



**UWI**

ST. AUGUSTINE CAMPUS  
TRINIDAD & TOBAGO, WEST INDIES

*20th Annual*  
**Faculty Student Research Day**

**FACULTY OF MEDICAL SCIENCES**

**THURSDAY 28 SEPTEMBER 2017**  
ERIC WILLIAMS MEDICAL SCIENCES COMPLEX  
CHAMPS FLEURS



THE UNIVERSITY  
OF THE  
WEST INDIES  
ST. AUGUSTINE CAMPUS  
TRINIDAD & TOBAGO  
WEST INDIES

# 20<sup>th</sup> Annual Faculty Student Research Day

## FACULTY OF MEDICAL SCIENCES

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Dr Adelle Chin	Ministry of Health
Dr Raveed Khan	School of Medicine, FMS

### PROGRAMME COORDINATOR

Dr Vijay Kumar Chattu  
Public Health and Primary Care Unit  
Department of Paraclinical Sciences  
Faculty of Medical Sciences  
(868) 645-3232 ext 2884  
Vijay.Chattu@sta.uwi.edu

### SECRETARY

Ms Dawn Weekes  
Public Health and Primary Care Unit  
(868) 663-8010 or (868) 645-3232 ext 2882  
Dawn.Weekes@sta.uwi.edu

DESIGN AND PRINT  
Centre for Medical Sciences Education (CMSE)

Faculty of Medical Sciences The University of the West Indies St. Augustine Campus | (868) 645-8639 | cmse@sta.uwi.edu

## FOREWORD

The Annual Medical Students' Research Day presents an opportunity to the University community and stakeholders to appreciate the work medical and dental students have undertaken as part of the Public Health curriculum during the second year of their medical and dental programmes.

This 20<sup>th</sup> Annual Faculty Student Research program is unique and special as it is expanded and embraces all the schools under the Faculty of Medical Sciences (FMS).

This abstract book includes the summary of the research projects undertaken by 39 groups of medical, dental students (year 2) and undergraduate students of Nursing and Optometry programmes. These projects undertaken have relevance to Public Health Medicine. Students are advised to share their findings with relevant stakeholders (Ministry of Health, Regional Health Authorities, CARPHA etc.) to inform and improve health policy and practice where applicable.

The Unit of Public Health and Primary Care would like to acknowledge the Head of Department, Dr Gershwin Davis, supervisors of the projects, the Medical Sciences Library, the Campus Ethics Committee, the Centre for Medical Sciences Education, the Directors of various schools under FMS and the Dean of the Faculty- Professor Terence Seemungal for their commitment to the students and the programme.

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## The adherence to protocol in paediatric immunization and to reinforce its importance in health centres

### MEDICAL EXPLORERS

*Akshay Maharaj, Kharishma Maharaj, Preetika Maharaj, Tamera Maharaj, Varin Maharaj, Ria Mahase, Tarini Mahase, Vikash Mahase. Dr. Virendra Singh*

#### Background

Regionally within the Caribbean, UNICEF's regional analysis uses the measles vaccine as a primary indicator of progress towards the national immunization coverage goal of 90%. Within our country, according to UNICEF's country profile as of July 5 2016, the approximate coverage for a total of 11 vaccines is tailored to be 91.5%. This value is based on initial data available to UNICEF and then the data was used in precise estimates which were reported to have fallen within coverage reports by our government.

#### Objectives:

The objectives of this study are:

- i. To investigate the reasons for non-immunisation amongst paediatric patients.
- ii. To determine if educating vaccine administering personnel on valid reasons for non-immunization would elicit an increase in the immunisation rate at selected health centres located within the North Central Regional Health Authority.

#### Method

A cross-sectional study, a type of observational study, was conducted at select health centres within the NCRHA. In total, a sample size of 229 paediatric immunizations were recorded. The data collection tool used was an optimized SPSS collection table that would have facilitated collection of key data such as vaccine type and number and reasons for non-immunization. The table included columns for patient code, age, vaccine code, immunization status and reasons for non-immunization given by nurse, doctor, and to the parent/guardian.

#### Results

Out of the 229 paediatric cases, only 18 were not immunized. Reasons included having fever with symptoms, check-up visit, and various medical complications. Of the 18 that were non immunized, 2 patients were inappropriately turned away. The reasons were wheezing and suspected hydrocephalus. Two further observations with respect to eggs in diet, and administration of the IPV vaccine at 2 months, were noted.

#### Conclusion

In summary, the two patients who were wrongfully denied immunization should have been immunized as reasons given for non-immunization were not recognized contraindications. Additionally, it must be noted that IPV is to be given at an age of 2 months in accordance with WHO guidelines. Also, the absence of dietary egg would not jeopardize the ability to receive the yellow fever vaccine.

## Demographic and lifestyle factors that affect HbA1c awareness amongst type II diabetic patients in Trinidad

### TYPE 2 DIABETES MELLITUS

*K. Khan, C. Kidney, V. Knowles, A. Koo, A. Lakhan, D. Lalla, S. Lallo, C. Lalloo, S. Singh, B. S. Nayak*

#### Background

Trinidad and Tobago is amongst the countries with the greatest burden of Type II Diabetes (T2D) in the western hemisphere. Educating T2D patients about their HbA1c and the ideal value that should be achieved, are recommended as measures to reduce morbidity and mortality associated with T2D complications.



## Objectives

The objectives of this study are: (i) Determine the awareness of HbA1c value amongst the type II diabetic population. (ii) Determine if there are any relationships bet HbA1c awareness and lifestyle factors such as diet and exercise (iii) Determine if there are any relationships bet HbA1c awareness and other demographics such as education level

## Methodology

A questionnaire was designed targeting 222 T2D patients of the EWMSC and SFGH Adult Diabetic Outpatient Clinics in Trinidad. Questionnaires were administered face-to-face and items included demographics (age, gender, ethnicity and education), medical history, diabetic status, lifestyle and self-management practices (for example exercise intensity, diet, alcohol consumption), job status, stress levels and income levels.

## Results

Among the 222 persons were surveyed 93 (41.9%) were males and 129 (58.1%) females. Of the respondents, 41.9% were aware of the term HbA1c whilst 58.1% were unaware. Statistically, there were positive correlations between HbA1c awareness and level of education received by T2D patients as well as between HbA1c awareness and intensity of exercise performed;  $p < 0.05$ . There was a relationship between dietary breakfast choices and HbA1c awareness however this was not found to be significant at  $p = 0.079$ . No significance was found between HbA1c awareness and income levels.

## Conclusion

A significant correlation was established between HbA1c awareness and intensity of exercise performed by T2D patients. It was also concluded that education level and awareness of the HbA1c value in monitoring glycemic control were related.

## An Observational Study Identifying the Types and Frequency of Dispensing Errors In The Pharmacies of The Eric Williams Medical Sciences Complex

### THE 'PROS PLANNING ALL'

*Adrian Brahim, Horry Brown, Danielle Budraj, Vatalie Caesar, Anyse Calder, Deisha Carr, Dion Castillo, Kevin Cedeno, Dr. Sandeep Maharaj, Prof. Sureshwar Pandey.*

## Background

A dispensing error can be defined as an inconsistency between the drug prescribed to a patient and the drug dispensed. These errors can include the dispensing of medication with inferior pharmaceutical or informational quality. Dispensing errors can be harmful or even fatal to patients.

## Objective

The objectives of this study are: (i) To Determine the types and frequency of dispensing errors at the Eric Williams Medical Sciences Complex (EWMSC), (ii) to explore the reasons for their occurrence and (iii) to make suitable recommendations for their prevention.

## Method

To Determine the types and frequency of dispensing errors at the Eric Williams Medical Sciences Complex (EWMSC), to explore the reasons for their occurrence and to make suitable recommendations for their prevention

## Results

66 errors were identified at the Adult Outpatient Pharmacy of the EWMSC, 19 at the Paediatric Outpatient Pharmacy and 22 at the Inpatient Pharmacy. The most common possible causes included a high workload, failure to verify patient information, incorrect data recorded in the pharmacy's system of records, inadequate notes made by pharmacists on a prior visit and in some cases, uncomfortable working conditions.

## Conclusion

Dispensing errors were encountered in 2.1% of all the prescriptions filled at the EWMSC pharmacies and recommendations were made to counter them. The study should be expanded to other pharmacies under the North Central Regional Health Authority (NCRHA) and the other Regional Health Authorities (RHAs) of Trinidad and Tobago.

## A cross-sectional study on the behavioural and nutritional determinants of obesity and their correlation to hypertension among students of The University of The West Indies; St. Augustine campus

BMI (BRIGHT MEDICS INCORPORATED)

*Crystal Cummings, Garreth Curry, Kavrita Dasigan, Radha Dass, Sharmarka Davis, Lance De Barry, Antar De Freitas, Melina De Four and Dr. Vijay Chattu*

## Background

Globally, beginning a university programme is frequently correlated with increased autonomy over the choices which a student makes with respect to the purchasing and preparation of foods that comprise their diet. With such a degree of independence, students may not take into account the risk of developing chronic diseases when making meal choices resulting in poor food decisions. Consequently, it is becoming increasingly difficult for students to maintain a healthy weight especially since food options are generally large-portioned with high-calories. The inadequate availability of healthy food coupled with elements like frequent snacking, price of food and skipping meals leads to high consumption of convenient foods thereby increasing the probability of a university student adopting of poor dietary health.

Additionally, with the advancement of technology, students rely greatly on energy-saving devices while the majority of the day is spent sitting thereby greatly reducing physical activity.

## Objective

- I. To evaluate the prevalence of obesity in UWI students,
- II. To investigate behavioural and dietary determinants of obesity in UWI students,
- III. To assess the prevalence of hypertension in UWI students,
- IV. To investigate the correlation between hypertension and obesity in UWI students.

## Method

Questionnaires were handed out to approximately 500 students. Students from The University of The West Indies St. Augustine campus were given surveys comprising 30 questions. The questions would be aimed at assessing the individual's nutritional and behavioural habits. Additionally, the heights and weights of the participants would be taken. Thereafter, their BMI would be calculated.

## Results

Our findings revealed a large proportion of overweight (21.4%) and obese (12.7%) UWI students (X=523). Gender and age were found to have a significant association with weight status ( $p < 0.05$ ). There was also high proportion of pre-hypertensive (36.9%) and hypertensive (20.8%) UWI students (X=520). Additionally, our data provides strong evidence of a relationship between obesity and hypertension ( $P = 0.000$ ) since the obese student population had the highest prevalence (44.8%) of hypertension. In this study, the obese

students indicated a strong desire to improve their health ( $P=0.002$ ) and reported to be making more lifestyle changes such as altering their diet ( $P=0.001$ ) and exercising in attempt to lose weight ( $P=0.001$ ). Exercise ( $P=0.023$ ), frequency of carbonated soft drink consumption ( $P=0.001$ ) and having a relative who suffers from cardiovascular disease ( $P=0.016$ ) showed a notable association. Weight classification was also found to be significantly correlated with moderately severe depression ( $P=0.049$ ).

