Poster Abstracts

P-1

A study on the transition from online to face-to-face classes on the self-reported mental health of University Students following the COVID-19 pandemic

C Babwah, M Belmontes, M Castro, B Dabideen, F Felix, T Gayle, S Sirjusingh, C Wilson, Y Clement
Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies
Email: maya.belmontes@my.uwi.edu

Objective: To determine factors associated with self-reported mental health status of university students following the transition from online to face-to-face learning at the University of the West Indies (UWI), St. Augustine campus.
Methods: The study was cross-sectional, with quasi-stratified and convenient sampling of students at all Faculties during the period April to June 2023. All students in the study had at least one year of online experience and questionnaires were completed in-person and online. Data was entered into SPSS (Ver. 29) and statistical analyses included analysis of variance (ANOVA) and Chi-squared tests, with statistical significance at $p<0.05$.
Results: Of 301 students in the study, most were female (59.6%), in Year 2 (72.1%) with an average age of 21.8 ± 2.1 years. Most students (57.0%) preferred face-to-face learning. Significantly associated variables included students' online experience ($p = 0.048$), study ethic ($p = 0.026$) and self-reported mental health status ($p = 0.003$). Variables significantly associated with mental health status following the transition from online to face-to-face learning included declined academic performance ($p<0.001$), worsened sleep pattern ($p = 0.002$), poor sleep quality ($p <0.001$) and increased workload anxiety ($p = 0.008$).
Conclusions: The findings indicated that although most students preferred face-to-face to online learning, several factors negatively affected their mental health status during the transition such as sleep patterns and workload anxiety. Addressing these might improve students' mental health.

P-2

The impact of social media usage on academic responsibilities, personal commitments, and mental health among medical students at the University of the West Indies, St. Augustine Campus

N Clarke[1], J Cumberbatch[1], A Gangerbissoon[1], N Mac Lean[1], V Mansar[1], K Morris[1], R Robinson[1], N Span[1], S Jankie[2], S Singh[2]
[1]Department of Paraclinical Sciences and [2]School of Pharmacy, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: vishal.mansar@my.uwi.edu

Objective: To determine the impact of social media (SM) usage (SMU) on university students with respect to their educational responsibilities, personal commitments, and self-reported mental health.
Methods: A cross-sectional survey of full-time students from the Faculty of Medical Sciences, UWI, St. Augustine was conducted using a self-administered online questionnaire. Demographics, SMU, measures of educational responsibilities, personal commitments, and mental health were solicited. Data was analysed using IBM SPSS Statistics (Ver 29); proportions were reported and associations between categorical variables were assessed using Chi-squared tests. Multinomial logistic regression was used to determine the predictors of SMU.
Results: Of 130 respondents, 64.6% were female, 66% used ≥5 SM platforms and 50.8% used SM for 4-6 hours/day. Checking of SM accounts at least every hour was associated with longer study breaks ($p=0.021$). Unexpectedly, these frequent users were more likely to report performance of activities without interruption ($p=0.003$). Participants (63.1%) felt SMU had a negative effect on mental health, however, there were no significant associations between self-reported mental health variables and SMU. Participants reported that SMU could impact behaviours and actions (36.4%), did not hinder the completion of goals (54%) and caused procrastination (92.2%).
Conclusion: SMU seemed to have an impact on aspects of time management and educational responsibilities. Further

research is required to formulate techniques for effective utilisation of SM for education and mental wellbeing.

P-3

Do those who know better do better? UWI St Augustine Campus' students' knowledge of cannabis-related mental health risks and their patterns of cannabis use

J L Pow, C Quashie, J Mitchell, I Narine, O Somorin
Psychology Unit, Department of Behavioural Sciences, University of the West Indies, St Augustine
Email: Joni.LeePow@sta.uwi.edu

Objective: Cannabis, which has been recently decriminalized was found to be associated with an increased risk of psychotic disorders in Trinidad. This study assessed the knowledge of cannabis-related risks in a sample of students at The University of the West Indies, St Augustine Campus and their patterns of cannabis use.
Methods: A sample of 237 students completed an online survey over a 5-week period (Jan-Feb 2023). Cannabis use was measured using the World Health Organization Alcohol, Smoking, and Substance Involvement Screening Test (WHO-ASSIST). Cannabis risk perception was measured with a created Cannabis Risk Perception scale (Cronbach $\alpha = 0.86$) which consisted of 15 evidence-based statements on cannabis safety.
Results: Half (51.9%) of the sample used cannabis in their lifetime, 14.0% used cannabis once a week or more and 9.5% first used cannabis $\leq$ age 15. Over a quarter of the sample agreed to statements indicating that cannabis can improve one's mood and mental health (49.8%), improves focus and concentration (40.3%), the type of cannabis is an indicator of potency (45.5%), cannabis is safer because it is decriminalized (29.4%), it does not contain additives (28.0%) and is natural (25.1%). Cannabis risk perception was found to be significantly related to the frequency of cannabis use ($p < .001$) where more accurate risk perception was associated with less frequent use.
Conclusions: Providing information to improve the accuracy of cannabis-related knowledge is recommended as a strategy to reduce the harms associated with young adult cannabis use as we move towards increasing cannabis liberalization.

