal magnitude, 9% (IQR, 3%-18%). 8 (89%) had hypertension, 7 (78%) had diabetes mellitus, 4 (44%) had dyslipidemia, 5 (56%) were smokers, 7 (78%) were alcoholic and 5 (56%) had family history of stroke.

No patient had symptom recurrence on median follow up of 133 days (IQR, 116-159 days) post TCD monitoring. Hemodynamic steal is common in patients with complete occlusion of ICA. The clinical significance of hemodynamic steal needs to be evaluated in larger studies.

**Abs. No. AB00OP26**

**Engaging Cardiologists in Tobacco Control**

*Mira Aghi*

Healis Sekhsaria Institute For Public Health, Cbd Belapur, Mumbai, India.
Abstract

Long term smoking of tobacco material has been observed to result in increase in NCDs. This finding has been supported by large scale studies. For example people who smoke or chew tobacco are prone to sudden heart attacks as they have a ‘plaque rupture’, which is instant and which results in the heart losing its ability to pump blood. Recently, the CDC released a new study estimating that 200,000 heart disease and stroke deaths could be prevented each year in the United States. Cardiovascular diseases, including heart disease and stroke, kill nearly 800,000 Americans each year or one in three deaths. However, most cardiovascular disease can be managed or prevented by addressing risk factors such as tobacco use.

All health care professionals who interact with any patient should advice him/her not to smoke or chew tobacco. It is imperative that this suggestion be specially implemented by cardiologists.

Cardiologists are best placed to advice their patients not to use tobacco. They should not only advise but also work towards prevention. It has been revealed that their beliefs are a major barrier in their working towards eliminating tobacco use among their patients and they do not feel that it is their call to interfere in the health style practices of people. Smoking is an established risk factor for cardiovascular disease. Behavioural modification training is recommended for the beliefs.

They need to recognize that their professional responsibility extends beyond treatment of tobacco- caused disease. Their treatment should include prevention and cessation. They can be very effective advocates for society. They can also bring major changes in health policies.

It has been demonstrated by many major researches that quitting tobacco use reduces the risk of heart attack and death to the levels of people who have never smoked. Prevention efforts can achieve much more.

A cardiologist may save more lives by lobbying for tobacco- control laws for a few hours than by treating cardiac ailments lifelong.

There is no room for speculation. Cardiologists.

Mental Health

Abs. No.AB00OR219

Differential distribution of geriatric depression and its determinants in community and old-age homes of urban Mysore

Bhavani Nivetha
Department of Community Medicine, Mysore Medical College and Research Institute, Mysore, Karnataka, India
E-mail: bhavani.nivetha@gmail.com

Globally, the population is ageing rapidly. Between 2015 and 2050, the proportion of the world’s population over 60 years will nearly double, from 12% to 22%, In India it is expected to increase from 8% to 19%. Older people face various physical and mental health challenges which need to be recognized. The concept of healthy ageing has come into effect which stresses on the need to have a holistic approach in tackling the geriatric problems. Depression is the most common mental disorder among elderly. Symptoms of depression in older adults are often overlooked and untreated because they coincide with other problems encountered by them. The WHO theme for this year “Depression: Let’s talk” emphasizes the importance of this condition. This study aims to estimate the differential distribution of depression and its determinants in community and old-age homes of Urban Mysore. It is a Cross-sectional questionnaire based study among geriatric population of Urban Mysore. Depression is assessed using Short form of Geriatric Depression scale (GDS-15), Cognitive impairment using Mini mental state examination (MMSE-30) and functional impairment using Instrumental activities of daily living scale (I.A.D.L). Data relating to socio-demographic variables and other determinants are collected separately. Data collection is ongoing. Results and conclusion will be presented at the conference.

Abs. No. AB00OR242

Challenges in implementing mental health projects in a scheduled tribe area
Abstract

Sudha Kallakuri1, Siddhardha Devarapalli1, Abha Tewari1, Pallab K Maulik1,2
1 The George Institute for Global Health, New Delhi, India, 2???,
The George Institute for Global Health, Oxford University, Oxford,
United Kingdom.
E-mail: skallakuri1@georgeinstitute.org.in

Mental disorders have become a major public health problem and evidence has shown that about 13-50% of Indians suffer from common mental disorders like Depression, Anxiety, stress, suicidal risk. Unfortunately majority of them do not receive treatment for the same. This condition is more prevalent in rural areas especially in Scheduled Tribe (ST) areas. To address this treatment gap a study was conducted in the ST community. This paper talks about various challenges that were faced during the implementation of this study.

This study was a before and after study conducted in the ST areas of West Godavari region in Andhra Pradesh using a mixed methods approach which involved developing and testing of multifaceted intervention led by ASHAs (health workers) and PHC doctors for its feasibility, acceptability and its effect in the community. Of the 5007 screened for CMDs 238 (4.75%) were identified as screen positives and 30 visited the PHC doctor for mental health services. Qualitative interviews suggested that socio economic factors, stigma, lack of confidence in the health system, lack of availability of psychotropic at the PHC, were some of the barriers. Conducting medical camps, anti-stigma campaign, training of health workers, use of electronic decision support tools, were some of the facilitators.

Though the study has shown positive effects in terms of service utilisation and feasibility and acceptability, a number of challenges were identified and need to be addressed in subsequent stages.

Abs. No. AB00OR281

Factors associated with depression and anxiety in patients of type 2 diabetes from rural Punjab, North India

Md Abu Bashar, Tarundeep Singh
School of Public Health, PGIMER, Chandigarh, India.
E-mail: imback20006@yahoo.in

Studies have shown that presence of depression and anxiety disorder in diabetics can worsen the disease outcome. Current study aimed to assess the prevalence of anxiety and depression and to identify their associated factors in type 2 diabetics.

This cross-sectional study was conducted among patients of type II diabetics attending NCD clinic and general OPDs of two primary care centres of district Fatehgarh Sahib, Punjab. The instruments used included a semi-structured questionnaire to collect the socio-demographic profile and the details of the diabetes and its treatment. Two well validated questionnaires, PHQ-9 and GAD-7, were administered to the patients to assess the depression and anxiety status respectively.

Overall, 55.9% and 35.6% study participants had anxiety and depression respectively. Factors found to be independently associated with anxiety were physical inactivity, higher BMI, being alcoholic and smoker, having any co-morbid illness like hypertension and ischemic heart disease. For depression, being female, physical inactivity, of older age, having co-morbid illnesses and having any complication like chronic kidney disease were significantly associated. Metabolic components found to be independently associated with both anxiety and depressions were systolic blood pressure, fasting blood glucose and Hb1AC levels.

The study identified a large proportion of adults with diabetes in rural area had anxiety and/or depression and identified factors associated. Additional studies are needed to establish the directional nature of this relationship and to test interventions.

Abs. No. AB00OP134

Is self esteem low in high BMI - A study in Gurgaon School

Shailaja Mane, Y Bhave Swati, Sunita Manchanda1, Paula Goel2
Department of Paediatrics, DY Patil Medical College, Pune, 2Fayth Clinic, Mumbai, Maharashtra, 1Max Hospital, Gurgaon, Haryana, India.
E-mail: dr.shailajamane7@gmail.com

Good self-esteem gives confidence to resist peer pressure and follow healthy habits which also relate to maintenance of body weight. The aim of this study was to compare BMI with Self-Esteem. Ethical clearance taken. Tool: Karl Pereira - Self-esteem testing scale. Self-filled questionnaire after explanation. To promote honest answers, no names were asked for –only age, gender and height and weight to calculate BMI. 253 children from a school – English Medium, Co-ed HSE in Gurgaon. Divided- Younger Group
Abstract

Prevalence of DM2 was 17.69% and prevalence of IFG was 13.1% in present study. Out of 130 study subjects, 31 subjects were sleeping 6 hours or less per night, and out of these, 13 (41.9%) subjects were diagnosed with DM2, and other 13 (41.9%) were diagnosed with IFG. Remaining 99 were sleeping 7 to 8 hours per night, among these, 13.1% were diagnosed with DM2 and 18.2% were diagnosed with IFG.

Abs. No. AB00OP260

Assessment of mental health stigma among medical officers and paramedical staffs of a district in India

Senthil Amudhan
National Institute of Mental Health and Neuro Sciences, Bengaluru, Karnataka, India.
E-mail: sam_mmc1999@yahoo.co.in

It is quite disturbing that many people with mental health problems reported stigma experiences, perpetuated by health care providers. This has huge negative impact on quality and accessibility of mental health services. With an intention to understand and diminish stigmatization by health care providers, we assessed the nature and degree of mental-health-stigma among medical officers and paramedical staffs (staff nurse and pharmacist) of a district in India.

A cross-sectional survey was undertaken among 153 medical officers, and 344 paramedical staff (staff nurses and pharmacists) in Kolar District. Stigma related knowledge, attitudes and behaviour was assessed using a pre-validated MAKs (Mental Health Knowledge Schedule), MICA-4 (Mental Illness Clinicians’ Attitudes Scale) and RIBS (Reported and Intended Behaviour) scale respectively. For medical officers, mean scores were 22.9, 46.1 and 13.4 and for paramedical staffs, mean scores were 22.8, 51.3 and 12.3 against maximum possible score of 30, 96 and 20 for MAKs, MICA-4 and RIBS respectively. Overall, the study reported higher knowledge but less favourable behaviour and attitude among health-care-providers when compared to their counterparts across various studies. Even though differences have reached statistical significance for certain socio-demographic characteristics among Medical officers and Paramedical Staffs, the small differences do not allow for drawing any conclusion for practical implications. This finding highlights the need to carry out anti-stigma programs among health-care-providers with a public health perspective.
on community health education, rehabilitation and follow-up bedside case detection and management, to improve the quality of mental-health care and utilizations of services.

**Abs. No. AB00OR366**

**Mixed methods research in comprehensive assessment of mental morbidity**

*Bhujabali Yalgudri, A Senthil, GN Rao, S Chandankumar, M Jagdish, H Babu GS*

Department of Epidemiology, National Institute of Mental Health and Neurosciences, Bengaluru, Karnataka, India.

E-mail: byalgudri@yahoo.in

Research is often equated with quantitative research. Morbidity like mental disorders having a higher level of stigma/discrimination needs qualitative studies to complement quantitative data collection strategies. We undertook a qualitative research to support and understand the quantitative findings from Kolar Pilot study of the National Mental Health Survey (NMHS).

A total of 10 Focus-Group-Discussions (FGDs) and 10 Key-Informant Interview (KII) were undertaken across 5 talukas @ 2 FGDs (one among general public and one among health care providers) and 2 KIIs (Taluka Health Officer and pharmacist each). We used the interview schedules and FGD guides that were used in 12 states of NMHS. The focus of enquiry were sources/pattern of seeking care for person with mental illness (PMI), barriers to care, characterising homeless mentally ill (HMI), stigma related to mental health, substance use problem and its impact. Transcribed and translated data from FGD and KII were triangulated and theory-driven content analysis was undertaken.

In-depth information obtained from qualitative research helped refine those at-risk and broadened the scope of quantitative study. Predominantly, HMIs are thought of as violent and harmful. Facilities/services for HMIs were absent. Local traditional faith-healers were first point of contact for PMI. Stigma and poverty emerged as major barriers for help-seeking. Overall, PMI lead a poor quality of life due to stigma/discrimination in key social activities/opportunities (education/job/marriage). Substance-use problem were common among youth and the impact was severe for women in the family. Mixed methods research would enable to prioritise mental health interventions including policy-decisions.

**Abs. No. AB00P0364**

**Burden of mental and substance use disorders - A desk review**

*GS Harish Babu, Girish N Rao, R Senthil Amudhan, BD Yalgudri, SR Srinivas*

Department of Epidemiology, National Institute of Mental Health and Neurosciences, Bengaluru, Karnataka, India.

E-mail: 76drhb@gmail.com

“Disability Adjusted Life Years”, a principle tool for assessing health burden assists in planning, programme development, monitoring and evaluation of health programs. As, India is in the process of finalizing its action plan under mental health gap initiative, we analysed burden of Mental and Substance Use Disorders (MSUD’s) for India and compared it globally. A desk review of Global Burden of Disease data (http://vizhub.healthdata.org/gbd-compare/) was undertaken for MSUD’s.

From 1990-2015, globally, burden of NCDs increased 17% points; In India it increased 22% points with a higher rate of increase in recent decade (2005-2015). Gender differentials with respect to CVD’s, MSUDs, Diabetes and Depression were Males: 15%, 5.0%, 2.9%, 1.6%; Females: 10.6%, 5.5%, 2.3% and 2.5% respectively.

Nearly 10% of the total NCD-DALYs were due to MSUDs both globally (11.0%) and in India (9.9%). Amongst 15-49 years, MSUDs contributed to nearly 15% of NCD-DALYs, globally and for India it was 5.23%. India compared near similar ranking for MSUDs globally and was lower on the ranking with respect to High Income countries; however, the contribution to the global burden was similar for both India (16.3) and High Income countries (17.7%). For MSUD-DALYs, Depression contributed to less than 1/3rd (33%) globally and more than 1/3rd (37%) in India. In the Indian context, the burden of MNUDs (10.2%) amongst 15 to 49 years was slightly higher than that for CVD (9.9%). Despite paucity of data, findings indicate to high burden of NCDs and MSUDs in India and compares globally.

**Abs. No. AB00OR344**

**Prevalence of depression among type ii diabetes in a Tertiary Care Hospital of Mysuru city**

*TS Pradeep, Rajendra Prasad1, Prerana2*

Department of Community Medicine, MVJ Medical College, Bengaluru, Departments of 1Medicine and 2Community Medicine, JSS Medical College, Mysuru, Karnataka, India

[Downloaded free from http://www.ijncd.org on Tuesday, February 20, 2018, IP: 14.139.224.4]
Abstract

India is on the verge of a potential epidemic for Type II diabetes with the second highest diabetic population. Depression has been implicated as having a negative impact on the disease and also significant number of diabetic patients could miss out being diagnosed with the early signs/symptoms of depression or anxiety.

The Objectives of the study are to find out the prevalence of Depression among type 2 diabetics and factors associated with depression. It was a hospital based cross sectional study carried for 6 months using convenient sampling. Inclusion criteria – Age above 30 years and less than 60 years with at least one year old history of Type 2 Diabetes. Exclusion criteria-Type-1 diabetics and patients with already diagnosed psychiatric illness. The data regarding socio demography details were collected using a pre tested, semi structured questionnaire and Depression was assessed by Hamilton Depression Rating Scale by interview technique. Taking prevalence as 17 (previous study), sample size was calculated which was rounded of to 250. Data entered in excel sheet and analysed using SPSS 23 version. Descriptive statistics like percentage, mean and standard deviation are applied. Inferential statistical tests like chi square test are applied to find out association. The difference, association are expressed statistically significant at p-value less than 0.05.

Majority 85 (34%) of study participants belonged to age group of 51-60 years, 143 (57.2%) were male participants, 87 (34.8%) of the total participants were illiterate. According to the Hamilton Depression Scale, 142 (56.8%) were found to be suffering from depression. 85 (59.4%) males were diagnosed depressed (p value >0.05), 131 (55.7%) of those who were depressed were married (p value <0.05), 54 (64%) who were illiterates were depressed (p value <0.05), 39 (73.6%) of those suffering from depression were found to be having diabetic complications (p value <0.05). Rest of results will be presented during conference.

56.8% of study participants had depression and marriage, educational status and having any of diabetes related complications was significantly associated with depression which was also statistically significant.

Abs. No. AB00OR420

Evaluation of peripartum depression in females

Gurkirat Singh, Tanvir Kaur Sidhu, Dhruvendra Lal, PPS Cooner
Department of Community Medicine, AIMSR, Bathinda, Punjab, India.
E-mail: gurkiratsidhu01@gmail.com

Perinatal depression (PND) manifests in a number of different ways, varying in severity and period of onset: prenatal depression, “baby blues,” and postpartum depression. It has a prevalence of 10–20%. 2. And can occur during pregnancy, especially in the third trimester, or from several weeks to several months after childbirth. Depressive symptoms experienced in perinatal period are similar to classic symptoms of depression, including...
Abstract

depressed mood, loss of interest or enjoyment, and reduced energy. Even if depressive features may show a spontaneous remission, many women are still depressed one year after childbirth; effective pharmacological and nonpharmacological treatments are available, but both patients and their families often neglect depressive features during the perinatal period.

The Aim of this study was to study the prevalence of depression among peripartum period. Methodology it is crosssectional community based study which was conducted at rural and urban areas under AIMSR Bathinda amongst women in peripartum period. Sample size calculated by using daniels formula.

Total of 200 subjects participated in study (100 rural and 100 urban) women from rural area had more number of children as compared to urban. Most of the women were housewives. Many women had desire for male child. Association between depression and various variables was found to be significant.

This study concluded depression among women in peripartum period and recommends increased role of healthcare workers and family members in prevention, screening and treatment of depression amongst these women.

Abs. No. AB00OR433

Molecular and clinical indicators of improved neuroplasticity by yoga and meditation: A randomized clinical trial in major depressive disorder

Madhuri Tolahunase, Rajesh Sagar1, Rima Dada
Departments of Anatomy and Psychiatry, All India Institute of Medical Sciences, New Delhi, India.
E-mail: madhuri.tolahunase@gmail.com

Major depressive disorder (MDD) is a devastating mental and physical illness associated with accelerated aging. Evidence indicates that yoga is a profound science of inner wellbeing and has significant antidepressant properties.

The Objective of this study was to study the molecular and clinical indicators of improved neuroplasticity by yoga and meditation in MDD.

MDD patients aged between 20 and 50 years (n=96, Male 46) were randomized to either yoga group (n=46) receiving yoga based lifestyle intervention (YBLI) for 12 weeks or control group (n=50). Clinical and laboratory parameters were assessed before and after intervention. Subjects were administered clinical scales that measure different scores of depressive symptoms, stress resilience and quality of life (QOL). The blood levels of systemic biomarkers of neuroplasticity were measured. In addition blood transcriptome expression patterns were analysed.

YBLI produced significant antidepressant response by reduction of BDI-II scale scores and improved stress resilience and QOL by increase in CD-RISC and WHOQOL-BREF scales scores respectively, in MDD patients of yoga group. Furthermore, YBLI decreased cortisol and IL-6 levels, and increased BDNF, melatonin, serotonin, IL-37, telomerase activity and sirtuin-1levels. Expression of CX3CL1, GPR50 and RB1 were increased in the yoga group relative to the control group.

This study is the first to explore YBLI and systemic indicators of neuroplasticity in MDD. Findings from our study indicate the potential benefits of yoga to slow cellular aging, increase neuroplasticity and decrease severity and sequelae of depression. YBLI increases stress resilience and QOL, and enhances the outcome of treatment in MDD.

Abs. No. AB00OR401

Assessment of burden upon informal primary caregivers of patients suffering with common mental disorders

Sabira Aalia Dkhar, OP Rajoura, S Chaturvedi, MS Bhatia
University College of Medical Sciences, New Delhi, India.
E-mail: sabira.aaliya@gmail.com

WHO defines health as ‘a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.’ Common Mental Disorders comprises of depression, anxiety, post-traumatic stress, panic attacks and obsessive-compulsive disorders. WHO estimates that one in four people will experience a mental health condition in their lifetime and many will be disabled as a consequence. Our study was a hospital based cross sectional analytical study. The subjects were primary caregivers of 226 treatment naïve patients coming for the first time to the psychiatry OPD of Guru Teg Bahadur hospital. Those, caregivers who were suffering from physical or mental illness and patients who were suffering from mental retardation, schizophrenia, substance abuse and alcohol dependence were excluded from the study. Study tools used were socio demographic
profile of the patient and caregiver and ZBI (Zarit burden inventory). About three fifth (61.5%) of the caregivers had no or minimal burden due to caregiving, 31% had mild to moderate burden, 6.2% had moderate to severe burden. Around 1.3% reported of severe burden. Mean ±SD score of the burden as assessed by the Zarit Burden Inventory was 18±14 (median=16). On multivariate logistic regression anxiety, stress, duration of illness, direct expenditure and hours of sleep were found to be major predictor of burden. Burden experienced by the caregiver of patients is significantly high and the cause is mainly due to their affected well-being along with duration of illness and financial factors.