## Conclusion

According to the results, there was a high prevalence of obesity and hypertension with an evident correlation between the two variables. Few behavioural and nutritional determinants were associated with obesity because the obese students reported to be taking actions with respect to their diet and exercise in an attempt to reduce their weight. Nevertheless, strategies must be implemented to promote effective guidelines for a healthy lifestyle thereby seeking to reduce the prevalence of obesity and hypertension.

## The Prevalence of MRSA and Other *S. aureus* Strains in Pets (Cats and Dogs) and their Human Owners in Rural and Urban Areas in Trinidad and Tobago

### THE RESISTANCE

*Natalie Sandy, Brandon Satram, Naomi Scott, Christopher Seeraj, Ishta Seeram, Brittany Seerattan and Keenan Seuradge. Prof. A. A. Adesiyun and Mrs. Alva Stewart-Johnson*

## Background

MRSA is a highly resistant strain of *S. aureus* that no longer responds to the beta lactam group of antibiotics (Amoxicillin, Penicillin, Methicillin and Oxacillin). Factors such as degree of knowledge of proper usage and uncontrolled access of these antibiotics have a potential to play an important role in the prevalence of MRSA which result in the therapeutic failure in both animal and human populations.

## Objectives

To assess the prevalence of CA-MRSA and other *S. aureus* species in rural communities in Trinidad and Tobago, to assess the prevalence of *S. aureus* and MRSA in the household pets that owners have most contact with and to determine the susceptibility patterns of CA-MRSA strains to several antibiotics sequestered from both pets (cats and dogs) and humans from both communities.

## Method

This is a cross-sectional study in which questionnaires were used to collect demographic and risk factor data or human participants and their pets for MRSA in rural and urban communities. Nasal swabs were obtained from 100 humans and 100 pets (cats and dogs). Biochemical tests such as: gram staining, catalase and DNase were used to determine *Staphylococcus* spp. presence. Antibiotic resistance was assessed by Kirby-Bauer disk diffusion and resistance patterns noted. Detection of MRSA was initially assessed by the resistance of *S. aureus* to Cefoxitin and confirmed by the PBP2 latex agglutination test.

## Results

The overall carriage rate for *S. aureus* in the anterior nares of both pet animals and their owners in both urban and rural communities was 50.5% (101/200). For MRSA, the prevalence was 6.0% (3/50) and 2.0% (1/50) in household pet animals and their owners respectively in urban communities while in rural communities, the prevalence was 4.0% (2/50) and 12.0% (6/50) respectively. The differences were statistically significant for owners ( $p < 0.05$ ). The same antimicrobial resistant pattern (CL-FOX-P-AML) was detected between MRSA strains isolated from a household pet and its owner, suggestive of zoonotic spread in the carriage of the pathogen. Human males (32%) were at a higher risk of being carriers of *S. aureus* than females (12%) in the rural district. For household pets, the risk of carriage of MRSA was high amongst those that lived in both indoors and outdoors (4%) and had contact with other animals (4%)

## Conclusion

This study provided important information for *S. aureus* nasal colonization in household pets and their owners in urban and rural communities. In addition, it demonstrated that living in rural communities increased the odds of MRSA colonization. It is recommended that more attention should be paid to control MRSA colonization in rural communities in Trinidad and Tobago.

## Prevalence rates of impaired glucose tolerance and gestational diabetes mellitus amongst expectant mothers, and undiagnosed diabetes mellitus in walk-in patients at NCRHA health centers

### THE SUGAR DADDIES

*J. Benjamin, S. Bidehsi, J. Bisnath, R. Bissessar, J. Blackman, T. Bobb, N. Boodoo, R. Khan*

## Objective

To assess the prevalence rates of impaired glucose tolerance and gestational diabetes amongst expectant mothers, as well as the prevalence rate of undiagnosed diabetes mellitus in walk-in patients at select health centers under the purview of the North Central Regional Health Authority.

## Design

A cross-sectional study over the period January 2012 to December 2016.

Setting: Arouca Health Centre, Macoya/Tunapuna Health Centre and St. Joseph Enhanced Health Centre.

Sample population: Pregnant women aged 18-45 years who were within their 2nd - 3rd trimester of pregnancy, and for undiagnosed diabetes mellitus the sample population consisted of males and females over the age of 18.

## Methodology

Medical records of 90 pregnant women and 174 walk-in patients who received care at the selected health centers during the period January 2012 - December 2016 were examined and the following were recorded: Age, Ethnicity, Parity, Gravidity, Past medical/ surgical history, Past obstetric history, Oral glucose tolerance test results, Random blood glucose results, HbA1c results and family history of diabetes mellitus.

## Results

The sample population was 90 expectant mothers and 174 walk-in patients. However, valid results were available for 50 expectant mothers and 78 walk-in patients. Of the 50 valid results for expectant mothers, 1 mother had a confirmed diagnosis recorded for Gestational Diabetes Mellitus yielding a prevalence of 2% for GDM. Age was positively correlated with the diagnosis of Impaired Glucose Tolerance. ( $p=0.028$ ).

Of the 78 valid entries for walk-in patients, 14 had a confirmed diagnosis of Diabetes Mellitus yielding a prevalence of 18% for undiagnosed DM. A family history of diabetes was positively correlated with a subsequent diagnosis of DM amongst previously undiagnosed diabetics.

## Conclusion

The prevalence rate for Gestational Diabetes Mellitus was found to be 2% and the prevalence rate for undiagnosed Diabetes Mellitus in walk-in patients was 18%.

## Sleep apnea risk factors and comorbidities

### OBSTRUCTIVE SLEEP APNEA

*V. Dyal, T. Evans, A. Forde, C. Foon, E. Gangadeen, D. George, G. George, R. Gervais-Charles, L. Sai Reddy, Dr. S. Sakhamuri, Prof S. Teelucksingh.*

#### **Background**

Obstructive sleep apnoea (OSA) is a clinically significant disorder of sleep, caused by upper airway narrowing, that leads to the impairment of ventilation during sleep. It is associated with many of the non-communicable diseases that plague Trinidad and Tobago such as obesity, hypertension, type 2 diabetes, coronary artery disease, cardiac failure, dysrhythmias, and stroke. The prevalence of OSA is unknown in developing nations but occurs in 14% of men and 5% of women in the United States. Diagnosis involves taking a thorough history, physical examination, use of screening questionnaires and level one polysomnography (gold standard).

#### **Objective**

The objectives of this study are (i) Correlate the clinical presentations, risk factors and comorbidities with the occurrence of OSA and its severity in the studied cohort. (ii) Correlate the comorbidities and complications of OSA with various polysomnographic parameters.

#### **Method**

A cross sectional study was conducted, involving 189 patients with suspected OSA, from throughout Trinidad and Tobago. All patients had level one polysomnography performed at a single tertiary center during the period March 2012 to June 2017. Demographic data and the presence of comorbidities were collected from patient records as well as patient scores in The Berlin and Epworth Sleepiness Scale (ESS) questionnaires.

#### **Results**

A total of 152 patients (80%) were diagnosed with OSA, 69 (45%) of which satisfied the apnoea hypopnoea index criteria for severe OSA. OSA patients were mostly males (72%); aged over 40 years (85%), East-Indian in origin (60%) and either overweight or obese (82%). Snoring and daytime tiredness/sleepiness occurred in 96% of patients. The major comorbidities were hypertension (50%), type 2 diabetes (36%) and dyslipidemia (31%). The severity of OSA increased with both increased BMI ( $P < 0.002$ ) and larger neck circumferences ( $P < 0.0001$ ). The noSAS score identified 85% of patients diagnosed with OSA, the Berlin questionnaire identified 81% and the Epworth Sleepiness scale (ESS) identified 56% of OSA patients. Patients with witnessed apnoea, had a likelihood of OSA of 4.56 times (95% CI: 1.06–19.56) higher than those without.

#### **Conclusion**

Our study showed that patients over the age of 40 years, obesity and large neck circumference are significant independent predictors for OSA. NoSAS score and Berlin questionnaire were reliable in identifying high-risk OSA patients whereas the Epworth Sleepiness scale performed poorly.

# Investigation of Health Seeking Behaviours of citizens of Trinidad with respect to Acute Febrile Illnesses

## LE FÉBRILITÉ

*Romario Revanales, Lawrence Roberts, Shekelliah Roberts, Krystelle Rohit, Karlton Rolle, Aishwarya Sahoo, Dr. Shalini Pooransingh*

### Background

Presently, diseases classified as acute febrile illnesses produce homogenous symptoms across the spectrum. These symptoms include: fever, joint and muscle pain, conjunctivitis, headache, weakness, rash and swelling of the lower limbs. Symptoms usually last 4-7 days. The proximity of mosquito breeding sites to human habitation is a significant risk factor for contracting viruses such as Zika, Chikungunya and Dengue, and by extension, displaying signs of acute febrile illnesses

### Objective

1. To determine the most common treatment used by the general population in treating AFIs.
2. To ascertain the most preferable method for treating AFIs among the general population.
3. To determine whether there is a correlation between socio-cultural factors (gender, marital status, ethnicity, age, religion, monthly income, location) and health seeking behaviours.
4. To determine what factors influence/ deter persons' decisions to use public healthcare facilities and what can be done to improve and thus promote utilisation of public healthcare facilities with respect to acute febrile illnesses
5. To determine whether persons exposed to mosquitoes are affected by acute febrile illnesses and what measures are taken to prevent mosquito borne diseases
6. To determine how the information obtained be used to influence the health seeking behaviours of the general population in the future.

### Method

A cross sectional study was conducted on assessment of the health seeking behaviours of citizens with respect to acquired Acute Febrile Illnesses (AFI) in Trinidad. Initially 300 questionnaires were distributed, however only 270 of the questionnaires were deemed viable for the study, hence sample size was readjusted to 270. With the data collected and organized, various graphs and charts were generated allowing for ease of analysis by the use of IBM SPSS system.

### Results

The general consensus amongst the study population on the immediate course of action taken by the subjects when experiencing symptoms of acute febrile illnesses, as seen above, was found to be the use of over the counter medication (46.2%), followed by the use of home remedies (27.49%). This persisted amongst the population irrespective to gender, age, marital status, religion, ethnicity, income and community type. However, differences in less popular course of actions (visiting a hospital, visiting a health centre, ignoring the fever and other) methods were found to be influenced by sociocultural and socioeconomic factors.