P-4

The prevalence of depression, anxiety and stress in the student population at the School of Veterinary Medicine, UWI

J Johnson, A Ganpat, M Heeraman, S Roopchan, AK Persad
Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: Jenelle.johnson2@sta.uwi.edu

Objective: The aim of this study was to determine the prevalence of depression, anxiety, and stress in the veterinary student population and the associated risk factors.
Methods: A cross-sectional study was conducted targeting students enrolled in Years 1-5 and the level of depression, anxiety, and stress was determined using the DASS (Depression, Anxiety and Stress Scale). A questionnaire was custom designed that measured the DASS as well as demographics and risk factors for depression, anxiety, and stress. The collected data were tabulated using Microsoft Excel ® and analysed using the Statistical Package for Social Sciences (SPSS) 22.0.
Results: The study comprised 104 students, 75 females and 29 males. The distribution by year of study was Yr. 1 (31 students), Yr. 2 (15), Yr. 3 (34), Yr. 4 (10) and Yr. 5 (14). Most of the students were classified as having some form of depression (73%), anxiety (80%) or stress (67%). Yr. 3 students had the highest level of depression (82%) and stress (76%), while Yr. 5 students had the highest level of anxiety (100%). Females reported higher levels of stress, anxiety, and depression compared to males.
Conclusions: The high prevalence of depression, anxiety and stress among veterinary students is alarming and there is a need for the introduction of appropriate interventional strategies and support services.

P-5

Youth perspectives on mental health during COVID-19 lockdown in Trinidad and Tobago: Implications for emergency response in small island developing states

MM Murphy[1], C Pemberton[2], E Wheeler[3], L Gulston[4], O Kerr-Layne[4], A John[4], B Baksh[4], G Thomas[3], CF Allen[3]
[1]The George Alleyne Chronic Disease Research Centre, The University of the West Indies, Barbados, [2]QURE Ltd, Trinidad and Tobago, [3]The Pan American Health Organization/ World Health Organization, Trinidad and Tobago and [4]The Ministry of Health, Trinidad and Tobago.
Email: madhuvanti.murphy@cavehill.uwi.edu

Objectives: To explore the knowledge, attitudes and behaviours of young people living in Trinidad and Tobago on matters affecting them during the pandemic.
Methods: Ten virtual focus groups were conducted with 64 participants aged 18 to 24 from June to August 2021, when partial lockdown measures were in effect for COVID-19 prevention. Groups were stratified by geographic location and socioeconomic status. The recordings were transcribed and analysed to explore themes of importance to youth.
Results: Negative impacts on mental health emerged as a strong theme. The lack of timelines for restrictions led to wide-ranging mental health impacts. Conflict and tension existed in home environments, longer restrictions led to the erosion of the social culture, and young people were stressed

about the changing face of education and job security due to the pandemic.

Conclusions: Measures taken to address COVID-19 led to the aggravation of mental health challenges among youth. Initiatives to help young people navigate their mental health issues must be developed. In low-resourced small island developing states, the increased need for mental health services during the COVID-19 pandemic highlighted the need for strengthening the capacity and resilience of these services in the event of environmental and health emergencies. Building the resilience of educational and employment services is needed.

P-6
The impact of stress on the physical and mental health of pandemic preclinical medical students in Trinidad and Tobago

M Bhagaloo[1], A Birbal[1], G Boodoo[1], J Dhawalaghar[1], G Johnson[1], L Joseph[1], CS Persad[1], J Sooklal[1], S Reid[2], L Benjamin[3]
[1]Department of Para Clinical Sciences, [2]Department of Clinical Medical Sciences and [3]Department of Basic Veterinary Science, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: lyshel.joseph@my.uwi.edu

Objective: To assess levels of perceived stress and evaluate its impact on the physical and mental health of 'pandemic' preclinical medical students.

Methods: This cross-sectional study targeted 'pandemic' preclinical medical students (those who experienced online medical schooling during the COVID-19 pandemic and had returned to in-person study) at the Faculty of Medical Sciences, The University of the West Indies, St Augustine. Data were collected virtually via a shared Google Form which included the Perceived Stress Scale (PSS), Generalized Anxiety Disorder 7 (GAD-7) and Patient Health Questionnaire-2 (PHQ-2). Data were analysed via SPSS Version 29.

Results: There were 76 respondents, and the prevalence of high perceived stress (HPS) was 34.2% and moderate stress was 57.9%. Some students had scores consistent with a possible diagnosis of GAD (46%) and major depression (45.3%). Most (82.9%) described workload as 8-10 (10=highest) and 73.7% reported academic stress-related headaches. Persons with moderate stress experienced between 0-5 stress symptoms and persons with HPS experienced up to 8 symptoms. Analyses of variance indicated that the differences in mean GAD-7 Score, PHQ-2 Score, and number of symptoms experienced were statistically significantly different between low and HPS categories. PSS Score was positively correlated with GAD Score (0.66, $P \leq 0.01$), PHQ Score (0.59, $P \leq 0.01$) and with number of symptoms experienced (0.38, $P \leq 0.05$).