Abs. No. AB00OR451

Mental health bill 2017-Renewed perspectives

Abhisek Mishra
AIIMS, Raipur, Chhattisgarh, India.
E-mail: drabhisekmishra@gmail.com

The WHO recognized that “Mental health and well-being are fundamental to quality of life, enabling people to experience life as meaningful, to become creative and active citizens. As per Global Burden of Disease report, mental disorders accounts for 13% of total DALYs lost for Years Lived with Disability (YLD) with depression being the leading cause. According to a study conducted by National Institute of Mental Health and Neurosciences (NIMHANS) India, it is estimated that weighted prevalence of depression for both current and life time was 2.7% and 5.2% respectively. Mental Healthcare Bill, 2016, a legislation seeking to rectify our country’s blatant apathy hitherto towards people suffering from mental afflictions which repeals the existing Mental Health Act of 1987. Hence this paper aims to critically analyze the need, scope and lacunae of the Mental health care bill unanimously passed in, Lok Sabha on 27th March this year. Review of literature and articles available on internet are extensively searched by author for a period of 3 months, from March 2017 to May 2017. The biggest impediment to the proper and widespread implementation of the provisions provided by the bill is the percentage share of the budget allocated to the health sector. With a meager one to two percent of the Union budget dedicated to the entire health sector, India cannot reasonably hope to make a visible change in eradicating the mental health crisis.

Abs. No. AB00OR430

To assess the quality of life in relapse cases of substance abuse taking treatment from drug deaddiction centre, Government Medical College, Amritsar

Arshdeep Kaur, Sanjeev Mahajan SS Deep, Tejbir Singh
Department of community medicine, Government Medical College, Amritsar, Punjab, India.
E-mail: r.sahilrally@gmail.com

Numerous rehabilitation centres across India are working to nurse drug addicts back into healthy productive lifestyles, despite this, relapse rate in drug addicts is 80%. To date very little research has been done in district Amritsar, focusing on the needs of these patients for obtaining an optimum quality of life therefore this research aims to assess the Quality of life in Relapse cases of Substance Abuse. A sample size of 180 relapse cases from outpatient and inpatient setting of Drug Deaddiction Centre, Government Medical College, and Amritsar was taken in 2016. The purpose of the study was explained to the patients and informed written consent was taken. Those patients who gave consent were interviewed using a pretested semi-structured questionnaire, the collected information was compiled and analysed to draw valid conclusions. Out of 180 respondents (38%) had general physical, (27%) had neurological and (24%) had psychological problems. (82%) had hobbies before addiction, out of these (76%) left their hobbies after addiction? (52%) had tendency of self-harm, (63%) faced difficulty in starting the day, (57%) showed escapism to problems of life, (67%) faced problems of thinking and communication after addiction. (30%) were dependent on their families for earnings. Increase in monthly expenditure was found in all respondentsafter addiction. (58%) respondents had believe in God, out of these (39%) obtained relaxation of mind in this, rest (61%) don’t. Supervision and monitor through treatment and psychobehavioral therapy is the key.

Abs. No. AB00OR435

Prevalence of mood disorder among medical undergraduate students

Reena Titoria, Anu Mohandas, Garima Gupta
Department of community medicine, University College of Medical Sciences, GTB Hospital, New Delhi, India.
E-mail: drreenat@gmail.com

Bipolar disorder is one of the common chronic serious mental illness affecting 7 billion people in the world associated with significant morbidity and it frequently goes unrecognised. After extensive literature search, it was found that there is paucity of studies from the Indian setting that have addressed the issue of bipolar disorder.
The present study was carried out to screen for bipolar disorder among medical undergraduate students and its correlates. Due to non-availability of many studies from India, the proportion of 50% was taken as prevalence to calculate the sample size. With 95% confidence interval and 8% absolute error, a sample size of 126 was calculated using Epi Info. Study tools used were socio-demographic profile of participants, Global Physical Activity Questionnaire (GPAQ) and Mood Disorder Questionnaire (MDQ). MDQ is a self-reporting screening instrument for bipolar disorder having a Cronbach’s alpha coefficient of 0.84. Data was analysed using chi-square test with “p” value <0.05 considered as significant. Independent association of socio demographic variables were determined by multi–variate logistic regression analysis. The study included 87.3% males and 12.7% females with mean age 21.26 ± 1.23 years. Out of 126 participants, 17 (13.5%) were screened positive for bipolar disorder. Factors found statistically significant association with bipolar disorder were number of siblings, place of residence, Body Mass Index (BMI) and physical activity of the participant. The results suggest that medical students constitute a vulnerable group and there are certain risk factors other than academic stressors which predispose a medical student to psychological morbidity.

Abs. No. AB00OR104

Stress and coping strategies among nursing students

Ashok Kumar, Mamta, Aashish Parihar, Raj Rani
College of Nursing, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India.
E-mail: mamta_rajput45@yahoo.co.in

Nursing is a very challenging profession, which requires very stringent training since initial years of nursing education. Throughout the training period, students are exposed to various challenges and stressful situations. Inability to cope up with varied stressors may lead to psychological distress and impede students’ pursuits of nursing career. This descriptive survey was aimed to assess level of stress and coping strategies among nursing students at All India Institute of Medical Sciences, Jodhpur, Rajasthan. After taking informed consent 221 nursing students pursuing B.Sc. (Hons.) Nursing programme were enrolled in the study. Data collection tools included Student Nurse Stress Index (SNSI), Brief cope scale and self-structured socio demographic questionnaire. Nearly 82.4% of the students reported moderate level of stress. Interface worries (Mean score 17.88 ± 4.9) and academic load (Mean score 17.6 ± 4.78) were the major source of perceived stress. Students considered attitude of other professionals towards nursing, lack of free time and fear of examination as most likely reasons of their distress. Active coping followed by positive reframing were the most commonly used coping strategies. Level of stress was found to have significant association with interest of students in nursing (p level=0.004) Interface worries and academic related concerns emerged as major source of stress among students. A positive trend was evident
Abstract

in use of adaptive over maladaptive coping strategies. However, there is great need to plan and implement stress management programmes so that these budding health professionals could be more equipped and trained to face various challenges of the profession.

Abs. No. AB00PO507

Evaluation of efficacy of blonanserin versus risperidone in North Indian schizophrenic patients

Swati Choudhary, Dinesh Kumar Badyal1, Sandeep Goyal1
Departments of Pharmacology and 1Psychiatry, Christian Medical College and Hospital, Ludhiana, Punjab, India.
E-mail: docswatif02@yahoo.com

Objective of present study was evaluation of efficacy of blonanserin versus risperidone in North Indian Schizophrenic patients. 20 Patients diagnosed with Schizophrenia (ICD10), with a positive and negative syndrome scale (PANSS) score ≥40 were divided randomly into two treatment groups, Group A received blonanserin 8-24 mg/day, Group B received risperidone 2-8mg/day. Patients were assessed at baseline and 3 weeks for clinical efficacy using PANSS Score. Total positive score (TPS), Total negative score (TNS), Total general Psychopathological score (TGPPS), PANSS score was compared within the groups and amongst the groups. There was statistically significant improvement in intragroup comparison in both groups. The pans score improved by -18.59% within in Group A and -15.01% within Group B. But no statistically significant difference was seen when the percentage change in Pans score was compared between Group A and Group B. Both blonanserin and risperidone are efficacious in the Schizophrenia, but there is no significant difference in the efficacy of both the drugs.

Abs. No.AB00PO648

Depression - An epidemic

Rashmi Rathee
Government of Sikkim, India
E-mail: ratheerrarshi@gmail.com

Depression historically known as Melancholy is a silent, non-infectious, debilitating disorder which is threatening the globe with an epidemic soon. With WHO data reports that show an 18% increase in Depression between 2005 and 2015, it can be said with conviction that this disease is in dire need of attention. Understanding the epidemiology of disease as well as the symptoms and the treatment protocols is very important for any change in the positive direction.

To begin with, we need to consider the current situation of our world in relation to depression and suicides. Today, suicides are the 2nd leading cause of death amongst the ages of 15 to 44 which constitutes the productive youth that the country’s future banks on. While most professionals are seen addressing serious diseases such as Tuberculosis, Cancer, AIDS, etc, to even mention a mental disorder is considered taboo.

More importantly, the cause for such widespread Depression in today’s world needs to be figured. Extensive research must be conducted as to the cause for such expedited spread of a non-communicable disease.

Most importantly, the information that no matter how multi-disciplinary, the treatment is still available must be given to the general public. People need to be encouraged to talk about their problems and motivated to take steps to cure themselves of their ailment. Patients must be given a complete treatment which includes family support and suicide help lines.

Understanding Depression is the need of the hour and must be given a lot more importance than it is given today. It needs to be tackled actively rather than in behind closed doors and hushed tones.

Abs. No. AB00PO644

Validation and feasibility testing of self-help yoga manual for caregivers of persons with schizophrenia in the community

Aarti Jagannathan, Sudarshan Hegde,
Shree Raksha U Bhide, Amer Hamza, Jagadisha Thirthalli, Shivarama Varambally, HR Nagendra, BN Gangadhar
Departments of Psychiatric Social Work, National Institute of Mental Health and Neurosciences, Swami Vivekananda Yoga Anusandhana Samsthana, Bengaluru, Karnataka, India.
E-mail: jaganaarti@gmail.com

Research studies and the Government's National Policy on AYUSH advocates for dissemination of yoga as a therapy in the community. To make yoga accessible in homes/community, the current study funded by Indian Council of Medical Research, to validate and assess the feasibility of self-help yoga manual-VCD for Indian caregivers of persons with schizophrenia was undertaken. An earlier developed yoga programme for caregivers of schizophrenia was remodelled into a self-help manual- VCD format in three languages and
validated by mental health and yoga experts (n = 7). The manual-VCD was assessed for its feasibility on 5 family caregivers of outpatients diagnosed with schizophrenia of NIMHANS, Bangalore. All caregivers were taught yoga and educated on the use of the self-help manual-VCD for home practice, in four parts (1-hour session per week for four weeks). Participants provided quantitative and qualitative feedback about the manual-VCD, at the end of every session. The quantitative results depicted that over a period of 3 weeks there was significant reduction in the burden (z = 4.82, p = 0.01) and perceived stress of the caregivers (z = 4.41, p = 0.01). The qualitative feedback supported the quantitative findings where majority of the caregivers reported the overall rating of the programme, usefulness of the manual-VCD and performance of the trainer to be very good and easy to follow at home. The self-help yoga manual-VCD for Indian caregivers of persons with schizophrenia was found to be feasible and can be tested for its efficacy in the future.

Abs. No. AB00PO666

Short term effects of yoga for persons with obsessive compulsive disorder

GS Shubha Bhat, Shivarama Varambally, Aarti Jagannathan, Sneha Karmani, Vinod Kumar, Pooja More, BN Gangadhar

Department of Psychiatry, National Institute of Mental Health and Neurosciences, Integrated Centre for Yoga, National Institute of Mental Health and Neurosciences, ‘Department of Psychiatric Social Work, National Institute of Mental Health and Neurosciences, Bengaluru, Karnataka, India.
E-mail: shubhagsb85@gmail.com

The mainstream treatment for Obsessive Compulsive Disorder (OCD) has been pharmacological, although complementary and alternative therapies have been tried as adjuncts. In this study we explored the effects of one-month practice of a specific validated yoga module in patients with OCD. 16 consenting patients with OCD (minimum Y-BOCS score of 16) were included from 59 screened subjects in a single arm pre-post study design. Patients were taught the validated yoga module for 10 days and continued practice for next 20 days. Severity of obsessions, compulsions, anxiety, depression and insight into symptoms were assessed at baseline and at 1 month. Results: Majority of the patients were male with an average (SD) age of 30.6 (9.81) years, average (SD) education level of 12.62 (3.68) years, average age of onset of illness of 22.31 (10.83) years. 9 out of 16 (56.25%) patients attended all 10 sessions in the yoga centre, and continued practice by themselves for an average (SD) of 7.38 (5.66) days in the month. Wilcoxon Sign Rank test showed that there was significant reduction in obsessions [Pre Mean (SD): 12.50 (2.80), Post Mean (SD): 5.25 (3.32); Z:-2.52, p:0.012], compulsions [Pre Mean (SD): 10.50 (3.86), Post Mean (SD): 7.25 (3.84); Z:-2.21, p:0.027 ], anxiety [Pre Mean (SD): 16.50 (9.98), Post Mean (SD): 7.12 (2.69); Z:-2.36, p:0.018] and depression [Pre Mean (SD): 14.81 (6.07), Post Mean (SD): 8.75 (4.49); Z:-2.38, p:0.01] with yoga practice in one month. Conclusion: Yoga as an add-on treatment shows promise in managing symptoms of persons with OCD.

Abs. No. AB000R696

Socio demographic and clinical profiles of patients with Anxiety disorders approached NIMHANS Integrated centre for yoga

Pooja More, N Manjunatha, Sneha Karmani, Vinod Kumar, GS Shubha Bhat, Vidya Sagar, Aditi Devi, Shivarama Varambally, BN Gangadhar

Department of Psychiatry, NIMHANS Integrated Centre for Yoga, NIMHANS, Bengaluru, Karnataka, India.
E-mail: poojamore900@gmail.com

Anxiety disorders are the most prevalent psychiatric disorders in general population with a life time prevalence of 33.7%. Yoga interventions have been shown to reduce stress and anxiety related symptoms in previous studies, but there is minimal information on patients with anxiety in India using yoga as a method of treatment. The NIMHANS Integrated Centre for Yoga (NICY) is one of the few centres located within a modern medical institute offering yoga treatment to patients with psychiatric disorders. The aim of this paper is to describe the socio-demographic and baseline clinical profiles of patients with anxiety disorders who consulted at NICY from 2015 – 2017. File review of the out-patients and in-patients with primary diagnosis of anxiety disorders (GAD, Panic Disorder, Social Anxiety Disorder, Agoraphobia, and Specific Phobia) (with other psychiatric and medical co morbidity) for yoga treatment from January 2015 to March 2017 are included. Total of 327 case records were traced (74.9% out-patients). Average age of sample was 34.40 (+ 12.56) years, predominantly males (64%). Commonest anxiety disorders referred for yoga treatment were anxiety disorders (unspecified) (49.2%), GAD (16.5%), mixed anxiety and depressive disorders (12.2%). The baseline average severity assessed using Clinical Global Impression- Severity was 3.64 (+ 1.2) suggesting moderate severity. A significant proportion of patients with anxiety disorders presenting to a tertiary
Abstract

Neelam Vats, Tarini Vats
Student Guidance and Counselling Cell, Punjab Engineering College, Chandigarh, India, ¹Department of Pharmacology, Maharaja Agrasen University, Baddi, Himachal Pradesh, India.
E-mail: vats.neelam7@gmail.com

Mental health refers to a broad array of activities directly or indirectly related to the mental well-being according to the WHO definition of health.

Due to fast physical changes and mental development students sometimes experience incompatibility in mental development with their physical changes or the social environment and thus suffer from problems arising from inadequate adaptations. Stress is simply a reaction to a stimulus that disturbs our physical or mental equilibrium. In other words, it's an omnipresent part of life. A stressful event can trigger the “fight-or-flight” response, causing hormones such as adrenaline and cortisol to surge through the body. A little bit of stress, known as “acute stress,” can be exciting—it keeps us active and alert. But long-term, or “chronic stress,” can have detrimental effects on health. A lack of sleep, poor eating habits, and not enough exercise make up a recipe for Depression among students. The stress that comes with academia including pressure to get good grades, financial worries, failed relationships and conflicts with roommates. Anxiety is a displeasing feeling of unconscious, nervousness, apprehension, fear, concern or worry. It is also described as the mental state that results from a difficult challenge for which the subject has insufficient coping skills. Anxiety can be identified by a variety of physical, emotional, cognitive and behavioral symptoms, palpitations, sweating, trembling, shortness of breath, sense of choking chest pain, headache, nausea, stomach upset, dizziness, numbness or tingling, chills or hot flashes, restlessness, fatigue, muscle tension and sleep problems.

Abs. No. AB00OR705

Mental health issues among students

HIV/AIDS pandemic has undermined the quality of life of the infected persons in all segments of the population. With the advent of ART, patients are living longer with new challenges. Besides physical health various socio-demographic, financial and psychological factors play important role in quality of life in these patients.

In the present cross-sectional study, 400 AIDS patients of age ≥ 18 years and taking treatment prior to 31 December 2012 from ART centre, Guru Nanak Dev Hospital, Amritsar were taken. After taking informed written consent patients were interviewed using a semi-structured questionnaire. The collected information was compiled and analysed to draw valid conclusions.

Of all patients, 57.5% were males. Majority (73.7%) were from 31-50-year age group and 64% were married. Furthermore, 67.8% of the participants belonged to upper lower class according to Modified Kuppuswamy Scale. Feeling sick and spouse being diagnosed with HIV were the major reasons for getting tested. Sexual contacts (66.5%), contaminated syringes (18.3%) and blood transfusion (7.5%) were major modes of disease transmission. Patients’ initial reactions to the diagnosis of HIV included sadness (43.8%), shock (22.2%), anger (21.2%), acceptance (9.2%) and denial (3.5%). 90.5% participants reported that they have received psychological counselling after diagnosis. Majority of Patients getting treatment were among 31-50-year age group. Major route of transmission is heterosexual and there is significant psychological impact of HIV infection.

Abs. No. AB00OR828

Prevalence of depression, anxiety and stress among students of Panjab University

Naveen K Goel, Manjot Singh¹, Manoj K Sharma¹, RK Bakshi
Department of Community Medicine, Government Medical College, ¹Centre for Public Health, Panjab University, Chandigarh, India.
E-mail: goelnaveen2003@yahoo.co.in

Depression, Anxiety and Stress (DAS) disorders begin at an early age and are often recurring. The aim of the study was to find the status of the mental health of students of the...
Panjab University, with the objectives to find prevalence and correlates of DAS.

This was an institution based cross-sectional study conducted in Panjab University, Chandigarh for a period of 5 months (January - May 2014). Nine departments and one Centre were selected by random sampling method and 400 students who gave their consent to participate were selected from these Departments and Centre by convenient sampling method. DASS-21 was used for finding the prevalence of DAS. Data was analyzed with the help of Microsoft Excel 2007. Percentages were used to draw inferences.

The overall prevalence of depression, anxiety and stress came out to be 59.2%, 86.5% and 52.7% respectively. The prevalence of the DAS decreased with age. All the morbidities were more among females than males.

High prevalence of DAS, and high co-morbidity was seen among the students of the Panjab University. Poor mental health awareness, stigma related to mental disorders and limited youth-based services combine to make youth an underserved population in our country.