### Conclusion

Conclusively, the respondents' judged their immediate course of action of using over the counter drugs and home remedies to be effective thus this habitual practice persisted as their first response. Contrasting views were found only in less popular course of actions (visiting a hospital, visiting a health centre, ignoring the fever and other) which were influenced by sociocultural factors. There is need for greater awareness needed amongst the public concerning proper treatment of AFI symptoms.



# Retrospective Audit of Mammography, Core Needle biopsy and Fine Needle Aspiration Cytology for diagnosis of breast lesions at The Trinidad and Tobago Cancer Society (TTCS)

## ANSWER FOR BREAST CANCER

*Riko Hart, Afuloso Hector, Keithtra Hepburn, Asmah Hoesin, Silina Hoesin, Jeremy Inniss, Dave Jaisaire, Kavisha Jaisaire and Dr. Fidel Rampersand.*

### Objective

To conduct a retrospective audit of mammography, core needle biopsy and fine needle aspiration cytology for diagnosis of breast lesions at the Trinidad & Tobago Cancer Society (TTCS).

### Design

A retrospective study over the period January 2013- December 2015.  
Setting: Trinidad & Tobago Cancer Society, Rosalino Street, Port of Spain.

### Sample Population

Women over 18 years of age, any ethnicity, residents of Trinidad & Tobago who have undergone biopsy testing and corresponding mammography screening at TTCS during the 2013-2015 period.

### Methodology

Systematic sampling was applied to select 194 patients from a biopsy logbook which recorded the names of the all the patients who performed biopsies during the 2013-2015 period, specifying the type of biopsy done for each patient. The selected patients' files were retrieved from cubicles where the files were arranged alphabetically, after which they were examined to ensure that they met the inclusion criteria for the study. Extracted data included: age, ethnicity, area of residence, year of screening and family history of breast cancer or any other cancer, evidence of hormone replacement therapy and previous invasive procedures, detection and confirmed diagnosis of cancer, specifically noting the grade and type of breast cancer from the biopsy reports, symptoms at the time of detection, mammography and ultrasonography findings.

### Results

29% of the patients with mammography BIRADS 0-3 were ultimately confirmed to have breast malignancies. A discordance between mammogram (MMG) and the work-up breast ultrasound (BUS) BI-RADS classifications was experienced by 26 patients, suggesting that the significant BI-RADS change was 16%. There was 100% use of core needle biopsy in the diagnosis of breast cancer in confirmed patients. 97.91% of the confirmed breast cancer patients were diagnosed with ductal carcinoma in situ. 68.75% of the 48 women diagnosed with malignancies presented with breast lumps. A family history of cancer was observed in 29% of those diagnosed with breast cancer.

### Conclusion

Mammography as a standalone diagnostic tool is not adequate and requires further evaluation through correlation with breast ultrasonography, and biopsy for accurate diagnosis. Core needle (tru-cut) biopsy is the preferred choice by local cytologists as a diagnostic tool for breast malignancy when compared to FNAC or stereotactic biopsies.

## Infection Control in the Dental Workplace

### TOOTH BUDS

*Dominique Berkeley, Danielle Durham, Abigail Dowden, Caveen Jaglal, Ornella Jagroop, Jozanne Joseph, Shanta Maharaj, Christopher Mc Kenzie, Anya Persad, Arati Ramcharitar, Oriana Sabga, Funmilola Shafe, Kerella-Joy St. Clair, Dr. Fiayaz Shaama,*

#### Background

Microorganisms that cause infections in health care facilities are a constant concern to employees as well as patients and visitors. Routine testing for infection in medical facilities is part of a requirement for working in a safe environment and a public health issue. The aim of the project was to test for possible bacterial contamination in the dental school. Additional aim was to determine the behavior and practices of dental personnel by anonymous questionnaire.

#### Objectives

To investigate whether bacterial contaminants and microorganisms are present in the Dental workplace. To culture bacterial colonies and fungi for identification.

To conduct a survey using questionnaires to determine whether infection control protocols are adequately practiced by dental staff and lab personnel.

#### Method

Ethical approval was obtained for the study. Air and surface samples were collected from both the dental clinic and the dental laboratory in Mt Hope. Samples were tested for fungi and bacteria respectively. Testing was done in the Microbiology department in the Faculty of Life Sciences in UWI, St Augustine. The tests were performed in duplicate. Questionnaires were administered to the laboratory and clinic staff to evaluate their behaviour with respect to safety and infection control. Convenience sampling was used.

#### Results

The most commonly detected bacteria were Gram positive in nature as cocci or rods and was found in major regions of the clinic and lab. Fungi was also detected in the study field of which Fungi Imperfecta and Aspergillus were the most common. These findings suggest there is some level of contamination possibly due to improper infection control measures or environmental factors. This study did not identify the source of these bacteria. Evaluation of questionnaire on specific staff practices revealed that a proper infection control policy was being implemented.

#### Conclusion

The tests done resulted in the discovery of fungi Penicillium and Aspergillus which are a matter that should be dealt with. Due to limited resources, the bacteria found could not be definitively identified, however, they were believed to be Staphylococcus aureus and Bacillus subtilis.

## Community's perception on being asked to donate blood

### HAEM TEAM

*Anthony Mansoor, Chnique Maraj, Nirvan Maraj, Kiara McClure, Brennan McIntyre, Riyad Mohammed, Kristin Morain and Dr. Kenneth. S. Charles*

#### Background

The purpose of this research is to discover how individuals feel when directly asked to donate blood by someone else in need of it. Directly being asked to donate blood is a common occurrence when using the Family or Replacement blood donation method and this, when coupled with unfavourable circumstances

gives rise to an overall disadvantageous outcome. These outcomes range from psychological impacts such as individuals feeling stress and obligated to donate to institutions having to discard 'bad blood' donated. Therefore, societies primarily dependent on the replacement blood donation method will encounter such obstacles and so, to function more effectively, and preserve Public health, the impacts of operating primarily under such a method should be fully assessed and searched out. This project aims to ascertain the emotional and psychological effects of this method.

### **Aim**

To assess the impacts of being asked to donate blood by relatives has on the donor.

### **Methodology**

Between the months of January and May questionnaires were printed distributed to Trinidad residents and also an online survey was conducted. A total of 360 individuals successfully completed the survey which consisted of both closed and open ended questions allowing for participants to fully express their feelings and thoughts on being asked to donate blood.

### **Results**

A key question in the survey was; when asked whether or not they would be willing to donate blood to a stranger. Respondents with an overwhelming majority of 82% expressed emphatic agreement to willingly donate blood to those in need. 13% of participants remained neutral, and only 5% stated that they wouldn't be willing to donate to a stranger.

### **Conclusion**

From this study, it can be deduced that the majority of the population is willing to donate blood and so reliance on the Voluntary blood bank replenishing method would be more beneficial than a blood donation system in which the blood replacement method is most dominant.

## **Glaucoma Literacy among Public Sector Healthcare Professionals within the Ophthalmology Clinics in Trinidad & Tobago**

### **VISION 2020**

*Esther Ramlakhan, Kadesh Ramlakhan, Stephanie Ramlal, Stephen Ramlogan, Ahilya Ramnarine, Devan Ramnarine, Renuka Ramoutar, Dr. Desirée C. Murray.*

### **Background**

Glaucoma is a group of eye diseases that causes loss of vision over time by affecting the optic nerve. It is the leading cause of irreversible blindness in Trinidad and Tobago and globally.

### **Objectives**

1. To assess the prior knowledge of glaucoma in the different cadres of health professionals.
2. To devise an intervention strategy which would positively enhance the health professionals' prior knowledge of glaucoma.
3. To assess the effectiveness of the education intervention strategy.

### **Method**

This study used a prospective pre-post comparison study of glaucoma literacy (GL) scores before and after an educational intervention. A sample frame of 7-12 health professionals and others working full time in the ophthalmology department/eye clinic in the Regional Health Authorities (RHA's) within Trinidad and Tobago were interviewed.. An intervention in the form of a fact sheet was created specifically designed to answer the questions found in the GL questionnaire. Questionnaires and fact sheets were printed and personally delivered

to the RHAs. On completion of the pre-survey, volunteers were each given a fact sheet which included a website link. Participants were asked to access this website link after reading the fact sheet on their own time and fill out a post-survey. The post-survey was a replica of the pre-survey created on an online google survey database.

## Results

The data collected from our GL study showed that the nursing staff at the 3 RHAs had good to poor understanding of glaucoma. After comparing pre and post educational intervention scores it was showed that the intervention positively impacted their understanding of the disease, resulting in every nurse scoring higher on the GL questionnaire after the intervention. The doctors at the RHAs had no difference in pre and post scores.

## Conclusion

Based on the results obtained from this study, it can be inferred that educational intervention greatly impacts on some of the health care workers' knowledge of glaucoma. Thus, implementing a strategy that that can be geared towards ensuring that the medical staff have a good understanding of this disease to counsel the public on how to either prevent or manage glaucoma

# A Retrospective Analysis Of One (1) Year Of Laboratory Data To Determine Trends In Antimicrobial Susceptibility And Resistance Profiles With A Note On Stewardship Practices Of Doctors Of The Eric Williams Medical Sciences Complex

## RAMBUNCTIOUS RESEARCHERS

*Amy Ramai, Ted Ramai, Kyle Ramcharan, Levi Ramcharan, Sasha Ramdhan, Carinna Ramdial, Nichele Ramdial, Vishala Ramdeen and Dr. Karla Georges.*

## Background

Surveillance studies conducted by the Centers for Disease Control (CDC) have demonstrated an alarming increase in resistance, which impacted negatively on patient mortality/morbidity and limited the use of antimicrobial agents. There is no national data set available to monitor trends in AMR. Monitoring trends in resistance is imperative in determining the extent of the problem in Trinidad and Tobago. In addition to this, evaluating stewardship practices of local doctors is necessary to assess attitudes, practices and views towards antimicrobial resistance and thereby develop appropriate recommendations. Our major objective is to facilitate the development of a surveillance system for antimicrobial resistance, firstly in Trinidad and Tobago as a prototype and then later expand to the wider Caribbean.

## Objectives

- To analyze one year of laboratory data from the St. Augustine medical laboratory with regards to trends in susceptibility and resistance patterns across various antimicrobial drugs and bacteria species.
- To conduct a survey via questionnaires to doctors of the Eric Williams Medical Sciences Complex (EWMSC) and assess their stewardship practices towards the usage of antimicrobial drugs.
- To make recommendations on antimicrobial stewardship and ways to reduce rising trends in resistance.