Conclusions: Medical students faced high workloads and reported significant stress, the effects of which negatively impacted their mental and physical health. Identification of students with significant stress should be done and interventions made to reduce its effects.

P-7
Unpacking the association between negative affect and neuroticism on perceived stress in marriages in Trinidad and Tobago

AT Brizan, A Hunte
School of Graduate Studies and Research, University of the Southern Caribbean
Email: arondell@stu.usc.edu.tt

Objective: To examine the association between negative affect and neuroticism on perceived stress in marriages in Trinidad and Tobago.

Methods: The sample comprised 141 married adults identified through convenience and snowball sampling methods. Data were collected using a questionnaire (using Likert scales) comprising of a modified version of Cohen's Perceived Stress Scale, Positive Affect Negative Affect Scale, and the Big Five Inventory Scale, as well as demographic questions. The data were analysed using multiple linear regression (SPSS Version 25).

Results: The majority of the sample was female (62.4%), with the largest age group being 36-40 (26.2%). Many of the participants were married for 0-5 years (31.2%) and a large number of the participants were from the Arima area (22%). Negative affect and neuroticism significantly explained over 30% of the variance in perceived stress in marriages ($r^2 = 0.39$, $p < .001$). In addition, the results showed that negative affect significantly and uniquely predicted perceived stress in marriage among the participants, while neuroticism did not.

Conclusions: Spouses who experience high levels of negative affect were more likely to experience high levels of perceived stress in their marriage. Therefore, understanding emotional predispositions as well as the factors that impact the levels of stress in marriages might aid in improving the quality of marriages.

P-8
Symptom dimensions of psychopathology in untreated psychosis–Findings from the International Programme of Research on Psychotic Disorders (INTREPID) II

C Donald[1], D Quattrone[2], U Reininghaus[3], JL Pow[1], T Roberts[4,8], GM Esponda[4,8], H Weiss[5], A Cohen[5], S John[6], B Olley[7], O Ayinde[7], R Murray[9,10], O Gureje[7], R Thara[6], C Morgan[4,9,10], G Hutchinson[1]
[1]Department of Psychiatry, University of the West Indies, Saint Augustine, Trinidad, [2]MRC Social, Genetic and

Developmental Psychiatry Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London, [3]Maastricht University,[4]Health Service and Population Research Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London, UK, [5]Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, London, UK, [6]Schizophrenia Research Foundation SCARF, Chennai, India, [7]Department of Psychiatry, University of Ibadan, Ibadan, Nigeria, [8] ESRC Centre for Society and Mental Health, King's College London, [9]Psychosis Studies Department, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, UK and [10]National Institute for Health Research (NIHR) Mental Health Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London
Email: casswina@gmail.com

Objective: To investigate the underlying symptom dimension structure of psychosis across and within sites in the Global South–India, Nigeria and Trinidad.
Methods: The International Programme of Research on Psychotic Disorders (INTREPID) II is a research programme that includes incidence, case-control and cohort studies of untreated psychosis in Kancheepuram, India; Ibadan, Nigeria; and northern Trinidad. The Schedules for Clinical Assessment in Neuropsychiatry captured symptom presentation in individuals with untreated psychosis. These data were converted to the OPerational CRITeria (OPCRIT) system and symptom ratings were analysed using multidimensional item response modelling in Mplus to estimate five theory-based models of psychosis. We used multiple regression models to examine demographic factors associated with symptom dimensions.
Results: A bifactor model, composed of one general factor and six specific dimensions i.e., hallucinations, delusions, disorganisation, negative, manic and depressive symptoms, best-represented associations among ratings of psychotic symptoms. Comparing Trinidad with both India and Nigeria showed significant variation in all dimensions. compared to Afro-Trinidadians. Indo-Trinidadians had higher rates of depression compared with Afro-Trinidadians.
Conclusions: Variations in symptom dimensions were found within and between sites. Demographics differentiated presentation in Trinidad. Geography and environment played a role in symptom presentation in psychosis.