Abs. No. AB00PO776

Burden of major depressive disorder among mothers of children with autism spectrum disorder in Bangladesh and impact on quality of life

Md Saimul Islam, Aliya Naheed,1 Kamrun Nahar Koly,1 Helal Uddin,2 Jalal Uddin,3 Fahmida Tofail,4 Jena Hamadini,5 Saima Hossain Wazed,6 Enayet Hossain,7 Kerim Munir8
1Initiative for Noncommunicable Disease, ICDDR,2 National Institute of Mental Health, 3National Institute of Neurosciences, 4Nutrition and Clinical Services Division, ICDDR,5 Maternal and Child Health Division, ICDDR, Dhaka, 6National Advisory Committee on Autism and NDDs, 7Noncommunicable Disease Unit, Government of Bangladesh, Bangladesh, 8Boston Children’s Hospital, Harvard University, Massachusetts, USA.
E-mail: saimul.islam@icddrb.org

Maternal depression has been linked to negative parenting and adverse maternal health outcomes. Depression among mother of children with autism spectrum disorder (ASD) in the developing countries is not explored. Between May and June 2015, we estimated depression in 388 mothers who had a child with ASD, had a child at least 3 years of age, and enrolled in a special that provided services for ASD. Depression was assessed by SCID-I, and quality of life measured by EQ-5D. Out of 5 autistic children, 4 were male and 27% mothers suffered from depression. Mothers having a boy child (OR 2.06; 95% CI:1.03 -4.11), having no additional supports at home for child care (OR:1.88; 95% CI:1.12-3.14), currently being treated for an illness (OR:2.06; 95% CI:1.201-3.52), and experiencing bad attitude of neighbors (2.07; 95% CI:1.24 -3.46) were more likely to have depression than those who do not. Quality of life of mothers was low (65 (±20) on the visual analogue scale and highly negatively associated with the depression (beta=-16.80; SE=1.18; p-value<0.001). Depression among mothers of children with ASD is high and mothers generally have a poor quality of life. Further research is required to confirm if this association is causal or it reflects the risk of severe depression due to having a child with ASD.

Abs. No. AB000P871

Role of stress and coping in diabetes management

Shourie Sh
Department Of Psychology, D.A.V. College, Chandigarh, India.
E-mail: Shrutishourie@yahoo.com

It has been predicted that India is progressing fast towards becoming the global capital of diabetes and the number of diabetics is increasing to an epidemic proportion (Sanjay, 2013). Diabetes claims many lives, which are preventable, if the patients follow the medical regimen (Goodall & Halford,1992). A critical element in diabetes management is compliance to the medical regimen. Compliance is particularly impacted by various psychosocial realities. The present investigation aims to study the role of stress and coping in Diabetes management, and their role in ensuring compliance to help the patients in successfully managing their Diabetes.

A total of 300 subjects were recruited in the study: 100 Healthy Controls, 100 Good Control Non–Insulin Dependent Diabetics, and 100 Poor Control Non–Insulin Dependent Diabetics (on medical indices). The participants were administered following standardized tools: Presumptive Stressful Life Events Scale (Singh et al.,1984), Daily Hassles and Uplifts Scale (Delongis et al., 1982), Stress Symptoms Rating Scale (Heilbrun & Pepe, 1985) and Ways of Coping Questionnaire (Folkman & Lazarus, 1985).

Results clearly indicated differences between good and poor control diabetics on measures of Stress and Coping, which implies that stress management and effective coping skills training can help the medical practitioners to equip the diabetics and ‘at-risk diabetics’ to learn a new
way of life, and lead a healthy life. The paper discusses a psychological perspective of compliance among diabetics.

Abs. No. AB00PO864

Utilization and Status of Mental Health Care Services in Punjab

Sonia Puri
Department of Community Medicine, Govt. of Medical College, Chandigarh, India.
E-mail: soniapuri@gmail.com

Mental, neurological, and substance use (MNS) disorders account for an estimated 14% of the global and 7.5% of Indian burden of disease respectively. The changing epidemiological and socio demographic transition has been a major contributor of this. But in India only about 10% of people are receiving evidence-based interventions or seeking health care and in states, figures are all the more less. Hence, present study was an effort to find out the mental health service utilization pattern in Punjab state.

Air Pollution

Abs. No. AB00OR710

Household air pollution and risk of NCDs

Ravindra Khaiwal, Maninder Kaur Sidhu¹, Suman Mor²,³, Siby John¹
School of Public Health, Post Graduate Institute of Medical Education and Research, ¹Department of Civil Engineering, PEC University of Technology, ²Department of Environment Studies, Panjab University, ³Centre for Public Health, Panjab University, Chandigarh, India.
E-mail: khaiwal@yahoo.com

The use of various types of solid biomass fuels (SBFs) for cooking in developing countries significantly contribute to the household air pollution (HAP). Emissions resulting from variety of SBFs (cow dung cakes, wood, and agriculture residues) contains significant amount of health-damaging pollutants (particulate matter, Carbon Monoxide (CO), polycyclic aromatic hydrocarbons (PAH) etc.) and are the main risk factors for a number of diseases in India.
Social Determinants and Equity

**Abs. No.AB000R108**

**Cost of OPD Services in a community health centre of Bankura, West Bengal**

*Sumana Samanta, Dabakar Haldar, Daliya Biswas, Sourav Lo, Aditya Prasad Sarkar, Gautam Narayan Sarkar*

Department of Community Medicine, Bankura Sammilani Medical College, Haldia, West Bengal, India.

E-mail: dr.sumana.samanta@gmail.com

As there is changing trend of privatization and globalization of health care services, it has become mandatory to have scientific practices in Cost Accounting to provide accurate information about cost of patient care.

A facility based cross-sectional study was conducted from February to June 2016 to determine the unit cost of OPD services and to identify the major cost area of OPD services provided by Amarkanan CHC of Bankura district, West Bengal, India. Manpower, medicines, logistics, maintenance, transport, electricity, building, equipment and furniture were different cost areas. Work sampling and time motion study were conducted for assessing the manpower cost. Complete enumeration was done to assess other different cost areas. Predesigned formats were used for work sampling, time motion study and also for collection of different cost data.

Unit cost of different services as well as overall unit cost were estimated. If a patient received injection, undergone dressing and had ECG, X-ray both done in a day then the total cost of OPD services for manpower would be ₹ 85.33/-. Cost of logistics/patient/day is maximum in X-ray room. Unit cost for building was ₹1.15/-, medicine was ₹23.15, electricity was ₹1.19/-, transport was ₹0.23/- and maintenance was ₹0.19/-. Maximum cost rendered by Government to conduct OPD in Amarkanan CHC was for manpower.

There is a need of close monitoring, aligning the staffing pattern and activities and having adequate number of staff with right qualifications at right time and place to increase efficiency, productivity and cost effectiveness of OPD services.

**Abs. No. AB000R211**

**Economic impact of diabetes mellitus**

*Charu Kohli, Jugal Kishore*

Department of Community Medicine, Maulana Azad Medical College, 1Department of Community Medicine, Vardhman Mahavir Medical College, New Delhi, India.

E-mail: kohlicdoc17@gmail.com

Diabetes mellitus Type 2 (DM) is a costly disease to manage because of its chronic nature and severity of complications. This study was conducted to assess average out of pocket expenditure incurred on its management and treatment seeking behaviour among diabetes patients in Delhi, India. A community based cross sectional study was conducted in rural and urban slum areas of Delhi selecting a total of 98 diabetic patients. These patients were detected from the cross-sectional screening on 200 adults in urban area and 1005 in rural area selected by systematic random sampling. In both urban and rural areas, majority were Hindu, married, literate and unemployed. Nine (29.0%) in urban slum area and 5 (7.5%) patients in rural area reported that they are not taking any treatment for DM (p=0.005). When asked about the reasons for not taking any treatment then, lack of money, distance of the health facility from residence, dissatisfied with long queues and waiting time and no need of taking treatment were some of the reasons given by the patients. In urban area, 10 (32.2%) patients told that it is a burden on their family while in rural area 30 (44.7%) of the patients told that they have to squeeze money from the family expenditure to afford drugs. Weighted mean for average expenditure of diabetes management came out to be Rs 433.84 (6.92$) per person in last three months. It is concluded that public health care facilities should be established for easy and affordable availability of drugs.

**Abs. No. AB000R306**

**Cost of Treatment for Head and Neck Cancer in India**

*Akashdeep Singh Chauhan, Shankar Prinja, Sushmita Ghoshal, Roshan Verma, Arun S. Oinam*

1School of Public Health, 2Department of Radiotherapy, 3Department of Otolaryngology, Post Graduate Institute of Medical Education and Research, Chandigarh.

E-mail: akashchauhan2307@yahoo.com
Abstract

Theme: Economics of NCD Control

There is no scientific evidence on cost of treating cancer either for guiding reimbursement decisions or to assess efficiency of alternate treatment modalities in India. The present study was designed to estimate the cost of treating head and neck cancer (HNC) with the aim of determining package rates.

The present study was undertaken in the departments of radiotherapy and otolaryngology of a large tertiary care hospital in North India. Economic system costs incurred was assessed using bottom up methodology. Data on all resources – capital or recurrent, incurred on the delivery of HNC treatment was collected from April 2014 to March 2015. Following cost of illness approach, patients were interviewed to elicit out of pocket (OOP) expenditure.

A total of INR 39.8 million (USD 0.65 million) was spent on radiotherapy care for treating HNC during 1 year. Salaries constituted the major component (43.4%) of this cost, followed by equipment/furniture (27.7%), space rent (21.1%), overheads and consumables (7.8%). Additionally, INR 55,548 (USD 911) per HNC patient was spent on surgery. Besides this, patients spent an average amount ranging from INR 12,454 (USD 204) to INR 40,413 (USD 663) on different treatment therapies. In terms of package rates, cobalt radiotherapy alone was cheapest (INR 41,506, USD 680), while intensity modulated radiotherapy (IMRT) was costliest (INR 1, 95,949, USD 3,212).

The estimates from present study could be used for developing package rates under various publicly financed health insurance schemes as well as for planning for creation of new cancer centres.

Abs. No. AB00PO314

Cost of treatment of multiple myeloma in a public sector Tertiary Care Hospital of North India

Gunjeet Kaur1, Shankar Prinja1, Pankaj Bahuguna2, Deepesh P Lad3, Gaurav Prakash4, Alka Khadwal4, Raja Ramachandran2, Subhash Varma4

School of Public Health, Postgraduate Institute of Medical Education and Research, Departments of ‘Internal Medicine and ‘Nephrology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.

E-mail: doc.gunn@gmail.com

Multiple Myeloma (MM) is a neoplastic disorder, which accounts for 13% of all haematological malignancies globally. While, conventional chemotherapy used to be the mainstay treatment for the disease, the landscape of treatment witnessed a paradigm shift with the introduction of Autologous Stem Cell Transplant (ASCT) along with high dose chemotherapy. In this paper, we present a cost analysis of various services provided to multiple myeloma patients, using either of the two modalities of treatments i.e. conventional chemotherapy or ASCT. Bottom-up costing methodology was used to collect data on all health system resources, i.e. capital or recurrent, which were used to provide various services to MM patients. Capital costs were annualized for their useful life using a discount rate of 5%. Out of pocket expenditure on treatment was also ascertained. Cost was assessed for various services, including outpatient consultation, bed day hospitalization in general ward, intensive care unit, and bone marrow transplant unit. Unit costs were calculated from both health system and patient perspective. The overall costs per patient for ASCT (including high dose chemotherapy) and conventional chemotherapy was INR 395,527 (USD 6,085) and INR 62,785 (USD 966) respectively. Estimates on cost from our study could be used for planning health services and evaluating cost effectiveness of different modalities of care for multiple myeloma.

Abs. No. AB00OP249

Cost of intensive care treatment for liver disorders in India

Shankar Prinja, Pankaj Bahuguna, Ajay Duseja1, Manmeet Kaur, Yogesh Kumar Chawla1

School of Public Health, Post Graduate Institute of Medical Education and Research, ‘Department of Hepatology, Post Graduate Institute of Medical Education and Research, Chandigarh, India.

E-mail: pankajbahuguna08@gmail.com

Liver diseases contribute significantly to the health and economic burden globally. We undertook this study to assess the health system costs, out-of-pocket (OOP) expenditures and extent of financial risk protection associated with treatment of liver disorders in a tertiary care public sector hospital in India.

This study was undertaken in an intensive care unit (ICU) of a tertiary care hospital of North India. It comprised of an ICU and HDU (high dependency unit). Bottom-up micro-costing was undertaken to assess the health system costs. Data on out of pocket (OOP) expenditures and indirect costs were collected for 150 liver disorder patients admitted in ICU or HDU from December 2013 to October 2014. We estimated the unit cost from both health system and patient perspective. Financial risk protection was assessed by computing prevalence of catastrophic health expenditures as a result of OOP expenditure.
In 2013-2014, health system costs per patient treated in ICU and HDU were USD 2,728 (INR 1,63,664) and USD 1,966 (INR 1,17,985) respectively. The mean OOP expenditures for treatment in ICU and HDU were USD 2,372 (INR 1, 42,297) and USD 1,752 (INR 1,05,093), respectively. Indirect cost of hospitalization in ICU and HDU patients was USD 166 (INR 9,952) and USD 182 (INR 10,903) respectively.

Treatment of chronic liver disorders pose economic challenge for both health system and patients. There is a need to focus on prevention of liver disorders, and finding ways to treat without exposing the households to catastrophic effect of OOP expenditures.

Abs. No. AB000P319

A study on association between socioeconomic disparities and health services accessibility among Muslim communities

Istikhar Ali
Department of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi, India.
E-mail: istikharali88@gmail.com

The Socio-economic disparity is prevalent across different strata of society based on their social status, infrastructure, and occupation along with other attributes, such as religious affiliation etc. Thus, disparity can most simply be defined as structured inequalities between different groupings of people. The study of socioeconomic disparity in Muslim is one of the most important things to look at but there are a whole lot of lacunae in research work considering the social stratification and the association with health service accessibility. The study identifies major obstacles in accessibility of health services among Muslims: motivation, awareness and knowledge, social and cultural acceptability, health concerns, and behaviour to such services. This study aim to explore the socioeconomic disparities and its association with health accessibility, to analysis the differences in health status and use of healthcare between Muslim and Other communities of varying can have important implications for health care. It is a review of secondary data sources. Both report (including from Sachar Committee report (2006), National Family Health Survey (NFHS), a multi-round survey conducted by the Ministry of Health and Family Welfare during 1992-93, 1998-99, and 2005–06) and research articles became the major source of information. To concluded, the health service accessibility among Muslims face different obstacles that deprive them of having appropriate access to health care because of socioeconomic disparity. A comparative study assessed the result suggests that critical part of health access of the variable for the Muslim population. These findings provide major insights on socioeconomic disparity association with health accesses among the Muslim in India.

Abs. No. AB000P327

Life course socioeconomic position and its association with early onset type 2 diabetes: A mixed method study

Uma Vadassery Sankar, V Raman Kutti
Achutha Menon Centre for Health Sciences Studies, Sree Chithira Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India.
E-mail: umasanthosh23@gmail.com

Recent epidemiological research suggests that type 2 diabetes is a disease of inequality. The age of onset of the disease is gradually shifting from the elderly to younger age groups. So this paper explores the research question: have socioeconomic position (SEP), and the changes in SEP, contributed to the occurrence of early onset type 2 diabetes in Kerala.

Concurrent nested mixed method design. Childhood SEP (CSEP) and adult SEP (ASEP) were measured using a tool developed for the purpose; together, they map the life course SEP of a subject. This was followed by a case-control study to know the association between life-course SEP and early onset type 2 diabetes. Cases were 196 and controls were 203. An 11 item childhood SEP questionnaire and 22 item adulthood SEP questionnaire were used to assess life course SEP. The case control study explored the association of early onset type 2 diabetes with such life course markers as childhood SEP, adult SEP, migrant status, age and sex. The pathway of association is explained by three case studies.

Both poor CSEP and poor ASEP were strong predictors of risk of early onset type 2 diabetes, as was age above 36 years. Depending on adult SEP (ASEP) and migrant status, subjects fell into four groups: non-migrant non-poor, non-migrant poor, migrant poor and migrant non-poor. Compared to the reference group, the non-migrant non-poor, the ‘non-migrant poor’ had a significant excess risk (OR=2.21). Being a migrant as well as poor (‘migrant poor’) seems to constitute the greatest risk for type 2 diabetes in this community (OR??).

Our data suggest that life course events such as migration, and their impact on socio-economic position, strongly affect the risk of early onset type 2 diabetes. Focusing on behavioural risk factors alone, such as diet and exercise, may not be sufficient to manage the epidemic in the future:
we need comprehensive policies to mitigate poverty which will have its effect on the NCD epidemic.

Abs. No. AB000R419

Determinants of healthcare utilization among urban poor patients suffering from non-communicable diseases

Sundaram, Arun Kumar Sharma, NK Saini
University College of Medical Science, New Delhi, India.
E-mail: sundaram.mamc@gmail.com

The urban poor, who mostly live in the slums, have the least resources and opportunities to avail health-care services owing to patchy government health-care coverage, financial, socio-cultural and geographical barriers. This study was conducted among 480 households of northeast parliamentary constituency of Delhi. To achieve the sample size, 30 out of existing 37 slum clusters were selected using cluster sampling and 16 households from each cluster were selected using grid sampling. A pretested, semi-open ended questionnaire was administered to enquire about any illness in last 6 months which required access to healthcare. If healthcare facility was utilized, whether it was government or non-government. Out of 175 (44.8%) patients of NCD, 172 utilized a healthcare facility while out of 216 (55.4%) patients of communicable diseases, 213 utilized healthcare facility. The odds of patients of non-communicable diseases utilizing government healthcare facility were 2.878 times (P value = 0.000; 95% CI = 1.726-4.800). Among NCD patients availing some or the other healthcare facility (n=172), univariate analysis and binary logistic regression was applied to find out significant predictors of healthcare utilization out of religion, occupation, ownership of BPL card, monthly per capita income and standard of living index. We couldn’t find any significant association between these factors and type of healthcare facility being utilized.

Abs. No. AB000R369

Gender differentials in the prevalence of behavioural and dietary risk factors of cardio vascular diseases—evidence from an urban slum, Puducherry

Uma Vasudevan, S Kalaiselvi, Sitanshu Sekhar Kar
Department of Preventive and Social Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry, India.
E-mail: unnemaa@gmail.com

Nationwide household surveys have shown that the morbidity and mortality from non communicable diseases are disproportionately affecting man and women in India. From The NSSO Survey (71st round), prevalence of non-communicable diseases was 63% (females) and 47% (males). This study examined the gender differentials in the prevalence of behavioural and dietary risk factors among individuals in an urban slum in Puducherry. A community based cross sectional study was conducted using WHO STEP wise approach among all eligible adults above 18 years in an urban slum of Puducherry during 2014-15. Risk from fast food intake was considered if consumed more than twice a week. Intake of fruits and vegetables were considered as inadequate if less than 400-500gms or < 5 servings per day. Excessive salt intake was considered if more than 5 gms per day. Physical activity was measured using IPAQ standards and classified. Gender differences were examined and compared using chi-square test. Of the 2213 participants, 40.9% (n=906) were males and 59.1% (n= 1307) were females. When disaggregated based on hypertension status, significant gender differentials were found in the risk factors among undiagnosed hypertensive groups. Among the unknown hypertensives, inadequate intake of fruits and vegetables (Males- 94.8%, Females-99.5%, P Value-0.003) and inadequate physical activity (Males- 27.5%, Females-41.6%, P value-0.003) were significantly higher in females while fast food intake (Males- 25.4%, Females- 15.1%, P Value- 0.009) was more among males. This implies the need to consider gender mainstreaming approach in planning for prevention and management towards non communicable diseases.