## Method

The study was comprised of a retrospective analysis and a survey. For the retrospective analysis, data was obtained from the St. Augustine Medical laboratory for the past one (1) year and included all specimen data (blood, sputum, wound cultures etc.). A total of 226 patient records were analyzed and data was obtained in the form of antibiograms for the retrospective analysis. For the survey, the population included all doctors, specifically house officers, employed at the EWMSC. The Population size was found to be three hundred and

seventy-nine (379) house officers. A sample size of 65 was obtained for the stewardship analysis. Data was obtained from questionnaires via a convenient sampling method. Questionnaires were given to doctors on the wards and lounge areas of the hospital at dates and times convenient to the researchers and doctors.

### Results

The retrospective analysis revealed high levels of resistance among E.coli bacteria as well as Salmonella Enteritica. Also of note was that Ampicillin showed the highest number of resistant samples across the range of antibiotics used. The stewardship analysis showed that most doctors were unfamiliar with local prescription guidance and also that most doctors preferred to give prompt treatment and rely on history taking alone rather than carrying out physical examinations and waiting on laboratory findings to reveal clear signs of infection.

### Conclusion

Many commonly occurring bacteria such as S.enteritica showed high levels of resistance across antibiotics representing a concern for the levels of resistance among prevalent species. This problem in the EWMSC exacerbated by careless practices of doctors in their prescribing antimicrobial drugs but almost all claim that guidance and protocols regarding antimicrobial use is limited and many, if not all, would like a revamped policy regarding the issue. Many doctors also believed that increasing the range and supply of antimicrobials at hospitals would also help to curb the problem of resistance and indiscriminate use. It is only through consistent surveillance and a change in the practices of doctors towards antimicrobial prescription can levels of resistance be reduced.

## A Quantitative Analysis of Non-Compliance with Dietary Regimen amongst Pregnant Women with Diabetes

### THE GATEKEEPERS

*T Alexander, U Eric Onokpikini, M Jogee, A Joseph, W Ottley Wright, M Ramlakhan-Roopnarine, O Ocho.*

### Background

Compliance with Dietary Regimen amongst Pregnant Women with Diabetes. is a key behaviour that determines the future of the woman as well as to the fetus wellbeing. The control of dietary intake is a crucial element of the diabetes treatment regimen, and is used for the purpose of normalizing blood glucose levels. Pregnant women with diabetes often experience difficulties in remaining compliant with their dietary regimen. The social support system and limited level of knowledge regarding their diabetes dietary management may also contribute to this problem. Although, clinical support may be provided through health care institutions if the clients did not access these services, this may also result in them having a knowledge deficit regarding the importance of dietary restriction.

### Objective

The objectives of this study are: are: (i) To identify whether there was an association between socioeconomic factors and compliance with prescribed dietary regimen (ii) To identify whether knowledge affected compliance with diet regimen (iii) To identify cultural and lifestyle issues which may influence compliance with prescribed dietary management (iv) To identify whether clinical support services, contributed to the level of compliance to prescribed dietary regimen.

### Method

A cross-sectional descriptive quantitative study, was conducted to obtain survey data from a sample of 60 participants. As such, it was a descriptive research study designed to address why pregnant women with diabetes are non-compliant to their dietary regimen. This study was conducted to examine different factors influencing dietary compliance amongst pregnant women diagnosed with diabetes and are attending

antenatal clinic at the Port of Spain General Hospital, San Fernando General Hospital and Mt Hope Women Hospital. The method of data collection was a semi-structured questionnaire administered to 60 participants with a total of 20 participants taken from each hospital. This design was selected, because it allowed the researcher to collect data at a specific point in time from a representative subset of the population through the use of questionnaires. The data gathered was then analysed and used to evaluate the problem.

### **Results**

The study indicated socioeconomic status negatively affected noncompliance to dietary regimen; supported the influence of knowledge on the level of compliance with dietary regimen, found the respondents had adequate knowledge of diabetes management, had attended a consultation with a dietician; however, most of the information regarding diabetes management was given by the Doctor. Most of the contact for teaching happened at the doctor's visit; however the clinical support services available were limited, and extended to the pregnant women with diabetes on a priority basis.

### **Conclusion**

Proper planning must be undertaken in order to determine the strategies to enable pregnant women with diabetes to adhere to the recommended diet. Lifestyle and dietary changes are essential to manage the disease.

## **Effect of Diabetes on The Multistable Perception Mechanism and Dynamic Switching Capabilities of The Brain**

### **DIABETES AND DYNAMIC SWITCHING TIME**

*Rinelle Rajcoomar Faezah Sahibdeen and Dr. Rajrishi Sharma*

### **Objective**

A comparative study to determine whether being type-2 diabetic affects dynamic switching time as compared to age and gender matched non-diabetics.

### **Summary**

This study involves a case control, retrospective analysis of the dynamic switching times, due to the multi-stable perception mechanism, in persons with diabetes compared to age-matched and gender matched non-diabetics. Multi-stable perception is a phenomena in which our conscious experience switches back and forth between two (or more) possible percepts when an ambiguous (unclear) stimulus, is presented continuously. If an image is unclear or uncertain, then having more than one interpretation of it is feasible and the time taken for a person to switch from observing one percept of an image to observing another can be recorded as data as the dynamic switching time.

Over the years, research has proven that diabetes is associated with reduced cognitive function, however functions such as learning and memory have been the main focus of such studies. Perception is a component of cognitive function that has not been highlighted as much as the other components in relation to diabetes and, as such, we found it fitting to carry out a pilot study to determine whether dynamic switching times are affected in persons with diabetes.



# The most common risk factors for ovarian cancer, as well as, the histological varieties present in Trinidad

## THE PATHOLOGISTS

*Nadia Kandhai, Nicholai Kassie, Arun Katwaroo, Karishma Kesarisingh, Aatiqah Khan, Adam Khan, Amanda Khan, Dr Srikanth Umakanthan.*

### Background and Rationale

Ovarian cancer has a far lower survival rate than other cancers as people are unaware that its risk factors and symptoms are easily disguised as normal menstrual problems or other abdominal ailments/ diseases. As such, ovarian cancer is mostly detected at a late stage that may be untreatable resulting in unfavourable prognosis. This study will be undertaken to assess the most common risk factors of this cancer in Trinidad, and also the most common histological varieties present, in the hopes of educating the public and scientific community on ovarian cancer in Trinidad.

### Objectives

1. To determine the most common risk factors for ovarian cancer in Trinidad.
2. To determine the most common histological variety of ovarian cancer that is seen in cases in Trinidad

### Methodology

A case series format of data collection was used to obtain the necessary information for the study. Fifty cases of Ovarian Carcinomas were selected randomly from specimen samples taken from women with suspected malignancies over a span of five years, 2013 to 2017. The women were all over 18 years of age and of varying racial ethnicities. These records were obtained with permission from the Histopathology Unit of the Eric Williams Medical Sciences Complex. From their records; medical, physical, social and genetic factors were noted and tabulated to observe trends and common prominent risk factors among the sample population.

### Results

Risk factors such as; previous pregnancies, surgeries and irregular menstrual cycle were recorded most frequently as: 13, 12 and 9 patients respectively. Factors seen slightly less frequently were: previous cancer diagnosis, smoking, contraceptive use and alcohol use, with 7, 6, 5 and 4, respectively. Those rarely seen were; family history of cancer, infertility, recreational drug use and Hormone Replacement Therapy (HRT), with 1, 2, 0 and 0 patients, respectively.

The most common histological varieties/ types recorded in the patient files were Granulosa cell tumours (16% of patients) and Leiomyomas (7%). Meanwhile the remaining recorded types: Papillary serous cystadenofibroma, serous cystadenoma, cystic teratoma and insular ovarian carcinoma, each accounted for 5% of patients. Most of the records (58%) showed no data on histological types.

The non-menopausal patients seem to, more frequently, experience: irregular menses (7 patients), Abdominal/ back pain (7 patients), ovarian cysts (5 patients), PV bleeding/ discharge (4 patients) and uterine fibroids (2 patients). While the post-menopausal patients exhibited mostly abdominal distension (4 patients), PV bleeding/ discharge (3 patients) and other symptoms: nausea, headaches, dizziness, etc. (6 patients).

### Conclusions

The most common risk factors for ovarian cancer seems to be previous surgeries and pregnancies, as well as, irregular menses. Additionally, it seems that Granulosa cell tumours (malignant) and Leiomyomas (benign) are the most common histological varieties of ovarian cancer seen in Trinidad.

## Review analysis of the Zika virus' published information

### ZIK V ZAPPERS

*Nickeisha Paul, Isa Pooran, Esther Pope, Sage Precilla, Alissa Prince, Kryslle Rajpaulsingh, Karaishma Ragoon, Vinai Ram, Dr. Shalini Pooransingh.*

#### Background

A recent Zika outbreak occurred in Brazil in 2015 which gave way for spread of the disease in other countries in the western hemisphere. The recent connections made between Zika and life threatening diseases in unborn infants made it relevant in the public health community. It has been seen necessary for attention to be drawn to this mosquito vector disease by appropriate authorities; so upcoming international events will be better managed and will not lead to outbreaks.

#### Objective

The objectives of this systematic literature review:

1. To analyse and evaluate the research that was already performed on the Zika virus.
2. To select the most relevant literature for the review
3. To critically appraise the selected literature
4. To make recommendations on what areas of research are lacking and what direction new research should take.

#### Method

A systematic literature review was carried out on the "Science Direct" and "Pubmed" databases. Review articles, Journals, Research Articles and Cross-sectional data relating to Zika virus within the years 2012- 2016 were evaluated. In totality, 81 journals from Science Direct and 42 articles from Pubmed were pertinent to this research project.

#### Results

Overall, major trends outlined that there is poor knowledge surrounding the transmission of the virus via blood transfusions or sexual fluids; and poor treatment options for those who were infected. Good amounts of evidence found that Zika virus was directly linked to the development of microcephaly and to a lesser extent, development of Guillain- Barré syndrome in infants who were born infected.

#### Conclusion

Prevention from being infected is highly recommended until differential diagnostic tests are more well developed (since Zika virus is vastly misdiagnosed as Chikungunya or Dengue); and until better treatment options are made available.

## Hand Hygiene and Tuberculosis Infection Control Knowledge, Attitude and Practice among Government Primary School Teachers in Trinidad and Tobago.

### HELPING HANDS OF MT HOPE

*Shala Singh, Maria Chan Chow, Tricia Sinanan, Ambika Sinanan, Aaron Sinanan, Narika Singh, Rehanna Singh, Robyn Singh, Christine Shafe and Dr C. Unakal*

#### Abstract

Background: The objective of this study is to assess hand hygiene and tuberculosis infection control knowledge, attitudes and practices among government primary school teachers in Trinidad and Tobago.