P-9
Ease of use and usefulness of a virtual gaming simulation on mental health assessment during a home visit among Guyanese nursing students: A web-based survey

E Daniel[1], R Trotman[2], G Ramdeen-Mootoo[1], V Victor[1], K Lootawan[1]

[1]The UWI School of Nursing, Faculty of Medical Sciences, University of The West Indies, St. Augustine and [2]National Insurance Scheme Medical Department, Ministry of Health, Guyana
Email: Esther.Daniel@sta.uwi.edu

Objective: To investigate the ease of use and usefulness of Virtual Gaming Simulation (VGS) on mental health assessment during home visiting.
Methods: A cross-sectional, descriptive web-based survey was employed. The population was 160 BSc. nursing students at a school in Guyana. Of these, Second-Year students (n=45) were enrolled in a VGS on 'Mental Health Assessment during a Home Visit.' Permission to use VGS was obtained from the developers. The survey instrument consisted of two sections: participant demographic data (9 items) and a section to determine the ease of use and usefulness of VGS (18 items) using a five-point Likert scale. Data were analysed and descriptive statistics presented.
Results: A total of 45 students participated in the study, 38 (84.4%) female and 7 (15.6%) males. The mean score for the items on the Ease-of-Use Scale was 42.9 (SD=5.0). Participants reported much higher scores in two items: "audio quality of the video was good" (4.6/5) and "situation presented seemed realistic" (4.6/5). The mean score for the items on the Usefulness Scale was 34.1 (SD=6.7). Participants reported much higher scores in two items: "I think simulation will help students prepare for community home visits related to mental health assessment" (4.4/5) and "I think simulation improved my knowledge on mental health assessment" (4.4/5).
Conclusion: This was the first attempt to investigate the potential of ease of use and usefulness of VGS in nursing education in Guyana. Participants found the simulation to be simple to use, engaging, and exciting.

P-10
The explorations of academic stress and wellbeing among medical sciences students

T Esnard [1], T Ramdhanie[2], D Baboolal[2], A Beharry[2], C Kolai[2], F Mangera[2], V Moonian[2], S Sookoo[2], G Ugas[2]
[1]Department of Behavioural Sciences, Faculty of Social Sciences and [2]Department of Pre-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: talia.esnard@sta.uwi.edu

Objective: The objectives of the study were to examine the relationship between academic stress and the well-being of Bachelor of Medicine and a Bachelor of Surgery (MBBS) students and to determine if their academic stress differed by sociodemographic backgrounds.
Methods: This was a cross-sectional survey using an online questionnaire to measure perceived stress levels and per-

ceived quality of life among MBBS students at the University of the West Indies, St Augustine. The instruments used were the Perceived Stress Scale (PSS) and World Health Organisation Quality of Life Scale (WHO QoL). Data were analysed using the IBM SPSS Statistics software. Statistical tests included tests of difference (t-test and ANOVA) and test of association (Pearson's r).

Results: There were 134 respondents with mostly average levels of academic stress levels. That is, the scores ranged from 20-24 for the sample (with possible range being 10 to 40). There were significant differences in academic stress by age (p=0.027), nationality (p<0.001), family size (p=0.038), and programme of study (p=0.003). There was a moderate inverse relationship between academic stress and quality of life (r=–0.318, p < 0.001).

Conclusions: There were generally average levels of reported academic stress among the MBBS students. There were differences in academic stress by several sociodemographic variables. Academic stress also had a moderate association with perceived quality of life.

P-11
Evaluation of oestrus in the Buffalypso (*Bubalus bubalis*) using electrical resistance of vaginal mucus and its association with conception using artificial insemination

DM Ramcharan[1], HO Stewart[2], AK Persad[3]
[1]Faculty of Food and Agriculture, The University of the West Indies, St. Augustine, [2]Bio-Sciences, Agriculture and Food Technology, University of Trinidad and Tobago and [3]Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: davidramcharan91@gmail.com

Objectives: To determine if the electrical resistance of vaginal mucus (EVR) can be used to accurately evaluate the oestrus cycle; and to determine the relationship between EVR and conception in artificially inseminated buffalypso.

Methods: Thirty-three adult female buffalypso were placed on an oestrus synchronization protocol. The study was divided into two parts. Part A involved the daily mapping of the buffalypso oestrus cycle. For Part B, EVR readings were measured using the Draminski oestrus detector to determine the most suitable time for artificial insemination (AI). A Likert scale of 0-4 was also used to represent uterine suitability for insemination. Ultrasounds were done 60 days post AI to determine the pregnancy rate. Statistical analysis was done using SPSS.

Results: Of the inseminated animals (15.6%) were found to be pregnant 60 days post AI. Animals inseminated at an EVR of 150 or less were more likely to be pregnant at day 60 versus animals with an EVR greater than 150 (p<0.001). It was also observed that as Draminski readings decreased, the inseminator uterine rating increased (r = -0.345). This

negative correlation suggests that EVR scores were consistent with uterine ratings and could be used to identify animals in oestrus.

Conclusion: Oestrus in buffalypso can be identified using EVR, and animals bred at an EVR of less than 150 were more likely to get pregnant. EVR can also be used to predict the best time for insemination of animals that display 'silent heat'.

P-12
Knowledge, attitude, and perceptions of dairy farmers in Trinidad and Tobago to antibiotic use and antibiotic resistance

A Maharaj, A Huggins, N Jogie, K Meade, MJ. Morris, AK Persad
Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: anandaa.maharaj@my.uwi.edu

Objectives: Poor antibiotic stewardship in livestock production has been identified as one of the primary causes for the emergence and dissemination of antibiotic resistant organisms. The aim of this study was to determine the knowledge, attitude, and perceptions of dairy farmers to antibiotic use and antibiotic resistance.