Abs. No. AB000R289

Cost of cardiac care at a tertiary level setting in Northern India

Shankar Prinja, Jyoti Dixit, Shyam K Singh Thingnum, Yashpal Sharma, Rajesh Kumar
School of Public Health, PGIMER, Chandigarh, India.
E-mail: dixitjyoti9@gmail.com

Several initiatives to provide affordable and accessible cardiac care services, including creation of a network of AIIMS like institutions under Pradhan Mantri Swasthya Suraksha Yojana, Rashtriya Bal Swasthya Karyakram for screening of school children for heart related ailments like Rheumatic Heart Disease (RHD), are currently being implemented in India. However lack of data on the cost of cardiac care is an impediment to the evidence based planning for such initiatives. So, we undertook an economic costing of cardiac care using bottom-up
Abstract

Costing methodology from both patient and health system perspective. Data on all resources (capital and recurrent) and out-of-pocket (OOP) expenditures for one year was collected. The results of our study showed per day-care consultation at cardiology and Cardio-thoracic and vascular surgery OPD costs INR 311 (USD 4.8) and INR 547 (USD 8.5) respectively. Per test costs for ECHO, ECG, TMT and Holter were INR 358 (USD 5.6), INR 18 (USD 0.3), INR 963 (15 USD), INR 1892 (USD 29.5) respectively. The cost per bed-day hospitalization in Cardiology and CTVS wards (excluding ICU) and I.C.U was INR 1,040 (USD 16) and INR 3,853 (USD 60) and INR 12,635 (USD 197) respectively. Per unit cost for MVR, AVR, TVR, DVR and TrFlow valve surgery were INR 43,311 (USD 677), INR 43739 (683), INR 36969 (USD 578), INR 43208 (USD 675) and INR 57,771 (USD 90) respectively. Per unit cost of all kinds of valve replacement on average was INR 40,178 (USD 628). The mean Out-of-pocket expenditure for valve replacement was INR 1, 76,391 (USD 2756). The estimates generated can be used for estimating the cost effectiveness of cardiac care services.

Abs. No. AB000R339

Factors affecting treatment adherence among hypertensive patients in Indira Colony, Manimajra, Chandigarh

Saurabh Kumar Gupta, JS Thakur, Suman Mor
Centre for Public Health, Panjab University, 1School of Public Health, PGIMER, Chandigarh, India.
E-mail: saurabhgupta751@gmail.com

Non-adherence to hypertension treatment leads to poor blood pressure control and increases the risk of disease complications. The prevalence and factors associated with non-adherence should be determined so as to lower the impact of a disease that is on the increase, on the health systems which are already overburdened with communicable diseases.

Objective: was to measure patient’s adherence to prescription, determine factors responsible for non-adherence and health belief affect adherence among hypertensive patients.

A cross sectional Study was carried out at field practice area of Urban Health Training Center (UHTC) Indira colony, Manimajra, Chandigarh. The participants were 100 selected using systematic sampling technique. Data was collected by using 8-point Morisky scale for adherence and Self-Structured Questionnaire and health beliefs model questions. The prevalence of non-adherence was 68%. Age ≤ 55yrs showed highest adherence (40%) as compared to >55yr (23%). Female showed high adherence (59.4%) to treatment than male (29.4%). Perception of benefit and self-efficacy is interconnected to high adherence. Adherence to hypertension treatment was suboptimal. There is need to improve it through strategies and multi-sectoral approach helping patients understand their treatment.

Abs. No. AB000R526

Out of pocket expenditure of Chronic Kidney Disease patients at a Tertiary Care Centre in Himachal Pradesh, 2017

Gopal Ashish Sharma, Anupam Parashar, Anita Thakur, Narender Mahajan
Department of Community Medicine, IGMC, Shimla, Himachal Pradesh, India.
E-mail: gashish.commed@gmail.com

Chronic kidney disease (CKD) is an alarming public health issue and emerging to be an important chronic disease globally. 10% of the population worldwide is affected by Chronic Kidney Disease (CKD), and millions die each year because they do not have access to affordable treatment. In India, given its population >1.2 billion, the rising incidence of CKD is likely to pose major problems for both healthcare and the economy in future. This descriptive study measures total direct out-of-pocket expenses in an Indian CKD population attending Renal outpatient clinic at Tertiary Care Centre Shimla, HP. A cross-sectional survey of all patients >18 years old, receiving care for CKD (Stage I-V) during the study period was done. Patients were interviewed with self-designed, pretested, semi-structured questionnaire for socio demographic details and expenditure incurred. Data was analyzed using Epi info version 7.2.0.1. There were 74 prevalent CKD study participants. Out of 74 patients interviewed, 47 (63.5%) were males and 27 (36.5%) were females. Mean age of patients was 58±11yrs. Annual household income was Rs 282000 with Interquartile Range [IQR] from (Rs 120000-540000). Median value of annual out-of-pocket(OOP) expenditure per patient was Rs 10850 with IQR (Rs 2800-20120). In total 41 (55.4%) patient’s costs were not reimbursed. Total mean direct medical costs and direct non-medical costs incurred were Rs.2085 ± 3575 and Rs 968±1293 respectively. There was increase in patient’s OOP expenditure from Stage 3 to Stage 4 but not significant (p = 0.83). However, increment in expenditure from Stage 3 to 5 (p = 0.001) and Stage 4 to 5 (p = 0.01) was significant.
Abstract

Scavenging or sweeping deal with daily filth of city which is created by so called clean people. These all conditions make their social and health conditions worsen and are forced to live a low standard of life. We need to develop plans for such vulnerable groups, and provide them minimum standard of health services. They need world consideration for their development in all aspects.

Abs. No. AB00PO857

Dynamics of happiness among married couples

Neha Sharma
Department of Human Development and Family Relations, Government Home Science College, Panjab University, Chandigarh, India.
E-mail: sh.neha.83@gmail.com

The present study was undertaken to assess the level of happiness among married couples and to examine the contribution of locus of control and perceived marital adjustment on happiness levels of married couples. Oxford Happiness Inventory, Levenson’s Multidimensional Locus of Control Scales and Marital Adjustment Questionnaire were administered on 100 married couples (26-35 years of age) living together and belonging to Chandigarh City. The results revealed that major proportion of the married couples reported high levels of happiness. Husbands perceived more happiness and powerful others control as compared to their wives whereas wives significantly reported higher marital adjustment and chance control as compared to their husbands. Correlation analysis revealed that marital adjustment was significantly positively correlated with happiness. The correlation between happiness and internal control was found to be positively significantly correlated whereas powerful others control was negatively significantly correlated. Though, chance control was negatively correlated with happiness among married couples, yet no significant differences were reported. Results revealed marital adjustment emerged as a strongest protective factor whereas powerful others control emerged as a strongest risk factor.

Abs. No. AB00PO856

Indignity and violence as predictors of poor well-being

Ravneet Chawla
Department of Human Development and Family Relations, Government Home Science College, Panjab University, Chandigarh, India.
E-mail: hdfr7dr.ravneet@yahoo.com

The assumed equalitarian living in marriage is yet defeated in numerous cases. The present study sums up evidence from 12 cases between the ages 22-33 years reported in the Women and Child Support Unit of Chandigarh. Contradicting dignity, love, romance, belonging and dedicated partnership in all of these in a marriage, and further in the expanded family, the women cried sex without consent, adultery, punitive behaviour of elders, direct hitting, abusive language, indifferent behaviour, labeling and neglect from the spouse. In most cases, the victims expressed disinterest in life, felt suffocated, reported insomnia and poor appetite, hopelessness and crying out-bursts. One of the cases reported abortion due to hitting. A couple of cases reported torture in various forms. The intervention by the counsellor and the women police officials function as mediators but ensuring dignity, or civic parting was recommended. The concern lies in the incomplete healing and no-where-to-go situation among these rather miserable women most of who are poor in life skills.

Abs. No. AB00OP132

Prevalence of non-communicable diseases and its equity analysis among working population in four Cities, China

Shen Yang, Liu Sheng-Lan, Wang Yan-Ling, Jiang Ying, Chang Chun
Peking University School of Public Health, Beijing, China.
E-mail: shenyang@bjmu.edu.cn

The burden of non-communicable diseases (NCDs) in China is substantial now, while little attention has been paid to working population. The aim of this study was to investigate the prevalence of NCDs and their associated risk factors among employees in urban China. Besides, health equity among employees with different socioeconomic status (SES) – measured by education, income and occupational class, was evaluated. A cross-sectional study was conducted between Mar to Oct 2015, and totally 3553 employees from 5 types of workplaces in Beijing, Xiamen, Quanzhou, and Hohhot were selected using stratified cluster sampling and investigated by questionnaires. The prevalence of self-reported NCDs in the employees from four cities was 14.8%, with 16.7% in men and 12.5% in women, respectively. Logistic regression analysis showed the risk of NCDs increased with advancing age; college and above education (OR=2.020, 95%CI: 1.567-2.605), high level of occupational stress (OR=1.328, 95%CI: 1.091-1.617), overweight or obesity (OR=1.530, 95%CI: 1.292-1.820), smoking (OR=2.401, 95%CI: 1.955-2.957), and diabetes (OR=1.842, 95%CI: 1.336-2.534).
Abstract

1.249-1.875), smoking (OR=1.436, 95%CI: 1.148-1.798) and drinking (OR=1.976, 95%CI: 1.409-2.771) were risk factors for NCDs, whereas migrant was protective factor (OR=0.756, 95%CI: 0.604-0.945). In the gender-stratified analysis, significant difference in the prevalence of NCDs among employees with different SES were observed (both P<0.01), and the concentration indexes (CI) for NCDs were positive and highest in income group. Overall, the findings suggest that NCD prevalence was relatively low in the above settings and closely associated with age, education, occupational stress and lifestyles. There is socioeconomic inequities in NCDs prevalence – of which were particularly concentrated among higher SES groups according to self-reported diagnoses.

Sustainable Developmental Goals and NCDs

Abs. No. AB000R274

A Protocol on a cluster randomized control trial to reduce screen-based sedentary behaviour’s in 2-5 years children in Chandigarh, UT, North India

Nimran Kaur
School of Public Health, Post Graduate Institute of Medical Education and Research, Mohali, Punjab, India
E-mail: drnimran@yahoo.in

Accentuated digital media use among children under 5 years can lead to psychiatric disorders, emotional symptoms, hyperactivity, sleep disturbances, antisocial behaviour that may have implications on overall quality of life later. This study will be done to estimate the prevalence of screen time (ST) and its associated factors; And design and assess the effectiveness a multicomponent intervention program on reducing ST among children of age 2 to 5 (±3 months) years in Chandigarh, Union Territory (UT), and North India. A cross sectional study will be conducted among 360 preschoolers to estimate prevalence of excessive ST (>1 hour) by using a pretested, semi structured questionnaire; And it’s associated factors by using validated tools; Preschool Behaviour Check List, Preschool aged Physical Activity Questionnaire and Childs Sleep Habits Questionnaire. A home based multicomponent intervention program on primary care givers of the participants will be designed using social cognitive theory to reduce ST in children; And pilot tested to calculate the intraclass coefficient to estimate the sample size for a cluster randomized control trial in an Indian setting. A baseline, midline (3 months) and end line (6 months) assessment will be done to measure the impact of this intervention using difference in differences analysis. Ethical approval will be obtained from Institute’s Ethical Committee. The results of the study may provide evidence on the effectiveness of a home based multicomponent intervention program on primary caregivers in reducing ST in pre-schoolers in developing countries.

Abs. No. AB000P284

Cost of Haemodialysis in a Public Sector Tertiary Hospital in North India

Gunjeet Kaur, Shankar Prinja, Raja Ramachandran, Pankaj Malhotra, Krishan Lal Gupta, Vivekanand Jhal
School of Public Health, 1Department of Nephrology, 2Department of Internal Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh, 3George Institute for Global Health, India.
E-mail: doc.gunn@gmail.com

About 2.2 lakh patients of End Stage Renal Disease get added every year, which calls for additional demand for 34 million dialysis in India. Matching up this accruing demand with the supply side to provide health care services, in terms of dialysis every year will be an uphill task. The situation becomes grave especially when there are financial implications both for the health systems and the patients on haemodialysis. Therefore, we undertook this economic analysis to estimate the unit cost of haemodialysis from health system perspective along with out of pocket payments made by the patients on the haemodialysis at a public sector tertiary hospital in North India. Bottom up approach as per principles of economic costing was used to ascertain the resource use in the provision of haemodialysis. The time period for reference was March 2015 to April 2016. Out of pocket expenses incurred by 108 patients on haemodialysis (HD) in the study hospital were also assessed. Catastrophic health expenditure (CHE) in relation to HD was also assessed. Binary logistic regression was done to assess the risk of CHE in HD patients. A univariate sensitivity analysis was performed. The average unit cost computed per haemodialysis patient from the health system perspective was INR 3,974 (USD 61.2). The mean out of pocket expenditure per patient per haemodialysis assessed was INR 2,838 (95% CI: INR 2,203.50-3,546).
Abstract

With the increasing numbers of patients requiring dialysis in the country, provisioning of good quality HD is needed to match up to this demand.

Abs. No. AB00OP293

An investigation into clinical handover practices for chronic disease patients at the point of hospital admission and discharge in two states of India

Suganthi Jaganathan, Claire Humphries1, Jeemon Panniyammakal, Shifalika Goenka, Prabhakaran Dorairaj, Sanjeev Singh2, Paramjit Gill3, Sheila Greenfield4, Richard Lilford4, Semira Manaseki-Holland1

Centre for Chronic Disease Control, Public Health Foundation of India, New Delhi, 1Amrita Institute of Medical Sciences, Kochi, India, 1University of Birmingham, Birmingham, 4University of Warwick, England, United Kingdom.

Clinical handover is critical for safe management of non-communicable disease (NCD) patients, whose care is often transferred between healthcare providers (HCPs).

The study objective was to identify barriers/facilitators to clinical handover practices for chronic NCD patients at point of hospital admission and discharge.

A cross-sectional survey was completed at admission, discharge and 4 months follow-up by 546 patients with CVD, diabetes, COPD or stroke. The study settings were three government hospitals in Kerala and Himachal Pradesh.

The majority of inpatients self-referred (48.4%) or were referred by a hospital outpatient doctor (28.6%). 61.4% of patients brought papers from previous HCP visits; the contents of these were notably varied and 9.9% illegible. Most inpatients (78%) were advised to visit the outpatient department of the same hospital for follow-up. Only 6.2% were advised to follow-up at another hospital/HCP. Most patients (58.8%) had a good/general understanding of their condition and its management; 19.3% had very little understanding. Almost all inpatients (99%) received papers at discharge; the contents of these varied greatly. Most patients (93%) felt that receiving discharge papers is important. After four months, less than 5% of patients had accessed primary care for their continual care.

In conclusion, patients are main vehicle for information transfer between HCPs and often have only basic knowledge and inadequately documented handover information to utilise. Additionally, NCD patient utilisation of government primary healthcare is lacking. Implementation of structured protocols and interventions enhancing primary/secondary care integration are recommended.

Abs. No. AB00OP312

Practice patterns of Indian physiotherapists in health promotion

Imraan Khan, Sundar Kumar Veluswamy, Debra Shirley1, Elizabeth Dean2

Ramaiah Medical College and Hospitals, Bengaluru, Karnataka, India, 1University of Sydney, New South Wales, Australia, 2University of British Columbia, British Columbia, Canada.

E-mail: sundark94@gmail.com

Noncommunicable diseases (NCDs) are a major global health burden and according to a 2014 WHO report, India contributes to more than two thirds of the total NCD related deaths in the South-east Asia Region. The United Nations high-level meeting on NCD recommended a commitment to a multistake holder approach to NCD prevention. Health care providers are stakeholders who can play an important role in NCD prevention and many health care providers already incorporate prevention and management of the NCDs into their practice. Physiotherapists are health care providers with a background in exercise and disease who should be uniquely placed to embrace involvement in promoting a healthier lifestyle as part of a multidisciplinary approach to target risk factors for NCD. Hence, this study focused on determining the practice patterns among the Indian physiotherapists regarding health promotion in their daily practice. This cross-sectional survey invited 468 physiotherapists from across the country to participate of which 301 completed the survey (response rate: 64%). The data were summarized using descriptive analysis. The results show that 81.5% of the physiotherapists are asking their patients about their family history of NCD; 82.2% of physiotherapists provide verbal advice on increasing physical activity and also the majority of the physiotherapists are advising their patients on healthy lifestyle modification such as smoking cessation and healthy eating. We conclude that most Indian physiotherapists are implementing health promotion advice as part of their daily practice and are competent to contribute to tackling the burden of NCDs.

Abs. No. AB00OP316

A study on utilization of diagnostic and therapeutic services of national program for prevention and
control of cancer, diabetes, cardiovascular diseases and stroke from primary health care Institutions in Pathanamthitta District, Kerala, India

Shammy Rajan, Ravi Prasad Varma
Mental Health Centre, ‘Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India.
E-mail: shammy666@gmail.com

In Kerala, National Programme for Prevention and Control of Cardiovascular diseases, Diabetes, Cancer and Stroke (NPCDCS) was piloted at Pathanamthitta district in 2011. Three years of the commencement, the details of coverage, monitoring and evaluation of the program are not known. This study mainly concentrated on those factors. A community based cross sectional survey was conducted at Pathanamthitta among 320 subjects identified by multistage cluster sampling. Bivariate and multivariate analyses were done. An observation study was also conducted at randomly selected NCD clinics. The results showed that self-reported prevalence of diabetes was 25.9% (21.4-31.0), hypertension 35.3% (30.3-40.7) and NCD (diabetes and/or hypertension) was 48.3% (42.7-53.6).

Among the subjects, 67.8% were aware about existence of NPCDCS and 53.1% utilized screening service. Out of those who had NCDs, 40.9% utilized treatment service. People regularly visited by health workers and people having NCDs before 2011 were more likely to utilize the program. The observational study showed that NPCDCS only collects the number of people screened and of those who have NCDs. It lacks denominator based data. To summarize, the prevalence of NCDs is very high in Kerala (Diabetes – 27.1%, Hypertension – 32.0%), compared to India. There was significant association between health workers visit and NCD diagnosed before 2011 with utilization of program. The program is not looking into number of beneficiaries whom are missed out. The level of visibility shows IEC activities are not satisfactory.

Preference: Oral presentation in the area ‘Health system strengthening for Universal Coverage in relation to NCDs’.

Abs. No. AB00P318

Perspectives of stakeholders on addressing operational challenges of NCDs in tribal regions of Jharkhand in India - A qualitative study

Cheena Malhotra, Meghagupta, Laxmikantpalo, Vikaschoudhary
Project HOPE

The government of India implemented the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS) program to promote healthy living and provide early detection, treatment and referrals to reduce the burden of NCDs. There are several operational challenges to implement the NPCDCS guidelines. This qualitative study was conducted to investigate the operational challenges related to implementation of the program and understand the attitudes, opinions and perceptions of NCDs providers and community in a tribal area of Jharkhand. The methodology focused on undertaking assessment at three levels: facilities, communities and health systems from the perspective of understanding the aspects of service provision, the health seeking behaviors and the existing enabling environment respectively. Both secondary and primary data was collated and collected. The assessment involved qualitative methods using In-depth Interviews (IDIs), Focus Group Discussions (FGDs), and utilization of checklists to assess facility readiness. Findings suggested that there is need to develop a robust implementation strategy for operationalization of national NCDs program. A comprehensive behavioral change communication strategy to mobilize the community and improve care seeking behaviour are critical. At the same time, a clear emphasis need to strengthen the surveillance, monitoring and reporting mechanism at facility and district level for quality delivery of NCDs services. The quality and content of technical trainings for health care providers are key to improve the skills of providers for better service delivery. Awareness camps for community sensitization on NCDs are very crucial for prevention and management of NCDs.

Abs. No. AB00OR290

Healthcare facility preparedness regarding gender based violence in Delhi

Hitakshi, M Meghachandra Singh, Suneeela Garg, Rajesh Kumar, Vandini Sharma, Reeta Devi, GK Ingle
Department of Community Medicine, Maulana Azad Medical College, ‘School of Health Sciences, IGNOU, New Delhi, India.
E-mail: hhitaakshi@gmail.com

The study aims at assessing healthcare preparedness for Gender based violence (GBV) victims, a cornerstone of public health, in terms of available facilities in government run hospitals and dispensaries in NCT-Delhi.
Abstract

A cross-sectional observational study conducted using a facility checklist for observation among 10 hospitals and 25 dispensaries under Govt. of NCT-Delhi. Data was analyzed using SPSS-pc-17 and expressed in percentage.