## Methodology

A cross – sectional study on knowledge, attitude and practice on hand hygiene and tuberculosis infection control was conducted among teachers from government primary schools across Trinidad and Tobago. The data was collected by administering questionnaires in May 2017. The data was checked and analyzed using statistical package for social sciences (SPSS), version 23 software. A p value of <0.05 was considered statistically significant after associating the dependent and independent variables.

## Results

A total of 342 out of 398 distributed questionnaires were completed and collected. It was found that 66% of the respondents were knowledgeable, 50% had a positive attitude and 76% exhibited good practices towards hand hygiene and tuberculosis infection control. These findings were illustrated using tables.

## Conclusion

The results collected depicted poor attitude towards hand hygiene and tuberculosis infection control. General good knowledge and practice was highlighted. However, it was determined that education is necessary to greater improve the knowledge and attitude of government primary school teachers which will in turn better their practices.

Key words: Hand hygiene, Tuberculosis Infection Control, Government Primary School teachers, Trinidad and Tobago.

## Satisfaction of Healthcare and the Factors Which Influence It in Sickle Cell Anemia Patients During a Crisis

SICKLE CELL RESEARCHERS

*Sabrina Chambers, Micah Chankersingh, Nadita Chillar, Ethan Chrichlow, Johnathan Clarke, Lynden Cooper, Xiela Coyi, Dr. Wayne Labastide*

## Background

Sickle cell anaemia (SCA) is a common condition in Trinidad and Tobago. However, many of the care-related issues that critically affect long term outcomes for these patients are unknown to many health care professionals at all levels. This influences SCA patients' willingness to return and their compliance for treatment which may pose a health risk if left to develop.

## Objective

The objectives of this study are: i) To determine the level of patient satisfaction of SCA patients as it concerns priority, accommodation, and clinical treatment during a crisis; ii) To determine and evaluate the factors and issues which influence patient satisfactions of SCA patients as it concerns priority, accommodation, and clinical treatment during a crisis and iii) To highlight research that needs to be done as it concerns priority, accommodation and clinical treatment during a sickle cell crisis.

## Method

An observational, exploratory, qualitative study was used to analyze patient care and satisfaction in SCA patients during a crisis. A questionnaire was used to collect data from a sample size of 96 SCA patients and 30 medical staff from two hematological clinics in Trinidad and Tobago, as well as from online platforms. Additionally, statistical analysis of data included: Means, Frequencies, ANOVA, T-tests, Univariate Analysis, and Pearson's correlation.

## Results

It was concluded that a neutral level of satisfaction among SCA patients existed. However, on further desegregation study, it was found that age had a significant influence on this satisfaction. Pediatric patients

(ages 6-15) are more satisfied with healthcare than their older counterparts: ages 16-29; 30-40 and 41-50. It was also noted that patients generally delay medical intervention until they reach a pain threshold of 8.23.

### **Conclusion**

Satisfaction plays a significant role in SCA patients' willingness to seek medical intervention. Additionally, more research is needed to fully understand the factors which influence this satisfaction and the ways in which they can be used for other diseases.

## **The Effects of Obesity on risk taking and cognitive function**

### **THE I.V. LEAGUE**

*J Ballah, V Baran, D Bartholomew, T Bartlet, L Basanoo, A Basdeo, N Beejai, V Beepat, F Parmanan, S Parris, N Percy, A Persad, D Persad, K Persad and S Persad, Dr F Youseff.*

### **Background**

Obesity has become a worldwide epidemic which has a lot of negative consequences with hypertension, type 2 diabetes, stroke and certain cancers being the majority. Trinidad and Tobago has one of the highest rates of obesity in the Caribbean, at approximately 31%. Ten years ago, the mechanism in which obesity affects cognitive function was unclear but this research follows literature review that has however recently shown that high triglyceride levels negatively impacts the brain by inducing cognitive impairments.

### **Objective**

The objectives of this study are:

1. To assess the impact of the non-modifiable risk factors such as age and gender on cognitive function.
2. To examine the impact of the modifiable risk factors of body mass index (BMI) and waist to hip ratio on cognitive function.
3. To determine which risk factor is most significant in an effect on cognitive function.

### **Method**

This research project was a case control, cross-sectional study, conducted at the Eric Williams Medical Sciences Complex, amongst 65 persons, using a simple random sampling method. Participants were between the ages of 18-45, non-diabetic, non-hypertensive and from all parts of Trinidad. Data in way of two electronic games were recorded, age, sex, BMI using their weight and height measurements, waist: hip ratio was collected and from participants through an assessment form that was filled out with the help of a study coordinator.

### **Results**

From the two electronic games used to assess risk taking there was no significant differences between normal, overweight and obese people. Also, there was no significant difference in age of persons who were obese, overweight or healthy.

### **Conclusion**

According to the data collected through the questionnaires, depression screening, and electronic games, it was concluded that no significant deviation was found in obese persons as opposed to persons of normal weight. Hence, it can be said that there is no correlation between obesity and a person's tendency towards risk taking.

## Empathy of Dental Students in The University of The West Indies Towards Patients

### DENTAL DYNAMICS

*Kaitlyn Boodoo, Nisha Bridglal, Padma Chabinath, Thalia Hanomansingh, Devindra Lakhan, Shaleema Mohamed, Estevan Olliviere, Megan Quiyou, Amanda Ramkelawan, Preeya Ramlall, Romario Singh, Shivani Singh, Petal Teelucksingh, Marcus Wei, Ravi Teja Chitturi*

#### Background

Empathy is an essential concept in the dentist-patient relationship and is a core competence for dentists. This study was conducted with the aim to identify and understand several empathetic characteristics among dental students towards their patients at the University of the West Indies Dental School.

#### Objective

The objectives of this study are:

1. To identify several characteristics involving empathy.
2. To compile and present these characteristics in the form of questionnaires in order to gain feedback from respective year groups.
3. To distribute questionnaires as the main source of data collection.
4. To analyze and interpret the data collected.
5. To present the data analyzed describing various levels of empathy of year 1, 2, 3, 4 and 5 students towards their patients.

#### Method

A cross sectional descriptive study was conducted employing convenience sampling method to assess the levels of empathy among years 1-5 undergraduate dental students of the University of the West Indies, Trinidad. A validated, self administered questionnaire Jefferson Scale of Empathy, Health Care Provider Student version (JSE-HPS) was used in this study. It consisted of 20 statements answered on a 7-point Likert scale which were scored from 1 (entirely disagree) to 7 (entirely agree). Independent samples t-test, one way ANOVA and Tukey's Posthoc tests were also used to compare the mean empathy scores across the years of study.

#### Results

A total of 51 undergraduate students and clinicians participated in the study with a response rate of 100%. The study showed that the second year students had the highest mean empathy score of  $103 \pm 9.18$  (Mean  $\pm$  SD) while the year fifth year clinical students had the lowest mean empathy score of  $79.40 \pm 12.88$  (Mean  $\pm$  SD).

#### Conclusion

Mean empathy scores decreased from years one to five in the University of the West Indies Dental School. Empathy should thus be given greater emphasis in the curriculum at the dental school in order to improve the dentist-patient relationships and thus improving the patient's treatment.

## Assessing the Impact of Cancer on various dimensions

### IMPACT OF CANCER

*Denise Alexander, Greer Bain – Bedeshi, Natasha Lyder-George, Tricia Vitalis, Dr Phillip Onuoha and Mrs Gloria Ramdeen-Mootoo*

#### Aim

The aim of this study is to explore the lived experiences of parents and for them to describe how Cancer has affected their lives psychologically, psychosocially, spiritually as well as financially. Their challenges and coping strategies experienced by these parents whose children are diagnosed with Cancer would be explored.

## Methods

An exploratory phenomenology method was used to guide the study. The participants were selected from the institution of the Paediatric Oncology Clinic at The Wendy Fitzwilliam's Paediatric Hospital. Triangulation of different strategies namely of one focus group interview and four key informant interviews were utilized to collect data from ten parents. The data was audiotaped, transcribed and organized into codes and themes.

## Results

In the main findings of this study three main themes were identified: reliance on spirituality to cope, psychosocial challenges, and social support system. This study revealed that the lived experiences of parents who care for their children diagnosed with Cancer, feels like a never-ending struggle. Regardless of the substantial progress in the treatment of Cancer, childhood Cancer is still emotionally, physically, and psychologically challenging for parents and nurses.

## Discussions

It is important to stress that one single study, regardless of its qualitative or quantitative design, cannot examine any phenomenon to its full extent. The theme highlighted in this study offer opportunities for additional qualitative and quantitative research in the field of oncology and its impact on Trinidadian parents and the Trinidad family system. Therefore further research is needed from the nursing perspective that should be conducted with greater emphasis in paediatric oncology.

## Pituitary Disease in Trinidad & Tobago: Clinical & Ophthalmic Findings

### VISUAL EFFECTS OF PITUITARY TUMOURS

*Virmala Maharaj and Dr. B Subash Sharma*

## Background

Pituitary tumours affect individuals in multifaceted ways, but very little is presently known on pituitary tumours within Trinidad and Tobago, even by extension the Caribbean. However, this topic has been academically explored in more detail internationally.

## Aim

Therefore, the purpose of this study is to establish a collection of data on the visual effects of pituitary tumours in Trinidad and Tobago.

## Methods

This study encompassed 16 patients (12 females and 4 males). Data collected will be analysed to obtain, a male: female, ethnicity distribution of those examined, initial symptom/s, micro-adenoma: macro-adenoma, visual field defects, blood work, radiological findings, along with patient treatment/s and their prognosis.

## Conclusion

With this research as a starting point; subsequent research is encouraged within this field. The research aims to create earlier diagnosis of pituitary tumours (more so specifically by visual presentations) before the condition has further progressed to cause permanent damage to the patient.



## Knowledge, Attitude and Practices (KAP) of antibiotic usage and resistance among Veterinary students at the University of the West Indies

INFECTIOUS DREAMS TEAM

*Arianna Hanoman, Joshua Jogie, Karishma Ragoo, Gabrielle Urbano, Faron Vire, Jessica Western, Sarana Williams, Satwika Yalamanchilli, Yu Yin Ye, Dr. Stanley Giddings.*

### Background

Since the discovery of antibiotics, its misuse and overuse has increased rapidly along with antimicrobial resistance. In hopes of aiding to combat against this crisis, a One Health approach was used to give an insight of the KAP of the future professionals towards antibiotics.

### Objective

The objectives of this study are: (i) To assess the KAP of antibiotic usage and resistance among Veterinary Medicine students and ii) To determine whether the KAP of antibiotic usage and resistance among Veterinary Medicine students improved throughout each successive year of their training.

### Method

A cross-sectional study was conducted in the School of Veterinary Medicine, U.W.I. KAP questionnaires on antibiotic usage and resistance were distributed to the Veterinary student population.