Methods: A cross-sectional study was conducted targeting dairy farmers in Trinidad and Tobago (n=49). Farmers were contacted via phone and appointments made to visit the farm where the survey was administered. Data was tabulated and descriptive analysis done using Microsoft Excel.

Results: Overall, 51% of farmers indicated they knew how antibiotic resistance occurred. Most farmers (92%) believed antibiotics should only be used with a prescription, however the majority (56%) also indicated they could access antibiotics without a prescription, with agricultural stores being the primary source. The selection of an appropriate antibiotic was mainly dependent on advice from the veterinarian (73.5%) or results obtained from previous use (53.1%). Most (86%) farmers stated that antibiotic resistance could negatively affect production and 76% believed it could spread to humans. Interestingly, most farmers (63%) indicated antibiotic regimes could be stopped once the animal appeared healthier. Only 22% of farmers indicated they were up to date with current literature on antibiotic resistance.

Conclusion: There is need for increased educational programmes focused on promoting good antibiotic stewardship. Improved regulations are also required to reduce unauthorised access to antibiotics.

P-13
Agro byproduct feedstuff as a substitute for conventional feed for rabbits in Trinidad, West Indies

DA Patterson [1], KR Jones [2]
[1]Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine and [2]Department of Basic Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: kegan.jones@sta.uwi.edu

Objectives: To compare the digestibility of conventional pelleted feed (Diet 1) and an agriculture by-product feed (Diet 2) made from local agricultural by-products in rabbits reared in a humid tropical environment.

Method: The two feeds were given to rabbits to assess their digestibility and nutritive value. Feed 1 was a commercial conventional feed produced from a local feed mill. Diet 2 was the feed made entirely for the following agricultural by-products: cocoa hulls and shells, coconut seed meal, powdered bean, Moruga Hill rice bran, Moruga Hill rice hulls, corn stover and seaweed. The two feeds were fed to the rabbits for two weeks.

Results: The study found significant differences ($p<0.05$) in nutritive components between the two diets in terms of crude protein (Diet 1:150.8 g/kg vs Diet 2:113.4 g/kg), organic matter (Diet 1: 915.9 g/kg vs Diet 2: 910.8 g/kg), and ether extract (Diet 1: 2.04 g/kg vs Diet 2: 1.05 g/kg). Additionally, it was found that there were significant differences ($p<0.05$) in digestibility of crude protein (Diet 1:767.4g/kg vs Diet 2: 913.1 g/kg), organic matter (Diet 1: 918.9g/kg vs Diet 2: 843.6g/kg), and dry matter (Diet 1: 865.9 g/kg vs Diet 2: 793.3 g/kg).

Conclusion: The greater digestibility of the by-product feed suggests that it can be a valuable substitute to conventional pelleted feed in rabbit production, providing cost savings and potential environmental benefits.

P-14
In vitro digestibility and fermentation kinetics of agricultural by-products used as feed for sheep in Trinidad, West Indies

MDE Scott [1], MP Hughes [1,] KR Jones [2]
[1]Department of Food Production, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine and [2]Department of Basic Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: kegan.jones@sta.uwi.edu

Objectives: To determine the in vitro digestibility and gas production of agro-industrial by-products fed to sheep; and to determine the effectiveness of agricultural by-products as substitute feedstuff for sheep to reduce the importation of foreign feed ingredients.

Methods: Two alternative feeds (T2, T3) were formulated using the following by-products: cocoa hulls and shells, coconut seed meal, powdered bean, Moruga Hill rice bran, Moruga Hill rice hulls, corn stover and seaweed. In vitro gas production was measured for all three feed treatments for a total of 72h.

Results: In vitro, ruminal fermentation kinetics results showed that gas production from the immediately soluble fraction was significantly different ($p<0.05$) for the commercial feed (T1) compared with T2 and T3. Potential degradability also showed a significant difference ($p<0.05$) between the feeds. Fermentation parameters showed that there was a significant difference for metabolizable energy (ME) for all three feeds ($p<0.05$), organic matter degradability and methane (CH_4) production was significantly different ($p<0.05$) for T1 compared to T2 and T3. The agricultural by-product feeds had slower degradability in comparison to the conventional feeds. However, the substitute feeds had less methane production in comparison to the conventional feeds.

Conclusion: The agricultural by-product feeds can be utilized as a substitute to feed sheep due to its low methane production. These by-product feeds can be a suitable alternative for sustainable sheep production in the tropics.

P-15
A preliminary investigation of the distribution of the AB blood types in domestic cats in Trinidad, and the potential risks of transfusion reactions and neonatal isoerythrolysis

K Jaggernath [2], M Kellman [1], N Baksh [1], S Ramatally [1], S Bates [1], A Bally [1], A Hosein [2], I Pargass [1]
[1]Department of Basic Veterinary Sciences and [2]Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, the University of the West Indies, St. Augustine
Email: kristen.jaggernath@sta.uwi.edu

Objective: The AB blood group system is the most important blood system in cats, and consists of blood groups A, B and AB. The frequencies and distribution of these vary according to geographic location and breed. Most cats have naturally occurring alloantibodies to the erythrocyte antigen that they lack, and these can cause haemolytic reactions in blood transfusions and neonatal isoerythrolysis. There were no data on feline blood types in Trinidad. The main aims of this study were to determine the prevalence and distribution of the blood types, and the probability/risk of neonatal isoerythrolysis and transfusion reactions occurring.