The vacancy, as a percentage of the total sanctioned strength of hospital staff was 18.6% for the administrative staff, 87.5% for office superintendents. For doctors 15.8% in hospitals and 21.4% in dispensaries; 7.2% for nurses in hospitals and 5.4% in dispensaries. Vacancy of group C staff was 26.1% in hospitals and 20% in dispensaries. Basic amenities were available at all hospitals and not all dispensaries (only 12% had patient gowns, 16% had colposcope and none had SAFE kit). While a counseling room was available in all hospitals only 33.3% had counselors with 24 hours treatment facility. For dispensaries, the data was 20% for counseling room and 8% for counselor availability. Guidelines for rapid response in case of GBV were available only at hospitals. Only 2 hospitals had specific IEC material on GBV, no material was present in any of the dispensaries. 7 hospitals had designated nodal officers for managing GBV cases; no nodal officer was available at dispensaries.

There is a shortage of trained medical professionals and a lack of facility of care for GBV victims in Delhi. Recommendations include manpower increase; especially counselors and access to treatment amenities.

Abs No. AB00OR567

Health system strengthening: Empowering public health workers (Asha) for follow-up in NCD care

Aditya Kumar, Komal Khanna, Conjeevaram Haricharan, Santosh Kumar Jha

Health Rise Project, Abt Associates, India.
E-mail: adityakumarshaan@gmail.com

Lack of trained workforce is one of the major impediments to establish an effective non-communicable disease prevention and control program. Counselling skills and a robust follow up mechanism are scarce but important to motivate clients to access health services. Health Rise aims to build capacity of public health workers (ASHA/ANM) in counseling and establish a follow-up mechanism by applying a supportive supervision model.

Dedicated Outreach workers (ORWs) are paired with ASHAs to transfer and mentor counseling skills. After completing class room training, ASHAs work closely with outreach workers to receive supportive supervision as skills learned are applied on the job. In a comprehensively designed follow up cycle of 5 household visits to clients/patients, ASHA accompanies ORW during household visits. The first visit is led by an ORW and ASHA is an observer. A second visit is led by the ASHA and the ORW is an observer/mentor. The remaining visits are led by an ASHA with support by ORW as needed for complex cases.
Abstract

The intervention will provide evidence of effective skills transfer through follow up cycle boosting confidence of public health worker through the proposed model of “supportive supervision”. The result from this study aims to enhance the capacity of health worker in NCD care through an innovative approach and will inform scale-up to other sites to be supported by the Government of India.

Abs. No. AB00PO635

Morbidity pattern among patients attending Urban Health Centre in North India

Abdul Rouf, Mahbooba Rasool, SM Salim Khan, Mariya Amin, Sheikh Mohd Saleem
Department of Community Medicine, Government Medical College, Srinagar, Jammu and Kashmir, India.
E-mail: a.rouf.dr@gmail.com

The study aims at studying morbidity pattern of communicable and non-communicable diseases and seasonal variation of OPD patients of an Urban Primary health Centre Harwan under Department of Community Medicine, Government Medical College Srinagar. The objectives of the study are to assess the morbidity pattern of patients as per age, sex, and season and to determine the seasonal variation of morbidities. This retrospective record based study was conducted for the duration of one year from July 2016 to June 2017. The data were collected from the OPD registers of Medical officers and analysis was done on the basis of new patients only. The patients were grouped into age groups of <5 year; 5-15 years; 16-45 years; >45 years. The total number of new episodes of illnesses that were treated in the outpatient department from July 2016 to June 2017 was 6083. Adults (>15 years) constituted about 82%. Overall the respiratory disorders were the most common about 20%, followed by the musculoskeletal disorders 8.64%, urinary tract infections 8.10%, gastrointestinal disorders about (8%) and diarrhoeal diseases (7.9%). Most of the morbidities registered in OPD, were found more in winter and rainy season. The study gives an outline of the morbidity pattern of patients attending an urban health centre over a period of one year. This knowledge would help the health care administrators to plan, practice and deliver, high quality services as per the community need.

Abs. No. AB00PO656

Assessment of epidemiological factors affecting awareness of mothers regarding breastfeeding in Chandigarh

Navpreet Kaur, Naveen K Goel1, Manoj Kumar
Centre for Public Health, Panjab University, 1Department of Community Medicine Govt Medical College, Chandigarh, India.
E-mail: navpreet2418@gmail.com

Breastfeeding is generally considered by health professionals as the ideal feeding practices for infants. It is the first communication pathway between the mother and her infant. This study was aimed to for the assessment of epidemiological factors affecting awareness of mothers regarding breast feeding in Chandigarh.

Objectives of this study were as follows: (1) Assessment of epidemiological factors affecting awareness of mothers regarding breast feeding, (2) To find the knowledge and attitude of mothers regarding feeding practices, (3) To determine the gap between the knowledge and feeding practices among mothers.

All females attending immunization clinic in UHTC AND RHTC between January 2017 to April 2017 and willing to participate in the study were taken as study subjects. Convenient sampling technique was used. Findings from this research indicate that the mothers were highly knowledgeable (90%) about breastfeeding and able to recognize the benefits of breastfeeding and the importance of Colostrum. The exclusive breastfeeding rate was low (46%) The main factors observed in this study interfering with exclusive breastfeeding were the perception of mothers that the breast milk was not adequate and being thick for the baby, delay in lactation due to caesarean section and neonatal illness and hospitalization.

Abs. No. AB00OR

Pathways to diabetic care in public health facilities – A situational analysis in Delhi, India

Archana Trivedi, Sarabjit S Chadha1, Srinath Satyanarayana1, Karuna Sagili1, Kathirvel Soundappan1, Sharath Burugina Nagaraja2, Om Prakash Bera1, Kiran Kumar Reddy1, Jaya Prasad Tripathy1
USEA The Union, 1International Union against Tuberculosis and Lung Disease, The Union South East Asia Office, New Delhi, 2ESIC Medical College and PGIMSR, Bengaluru, Karnataka, India.
E-mail: atrivedi@theunion.org

Weak public health systems have been identified as major bottlenecks in providing quality diabetic care in low and middle-income countries, including India.
This study was conducted to assess diabetic care services in various public health facilities across six districts in three states of India using mixed methods approach. Quantitative component included assessment of diabetes services and gaps while qualitative component comprised semi-structured interviews with health care providers and diabetes patients.

30 public health facilities including 17 primary, 8 secondary and 5 tertiary were assessed. All had provision for blood glucose measurement but HbA1c estimation was available at tertiary centres only. There was no system to maintain and update patient records and lifestyle modification support (dietary advice, exercise/yoga, smoking cessation) was available in some secondary and all tertiary facilities. Screening and management for complications was not done at primary facilities. Basic oral anti-diabetic drugs were available in all health facilities whereas insulin was in tertiary centres only.

42 physicians were interviewed. Patient overload, lack of specialised training and follow up mechanisms were major the key barriers. 37 patients were interviewed. Patients had to visit tertiary facilities for drugs/insulin and routine follow-up. There was no formal referral and follow-up mechanism to link patients to specialised facilities.

There is wide gap in implementation of diabetes services at all levels. Primary and secondary facilities should play greater role in follow-up, drug dispensing, lifestyle modification support and screening for complications. Strengthening of recording and cohort reporting and adequate referral mechanism is the need of hour.

Analysis of blood donor deferral for early detection of implications for non-communicable diseases

Divijot Singh Lamba, S Sachdev, RR Sharma, N Marwaha
Department of Transfusion Medicine, PGIMER, Chandigarh, India.
E-mail: div834@gmail.com

Blood donor deferral is to ensure safety of both donor and recipient.

A retrospective analysis of deferral amongst blood donors was conducted who presented for blood donation between 2011 to 2015.

During the study period, total 80470 donor attempts to donate blood were registered over the period of five years of these 69972 (86.9%) were found eligible and subsequently donated blood and 10498 donors (13.1%) were deferred. Out of these males were 86.8% and 13.2% were females. Out of total males who presented 11.7% were deferred and out of total females 64.3% were deferred. Among total deferred donors, first-time donors were 79.1% and 20.9% were repeat donors; 90.7% were temporarily deferred and 9.3% were deferred permanently; 43% were voluntary donors and 57% were replacement donors.

In the present study, most common cause of donor deferral was hemoglobin less 12.5 g/dl (24.7%) followed by hypertension (12%), Common cold (6.3%), high risk behaviour (4.6%), history of jaundice (5.6%) and donation not due (3%).

Blood donor screening represents sampling of asymptomatic individuals with Non-communicable diseases (NCD) and thus creates a platform for their early detection and management. It also provides insights for planning community outreach programmes and formulating guidelines and strategies for prevention of these NCD.

Trend of tobacco related cancers in North India: Results of the hospital based cancer registry program

Sonia Puri, Sonia Puri, Deepak Sharma, AK Pandey1
Departments of Community Medicine and 1Radiotherapy, GMCH-32, Chandigarh, India.
E-mail: soniagpuri@gmail.com

Tobacco use prevalence is increasing exponentially in many parts of the world, including India. Using tobacco products increases the risk of cancer.

The objectives of the present study were to determine the prevalence as well as trend of different types of tobacco related cancers (TRC) from 2011 to 2014, under a hospital based cancer registry in North India. A record review of the TRC patients attending (Government Medical College and Hospital) GMCH, Chandigarh was carried out from the year 2011 to 2014. Data was collected and analysed using SPSS version 16.0 software. Statistical measures, rates and proportions were used for comparison.

Out of 1986 TRC cases that reported, females accounted for 461 (23.2%). and males for 1525 (76.7%) cases. Among
Abstract

Does shift of point of care for NCD services to outreach facility improve quality? - A record based descriptive study

Salin K Eliyas, V Karthiga, A Sujiv, L Subitha, C Palanivel, Ganesh Kumar, Sonali Sarkar, Gautam Roy, KC Premarajan
Department of Preventive and Social Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry, India.
E-mail: salins13@gmail.com

Regular monitoring of patients with Non-Communicable Diseases (NCDs) is important for disease management. Elderly patients in rural areas find it difficult to access Primary Health Centres (PHCs) for regular follow-up. In an effort to increase access, twice monthly NCD clinic was started at Thondamanatham sub-centre in rural Puducherry in April 2016 by health team from JIPMER Rural Health Center. This Operational research was done to assess the changes in patient follow up and quality of medical care received after establishing this outreach facility. We reviewed 201 case records of NCD patients who attended the outreach clinic between April 2016 and March 2017. Data extracted include patient characteristics, frequency of visits and quality of care in terms of monitoring of blood pressure, blood glucose and compared with previous year’s data. Focus group discussions were conducted to explore patient satisfaction. Of the 201 patients enrolled, median age was 56 years (IQR 49-65), 68.7% (138) were females; 39% (79) had hypertension, 22% (11) had Diabetes while 30% (51) had both. Patients with minimum 10 visits in a year increased from 49.2% to 55.2%. Patients with yearly at least 6 BP measurements increased from 72.6% to 87.6%. Monitoring of fasting blood sugar was similar in both settings but monitoring of total cholesterol decreased (36.8% to 22.4%). Patient satisfaction was high due to better accessibility and interaction with health care provider. Extending point of care for NCD to outreach areas improved treatment-seeking behaviour of patients with better compliance and patient satisfaction.

A comparative study for assessing the sanitation & hygiene practices in selected Urban, Slum & Rural areas of Chandigarh

Janavi, Amarjeet Singh, Suman Mor
Centre for Public Health, Panjab University, Panjab, India.
E-mail: drjanavi107@gmail.com

Sanitation is a linchpin to fight against poverty. Clean water & Sanitation is also included in SDG’s as Goal no.6. Globally in 2015 only 68% population had access to improved sanitation facilities though it had improved as it was mere 54% in 1990. Currently some 2.6 billion people still are deprived of improved sanitation, two third of who live in Asia & sub-Saharan Africa. Within developing countries, urban sanitation coverage is 71% while rural coverage is 39%. A lot has been achieved through Swachh Bharat Abhiyaan initiated by honorable PM Sh. Narendra Modi Ji with a mission to achieve Open Defecation Free India by 2019 but still needs much to be done especially for rural & slum areas. Chandigarh is a well planned city and it got rank 2 in Swachh Surkeshan 2016 but slipped down to position 11 in SS 2017. We did this study to find out the differences in sanitation practices among urban , slum & rural areas of Chandigarh & respondents views regarding current status of sanitation practices in Chandigarh. A cross-sectional study was conducted & sector 22, 18, 37 were included in urban areas & Dhanas & slum of sector 25 were taken as rural & slum areas respectively. A total of 200 respondents were interviewed (120 from urban area, 60 from slum & 20 from rural areas). Simple random sampling was done in urban area & systematic random sampling was done in rural & slum areas. Piped water into dwelling was the major source of drinking water in urban & slum areas but tube well was the major source of drinking water in rural area. Water treatment to make it safe for drinking was done in urban region whereas only 21.6% & 30% respondents of slum & rural areas treated their water to make it safe for drinking. Majority of the respondents in all the 3 areas reported interruption in water supply. Waste disposal was the major issue in slum area. Some respondents (13.3%) of slum area didn’t have their own toilet till date. “Policy & law enforcement is poor” was the response of the major respondents(65%) of urban area. Significant differences were found regarding sanitation practices among urban, slum & rural areas and clean water, toilets & waste disposal were the issues need to be addressed according to the area.
Abstract

**Abs. No. AB000R119**

**India’s bystander syndrome: A cross-sectional survey of good samaritan behaviour among urban population**

*Subraham Pany*

Institute of Medical sciences and SUM Hospital, Bhubaneshwar, Odisha, India.
E-mail: subrahampany@gmail.com

A Good Samaritan is one who, in good faith, without any expectation of reward and without any duty of care or special relationship, voluntarily administers immediate emergency care to a person injured in an emergency medical condition. The current death toll on Indian roads is over 1, 40,000 and over 70,000 lives can be saved if bystanders come forward to help.

The objective of present study was to assess responses of common people to a hypothetical situation as a bystander in road traffic accidents. And assess their knowledge, attitude, and practice on being a Good Samaritan. People residing in North Bhubaneswar were taken as study population. Convenience sampling of 1000 citizens who have completed graduation in any field.

Preliminary analysis of 122 subjects showed that only 9.83% acted as good Samaritans in the past when they were bystanders in road traffic accidents. 65.57% showed unwillingness to help because of legal strains in helping and 24.6% had reasons like they were busy, other nearby people would come for help, the injury/accident was not serious, etc. 83.60% showed willingness to act as good Samaritans in future when subjected to a hypothetical situation, 94.2% were unaware of the good Samaritan law.

Willingness to act as Good Samaritan is an inevitable finding among the participants. There is lack of knowledge regarding the Good Samaritan law protecting individuals. Precious lives can be saved if the first bystander at scene of accident shows the willingness to help. Hospitals should acknowledge a Good Samaritan and shouldn’t needlessly indulge them into medicolegal cases.

**Abs. No. AB000R248**

**A bibliometric analysis of the published road traffic injuries research in India, post-1990**

*Neeraj Sharma1,2, Mohan Bairwa2, B Gowthamghosh2, DK Mangaf, SD Gupta2*

1John Hopkins Bloomberg School of Public Health, Baltimore, USA,
2IIHMR University, Jaipur, Rajasthan, India.
E-mail: neerajsharma4450@gmail.com

Globally, road traffic injuries are leading cause of death among those aged 15-29 years. However, road traffic injury research has not received adequate attention of the scientific community in low and middle income countries including India. Hence, we carried out this study to provide a bibliometric overview of research done in the road traffic injuries in India. We used Scopus to extract relevant research in road traffic injuries from 1991-2017. This study presented the key bibliometric indicators such as trends of annual publications and citations, top 10 authors, journals, institutions and highly cited articles, citation analysis of articles, co-occurrence of keywords etc. Analysis were done using Scopus, Microsoft Excel, and VOS viewer. A total of 242 articles were retrieved with an h-index of 18 excluding self-citations. A steadfast growth of publications was documented in last decade especially after the year 2010. The h-index of the top 10 authors, institutions, journals, and highly cited articles did not cross single digit. Network visualization map showed that ‘traffic accident’, ‘male’, ‘Adolescent’, ‘child’ were the most commonly encountered key terms. The prominent authors were Gururaj G, Dandona R, and Hyder AA; top journals were Indian Journal of Forensic Medicine and Toxicology, Medicolegal Update, and International Journal of Applied Engineering Research; and top institutions were AIIMS, New Delhi, IIT, Delhi, and Administrative Staff College of India. This study concludes that RTI research is inadequate in quantity and quality which warrants more attention from researchers and policy planners to address the burden of road traffic injuries.

**Abs. No. AB000R298**

**Out-of-pocket expenditure and financial risk protection for hospitalization due to injuries in Public Sector Hospitals North India**

*Shankar Prinja, Jagnoor Jagnoor1,2, Deepshikha Sharma1, Sameer Aggarwal, Swati Katoch, PVM Lakshmi, Rebecca Ivers2*

1Post Graduate Institute of Medical Education and Research, Chandigarh, 2The George Institute for Global Health, New Delhi,
Abstract

Injuries are a major public health problem, resulting in high health care demand and economic burden. They result in loss of DALYs and high out-of-pocket expenditure. However there is little evidence on economic burden of injuries in India. We undertook this study to report out of pocket expenditure and extent of financial risk protection for injuries related hospitalizations in public sector hospitals in North India. Further we evaluate determinants for financial risk protection.

A prospective observational study was conducted. Participants were recruited from three hospitals for all injury cases. Data was collected via face-to-face baseline interviews and telephonic follow-up interviews at 1, 2, 4 and 12 months post-injury. Prevalence of catastrophic health expenditure (more than 30% of consumption expenditure) and impoverishment (Int$ 1.25) were estimated.

Road traffic injuries (57%) were leading cause of injury. Direct out-of-pocket expenditure for hospitalizations was INR 16,768 (USD 263) while indirect productivity loss was INR 33, 46,421 (USD 52,493). The prevalence of catastrophic expenditure was 22.2% with 16.4% slipping below poverty line. Prevalence of catastrophic health expenditure was higher and significantly associated with increase in age, poorest quintile and increased duration of hospitalization (p< 0.001).

The economic impact of injuries is significantly high both in terms of out-of-pocket expenditure and productivity loss. A high proportion of households experienced catastrophic expenditure following injury, highlighting need for programs to prevent injuries. Furthermore, expansion of health insurance coverage may help individuals cope with financial consequences of injury.

Abs. No. AB00OR299

Evaluation of a pilot health insurance scheme for road traffic injuries on national highways in India

Shankar Prinja, Deepshikha Sharma, Swati Katoch, Mannmeet Kaur, Rebecca Ivers, Jagnoor Jagnoor1,2
School of Public Health, Post Graduate Institute of Medical Education and Research, Chandigarh, 1The George Institute for Global Health, New Delhi, India, 2The George Institute for Global Health, University of Sydney, Sydney, Australia.
E-mail: deepshikhasharma12021990@gmail.com

Road traffic injuries (RTI) are the leading cause of mortality and morbidity in India. In addition, its treatment imposes a huge economic burden on households. Recognizing this problem, the Government of India implemented a pilot scheme for emergency referral transport and health insurance for road traffic injuries, on three major stretches of national highway in India.

Using multiple sources of primary and secondary data, we evaluated this scheme for process and outcome indicators such as coverage, patterns of utilization, quality of services delivered and impact of the scheme on out-of-pocket (OOP) expenditure, financial risk protection (FRP) for treatment and quality of life outcomes of RTI patients.

Overall scheme led to significant reduction in OOP expenditure and catastrophic health expenditure (CHE), although no significant impact on quality of life of patients was observed. There was no difference in quality of life summary scores (EQ5D-5L) between, those who availed the benefits under the scheme and those who did not. The benefits of the scheme were accrued predominantly (83%) by the poorest 20% population. The Emergency Referral Services (ERS) were found to be adequate in terms of timeliness and availability.