### Results

From the data obtained in the study, the overall knowledge among Year 1 to 4 Veterinary medicine students was exceptionally high. However 82.4% of respondents indicated the need for implementation of antimicrobial stewardship programs at the tertiary level. When probed about their attitudes towards antibiotic usage and resistance, many of these students had positive attitudes. In addition, the majority of the veterinary students also engaged in good practices towards the usage of antibiotics.

### Conclusion

The findings of this study have shown that Year 1 to 4 Veterinary Medicine students possess overall good Knowledge, Attitude and Practices with respect to antibiotic usage and resistance. However there is a need for antimicrobial stewardship programs at tertiary levels

## The Prevalence of Maternal Depression in a Primary Care setting, in a small middle-income country

P'S IN A POD

*Persad Varsha, Peter Sabrina, Peters Arrianna, Phakira Amy, Pheerangee Michael, Phillips Anton, Pinder Alphonette and Mungrue Kameel.*

### Background

The prevalence and determinants of mental health issues in pregnant women and women one year postpartum in developed countries have been extensively investigated. On the other hand, research on women from lower income countries has only recently been explored. Several reasons have been advanced for this discrepancy such as the greater need to provide adequate services to prevent both infant and maternal mortality, and women are at risk for experiencing psychological issues via the impact of both social and traditional cultural practices during the perinatal period. Notwithstanding depression and anxiety are both widespread and disabling mental health disorders, contributing not only to human suffering and to loss of health, but also lost economic output.

## Objective

The aim of this study is to measure the prevalence of maternal depression in a primary care setting in North-Central Trinidad a small island developing country and to determine its socioeconomic and health-related risk factors.

## Method

A cross-sectional observational study to determine the point prevalence of maternal depression in women attending primary care facilities in North Central Trinidad was conducted. The population consisted of all pregnant women attending primary care facilities. The systematic sample of 400 women was taken. A two-part questionnaire was administered after informed verbal consent. The questionnaire collected demographic data and the nine item PHQ questionnaire was administered.

## Results

Six hundred and two patients were entered into the study, consisting of 441 prenatal women and 161 postnatal women. The point prevalence of postpartum depression was 38.5(95% CI 31.0-46.5), and prenatal depression 49.7%.

## Conclusion

The study provides evidence that Maternal Depression is common in the developing world, detection and treatment therefore must be a priority as children born to mothers with depression have more behavioural problems, more psychiatric illness, more visits to paediatricians, lower IQ scores, and attachment issues.

## Students' attitudes towards a research component in the D.D.S. curriculum in a dental school in Trinidad

### THE CROWNING ACHIEVERS

*R Bachoo, T Mahabir, B Maharaj, S Maharaj, D Nanchoo, T Persad, S Ramkhelawan, K Ramsubagh, P Singh, J Stephens, S Marchan, W Smith.*

## Background

Globally, studies have been done to investigate the attitudes of dental students towards research, however, in the Caribbean, there is a lack of data in this area, since the Caribbean generally lacks a research oriented attitude. As such, this mandatory Research Programme, attempts to encourage students to understand the importance of research, in the medical field especially. The research studies, globally, all produced similar findings, that although students recognize the need for research in dentistry, there is a lack of students who eventually enter the field of research. As such, this study was chosen, in part, to collect local data of dental students and interns to gather their feedback on the issue, and add to the literature on this topic.

## Objective

The objectives of this study are to: (i) Measure the incidence of challenges or problems faced in conducting undergraduate research, (ii) Measure the incidence of opportunities or factors which facilitate the process of conducting undergraduate research, (iii) Examine whether the experience of participating in the Research Programme allows the participants to better understand scientific research articles published in journals, (iv) Examine whether the experience of participating in the Research Programme allows the participants to better identify and analyse the quality of research projects, (v) Identify perspectives on the experience of participating in the Research Programme, as well as, any suggestions for improving the Programme.

## Method

This observational study evaluated the attitudes and behaviours exhibited by dental students towards research. Data was obtained, using convenience sampling, via a modified dental students' research inventory

(DSRI) questionnaire developed by Shirahatti et.al. (2010) that had been tested for reliability and validity. The questionnaires were distributed to all students and interns at the UWI school of Dentistry who undertook the Year 2 research project during the period 2012-2016. The study sample size was one hundred and thirteen (113) individuals. The number of completed questionnaires returned was seventy-seven (77). The questionnaire consisted of twenty-seven (27) questions or statements which used a Likert-type scale to qualify responses. In addition, a comment section was afforded for respondents to elaborate on their experiences regarding this component of the curriculum. Data was analysed using IBM SPSS® Statistics (Version 21) software, which generated the average scores for all the questions and a grand mean score for the DSRI.

## Results

The grand mean DSRI score was 2.8 which corresponds to an average research opportunity. No significant differences in the grand mean DSRI scores among the different year groups, between genders and among the supervisor groups, were observed. Six subcategories of the DSRI all corresponded to an average research opportunity, while the subcategory of “Designing and Selecting a Study” corresponded to an above-average research opportunity. Conversely, the subcategory of “Writing and Publishing Research Findings” corresponded to a below-average research opportunity. Approximately 40% of persons who commented, felt that classes on the research process would have been beneficial, prior to commencing the Research Programme. Additionally, approximately 35% of the commenters said the time frame to complete the project was too short. Also, just a quarter of the persons felt that this research project was a beneficial experience. Furthermore, an overwhelming 83% felt that after completing their first research project, there were many aspects that could have been improved, if they had better knowledge about research at the beginning.

## Conclusion

Issues regarding availability of time, resources and infrastructure, limit the progress of many research projects. Also, the research-oriented lectures given by the Public Health Unit clashed with lectures scheduled by the School of Dentistry, making it difficult for students to partition their time and obtain a sound education on research. Ample time, pedagogy, resources and infrastructure, should be made available for students to conduct research properly.

## A Knowledge, Attitude and Practice study of Palliative Care Amongst Students and Staff of the FMS of The University of The West Indies, St. Augustine

### THE PALLIATORS

*D. Lawrence, N. Lightbourn, R. Lovell, A. Lutchman, T. Lutchman, A. Mackey, N. Mackey, M. Mahabir and Dr. B. Sa*

## Background

As stated by the WHO, palliative care is a measure which improves the QoL of a patient by providing relief from physical pain and other symptoms associated with their condition. Within the Caribbean, specifically Trinidad and Tobago, palliative care has been a topic of discussion. Its practice is ubiquitous, its knowledge is scarce and the attitude is ambivalent.

## Objectives

This study aims to conduct a knowledge, attitude and practice study of palliative care in Trinidad & Tobago which would be used to analyse the feasibility and make recommendations concerning palliative care within the public health sector.

## Methodology

Online survey distributed via email and collated by a single member to ensure protection and that the data was not compromised.

## Results

There was an overwhelming knowledge of what Palliative care was particularly as the demographic either learns about it in school or in their profession. However, there was a general lack of knowledge concerning legislature and specialised institutions of palliative care. Most respondents had a positive attitude towards palliative care with most citing it was to, "Treat/Manage Symptoms of the Disease". Furthermore, this extended into most respondents believing palliative care should be implemented in certain situations such as the end of a person's life. There was a mixed response to the practice whereby about two thirds had administered palliative care with the remaining one third being open to administer if given the opportunity. This was particularly influenced by the availability of drugs within the public health system according to respondents.

## Conclusion

Participants strongly agreed that it is necessary to expand the palliative care services provided in Trinidad and Tobago. It was also found that there needs to be an increase on the amount of information concerning palliative care within Trinidad & Tobago. Legislative change was also found to be mandated by the government where subsequent intervention is needed.

## Factors associated with Emergency Department visits and Hospital Admissions in adult asthma patients who present to Emergency Departments and Chest Clinics in Trinidad

### ER WHEEZE EASERS

*S Deonanan, S Deowan, V Deyalsingh, N Dindial, V Dipchan, C Donawa, J Douglas, A Dwarika, L Pinto Pereira, Dr S Sakhamuri.*

## Background

Asthma exacerbations result in frequent patient visits to the Emergency Department and hospitalizations. These exacerbations can be caused by factors which include: demographics, persistent trigger factors, irregular and improper use of medication, socioeconomic status, viruses and allergens. The past medical history of asthmatics has been determined to increase the risk of asthma exacerbations. Findings of this study would assist patients to identify trigger factors and can prevent potential attacks.

## Objective

The objectives of this study are:

- i. To examine factors which are associated with acute asthma attacks in patients who report more than once per year to the Emergency Department for relief of wheezing,
- ii. To study the factors associated with hospital admissions for adult asthma in the past year.

## Results

Overall, it was discovered that there was no observable distinction between the data in the case and control groups. This was evident since the differentiating property between the two groups had no significant changes to data in either category.

## Conclusion

Based on the findings from this research, most asthmatic patients were Indo-Trinidadian, fell into the 36-75 age category, had their asthma managed by health professionals and took their medication as prescribed, the most specified trigger factors were dust, seasonal changes and smoke, more than half of the participants suffered from other medical conditions and although several conclusions were made, insufficient data hindered the investigation into multiple factors.

## The Factors Affecting Insomnia within a General Population

### MENTAL AWARENESS BRINGERS

*Diana Ramnarine, Celine Rampaul, John-Luke Rampersad, Kimberly D Rampersad, Navita Rampersad, Anushka Ramrattan, Jonelle Ramsarran, Prof. G. Hutchinson*

#### Background

Insomnia has become an increasingly common complaint especially among young adults. While insomnia has many possible causes, it may be a marker of psychological distress. The effects of insomnia can also negatively influence health and academic performance, which in turn can lead to distress.

AIM: The aim of this study is to determine the factors affecting insomnia and determine its prevalence within a general population.

#### Objectives

To identify the factors that are associated with insomnia in the adult (18 years and over) general population of Trinidad. To determine the prevalence of insomnia within the adult (18 years and over) general population of Trinidad.

#### Methodology

The cross sectional design chosen for this study was a random sampling of the adult (18 years and over) general public of Trinidad. Random sampling was done at various locations within the community of each investigator, allowing for the involvement of individuals from various points of the island (north, central, south, east and west). The inclusion criteria were Trinidadian nationals over the age of 18; whilst, the exclusion criteria were non-nationals, medical professionals, known patients and prisoners. The data were collected in equal numbers of male and female; i.e. one hundred and twenty five males and one hundred and twenty five females. A total number of three hundred questionnaires were handed out, however, fifty of those did not meet the criteria used to select finished questionnaires; most were not filled in completely.