Methods: Blood typing was performed on 60 venous blood samples collected from cats across Trinidad. Feline Leukemia Virus / Feline Immunodeficiency Virus (FeLV/FIV) testing and back-typing were also performed. The risk of mismatched transfusion reactions and feline neonatal isoerythrolysis were calculated.

Results: There was a significantly higher prevalence of blood type A (98.3%) than blood type B (1.7%), and an absence of blood type AB. There were no significant differences in blood types between different geographic locations in Trinidad, and no statistical association between blood type and breed. The calculated risk of a mismatched transfusion reaction was 3.34%, and 1.7% for neonatal isoerythrolysis.

Conclusion: Blood type A is the most prevalent blood type in cats in Trinidad, with no type AB detected. The risk of fatal transfusion reactions and neonatal isoerythrolysis is low. However, as alloantibodies exist in cats, blood typing is crucial and should be practiced in all feline populations to prevent the risks of fatal haemolytic reactions.

P-16
An investigation of the attitudes and perceptions about animal abuse in Trinidad and Tobago

S Thomas[1], O Felicioli[1], T Seebaransingh[1], A Ramdeo[1], N Timla[1], R Charles[2], L Benjamin[2]
[1]Department of Clinical Veterinary Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine and [2]Department of Basic Veterinary Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: sabrina.thomas@sta.uwi.edu

Objective: To investigate the attitudes and perceptions of the general public of Trinidad and Tobago about animal abuse.

Methods: The study comprised 386 participants. The questionnaire was constructed in Google Forms and disseminated via social media platforms. It was a mixture of Likert scale and open-ended questions. The four major sections were: (1) Demographics, (2) Views on the relationships between people and animals, (3) Views on animal abuse and various acts of abuse, and (4) Views on punishments for acts of abuse. Using standard statistical software, data were summarised and analysed using Chi square tests.

Results: The results obtained showed 61% agreed that pets were their owner's property while 78% disagreed that an owner was free to do what they wished with their pets. Most (95%) agreed that animals are sentient beings. Few (2.8%) respondents believed that intentional killing of a companion animal warranted no legal punishment, while 7% of respondents advocated that accidental killing of a companion animal warranted no legal punishment. Most (70%) of respondents disagreed that animals had suitable protection under the country's laws pertaining to animal abuse.

Conclusions: The majority of people recognized the value and sentience of animals, and advocated for their rights and protections. This information gained can be used by organisations developing educational programmes on animal abuse for the public.

P-17
Occurrence of surgical site infections in small animal surgery

TDJ. Auguste[1], GJ Breur[2], M Simons[3], A Ruple[4], L Koma[1]
[1]Department of Clinical Veterinary Sciences, School of Veterinary Medicine, The University of the West Indies, St. Augustine, [2]Department of Veterinary Clinical Sciences, College of Veterinary Medicine, Purdue University, Indiana, [3]Center for Innovation, Richard A. Gillespie College of Veterinary Medicine, Lincoln Memorial University, Tennessee and [4]Department of Population Health Sciences, Virginia-Maryland College of Veterinary Medicine at Virginia Tech, Virginia
Email: Tennille.Auguste@sta.uwi.edu

Objective: To review the rates, organisms, risk factors, impact of, prevention and surveillance of surgical site infections in small animal surgery.

Methods: A systematic review of published literature was conducted for articles pertaining to surgical site infections of small animals (dogs and cats) from 1997 to 2022. Articles that contained any of the following information were included: rates; risk factors; the impact of surgical site infections on patients, humans and institutions; isolated organisms and antimicrobial resistance; prevention and surveillance methods.

Results: Rates of surgical site infections ranged from 2.8 to 8.5%. Intrinsic factors associated with development of surgical site infections included being an intact male dog, increasing body weight and comorbidities. Extrinsic factors associated with development of surgical site infections included duration of surgery and anaesthesia, type of surgical procedure, perioperative antimicrobial use and traffic flow in the surgical suite. Multidrug resistant organisms were commonly isolated from infected surgical wounds. There are no standard definitions for classification of surgical site infections in veterinary surgery. Interestingly there was no consensus on the prevention of surgical site infections with some authors indicating it was an unavoidable complication. The systematic review revealed a paucity of data from developing countries.

Conclusions: Surgical site infections in dogs and cats are a significant concern, especially with the isolation of multidrug resistant organisms. Adherence to infection control practices and appropriate perioperative aseptic principles including good antimicrobial stewardship are important in the prevention and control of surgical site infections in small animal patients.