Our findings suggest that the scheme is beneficial and therefore should be scaled up across all national highways of India. Further it is recommended that the benefits of the scheme should be provided for a longer duration of hospitalization resulting in greater reduction of OOP expenditures and enhanced FRP.

Abs. No. AB00OR310

Awareness and behaviour of four wheeled vehicle drivers and front seat passengers regarding seat belt usage in district Bathinda, Punjab

Dhruvendra Lal, PPS Coonar, Tanvir Kaur Sidhu
Department of Community Medicine, AIMSR, Bathinda, Punjab, India.
E-mail: laldhruv_1987@yahoo.com

In 2010 the governments of the world declared 2011–2020 as the Decade of Action for Road Safety. 1.24 million People were killed on the world’s roads in 2010 which is unacceptably high. There were about 4, 43,001 reported road accidents in India during 2013. Seatbelt has proven to be by far the most
Abstract

important safety device in cars as it dramatically increases the chances of survival of the occupants in the event of an accident. Failure to wear a seat belt is one of the leading causes of road crash death and a person is 10 times more likely to be killed in a road crash if you are not wearing a seat belt. Wearing a properly adjusted seat belt reduces the risk of fatal or serious injury by up to 50%.

The aim of this was to assess awareness and behaviour of 4 wheeled vehicle drivers and front seat passengers regarding seat belt usage.

Community Based Cross sectional study which included drivers and front seat passengers of 4 wheelers in Bathinda city at various halting places. Minimum sample size was 400 (Daniel's formula).

Total of 1041 participants were included in the study. Prevalence of seat belt use was 30.1% with very few participants being challaned for the same. Maximum people drove at 50 to 90 km/hr. 29.7% had history of major accidents in the past one year. Mean days lost from work because of accident were 1.7. Prevalence of seat belt use is very low in Bathinda region. Many serious causalities resulted because of non-adherence to use of seat belt which otherwise could have been reduced.

Abs. No. AB000R332

Falls of older persons in Thiruvananthapuram district, Kerala, India: A study of environmental hazards in and around the house

Rekha Ravindran, V Raman Kutty1, Mala Ramanathan1
State Health Systems Resource Centre, 1Achutha Menon Centre for Health science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India.
E-mail: devsuneel@gmail.com

Falls constitute a major public health problem among older persons worldwide. This study attempted to observe and identify the potential environmental hazards within and outside the houses that could have caused fall-related injuries of older persons in Kerala. The modifications done to the house after the event of fall were also observed.

Participant observation of households of older persons who were hospitalised at Government Medical College, Thiruvananthapuram, and Kerala, India was done using a home safety assessment checklist that was customized and adapted for the setting.

Several slipping hazards were identified inside and around the house. Door thresholds, door mats with no grip backing and plastic chairs were found to be potential tripping hazards inside the house. Steps/stairs were important in causation of falls. The bedrooms were often dark, small and cluttered with furniture increasing the chances of falls. The bathrooms posed slipping and tripping hazards. Lighting was a problem within the rooms, inside the toilet and bathrooms. Commonest alteration made to prevent falls was introduction of mats inside and outside the house. Changes that are needed for a safe environment for older persons are often challenged by the need to display status markers.

Several potential hazards were identified within and around the house. They either precipitated the falls or modified the outcome of falls. Further research is necessary to work out a guideline for constructing safe and friendly buildings for older persons.

Abs. No. AB000R387

Unintentional injury and its relation with parental supervision among under five children: A community based cross sectional study in a rural area of southern Punjab

Sourabh Paul, Shyam Meher, Paresh Prajapati, Tanvir Kaur Sidhu, Parampong Singh Coonar
Department of Community Medicine, Adesh Institute of Medical Sciences and Research, Bathinda, Punjab, India.
E-mail: drsourabh82@gmail.com

Unintentional injuries are one of the leading causes of hospitalization and mortality among children beyond one year. Parent supervision attributes profile questionnaire (PSAPQ) is a psychometrically sound measure for assessing injury risk in children 2 to 5 years of age due to inadequate supervision. A community based cross sectional study was conducted from April 2017 to May 2017 at bhalliana village of Mukteswar district, Punjab among children of 2-5 years age group using systematic random sampling. Objective of the study was to determine the burden of unintentional injury, its relation with parent supervision and also factors responsible for parental supervision. A pre designed and pretested questionnaire was used for data collection. Parent supervision was assessed by PSAPQ. Binary logistic regression was performed using SPSS 20. A total 186 children were involved in the study and 53 (28.5%) of them had any type of injury during last 4 month periods. Most commonly type of injury was superficial 39 (73.5%). Inadequate parent supervision was significantly
Abstract

associated with maximum number of unintentional injury (p = 0.003). Female child [OR = 2.6, (95% CI -1.2-4.9)], birth order more than two [OR = 1.55, (95% CI -1.3-1.7)], primary caregiver other than mother [OR = 1.2, (95% CI -1.1-2.1)], > 4 family members [OR = 2.3, (95% CI -1.7-3.9)] are significant predictors for inadequate parental supervision. Unintentional injury among children is common in rural Punjab and inadequate parental supervision is one of the responsible factors. Gender bias, higher birth order and joint family relationship are important determinates for inadequate supervision.

Abs. No. AB00PO566

Assessment of 108 ambulance services in Andhra Pradesh

Amit Agarwal, Meenu Singh, Pankaj Pant, Munish Kumar
Department of Telemedicine, Postgraduate Institute of Medical Education and Research, Chandigarh, India.
E-mail: agarwal.amit1982@gmail.com

The Government of Andhra Pradesh entered into a MoU with GVK EMRI to provide integrated emergency medical service with a toll free number 108. The Department of Health Medical and Family Welfare, Government of Andhra Pradesh asked PGIMER to assess the services of 108 ambulances. Currently the fleet of EMRI consisting of 465 ambulances including 79 Advance life support ambulances across the 13 districts of the state.

The objectives of this study to excess the appropriateness and relevance of management and implementation, user level satisfaction and provide recommendation relating to aspects such as scope for cost reduction and sustainability.

To evaluate the current performance of 108 ambulances in Andhra Pradesh, we prepared the field visit plan in each district and collect the data in pre designed form. After that we reviewed and analysed the collected data. We further identified the key issues and made some recommendation to improve functioning of 108 ambulances.

We observed that this service managed by a group of people. We found in our study that 108 ambulances utilized the most for pregnancy cases followed by trauma, cardiovascular and acute abdomen cases. We also observed that the utilization pattern of ambulances was 100%.

We observed that the processes were well defined, implemented and managed by the fleet teams. EMTs and pilots reflected high level of confidence in carrying out their daily work. However, the manpower planning process would need to be robust and high percentage of ineffective calls would need to be addressed.

Abs. No. AB00PO83

Why road safety is the need of the hour? A study among youth of district Dehradun, Uttarakhand

Rajnish Jain, Jayanti Semwal, Shaili Vyas, Malini Srivastava
Departments of Community Medicine and Psychiatry, HIMS, Dehradun, Uttarakhand, India.
E-mail: drjainrajinsh@gmail.com

Youth being the most dynamic and transitional phase of life becomes vulnerable to various health risk behaviours. Road safety related health risk behaviour is a major concern and of public health importance among youth population. Road traffic injuries are the eighth leading cause of death globally, and the leading cause of death for young people aged 15–29 years. Each year, almost 400,000 young people under 25 years old are killed in a road traffic crash - about 1049 youngsters every day (1). This study tries to assess various aspects of road safety related health risk behaviour among youth population as there is very less data available regarding this. Aim of this study was to find out the prevalence of road safety related health risk behaviours and its determinants among youth.

It was a cross sectional study conducted over a period of 12 months. The study population comprised of 1800 male youth aged 15-24 years studying in various schools and colleges of District Dehradun. A pre-tested and pre-structured questionnaire was used.

Approximately three-fourth of the subjects reported never using seat-belt. Regarding use of helmet, out of all the 1345 subjects who were at risk of driving in past 12 months, one in every four accepted never use of helmet. Approximately one-fourth of the total 1168 at risk subjects in past 30 days, accepted driving a vehicle while drunk and 39.9% reported use of mobile phones while driving.

Personality traits (extrovert, neuroticism and lack of direction), place of residence and age were turned out to be the major factors responsible for road safety related health risk behaviour.

Road safety related health risk was found to be alarmingly high among youth population.
Abstract

**Abs. No. AB00OR65**

**Review of breast cancer in comparison to cervix cancer in indian states – A review article**

_Virk Ritupreet, JS Thakur_¹

IIMR University, Jaipur, Rajasthan, ¹SPH, PGIMER, Chandigarh, India.

E-mail: ritupreetvirk@gmail.com

In 2013, Chandigarh has an age adjusted rate (AAR) of 37.5 per 100,000 population for breast cancer which is the third highest in the country. Such statistics from population based cancer registries (PBCRs) have highlighted the importance to monitor the time trends of major cancer sites and provide information for initiating cancer screening programs to target the unmet need of health services. The objectives of the study are to highlight the incidence of breast cancer in comparison to cervix cancer in Chandigarh city and other Indian cities as per PBCR reports and to compare the incidence of breast cancer in India as per PBCR reports of 2008-2011 and 2012-2014. Incidence rates (AARs) among all the 27 registries were compared. AARs for cervix cancer more than 20 per 100,000 has been reported by 11.1% of PBCRs (n=3) as compared to 66.6% of PBCRs (n=18) for breast cancer. The top three cities with the highest AAR for breast cancer are New Delhi (41), Chennai (37.9) and Chandigarh (37.5). With the rising trend of breast cancer in India, the youngest age groups diagnosed with breast cancer according to region were compared. In East and South India, the age group of 45-49 years reported the highest proportion of cases i.e. 30% of cases in Papumpare and 17.8% of cases in Kollam, Kerala. In North India, the age group of 50-54 years reported the highest proportion of cases i.e. 23.1% in Sangrur district of Punjab. It highlights the unmet need of health services for breast cancer screening program in the productive years of life and emphasizes on early detection and diagnosis to increase survival rates.

**Abs. No. AB00OR141**

**Body composition analysis of reproductive age group women using bioelectrical impedance analysis method in an urban area**

_Dr. Adrija Roy, Ipsa Mohapatra, OP Panigrahi_

Department of Community Medicine, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India.

E-mail: dradrijaroy@gmail.com

As NCDs continue to rise at epidemic levels worldwide, the need for their refined study measures have greatly increased. Bioelectrical Impedance Analysis (BIA) has been considered as a safe, non-invasive, simple, inexpensive, portable method for the evaluation of body composition in clinical practice. This study aims to estimate the body composition of reproductive age group (15-49years) women using BIA; also to find and associate the risk factors and comorbidities among them. A cross sectional study was carried out in the field practice area of urban health and training centre of Kalinga Institute of Medical Sciences. After appropriate sampling, 320 non-pregnant, reproductive age group women (15-49 years) were included. A pretested, semi-structured schedule was used to collect data on socio-demographic and various life-style factors. Anthropometric measurements too were taken. A digital portable instrument that works by the principle of BIA was used to analyse the body composition-Body weight, BMI, Body Fat percentage (%), visceral fat etc. Data was entered into Microsoft excel and SPSS software (version 20) was used for analysis.62.5% participants were non-slum dwellers, 82.5% were Hindus, 82% were non-vegetarians and 55% had regular physical activity. BMI depicted 17.5% overweight and 2.5% obese study participants. Body fat% was high in 34.4%, very high in 9.7% and low in 10% of women. Visceral fat was high in 56.9% participants. Chi-square test revealed-age group, religion, education, occupation, BMI, diet, family history and hypertension had highly significant association (p<0.0001) with body fat%. The use of BIA can thus help in identifying the risk factors and developing strategies for reducing body fat and its risk of NCDs.

**Abs. No. AB00OR155**

**Epidemiological study of obesity among reproductive age group women in an urban resettlement colony in Delhi**

_Palak Goel, GS Meena, Suneela Garg_

Maulana Azad Medical College, Ghaziabad, Uttar Pradesh, India.

E-mail: palakgoel.89@gmail.com

Obesity is a complex, multi-factorial chronic disease. As in developed world, the risk for obesity in developing countries is also strongly influenced by diet and lifestyle,
which are changing dramatically as a result of the economic and nutrition transition. This study was conducted to find out the prevalence and risk factors for obesity in reproductive age group women in an urban resettlement colony in Delhi. A community based crossed-sectional study was conducted in an urban area, Gokalpuri, from November 2015 to May 2016. A structured questionnaire was utilized to collect data from sample population. 350 reproductive age group women were interviewed. The data was entered into excel spread and Chi square test was used to find the association of obesity with socio-demographic variables. The prevalence of overweight and obesity was 13.1% and 25.3% respectively. A strong association was observed among obesity and women aged >30 years. No significant association was seen among women’s socio-economic status and obesity. Due to long-term consequences, the cost burden of obesity on the health care system is enormous. There is a need to introduce innovative yet simple and low cost measures to maintain optimal weight of our country.

### Abs. No. AB000R191

**Disease burden attributable to smokeless tobacco use**

**Sanjay Gupta, Ruchika Gupta, Dhirendra N Sinha, Ravi Mehrotra**

WHO FCTC Global Knowledge Hub for Smokeless Tobacco, National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, India.

E-mail: sanjaydr17@hotmail.com

Though data on adverse health effects of Smokeless Tobacco (SLT) use is not comprehensive, there is robust evidence that it causes addiction, precancerous oral lesions and cancers of oral cavity, oesophagus and pancreas. In addition, SLT use has been linked with adverse reproductive outcomes such as still births, pre-term births and low birth weight. The evidence suggests that some SLT products are associated with increased risk of fatal ischemic heart disease, type 2 Diabetes Mellitus and fatal stroke. There is insufficient evidence on association of SLT with increased risk for lung and cervical cancers and with hypertension. The public health impact of SLT use depends upon type of product, prevalence and pattern of use and background disease burden in the population. In the absence of adequate data it is difficult to provide an estimate of global disease burden attributable to SLT. Nonetheless, there is enough evidence to conclude that adverse health effects of SLT use are substantial and largely preventable. The policy makers should therefore be provided with country wise disease burden data attributable to SLT for formulation of strategies to combat this health menace.

### Abs. No. AB000R213

**Estimation of cardio vascular diseases CVD risk using WHO/ISH risk prediction charts in tribal population of Chamarajanagar**

**Amoghashree, NC Ashok, D Sunil Kumar, Praveen Kulkarni, MR Narayana Murthy**

Department of Community Medicine, JSS Medical College, Mysuru,

Regression analysis found that exercise, obesity and high BP records were significant predictors of Diabetes. Diabetes in geriatric women is a public health problem and effective strategies need to be planned to integrate with the national programme.

**Tulika Singh, S Nagesh, TK Ray**

Maulana Azad Medical College, 'Lady Harding Medical College, New Delhi, 'Sharda University, Noida, Uttar Pradesh, India.

E-mail: singh.tulika86@gmail.com

Non-Communicable diseases (NCDs) are leading cause of deaths in India, with diabetes responsible for 69 million deaths. Increase in life expectancy though appears to be a boon, coupled with age related morbidities, NCDs, gender disparity and financial insecurity leaves the geriatric women in particular vulnerable. This study was carried out to estimate the magnitude and correlates of diabetes among geriatric women residing in a resettlement colony of Delhi. A Cross-sectional population-based study using Z^p/d2 was carried out among 290 geriatric women. Data on socio-demographic factors were collected using pre-tested questionnaire, and anthropometric and biochemical indexes were measured. Fasting blood glucose was used to diagnose diabetes employing American Diabetes Association criteria. The data was analysed using SPSS software, version 17. In the present study 79% of subjects belonged to 60-69 years age group. Prevalence of diabetes was 10.0%. Among the socio-demographic variables age, literacy status, and socio-economic status were not significantly associated with diabetes. Binary Logistic Regression analysis found that exercise, obesity and high BP records were significant predictors of Diabetes.
Abstract

Karnataka, India.
E-mail: amogha.gowda@gmail.com

India is the home to almost half the tribal population of the world and is second to Africa in terms of tribal mass. Karnataka has 6.9% of tribal population of India. Because of acculturation many of these tribalS have come out of the forest and have been relocated outside the forest. As a result of this, life style has changed which resulted in development of NCDs. In this context, this study was carried out in tribal population to estimate the CVD risk using WHO/ISH risk prediction chart.

Objective of this study was to predict the cardiovascular risk among tribal population, utilizing WHO/ISH risk prediction chart and to estimate the prevalence of diabetes and hypertension.

Community based cross-sectional study. Information regarding socio demographic profile was collected using pretested and semi structured questionnaire. Anthropometric measurements, blood pressure, random capillary blood glucose was recorded. WHO/ISH risk prediction charts is used to assess the total 10 year risk for CVD. study duration was of 3 months. Convenient sampling was done.

Among 120 study subjects, 33.3% belonged to the age group of 40-49 years, 39.2% were unskilled in their profession, 62.5% are uneducated, 2.5% of the study subjects knows their diabetic status, and 15.8% knows their hypertensive status and 33.3% had BMI of underweight.62.5% of study subjects had less than 10% (mild) risk and 11.7% had ≥40% (high) risk of developing CVD in 10 years. Prevalence of diabetes is 3.33% and hypertension is 48.3%. Among 58 study subjects who were hypertensive, 39 (32.5%) were unaware of their hypertensive status.

Epidemiology of osteoporosis and low bone mineral density: A diagnostic lab based observational study

Mannmohan Singh, Jay Prasad, Anupa Dixit, Rohit Kumar, Pankdeep Chhabra, Akansh Khurana
THB, Gurugram, Haryana, ‘Centre for operational research, International Union against Tuberculosis and Lung Disease, New Delhi, ’Suburban Diagnostics, Mumbai, Maharashtra, India.
E-mail: drmannmohan@thb.co.in

Diagnostic labs have structured information about disease and the patients. Labs can offer insights in the population health issues. As osteoporosis is a major public health problem, lab data can be used to understand patterns of osteoporosis and low bone mineral density in the population. This observational study was conducted to understand prevalence of low BMD and osteoporosis across age, gender and site. Retrospective data of 935 subjects who got their BMD test done (between July 2015 to March 2017) at a Mumbai based diagnostic lab was analysed.

Mean age of the subjects was 52.7 years (Range 20 to 91 years) with 73.5% females. BMD and T scores of three sites, lumbar spine, right and left total femur were compared. Results have shown prevalence of low BMD and osteoporosis at lumbar spine 33 and 16% respectively. Prevalence at right and left total femur differs slightly but differed significantly from prevalence at lumbar spine. Prevalence of low BMD was 32% at right and left total femur, while of osteoporosis was 6.41 and 5.45% respectively. Prevalence of osteoporosis is comparable at all three sites till fifth decade after which it is very high at lumbar spine, i.e less than 4% at both right and left total femur, while 20% at lumbar spine. Prevalence was higher among females at all sites. Data has shown consistent decreasing trend of BMD with age among males and females both. Till 4th decade prevalence of osteoporosis was less than 3% among both male and females.

Prevalence of dyslipidaemia and its determinants in rural Delhi

Ruchir Rustagi
Department of Community Medicine, Maulana Azad Medical College, New Delhi, India.
E-mail: ruchirrustagi@gmail.com

Dyslipidaemia is a known risk factor for cardiovascular diseases. For planning future strategies and approaches for prevention of cardiovascular diseases, it is essential to know the burden of dyslipidaemia in the community. With this motive, the current study was conducted with the objective to find prevalence of dyslipidaemia and its associated factors in a rural area of Delhi, India. It was a community based cross-sectional study conducted in two rural areas in Delhi among 1005 subjects, selected.