#### Conclusion

From this study it was revealed that 30% of the adult (18 years and over) general population in Trinidad were currently suffering from insomnia; whilst, 10% showed predisposing factors to insomnia. Upon the study's completion, the following factors were discovered to affect the levels of insomnia within a person:

Poor Sleep Quality (frequent awakenings, problems falling asleep after awaking up, restless sleeping, etc.); Low socioeconomic status; Depression; and Gender (to a negligible extent)

## Prevention Of Needle Stick Injury In The Clinical Setting Among New Registered Nurses

### NEEDLE STICK INJURIES

*Smith –Kwanzaa Caimite, Alexis Avernoel, Augustus Michelle, Brooks Dawn, Clarke Keshmer, Gangoo Sadna, Ramlal Christine, Singh Rabindranath, Ocho Oscar Noel.*

#### Background

Needle stick injury is one of the greatest work-related health hazard, that registered nurses encounter on an everyday basis for example the risk of being exposed to dangerous and deadly blood borne pathogens through contaminated needle sticks such as human immunodeficiency virus (HIV) and hepatitis viruses. New registered nurses' lacking knowledge and skills regarding standard precautions are exposed to needle stick injuries from unsafe practices such as recapping of needles, manipulating used needles such as bending, breaking or cutting hypodermic needles and passing needles from one nurse to another (American Nurses Association 2002).

## Methods

This was a quantitative descriptive study. The dependent variable was the needle stick injury and the independent variables consisted of factors which influenced the occurrence of needle stick injuries among new registered nurses. The factors are practice, knowledge, resources and attitudes. The population was new registered nurses with less than three years' experience at the San Fernando General Hospital. A total of 120 new registered nurses were employed during the period under review and the entire population was used as the sample. A 26 item instrument was used to collect data which were analyzed using SPSS version 20.

## Findings

Most of the respondents 59 (49.2%) were between the ages 20-<30 years and 88 (73.4%) were female. The most common years' experience was 53 (44.2%). Almost half 54 (45%) respondents had experienced a needle stick injury with the most common exposure being while in use (17.5%) and recapping needles (215%). A total of 49 (40.8%) respondents had at least one to less than 3 needle sticks since employment and this was most common among staff on the medical wards. There was a moderate correlation between respondents knowledge about institution's policies and need for training ( $r=0.409$ ,  $p=0.01$ ) and strong correlation between their perception of the need to be more vigilant and the quality of the sharps that they are provided with ( $r=0.913$ ,  $p=0.01$ ).

## Conclusion

Avoidable practices such as non-adherence to standard precautions while using hypodermic needles are contributing factors to needle stick injuries. Prevention of NSI's should be an integral part of occupational health programs in the work place. Therefore, mandatory training and evaluation of health care worker's, knowledge and attitude regarding safety practices and proper use of available resources should be enforced when carrying out their duties in the clinical area.

## Using Tear Ferning to Develop a Diagnostic Test for Dry Eyes

### TEAR FERNING AND DRY EYES

*Nishad Mohan, Ryan Singh and Dr. Gillian Allison*

## Objective

An investigation into the clinical use of the Tear Ferning Pattern as a diagnostic tool for keratoconjunctivitis sicca on patients from Trinidad in comparison to the Tear Break Up Time method.

## Method

Forty subjects chosen at random participated in this study, and were selected based on their case history of a previous diagnosis with dry eyes or presenting with symptoms of dry eyes at the time of sampling. Tear samples were collected and the resulting tear ferning patterns were recorded using a light microscope. For the Tear Break Up Time test fluorescein 1% (v/v) was introduced into each subject's right eye and, tear break up time was observed with a slit lamp over a set time period..

## Results

It was found that there was a significant difference between the two methods in the diagnosis of dry eye using an independent t-test. The results suggest that the tear ferning pattern method ( $p < 0.05$ ) to diagnose dry eyes is clinically valid when compared to the traditional Tear Break Up Time method.



## Conclusion

Tear ferning pattern is a simpler method of clinical testing for dry eyes, and is a viable alternative to the Tear Break Up Time for the diagnosis of keratoconjunctivitis sicca. Therefore, this test has potential to be used in hospitals, eye clinics and even private practices especially when prevailing test like TBUT fails to produce sufficient data. Essentially, this test is vital to understanding dry eyes and the availability of the relevant apparatus makes it both convenient and practical.

## Replacement Blood Donation: The Effects on an Individual asking Another for Blood within the Community

### THE BLOOD TAKERS

*Z. Danielle, K. Gomez, C. Gonzales, S. Gopeesingh, K. Guy, R. Hall, S. Harrypersad Singh, R. Harrilal, Dr. K. Charles*

## Background

On a daily basis the citizens of Trinidad and Tobago are subjected to the inhuman injustice of having to solicit and beg blood for relatives in need as there is a shortage of this vital material due to insufficient voluntary donors. This project seeks to investigate how an individual is affected by having to ask another for blood and seeks to bring awareness to this violation of basic human rights in the hope that it will drive more voluntary donations and bring change to this archaic system.

## Objectives

- i. To explore how individuals are affected when asked to find blood for a relative in need.
- ii. To highlight the circumstances that surround the interaction of one person asking another for blood.
- iii. To discover the extent to which individuals will go to acquire the blood.

## Method

A questionnaire based, descriptive survey was conducted in Trinidad from the 15th of May to the 25th of June 2017. These persons were randomly sourced from areas around blood banks, hospital waiting areas, residences, malls and public spaces around the county, with no specific geographical location being targeted as the ritual of replacement blood donation is practiced throughout the country. The number of questionnaires completed were two hundred and forty-seven (247). This study had no exclusion criteria, apart from patients declining to participate and those who never had to acquire blood for someone in need.

## Results

In relation to the aims, a reported 35.2% of respondents said they felt desperate when asked to find blood. Of the 247 people asked, 22.7% of them were in debt to the person asking and 28.7% of persons unwillingly gave the blood. 40.9% of persons offered an incentive to the person they asked whereas 16.6% of these people did in fact expect a payment. A little more than half the sample population (50.6%), found it difficult to find blood. As a result of the experience, there was an 18.2% increase in persons willing to donate blood.

## Conclusion

While the practice of Replacement Blood Donation in Trinidad and Tobago, is acknowledged as the norm by its citizens, it undoubtedly places these individuals in desperate situations where they are tasked with securing their family's wellbeing. While most of the persons asked willingly gave blood, it was still reported to be difficult to find blood donors. This psychological stress prompts many into trade agreements whereby they acquire the blood. In addition, it has both a positive and negative impact on the person's perception of the process whereby some become willing to donate after they have had the experience and some unwilling.

# A comparison of the waiting times for elective surgeries within the public healthcare sector

## DIAGKNOWS

*E Njoroge, K Smith, T Sonny, M Sookdeo, Y Sookool, A Sookraj, C Sookram, A Soondar, Dr. E Haqq*

### Background

Elective surgeries can be categorized based on those that are (i) urgent (treated within 30 days), (ii) semi-urgent and (iii) non-urgent (treated within 90 to 365 days).[5] The punctuality of undergoing elective surgeries is a global problem. Medical specialist training in the Caribbean region resulted in operating theatres and resources being used, thus increasing the waiting time for elective surgeries.[6] Inefficiencies and lengthy waiting times can be attributed to lack of resources and specialists available within the local public health sector.[7]

### Objective

- I. To compare the waiting times for the referral for elective surgeries to the waiting time for elective surgeries
- II. To recognise any biopsychosocial factors that may have affected patients as a result of their waiting times for elective surgery.
- III. To determine patients' perception on waiting times for elective surgeries and assess their level of satisfaction.
- IV. To facilitate feedback from patients on suggestions to improve the waiting times for elective surgeries
- V. To highlight any factors that may influence waiting times for elective surgery.

**Method:** The target sample size for this study was two hundred and fifty (250) patients between 18-80 years who are awaiting or have underwent elective surgeries (knee replacement, hernia, fibroids, hip replacement, benign breast lump, cataract and cholecystectomy). Candidates were obtained using a random sampling method of patients in queue in the waiting room of the Surgical department and Clinic of two public hospitals in Trinidad.

### Results:

- Mean waiting time for referral in Hospital 1 is 6 months to 1 year
- Mean waiting time for surgery in Hospital 1 is 1 – 2 years
- Mean waiting time for referral in Hospital 2: 2 weeks to 1 month
- Mean waiting time for surgery in Hospital 2: 2 weeks to 1 month

### Conclusion:

Based on the findings of this cross-sectional study using simple, random sampling, the waiting times for referral for elective surgeries to the waiting times for elective surgeries for Hospital 1 was longer than the waiting times for Hospital 2. Due to the long waiting times, biopsychosocial factors, such as stress, anxiety, frustration, and pain, negatively impacted patients. In addition, factors such as receiving medical clearance influenced the length of waiting time for elective surgeries. As a result, the patients in Hospital 1 were mostly dissatisfied with the length of the waiting times. However, the patients in Hospital 2 were mostly satisfied despite the long waiting times. These findings were consistent with regional and international information obtained.

## The Role of Serum Protein Electrophoresis in the Detection of Multiple Myeloma: A Diagnostic Interpretation of Patients with Varied Immunoglobulins.

### MULTIPLE MYELOMA

*N. Ojar, S. St. John, S. Swann, J. Thom, B. Thomas, L. Thomas, D. Townsend, S. Trotman, Prof. S. Nayak*

#### Objectives

The objectives of this study are:

1. Determine the correlation of Serum Protein Electrophoresis with Serum Immunoglobulin Profiles?
2. Determine the relationship between Serum Protein Electrophoresis and certain immunological parameters of patients diagnosed with Multiple Myeloma?

#### Methodology

Results from serum protein electrophoresis were collected from 419 patients, both male and female over the age of 18. Results from Serum immunoglobulin profiles were obtained for only 131 of the patients. Chi-squared was done to produce observed and expected frequencies of decreased, normal and increased levels of Albumin,  $\alpha_1$ ,  $\alpha_2$  and  $\beta$ , for individuals who had an increase  $\gamma$ . In order to determine the correlations and calculate means between gender, elevated gamma and normal SPEP results, the student t test was used.

#### Results

Out of 131 patients, 24 (18.32%) had M bands present, both male and female. 16 (12.21%) of the 131 patients had a decrease in albumin and 60 (45.80%) had an increase in gamma, both males and females. The median age for patients with M band is 69 and for increased gamma is 57.

#### Conclusion

The median age of patients in Trinidad and Tobago with the presence of the M band (indicative of multiple myeloma) was found to be 69. This study was inconclusive in finding a direct link between the serum protein electrophoresis and serum immunoglobulin profiles, but provides sufficient data to indicate the possibility of linkages in greater sample sizes. However, enough evidence was found to recommend that these tests be performed for the early detection of multiple myeloma.