P-18
Survey and education of abnormal behavioural conditions occurring in dogs, cats, birds and rabbits in Trinidad and Tobago

J Johnson, E Hassranah, K Khatic, B Raghunanan, S Ramsook, C Jones, AK Persad.
Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: Jenelle.johnson2@sta.uwi.edu

Objectives: To determine the most prevalent behavioural issues in commonly kept pet species: dogs, cats, birds and rabbits in Trinidad and Tobago; and to educate owners using pamphlets on how to recognise abnormal behaviour patterns in their pets.

Methods: A survey was custom designed, tested and distributed physically and online using various social media platforms to pet owners in Trinidad and Tobago. The surveys were designed using the Google forms application which also captured and analysed the data. Pamphlets for each pet species (dog, cat, bird, rabbit) were designed and sent/given to owners if requested.

Results: The calculated sample size was 384 completed surveys. However due to several limitations, only 210 responses were collected across Trinidad and Tobago. Seventy-two of these respondents requested pamphlets. According to the respondents, the most common abnormal behaviours reported in dogs were the fear of loud noises, jumping on people and excessive vocalisation. While in cats, pica, biting and scratching furniture were the most common behavioural issues. In birds, biting, screaming/excessive vocalisation, feather picking, and the display of destructiveness were the main abnormal behaviours described. While destructive chewing, growling/biting/scratching and unwanted/excessive urination were the abnormal behaviours noted in rabbits. A third (34.3%) of respondents were interested in more information and the pamphlets.

Conclusions: The results obtained confirmed that most pet owners are unable to distinguish between normal and abnormal behaviours in their pets.

P-19

Assessing the prevalence of dental disease in dogs four years and older in Trinidad

DJV Brailey[1], JR Felician[1], F Mohammed[1], A Nanan[1], O Khan[1], K Sawh[2], A Hosein[1].
[1]Department of Clinical Veterinary Sciences, School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine and [2]Animedics Pet Hospital, Chaguanas
Email: ansarah.hosein@sta.uwi.edu

Objective: The aim of this study was to assess the prevalence of dental disease in dogs four years and older in Trinidad.

Methods: A total of 200 dogs were assessed from various veterinary clinics during the period of May 2016 to August 2016. They were examined for oral health problems such as tooth loss, gingivitis, halitosis, dental attrition and periodontal disease using organoleptic assessment, observation and dental probing.

Results: Out of the 200 dogs sampled, 100% were found to have at least one of the indicators of dental disease with dental calculus at the highest prevalence at 96.5%, halitosis at 95.5%, dental attrition at 94%, periodontal disease at 92.5%, gingivitis at 87.5% and missing teeth with the lowest at 29%.

Conclusions: From the results it can be concluded that dental disease was prevalent in Trinidad. Although most owners were aware that canine dental care was available, very few dogs had ever actually undergone professional dental examinations. It was also found that dental care was rarely suggested to owners by veterinarians.

P-20

Attitudes towards sustainable dentistry in Trinidad and Tobago

D Carr, A Donatien, A Dilraj, A Teelucksingh, K Maharaj, SA Mahadeo, T Hoyte
Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: deysha.carr@my.uwi.edu

Objective: To identify the factors linked to more positive attitudes towards sustainable dentistry among the general population of Trinidad and Tobago.

Methods: A cross-sectional survey was conducted comprising patients in the public dental clinics under the jurisdiction of the North Central Regional Health Authority and patients attending private dental clinics across Trinidad and Tobago using convenience sampling. Data was collected on a printed questionnaire designed to determine the factors affecting patients' attitude towards sustainable dentistry. The data were analysed using t-tests and analysis of variance (ANOVA).

Results: The questionnaire was completed by 1 240 adults: 66% female; 51% aged 18-40 years; 50% with at least an undergraduate degree; 42% African and 34% Indian; and 94% attending private clinics. Overall, the participants had a positive attitude towards sustainability in dentistry which was strongly correlated with a patients' age, sex and ethnicity. There was no significant correlation between a patients' health seeking behaviour and their attitude towards sustainable dentistry. Patients were willing to compromise their time, money and the durability of their dental work for more sustainable care. However, they were generally unwilling to compromise the aesthetics and health of their teeth.

Conclusion: Adults in Trinidad and Tobago had a positive attitude towards sustainable dentistry, with older patients and female patients having more positive attitudes. Patients were most willing to compromise their time, money and the

durability of their dental work. Therefore, dentists in Trinidad and Tobago should invest in sustainable alternatives that do not compromise the aesthetics or health of their patients' teeth because those technologies will not be favoured by their patients.