Using systematic random sampling method. WHO STEPS approach was used to collect data. Blood pressure, Body mass index, blood sugar and lipid profile were measured. Data analysis was done using SPSS version 17. Odds of dyslipidaemia among subjects with risk factors
Abstract

were calculated. p value less than 0.05 was considered significant. It was found that the overall prevalence of hypercholesterolemia, raised triglycerides and reduced HDL was 31.2%, 21.8% and 95.7% respectively. Dyslipidaemia was found significantly higher in males and in individuals more than 35 years of age. It was significantly higher in those who take alcohol, among overweight/obese and in subjects with diabetes mellitus Type 2. In multivariate analysis, age, occupation, tobacco use, BMI and diabetes mellitus Type 2 were independently associated with dyslipidaemia. Hence, it was concluded that there is significant burden of dyslipidaemia in rural areas in Delhi. Age, occupation, tobacco, alcohol consumption, BMI and diabetes mellitus Type 2 were independent risk factors of dyslipidaemia.

Abs. No. AB00OR233

Risk factor profile for non communicable diseases among the Kani tribe in Thiruvananthapuram district of Kerala

Priyanka Sajeev, Biju Soman
Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India.
E-mail: priyusajeev@gmail.com

NCD risk factors are increasing nationally and globally, and are often associated with the adoption of modern lifestyles. The prevalence and pattern of NCD risk factors among the Kani tribes in Kerala, that fast get adopted into modern lifestyles are studied here. 300 Kani tribes (24-65years) from Vithura Panchayat, Thiruvananthapuram were studied via cross sectional survey. Research tool was prepared based on WHO stepwise framework for surveillance of NCD risk factors. Descriptive, bivariate and multivariate analyses were done using the R statistical package. NCD risk factors like, hypertension (48.3%), tobacco (81.5%) and alcohol consumption (36.2%) and inadequate fruits/vegetable intake (100%) were found to be higher in Kani tribes compared to general population in Kerala. Abdominal obesity (22.1%) and physical inactivity were found to be higher in Kani tribes compared to published rates from other tribal communities in India. One third (28.2%) of Kani tribes were found to have a high combined risk score for NCDs. Hypertension was associated (p<0.05) with higher age, male sex, lower education, tobacco/alcohol intake among them. On multivariate analysis, age and alcohol consumption were found to be the prominent risk factors for hypertension, and higher education was found to be a protective factor. The major behavioural NCD risk factors in Kani tribes were found to be higher than the general population in Kerala. Physical inactivity and obesity rates were found to be higher than other tribal communities in India. The findings warrant targeted action in these vulnerable communities for effective control of the non-communicable epidemic.

Abs. No. AB00PO181

Epidemiological distribution of semi health status among University students in Japan and China

Hideo Yamazaki
Tokoha University, Hamamatsu, Japan
E-mail: yamazaki@hm.tokoha-u.ac.jp

Both lifestyle and behaviour factors predispose individuals to lifestyle related diseases (LSRD). In a practical activity of epidemiology, a primary prevention is effective and necessary to prevent LSRD. However, an appraisal technique for health conditions in a phase of susceptibility based on the theory of natural history of diseases has not been established yet. The primary prevention needs to take a detailed evaluation of susceptible health conditions into consideration. The purpose of the present study was to examine epidemiological distribution of semi health status evaluated susceptible health conditions among university students in Japan and China by the sample based Analysis. A self-report questionnaire consisted of 53 items was administered to university students in Japan and China between 2015 and 2016. As analysed data without defect values, 1,002 samples derived from Japanese students and 891 samples from Chinese. A principal component analysis (PCA) was applied to valid data combined Japanese and Chinese sample into a linkage sample. PCA was applied to the linkage sample to extract indices which indicated structural characteristics of the semi health state. Four principal components were extracted by the analysis. We adopted the first principal component as the semi health index. A distribution of the semi health state was determined by this index. A cut-off point was calculated from the value of the index in order to determine predictive value of discrimination the semi health state from the good health state. It suggested that there is a strong resemblance between Japan and China in the distribution of semi health status.

Abs. No. AB00PO253

Glycaemic status and associated comorbidities – Insights from laboratory data

[Downloaded free from http://www.ijncd.org on Tuesday, February 20, 2018, IP: 14.139.224.4]
Abstract

Anupa Dixit, Pankdeep Chhabra1, Manmohan Singh2, Rohit Kumar3, Akansh Khurana1
Suburban Diagnostics, Mumbai, Maharashtra, 1THB, Gurugram, Haryana, India.
E-mail: drpankdeep@thb.co.in

The clinical laboratory is a major source of health care data as laboratory tests are an integral part of patient management protocol and form the basis of important decisions for patient care. This retrospective study was conducted on de-identified laboratory test data to assess the status of glycaemic control and its association with dyslipidaemia and renal dysfunction among patients who had HbA1c >6.5% between May 2015 – Jan 2016. Out of 14,216 patients, good glycaemic control (HbA1c<7%) was observed in 19%, poor control (HbA1c 7-8.9%) in 51% and very poor control (HbA1c ≥ 9%) in 30% patients. Overall, the average HbA1c among these patients was 8.4%. Among 5,912 patients with available lipid data, 71% patients had at least one out-of-range lipid component. Out of 780 patients who also got tested for albuminuria, 24.5% had micro-albuminuria (30-300 mg/gm) while 6.8% had albuminuria (>300mg/gm). Among 6,818 patients with estimated glomerular filtration rate (eGFR) values, 16% had compromised renal function (eGFR<60). Laboratory data offers an advantage of being electronically available in a numerical format making it easy to analyse large population data in a short time. Even though clinical history was unavailable to confirm diagnosis of diabetes, this study consolidates the hypothesis that in India majority of patients have poor glycaemic control levels as indicated by high mean value of HbA1c and a large proportion (~81%) with HbA1c more than 7%. This insight also can be used for patient engagement activities and for planning and management of glycaemia and associated comorbidities.

Abs. No. AB00PO286

Factors impacting the success of research capacity building programs to address non-communicable diseases in low- and middle-income countries

B Oldenburg, K Singh1, T Sathish2, N Grills, S Mohan1, KR Thankappan1, N Thomas4
Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia, 1Centre for Chronic Conditions and Injuries, Public Health Foundation of India, Gurgaon, Haryana, 2Centre for Population Health Sciences, Nanyang Technological University, Singapore, 3Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, 4Christian Medical College, Vellore, Tamil Nadu, India.
E-mail: kavita.singh@phfi.org

There is an urgent need to build NCD research capacity in LMICs. The research workforce and evidence base for translation and implementation is particularly lacking in South Asia. We have implemented and evaluated two research training and capacity building programs in South Asia since 2011 – the US NIH-funded Asian Collaboration for Excellence in NCDs (ASCEND) and the Excellence in Non-Communicable disease Research (ENCORE) supported by Melbourne University and four health research institutions in India. Both aim to improve the research capacity of early and mid-career researchers. ASCEND has already provided training and mentorship to more than 40 young- and mid-career researchers from India, Sri Lanka and Malaysia who have presented and published their findings extensively. The more recent ENCORE program provides training to more than 20 mid-level researchers between Australia and India and it has also undertaken knowledge translation and exchange with health policy roundtables. Both programs are proving effective in developing highly skilled future leaders with technical, implementation research and leadership skills. Key success factors include: 1) blended learning programs incorporating e-learning, 2) training on advanced research methods, 3) formal mentorship and 4) creating a strong network of researchers, trainers and research institutions. Such programs largely support trainees in their own countries. The findings demonstrate the acceptability of the programs to early- and mid-career researchers and their research outputs are already improving NCD policy and practice in LMICs. However, it is very challenging to create and sustain such training and capacity building programs beyond the initial funding phase.

Abs. No. AB00OP202


Valerian Mwenda1,2, Jane Githuku1, Gladwell Gathecha2
1Field Epidemiology and Laboratory Training Programme, Ministry of Health, 2Non-Communicable Disease Division, Ministry of Health, Nairobi, Kenya.
E-mail: valmwenda@gmail.com

Prevalence of non-communicable diseases (NCDs) is increasing worldwide. Tobacco is a major risk factor for NCDs. Global Youth Tobacco Survey (GYTS) is used to monitor tobacco use among students in seventh to
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in Gangetic belt [OR: 3.3 (1.8–6.2); p<0.001]. On comparing between meals [OR: 1.4 (1.2–1.6); p<0.001] and residence to tobacco [OR: 4.1 (1.8–9.7); p<0.001), long interval family history of gallstones [OR: 5.3 (1.5–18.9); p<0.01] and smoking guardian (OR 2.5, 95% CI 1.9, 3.3) and smoking guardian (OR 3.0, 95% CI 2.2, 4.0) were associated with youth smoking. Decrease in tobacco use in 2013 could be attributed to anti-tobacco legislation passed in 2007. Measures targeting males and guardian smoking should form part of control efforts.

Abs. No. AB00OR411

Gallbladder cancer and its trend in India

Sudhanshu Sharma, GS Shukla, V Paul

Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh, India.
E-mail: nidanhomeo@yahoo.com

Gallbladder Cancer (GBC) is one of the rare but most common malignant tumour of biliary tract worldwide. Usually has no symptoms or signs and deteriorate quickly hence it’s very difficult to diagnose in early stage, prognosis is poor because of few effective treatment options. GBC is more prevalent in North and North-eastern part of India than Southern India. It is commonest digestive cancer in North Indian women. Incidence of GBC in women in northern Indian is approx. 9 per 100000 per year. Amongst various prevalent cancers in GBC has been found in Delhi and Bhopal (6.6% and 5.2%).

One of the case–control study, comparing GBC patients (mean age 51.7 years; 130 females) with healthy controls, family history of gallstones [OR: 5.3 (1.5–18.9); p<0.01], tobacco [OR: 4.1 (1.8–9.7); p<0.001], long interval between meals [OR: 1.4 (1.2–1.6); p<0.001] and residence in Gangetic belt [OR: 3.3 (1.8–6.2); p<0.001]. On comparing GBC cases with gallstone controls, risk factors were female gender [OR: 2.4 (1.3–4.3); p=0.004].

The purpose of the study is to find out the pre disposing risk factor of GBC in India.

For the study many relevant articles was done using search engines such PubMed and Google scholar.

Early prevention measures i.e. regular GB surveillance, prophylactic removal of GB, life style modalities (physical activity, avoiding tobacco), focus on hereditary factors, will help to reduce incidences of GBC. Establishment of counselling and educative centre for cancer cases would be helpful for early detection and prevention of cancer. (For Oral Presentation).

Abs. No. AB00PO447

Dyslipidemia among pre- and post-menopausal females attending a PAC clinic in a Tertiary Care Hospital: A comparative study

Krishna Mishra, Ipsa Mohapatra, Partha Sarathi Mohapatra, Amit Kumar
Departments of Community Medicine and Anaesthesiology, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India, 2Post Graduate Student cum Tutor.
E-mail: drkmishra89@gmail.com

Non-Communicable Diseases (NCDs) are the leading causes of death in the world, the etiology of which is multifactorial, involving no modifiable and modifiable factors. Menopause marks the cessation of ovarian function, increasing the risk of cardiovascular diseases due to hormonal changes because of derangement of lipid metabolism. Dyslipidemia being an independent modifiable risk factor for cardiovascular disease, this cross-sectional study was undertaken, in pre and post-menopausal women, from December 2016-April 2017, with the objectives: to find the burden of risk factors of NCD and the association of dyslipidemia with other variables in the comparative groups. This prospective study comprised 100 women, 50 pre-menopausal (18 to 45 years) and 50 post-menopausal (55 to 70 years). Lipid profile was evaluated in both the groups and data were statistically analyzed using Epi Info software. In our study, we found significantly high levels of serum TC, serum TGs, serum LDL, and serum VLDL in post-menopausal subjects when compared with pre-menopausal. Post-menopausal women are at increased risk of developing cardiovascular disease due to change in the lipid pattern and loss of cardioprotective effect of...
Abstract

Estrogen. Predicting the factors affecting the lipid profile in post-menopausal women, adopting strategies to control these mechanisms by modifying the relative risk factors during menopausal transition may improve the cardiovascular risk profile in these women. As dyslipidemia is an important modifiable risk factor of cardiovascular disease, the affected population needs to be adequately addressed about the lifestyle changes, dietary modification and need for exercises.

Abs. No. AB00PO449

Behavioural risk factors for NCDs- a study among patients attending a tertiary care PAC clinic

Amit Kumar, Ipsa Mohapatra, Partha Sarathi Mohapatra¹, Krishna Mishra²
Departments of Community Medicine and ¹Anaesthesiology, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India, ²Post Graduate Student cum Tutor.
E-mail: crish.cool@gmail.com

Currently, non-communicable diseases (NCDs) are responsible for almost two-thirds of all deaths globally; nearly 80% of which occur in low- and middle-income countries. This cross-sectional study was undertaken, from January-April 2017, in patients attending the pre-anesthetic evaluation check-up (PAC) clinic of a tertiary care hospital with the objectives: to assess the burden of NCD risk factors in these patients, estimate the relations of behavioural risk factors to socio-demographic correlates and to evaluate if socio-demographic, behavioural and anthropometric risk factors can predict biochemical risk factors. The burden of NCD risk factors was high in our sample. About 53.85% male and 17.65% female respondents were currently abusing one or other forms of substance. Male (46.15%) and female (17.65%) were using tobacco products. It was found that only 33.33% of respondents were doing satisfactory level of physical activities. Prevalence of behavioural and each of the biochemical risk factors increased with age, adjusting for other factors including sex and the place of residence. The odds ratios relating anthropometric variables to biochemical variables were modest, suggesting that anthropometric variables may not be useful surrogates for biochemical risk factors for screening purposes. Substantially high levels of the various behavioral risk factors among the sampled population, suggests an urgent need for awareness raising programmes, to lower the increasing burden of NCD risk factors.

Abs. No. AB00PO450

Anthropometric and biochemical risk profile of apparently healthy Indian vegetarian subjects in relation to metabolic syndrome

Harmeeet Kaur, Bani Tamber Aeri
Institute of Home Economics, Department of Food and Nutrition, Delhi University, New Delhi, Delhi, India.
E-mail: harmeetkaur707@gmail.com

The metabolic syndrome (MetS) is a constellation of interrelated risk factors of metabolic origin that appear to directly promote the development of atherosclerotic cardiovascular disease. It is turning out to be a leading public health challenge worldwide with increasing prevalence in epidemic proportions in both developed and developing nations. Vegetarian diets have been proposed as a healthy dietary option for people particularly in the western world. Vegetarianism in India is far different from West and has been aptly criticized as contaminated vegetarianism. The present cross-sectional study was conducted to assess the cardiometabolic risk profile of the vegetarian subjects in Delhi and to find out if Indian vegetarian diets are actually as healthy as they are thought to be.

Although data have been gathered for 200 apparently healthy vegetarian urban adults, above 35 years of. For current analysis for only 150 subjects (100 female and 50 male) is being presented. Anthropometric and biochemical assessments were carried out following standard procedures. Prevalence of metabolic syndrome was assessed using an IDF criterion (2005) which defines central obesity as one of the mandatory component to assess the syndrome. Results reveal that the mean prevalence of the metabolic in the studied group is 53.5% (53% in females and 54% in males). Common deranged parameters for both the groups included increased waistline (in 80% of the subjects) followed by low HDL levels (62.66%) and high triglycerides levels (48.66%) indicating a scope to further restudy the cardioprotective role of vegetarian diets in an Indian scenario.

Abs. No. AB00OR459

Physical inactivity and associated risk factors for weight gain among employed adults in urban Delhi: a cross-sectional study

Deepa Shokeen, Bani Tamber Aeri
Prevalence of overweight and obesity among working adults is very high. Sedentary lifestyle among working adults increases the risk of overweight/obesity and cardiovascular diseases. This study determined the prevalence of physical inactivity and associated risk factors for weight gain among working adults of urban Delhi, India.

A cross-sectional study was conducted among 455 employed adults (both males and females) using the Global Physical Activity Questionnaire (GPAQ). Relevant sociodemographic information was recorded with the help of a pre-structured questionnaire and BMI was computed for each respondent.

The overall prevalence of obesity (Males - 27.3% and Females - 15.4%) and overweight (Males - 13.2% and Females - 7.7%) among the employed adults was 42.6% and 20.9%. It was found that 32.3% of the subjects had low, 60.4% had moderate and only 7.3% had high physical activity. Males were found to be more physically active in comparison to females. It was found that sedentary lifestyle among working adults was one of the significant risk factors for the prevalence of overweight/obesity (63.5%, p<0.05) along with family history (74.9%), smoking (17.6%) and drinking (37.8%). Low physical activity was negatively correlated with increased BMI (p<0.005). An increasing trend in prevalence of overweight/obesity was observed with increase in age from early to late adulthood. Gender, age and marital status was significantly associated with abdominal obesity (p<0.05).

Being physically inactive, consumption of alcohol, being married and a female, in addition to increase in age, increases the risk of obesity and overweight significantly.

Non-communicable diseases (NCDs) contribute to around 38 million (68%) of the annual deaths globally. India being a populous country of about 1.3 billion affects the global burden of NCDs. Hence, the objectives of this paper are: (1) To find the baseline information on different NCD risk factors and their coverage. (2) To determine the trends of important NCD risk factors till 2016.

PubMed, Google and different surveillance systems were searched. National and state representative data, covering rural and urban population on NCD risk factors, having World Health Organisation (WHO) indicator definitions, were included in the study. The availability and trends of the various NCD risk factors were reviewed.

Various national/state level surveys in India include single or multiple risk factors. Nationwide coverage is available for tobacco use, alcohol drinking, blood pressure and overweight and obesity (100%). Periodic National Family Health Surveys provide information on selected risk factors between 2005-16 among adults aged 15-49 years. An overall significant increase was noted among overweight and obese males and females in 29 states in 2015-16 while a decline was noted in both tobacco and alcohol use by 2016.

India has a much delayed response on NCD risk factors surveillance and information of the same are sporadic and incomplete. In order to increase information comprehensiveness, standard WHO NCD risk factors questions must be incorporated in the ongoing surveys. India should also plan for cost and time effective NCD surveillance system.

Abs. No. AB00OR498

Risk factor profile of non-communicable diseases among youth in urban city of Himachal Pradesh

Devender Kumar, Anupam Parashar, Anita Thakur
Department of Community Medicine, IGMC, Shimla, Himachal Pradesh, India.
E-mail: dev10121986@gmail.com

Youth is important stage in life cycle in relation to the development of chronic non-communicable diseases. Late adolescence and youth population is the most vulnerable age group to develop these behaviours in their life style as behaviour changes are initiated and long term decisions are taken at this age. They are also considered more likely to quit the wrong habits in time before further harm, if appropriate intervention is taken. It is therefore important...
Abstract

Prevalence of diabetes and its correlates in Hisar urban population with specific emphasis on muscle strength and sedentary behaviour variables

Sivachidambaram Kulandaivelan, Ravinder Kumar1, Mahamed Ateef, Jaspreet Kaur Malik, Rekha Chaturvedi
Department of Physiotherapy, GJUST, Hisar, Haryana, 1Physiotherapy Center, Chandigarh, India, 2Department of Physiotherapy, CAMS, Majmaah University, Al-Majmaah, KSA.
E-mail: tryhard2024@yahoo.co.in

Population based large sample size study that examines hand-grip strength (HGS) and other sedentary behaviours on diabetes is scarce in northern India. We randomly selected 1788 subjects through multi-stage random sampling technique (response rate 72.0%; females 54.59%; mean age 28.86% of the participants had consumed alcohol in last one year. Low levels of physical activity were recorded among 63.68% of the participants. 81.76% of participants were consuming fruits only 3 days per week or less. The prevalence of overweight and obesity was 9.45%) and 1.99% respectively. Prevalence of raised blood pressure is 7.46% i.e. pre-hypertensive (5.97%); hypertensive (0.33%) and isolated systolic hypertension (2.37%). 2.48% and 9.09% of study participants were found to be diabetic and pre-diabetic respectively.