## The Relationship Between Type 2 Diabetes and Cognitive Function in Trinidad and Tobago

### HECATE'S HELPERS

*Tristen Ali, Kyle Antoine, Jessica Allum, Ria Ali, Mikael Ali, Jared Albury, Jared Ali, Mumtaz Ali, and Dr. E M Davis*

#### Background

Type 2 diabetes is a chronic condition that affects a large section of today's society. According to the International Diabetes Federation, Trinidad and Tobago had a total of 140,300 reported cases of type 2 diabetes in the year 2015 alone. Such numbers are particularly alarming due to the fact that it is a non-communicable disease that often times develops as a result of poor lifestyle choices. In persons with type 2 diabetes, cells that are normally responsive to insulin become desensitized to its' effects due to a number of causes (i.e. obesity, genetic predisposition, loss of liver function, errors in signalling pathways between communicating cells) resulting in persistent elevated blood glucose levels (hyperglycemia). The health risks associated with type two diabetes can range from cardiovascular disease and poor wound healing to kidney dysfunction and cognitive impairment. Cognitive impairment, namely executive functioning, is an area of great research, as the precise

link between type two diabetes and executive function is still not yet clearly defined. So, researching this within the community and creating public health awareness is appropriate in order to improve the quality and duration of human life.

**Objective**

To determine the effect(s) Type 2 diabetes has on one’s cognitive/executive function with special emphasis on risk taking abilities as compared to someone without the condition, using the Iowa Gambling Task and Balloon Analogue Risk Test.

**Method**

In this observational, cross-sectional study 100 participants were required to complete two computerized tests, the Iowa Gambling Task and the Balloon Analogue Risk Task (BART task). The participants were split into two groups with Group A consisting of 50 diabetic subjects and Group B consisting of 50 subjects without diabetes.

**Results**

It was found that in the Iowa Gambling task the subjects in Group B completed the test approximately 56.25% faster than subjects in Group A. Also, the final earnings of Group B were much greater than those of Group A. In the Balloon Analog Risk task, it was found that Group A scored much lower than Group B.

**Conclusion**

Diabetic subjects scored on average lower than the control group in both tasks. This suggests that the ability to make decisions in the face of risk and therefore executive function is markedly lower in diabetic individuals.

<b>Assessment of Healthcare Quality At The Accident and Emergency Department of San Fernando General Hospital Trinidad and Tobago</b>
<b>MEDIC RANGERS</b>
<i>M. Armstrong, N. Asraph, T. Austin, A. Bag, R.Bala, M. Baldeosingh, K.Balgobin, S.Balgobin, Dr. S. Pooransingh</i>

**Background**

It is known that San Fernando General Hospital has long waiting times in the Accident & Emergency (A&E) Department, leading to low patient satisfaction, yet there is little information on the causes of this discontent. There have been continued efforts in healthcare sector to improve patients’ experience at the hospital, but they call for the enhancement of data on patient satisfaction.

**Objectives**

1. Ascertaining patient satisfaction with A&E service
2. Determining times patients had to wait at various points in the service
3. Assessing safety of the environment of the A&E according to guidelines to Infection Prevention and Control from the Ministry of Health of Trinidad and Tobago
4. Documenting information about running of the Department from Head Doctor, nurse and manager.

**Method**

209 surveys were completed by patients regarding various parts of their experience at the A&E department. Questionnaires were also given to the department manager, head nurse and doctor, and customer relations officer (CRO) regarding the workings of the department. Observations of the environment of the hospital were also recorded.

## Results

Patients' satisfaction with the A&E department varied, as well as a wide range of waiting times. 11% of patients were very satisfied with the level of care they received, while 17% were very dissatisfied. The majority 23% of patients spent 4–6 hours at the A&E. The remaining were in the middle of the spectrum. Interviews with staff revealed low doctor-to-patient ratios. Observations showed lack of cleanliness in waiting areas and washrooms, but medical areas like triage and treatment rooms were well-maintained.

## Conclusion

Patients were satisfied with the medical care they received but were uncomfortable with the lack of privacy, long waiting times and mistreatment by staff, issues that can be corrected to improve patient satisfaction.

## Trends in the incidence of Acute Myocardial Infarctions before and after the introduction of the Tobacco Control Act of 2009

### THE CARDIAC ARRESTERS OF TRINIDAD AND TOBAGO

*S. Jaggat, S. Jaggernaut, L.A. James, L. James, N. Jattan, V. Jhinkoo, S. Jogie, E. Joseph, Dr. K. Mungrue*

## Background

Since 1948, acute IHD has been the main cause of death among males and females in Trinidad and Tobago, which is contradicting as there has been new developments in treatments for certain risk factors such as hypertension and dyslipidaemia that are now freely administered to the population in health facilities. One of the main contributing factors is the poor management of risk factors associated with acute IHD, including smoking tobacco. Approximately 933 million people worldwide are daily smokers and 80% of these smokers reside in low and middle-income countries. As a result, the WHO's Framework Convention on Tobacco Control was a treaty developed with the intention of its 180 parties to implement policies that can prevent and minimise tobacco use.

## Objective

To determine the level of awareness of the TCA of 2009 and its influence on IHD. This study also investigated the associated risk factors in patients that had a previous acute coronary event.

## Method

This research project was approved by the ethics committee of the University of the West Indies. A retrospective study was conducted via accessing medical records of all patients admitted to the EWMSC who suffered from a MI during the period 2007-2017. Additionally, interviews were conducted on patients who survived a MI and were currently enrolled in the Cardiology OPC at this facility. A systematic sampling method was used to select patients for the interviews. All the info obtained from the medical records and interviews were stored, retrieved and analysed by using SPSS program. Secondary data was obtained from annual reports released by the Ministry of Health and other credible websites.

## Results

A total of 663 patients with a confirmed diagnosis of MI admitted to a teaching hospital for treatment were recruited to determine risk factors existing prior to their MI event. A randomly selected sample of 95 of these patients was interviewed for smoking status. There were twice as many males (433) than females (230) emphasizing females have about a 30% lower burden of disease than males. The single most important risk factor was found to be hypertension (74%). Of the 95 patients interviewed at the cardiology OPC 63 (66.3%) were never, 7 (7.4%) continued to smoke and 25 (26.3%) discontinued smoking. Only 71.6% of the post MI patients were aware of the Tobacco Control Act of 2009

## Conclusion

Upon conducting this research project, the study revealed that in a small middle income country like Trinidad and Tobago, the goals of the TCA were not achieved after nine years of implementing the this treaty. There was not a significant reduction in tobacco consumption or the exposure to second hand smoke. As a result, the TCA did not achieve its public health goal of minimising diseases and mortality caused by tobacco use.

## Investigating the aetiology and epidemiology of back pain in adults aged 18-60 years in Trinidad and Tobago and its effect on productivity

### SPINAL INVESTIGATORS

*Adana Ali, Ayesha Ali, Azeeza Ali, E'jaaz Ali, Geneve Aberdeen, Ogechi Akpaka, Dr R. Ramcharan*

## Background

Back pain is an extremely common and often overlooked and under-appreciated symptom that may progressively worsen over time. The causes of back pain are widespread, and its severity may progress from the point of mild discomfort to incapacitation, resulting in a decrease in a person's ability to do work and the quality of their work. The decreased performance translates into a loss of productivity for many businesses and institutions, as well as a costly burden on the public healthcare system. This then collectively presents a major but mostly preventable public health issue.

## Method

The study conducted was a retrospective cross sectional study in which the sample population was selected using multi-staged sampling; the first stage involved choosing Hospitals with neurosurgery outpatient clinics. In total, 121 patients were interviewed. Data was collected by means of a questionnaire; the questions were read aloud to the patient after introducing ourselves and obtaining their permission, and then their responses were written on the questionnaire to ensure the clarity and accuracy of the data collected.

## Results

The majority of patients experienced lower back pain and expressed that their pain was recurring. Falls were the most prevalent cause of back pain, followed by prolonged and heavy lifting and car accidents. Disk pathology made up the majority of the cases followed by muscular problems and fractures. The most recommended mode of treatment to patients was Rest and painkillers. The amount of time missed from work was not dependent on whether patients were self-employed or the amount of money spent on treatment. The majority of patients received government funding for their treatment.

## Conclusion

In conclusion this study on the aetiology and epidemiology of back pain and its effects on productivity produced the following results:

1. The most prevalent cause of pain experienced across all age groups and occupational backgrounds was lower back pain
2. Disk pathology was the most common cause of back pain, followed by muscular problems
3. The majority of patients missed 1 to 4 weeks of work because of their pain, this would impact the productivity of some workers especially those who were self-employed and could not be paid sick leave from their place of business/ work

## A Trinidadian Cardiovascular Medication Adherence Survey - The ADHERE TNT Study

### THE RESEARCH CRANKS

*Cherisse Nancoo, Neval Nandlal, Sushanta Nankissoon Caniecea Nelson, Austell Nkemakolam, Nadine Noel, Kwame Olivers, Ryan Parasram, Dr. Naveen Seecheran*

#### **Background**

Cardiovascular disease (CVD) remains the leading cause of global mortality despite established evidence-based therapies. In Trinidad and Tobago, CVD is chiefly responsible for at least 25% of all deaths annually. In a 2003 report on medication adherence, the World Health Organization (WHO) stated that “increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.” The definition of medication adherence is that patients take their medications as prescribed.

The estimation of CVM adherence within the populace has major health application as this information would be crucial in implementing structured educational programs.

#### **Objective**

The study aimed to measure the level of cardiovascular medicine (CVM) adherence and determine any respective associating factors in the Trinidadian public health sector population at the Eric Williams Medical Sciences Complex Cardiology Outpatient Clinic.

#### **Method**

The study was that of a descriptive, cross-sectional one which was executed at a northern-central cardiology outpatient clinic within a public health care tertiary hospital. Data was collected via medical student administered questionnaires which were collected upon completion. The Statistical Package for Social Sciences 21 (SPSS, Chicago, IL, USA) was used to input data and unadjusted descriptive analyses were performed.

#### **Results**

In total, 595 individuals were asked to participate in the study; of whom, 535 agreed with a subsequent approximated 90% response rate. Approximately one-quarter of study participants had high adherence levels. Overall, males compared to females had a higher adherence score of  $6.3 \pm 1.6$  vs.  $5.9 \pm 1.78$  ( $p = .032$ ). There was near-significance with respect to adherence and level of education ( $p = 0.061$ ).

#### **Conclusion**

Patients displayed a limited level of cardiovascular medication adherence which is likely to translate into cardiovascular events and their potentially devastating complications. Emphasized by the study is the chief importance of instituting comprehensive interventions to enhance cardiovascular medication adherence in Trinidad and Tobago. Additional research studies are necessary to confirm and authenticate these results.