High prevalence of risk factors of NCDs among youth has been reported. There is an urgent need to direct and implement prevention and control interventions to this section of population in order to lower the serious consequences of NCDs.

Abs. No. AB00OR506

Prevalence of diabetes and its correlates in Hisar urban population with specific emphasis on muscle strength and sedentary behaviour variables

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Abstract

Vishwas Sharma, Amrita Nandan¹, Amitesh Kumar Sharma², Harpreet Singh², Mausumi Bharadwaj³, Dhirendra N Sinha³, Ravi Mehrotra³
¹Department of Bioinformatics, Indian Council of medical Research, New Delhi, Society of Life Science and Human Health, Allahabad,
²Department of Molecular Genetics, national institute of Cancer Prevention and Research, Noida, ³WHO-FCTC Global Knowledge Hub on Smokeless Tobacco, National Institute of Cancer Prevention and Research, Noida, ⁴Department of Molecular Cytology, National Institute of Cancer Prevention and Research, noida, Uttar Pradesh, India.
E-mail: vishmicro@gmail.com

Oral cancer (OC) aetiology is complex and controlled by multi-factorial events including genetics. Candidate gene studies (CGS), genome-wide association studies (GWAS) and next generation sequencing (NGS) identified various chromosomal loci to be associated with OC. There is no available review that could give us the comprehensive picture of genetic loci identified to be associated with OC by CGS, GWAS and NGS based approaches.

Systematic literature search was performed in the PubMed database to identify the loci associated with OC by exclusive CGS, GWAS and NGS based study approaches. The information of loci associated with OC is made online through the resource "ORNATE". Next, screening of the loci validated by CGS and NGS approach, or by two independent studies within CGS or NGS approaches were performed.

A total of 264 loci were identified to be associated with OC by CGS, GWAS and NGS approaches. Twenty eight loci i.e. 14q32.33 (AKT1), 5q22.2 (APC), 11q22.3 (ATM), 2q33.1 (CAPS8), 11q13.3 (CCND1), 16q22.1 (CDH1), 9p21.3 (CDKN2A), 1q31.1 (COX-2), 7p11.2 (EGFR), 22q13.2 (EP300), 4q35.2 (FAT1), 4q31.3 (FBXW7), 4p16.3 (FGFR3), 1p13.3 (GSTM1-GSTT1), 11q13.2 (GSTP1), 11p15.5 (H-RAS), 3p25.3 (hOGG1), 1q32.1 (IL-10), 4q13.3 (IL-8), 12p12.1 (KRAS), 12q13.12 (MAML2), 9q34.3 (NOTCH1), 17p13.1 (p53), 3q26.32 (PIK3CA), 10q23.31 (PTEN), 13q14.2 (RB1), 5q14.2 (XRCC4) were validated to be associated with OC.

“ORNATE” gives a snapshot of genetic loci associated with OC. Twenty-eight loci were validated to be linked to OC for which further fine-mapping followed by gene-by-gene and gene-environment interaction studies is needed to confirm their involvement in modifying OC.

Abs. No. AB00P0649

Temporal and future projection of diabetes mortality trends in Sri Lanka, By 2025

Abs. No. AB00OR642

Signature of genetic associations in oral cancer

Vishwas Sharma, Amrita Nandan¹, Amitesh Kumar Sharma², Harpreet Singh², Mausumi Bharadwaj³, Dhirendra N Sinha³, Ravi Mehrotra³
¹Department of Bioinformatics, Indian Council of medical Research, New Delhi, Society of Life Science and Human Health, Allahabad,
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Abs. No. AB00P0649

Temporal and future projection of diabetes mortality trends in Sri Lanka, By 2025

Abs. No. AB00OR642

Signature of genetic associations in oral cancer

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¹Department of Bioinformatics, Indian Council of medical Research, New Delhi, Society of Life Science and Human Health, Allahabad,
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“ORNATE” gives a snapshot of genetic loci associated with OC. Twenty-eight loci were validated to be linked to OC for which further fine-mapping followed by gene-by-gene and gene-environment interaction studies is needed to confirm their involvement in modifying OC.
Sri Lanka is a small country with twentyone million populations. The country is one of the highest diabetes prevalence countries in the world. The aim of this study is to identify the temporal and future mortality trends of diabetes in Sri Lanka on the eve of year 2025. Cause of deaths data, including diabetes deaths, are available to public from 1992 to 2010 from the Department of Census and Statistics. The future projection was done from 2011 to 2025 by using linear regression method. Microsoft Excel 2016 was used for the analysis. The total diabetes death rate showed a fivefold (9/100,000 in 1992 to 45.5/100,000 in 2010) increase in 2010 compared to 1992. Every year male diabetic death rates were greater than the female death rates. Both the male and female death rates showed a fourfold and fivefold increase from 19992 to 2010 respectively. According to the projections, total death rate was further increased in to 54/100,000 in 2015 and it will be 78/100,000 in 2025, almost a ninefold increase compared to 1992. Similarly, both male and female death rates were further increased to 28/100,000 and 26/100,000 in 2015 respectively. The male death rates will be increased by eight fold by 2025 and the female death rate will be increased by ninefold by 2025. Conforming to the analysis, diabetes becomes one of the major burdens of diseases in the country. And diabetes deaths have the possibility to become the number one cause of deaths in Sri Lanka in the near future.

Abs. No. AB000R595

Investigation of cancer cluster in an industrial area of northern state of India

Sanjay Kumar, Vijay Barwal, SR Mazta, Shishupal Singh Thakur
IGMC, Shimla, 1YSPGMC, Nahan, Himachal Pradesh, India.
E-mail: drsanjayk82@gmail.com

Cancer clusters may be reported when people learn that friends family, neighbors are diagnosed with cancer. Often there’s a concern that cancer is caused by some type of carcinogens that is being released into the environment. This paper reports an investigation done on the request of National Health Mission, Himachal Pradesh of a similar concern regarding suspected clustering of cancer cases in two health blocks in Solan district of Himachal Pradesh.

A House to house search was undertaken to find out the cancer cases under treatment as well as patients who had succumbed to the disease starting retrospectively from the year 2011 to 2016. Data was collected using a pre-tested schedule/questionnaire from the patients or their immediate family members and also from the medical records wherever available.

A total of 82 patients with history of cancer or having treatment records were identified. Of these 58.5% were males. No specific type of cancer predominated, and the cancers showed no clustering age wise. The 5-year prevalence for all types of cancers in the area came out to be 206.6 per lakh population (95% CI 164.2249.0) which is not significantly different from the national 5year prevalence of 202.9 per lakh for India.

In light of our findings it does not appear to be a true cluster of cancer cases. It may be a chance accumulation of different types of cancers with different latent periods roughly at around the same time.

Abs. No. AB000R663

A hospital based study of stroke in young from North East India

Masaraf Hussain, SR Sharma
Department of neurology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India.
E-mail: masaráfhussain@yahoo.co.in

Study of stroke among young adults and children has recently become a subject of interest. This is because it has a major impact on the individual and society. Studies of stroke in young can lead to therapeutically results affecting both short term and long-term outcomes. This paper is based on a hospital based retrospective study, of Stroke in Young, for a duration of one year. Total number of stroke patients seen was 117, with more of male patients, mostly Infarcts. Most common risk factors were alcohol abuse, tobacco use, vitamin B12 deficiency, and cardiac causes. Post-partum venous thrombosis was also detected. The factors leading to Stroke in young needs to be addressed urgently by appropriate preventive measures, as they lead to devastating consequences in the most productive age group.
Abs. No. AB00P0529

Prevalence of thyroid dysfunction in chronic kidney disease

B. Nandini Priyanka, S Balasubramaniyan, N Paari
Department of General Medicine, Raja Muthai Medical College, Annamalai University, Chidambaram, Tamil Nadu, India.
E-mail: b.nandinipriyanka@gmail.com

The Aim of the present study was aimed to study the prevalence of thyroid dysfunction in chronic kidney disease. The data was collected from the patients reported to dialysis unit, OPD and wards. During the period of 12 months, 50 patients who had undergone treatment for chronic kidney disease were followed up. Patients with chronic kidney disease confirmed by imaging and creatinine clearance, patients on hemodialysis or conservative treatment were included in this study. Patients on thyroid replacement, anti thyroid drugs, steroid and hormone therapy were excluded in this study.

50 patients (39 males and 11 females) were included in the study. From the study, incidence of thyroid dysfunction was found to be more in the age group of 40-50 years of age. 30 patients were on hemodialysis and 20 patients were on conservative treatment. In our study, 13 patients (26%) were found to have hypothyroidism. Among them, clinical features and investigations revealed 4 patients with clinical hypothyroidism and 9 patients with subclinical hypothyroidism. No incidence of hyperthyroidism were found in this study.

There were 20.67% overweight and 4% obese, which was not related to age or gender. Prevalence of hypertension was 9.3% and pre-hypertension was 40%. The proportion of students with CRF grades - Above average (34.7%) average (24.7%), below average (20.7%) good (16%) poor (3.3%) and very poor (0.7). CRF was better in female participants.

The prevalence of risk factors with family history is high along with the prevalence of lifestyle risk factors like smoking, obesity, use of alcohol and inadequate physical activity. The grades of CRF is satisfactory, especially among females.

Abs. No. AB00P0623

A population-based study of prevalence and risk factors of chronic kidney disease in adult population of Shiraz, Southern Iran

Marzieh Bakhshayeshkaram, Jamshid Roozbeh, Mohammad Hossein Dabbaghmanesh, Kamran Bagheri Lankarani, Sayed Taghi Heydari, Behnam Honarvar
Health Policy Research Center, 1Shiraz Nephro-Urology Research Center, Shiraz University of Medical Sciences, Endocrinology and Metabolism Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
E-mail: bakhshayesh@sums.ac.ir

Currently we face a significant increase in the new cases of end-stage renal disease in developing countries. Hence it seems vital to work on strategies and reduce its development and progression. Determining the related
risk factors can provide insight into achieving this policy making goals. Therefore, this study was conducted in order to identify risk factors associated with chronic kidney disease in Iranian adult population.

This cross-sectional study was performed in Shiraz, through a cluster random sampling in 819 including 340 males and 479 female adult participants. Body mass indexes, waist circumference, blood pressure and biochemical profile were assessed. We evaluated the prevalence of CKD according to glomerular filtration rate (GFR) as well as possible risk factors. GFR was calculated based on “Chronic Kidney Disease Epidemiology Collaboration” creatinine equation.

Mean age of our participants were 43.0± 14.0 years and 58.5% were female. Our results showed 16.6% of patients with GFR less than 60 mL/min per 1.73. The proportion of participants having hypertension, obesity, high waist circumference, diabetes mellitus and history of cardiovascular disease were 17.3%,19.3%, 35%,9.4% and 5.3%, respectively. Multiple regression analysis indicated an independent correlation between age, sex, central dyslipidemia and hypertension with CKD.

This study indicates that CKD is a substantial health burden in Iranian adult population. Additionally, the results of this study addressed the importance of integrated strategies that aimed to identify, prevent, and treat non-communicable diseases that fuel the development of CKD.

Abs. No. AB00PO769

Perception and utilisation of health care services for non-communicable diseases among residents of an urban area of Koraput district, South Odisha: A mixed method study

Monali Kar, RM Tripathy
Department of Community Medicine, MKCG Medical College, Berhampur, Odisha, India.
E-mail: drmonalikar@gmail.com

Non-Communicable diseases are becoming leading causes of death worldwide. About 82% of death from NCDs happens in LMIC including India. Under NPCDCS program NCD clinics had been established in 5 districts of Odisha including Koraput district from 2011-12. So this study is conducted in an urban area of Koraput to assess the perception and utilization of NCD health care services in study area and find out factors associated with it.

Quantitative findings revealed that 57.5% of study population were unaware of availability of any health services for NCD near their residence. 88.4% had never used any NCD health services for routine health check up. 80.2% of them never got any health information about NCD health services available in the area. Education, income, distance from health centre and waiting time at health centre were significantly associated with utilization of NCD health services. Qualitative findings highlighted that non-regular utilization of NCD services was mainly due to low knowledge and negligence about chronic diseases among them and high level of satisfaction from private health providers. Few of them usually avoid going NCD clinics as they have to wait for a long period there.

Low knowledge, self-awareness about the chronic diseases and NCD clinics was lacking in the community. Awareness about NCD and its health care services should be promptly raised among them.

Abs. No. AB00OR774

Magnitude and determinants of gestational diabetes: A cross sectional study from field practice area of a Medical College

Manish Chandra Prabhakar, P Deshmukh, A Raut
Department of Community Medicine, MGIMS, Wardha, Maharashtra, India.
E-mail: drmanishprabhakar@gmail.com

Gestational diabetes mellitus (GDM), is a common pregnancy complication and a growing health concern. It is important to recognize and treat gestational diabetes soon to minimize the risk of complications to mother and baby. GDM affects around 15% of pregnant women globally. The prevalence of GDM in India varies from 3.8 to 45.4%. The GOI guidelines recommend use of a calibrated plasma standardized glucometer to evaluate blood glucose 2 hours after the oral glucose. Pregnant women enrolled in this study of reproductive age group 15-45 year, are being followed up every month for their conception once they miss their menses, urine pregnancy test is being done to confirm pregnancy. Cross Sectional Study. October 2016 to May 2018. The study will be carried out in the villages under three Primary Health Centres Community Development Block located in Field
Abstract

practice area of medical college. Pregnant women who are permanent resident of village in study. 1260. Pregnant mothers will be screened for gestational diabetes mellitus as per the DIPSI guidelines, the testing will be done during 24-28 weeks of pregnancy. 75g glucose will be given orally after dissolving in approximately 300ml water After 2 hours, her 3-ml venous blood will be collected for blood sugar estimation. Data on exposure will be collected using pre-diagnosed and pre-tested questionnaire.

Abs. No. AB00OR144

Double burden of malnutrition among under fives in a Anganwadi centres of Chandigarh

R Saranya, Bhavneet Bharti, Sathiabalan Murugan1, Manvi Singh
Departments of Pediatrics and ‘Community Medicine, PGI MER, Chandigarh, India.
E-mail: sathiabalanm@gmail.com

In view of a changing global nutrition landscape, diet-related epidemiology has been influenced by migration, urbanization, economic and income inequalities. The double burden of malnutrition in the population is characterized by the coexistence of under nutrition along with overweight and obesity in the same population. India too faces the dual burden of malnutrition both at population and individual levels. The aim of this study was to estimate the prevalence of double burden of malnutrition in underprivileged children attending the Anganwadis centers in Chandigarh.

The study is being conducted as a rapid cross-sectional survey across all Anganwadi centers in Chandigarh. Children in the age group of 6mths to 5years are enrolled. There are 500 Anganwadi centers in Chandigarh with nearly 60-120 children registered in each Anganwadi centre. At least 30 children were enrolled from each center. The Anganwadi workers were trained to record Weight, Height and length using calibrated scales with permissible error of 100gms in weight and 0.1 cm for Length/height. Underweight, stunting, and wasting were defined using World Health Organization Child Growth Standards (2006) for weight-for-age, height-for-age, and weight-for-height. Weight-for-age values, height-for-age values or weight-for-height values below 2standard deviations were considered as underweight, stuntingand wastingSevere acute malnutrition (SAM) is defined as Wt for Ht <-3 Z score and Overweight as Body Mass Index(BMI) Z score more than +2 Z score using WHO growth standards.

Total of 6269 under 5 children have been enrolled till date. Extreme outliers in the data were eliminated (weight and height z scores below or above 5). Stunting (HFA <-2), underweight (WFA <-2) and wasting (WFH above 2 years and WFL 2 years or below) affected 43.52%, 29.56%, 16.49% of the under 5’s respectively. The comparative figures for Chandigarh under the NFHS 4 are 28.7%, 24.5% and 10.9%. The prevalence figures for the underprivileged children in Anganwadis are clearly higher. The prevalence of SAM in the study population is 4.88%. On the other hand, overweight was 4.71%. Gender differences were not significant as far as stunting is concerned. However, boys were significantly more wasted (18.33% of boys as compared to 14.61% of the girls; p-value <.01) as well as underweight (boys 30.83% vs. girls 28.26%; P value 03).

Our study clearly shows the double burden of malnutrition in the underprivileged under 5 children population of Chandigarh. Policy makers, public health experts and health care providers a need to plan integrated action for all forms of malnutrition in order to achieve Sustainable Development Goals (in particular Goal 2 and Target 3.4) and the Commitments of the Rome Declaration on Nutrition.

Abs. No. AB00PO853

Surveillance for non-communicable breast disease by breast-i

Siddharath Raj Chopra, Ira Bharadwaj, Swaroop N Shashidhar
Department of Pathology, Karuna Medical College, Chittur, Kerala, India.
E-mail: richagrover@gmail.com

The incidences of non-communicable breast diseases in women are increasing worldwide. Thus, the need for an ideal surveillance technology has led to the evolution and development of BREAST-i.

BREAST-i fulfils all the criteria of surveillance technology which is reliable, economical, non-invasive, rapid and patient friendly. BREAST-i is handheld - convenient to use and involves no radiation.

The procedure is patient friendly as there is minimal physical handling of breast tissue.

Time taken for the procedure is very short and the results are available immediately. No patient preparation is required.
BREAST-i technology involves studying the vascular patterns of breast through the transmitted red light at around 623nm from a handheld device in a dark room.

Vascular patterns in different diseases are different and are distinct from those in normal subject. Angiogenesis around a cancer absorbs excess light and produces shadow whose size and intensity depends on the tumour size. The purpose of BREAST-i is to alert the examiner for the need to refer the patient (well woman) for further investigations such as x-ray mammography and or ultrasound. BREAST-i may also be used as an adjunct to clinical breast examination.

Early trials carried out in Ghana are highly encouraging with high sensitivity and specificity.

More research is needed to validate and popularise the use of Breast-i.

Abs. No. AB00OP133

Prevalence and risk factors associated with hypertension and prehypertension in a working population at high altitude in China: a cross-sectional study

Peking University School of Public Health, Beijing, China.
E-mail: shenyang@bjmu.edu.cn

The burden of non-communicable diseases (NCDs) in China is substantial now, while little attention has been paid to working population. The aim of this study was to investigate the prevalence of NCDs and their associated risk factors among employees in urban China. Besides, health equity among employees with different socioeconomic status (SES) – measured by education, income and occupational class, was evaluated. A cross-sectional study was conducted between Mar to Oct 2015, and totally 3553 employees from 5 types of workplaces in Beijing, Xiamen, Quanzhou, and Hohhot were selected using stratified cluster sampling and investigated by questionnaires. The prevalence of self-reported NCDs in the employees from four cities was 14.8%, with 16.7% in men and 12.5% in women, respectively. Logistic regression analysis showed the risk of NCDs increased with advancing age; college and above education (OR=2.020, 95%CI: 1.567-2.605), high level of occupational stress (OR=1.328, 95%CI: 1.091-1.617), overweight or obesity (OR=1.530, 95%CI: 1.249-1.875), smoking (OR=1.436, 95%CI: 1.148-1.798) and drinking (OR=1.976, 95%CI: 1.409-2.771) were risk factors for NCDs, whereas migrant was protective factor (OR=0.756, 95%CI: 0.604-0.945). In the gender-stratified analysis, significant difference in the prevalence of NCDs among employees with different SES were observed (both P<0.01), and the concentration indexes (CI) for NCDs were positive and highest in income group. Overall, the findings suggest that NCD prevalence was relatively low in the above settings and closely associated with age, education, occupational stress and lifestyles. There is socioeconomic inequities in NCDs prevalence – of which were particularly concentrated among higher SES groups according to self-reported diagnoses.