P-21
Mechanical properties of various foods and confectioneries commonly consumed in Trinidad and Tobago

D Brathwaite, T Ragoobir, H Ramnanan, V Ramsumair, V Ramdath, D Sawh, W Smith
School of Dentistry, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: tamara.ragoobir@my.uwi.edu

Objectives: To measure the compression strength of commonly consumed foods and confectionary in Trinidad & Tobago; and to determine whether the influence of cuspal anatomy was associated with the compressive strength measurements of tested foods.
Methods: Ten foods/confectionery were selected for the study. Samples of each of the foods were tested using a universal testing machine. Six samples of each were tested using flat plates and chrome cobalt casts of teeth. Data were collected and analyzed using SPSS version 25. One-way analysis of variance was used to test differences in means.
Results: The mean compressive strength of the foods tested was 404 Newton (N) with a range of 30–2 568 N. There was no significant difference in compressive strength using the jaws and flat plates method. The highest mean compressive strengths were from stewed agouti bones (1 174.50 N) and dinner mints (908.25 N). Fried whole channa (chickpea) gave the lowest mean compressive strength (43.92 N). There was high variability in the compressive strengths obtained especially with agouti, chicken bones and dinner mints.
Conclusions: Agouti bones and dinner mints had the highest compressive strengths while whole-fried channa had the lowest. Cuspal anatomy was not associated with the compressive strength measurements of these foods.

P-22
Dental students' perceptions of clinical tutors as role models at the University of the West Indies, St. Augustine

S Boodoo, J Clarke, A Downes, M Ferreira, R Lewis, J Rampersad, J Shairsingh, A Snaggs, GS Aswal
School of Dentistry, Faculty of Medical Sciences, The University of West Indies, St Augustine
Email: docgsaswal@gmail.com

Objective: To explore clinical dental students' perception of clinical tutors as role models at the University of the West

Indies (UWI), St Augustine; and to determine the attributes associated with role modelling.
Methods: A cross-sectional study was conducted wherein all the DDS (Doctor of Dental Surgery) clinical students (Year 3-5) and interns were invited to complete an online anonymous questionnaire between March-June 2023. The questionnaire consisted of 19-items covering demographics, perceptions towards role modelling and attributes of positive and negative role models. The collected data were analysed using SPSS and $p < 0.01$ was the level of statistical significance.
Results: The response rate was 55% (71 of the 129 registered clinical students and interns). All the respondents believed that role modeling was important (100%). Most of the respondents confirmed that role models had an impact on their motivation towards learning (62%), career choice (83.1%) and professional behaviour, personality, values, and well-being (69.4%). Most (88.7%) agreed to have found positive as well as negative role models amongst the clinical tutors at the UWI. Positive role models increased the interest in learning, possessed adequate knowledge and clinical skills, were respectful to students, colleagues, and patients, were honest, ethical, and even-tempered. On the contrary, negative role models decreased the interest in learning, lacked adequate clinical knowledge and skills, were low on commitment, honesty, and ethics, and portrayed hypocritical or narcissistic behaviour.
Conclusions: Based on the responses, clinical tutors viewed as role models influenced students' learning, career choices, professional competencies, personality, values and well-being. At the University, clinical tutors did qualify as positive and negative role models. Understanding the attributes of positive and negative role models is essential in reinforcing desirable attributes amongst the clinical tutors.

P-23
Variation of the corneal biomechanical properties of patients with dry eyes, keratoconic and healthy eyes using the ocular response analyser machine

R Juman, S Hosein, K Ekemiri
Optometry Unit, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: ruqayya.juman@my.uwi.edu

Objective: To examine corneal biomechanical properties in individuals with dry eye, keratoconus, and normal eyes.
Methods: A rigorous case-control study was conducted at The UWI Optometry Clinic, delving into the corneal biomechanics of 85 subjects. They comprised 35 individuals with healthy eyes (control group), 30 with dry eyes, and 20 with keratoconus.
Results: The investigation revealed insightful corneal hysteresis (CH) values, measuring 11.2 mmHg for dry eyes and

11.13 mmHg for normal eyes. Correspondingly, the corneal resistance factor (CRF) values for dry and normal eyes were 11.14 mmHg and 10.98 mmHg, respectively. Among patients with keratoconus, the CH and CRF values were lower, measuring 8.89 mmHg and 8.32 mmHg, respectively. The analysis demonstrated no statistically significant differences in CH and CRF between healthy and dry eyes. However, differences were observed between keratoconus-affected eyes and healthy eyes. Furthermore, the association between age and gender varied within the different conditions. In dry eyes, CH exhibited a significant association with age and gender, while CRF did not. Conversely, in the case of keratoconus, CH showed no association with age and gender, whereas CRF did.

Conclusion: This study demonstrates variations in corneal biomechanical properties in keratoconic eyes compared to healthy eyes. Contrastingly, no statistically significant differences were found between dry eyes and healthy eyes. Thus, the Ocular Response Analyzer can be useful for diagnosing keratoconus, but its efficacy in diagnosing dry eyes may be limited. These findings emphasize the clinical applications and diagnostic importance of corneal biomechanics.

P-24
A retrospective look at using subthreshold micropulse laser therapy for treatment of central serous chorioretinopathy and success rates in Trinidad and Tobago

N Persad[1], F Hackett[2], P Samaroo[2], C Lowe[2], J Guytan[2], A Phillips[2], K Hosein[2], A Vialva[2], A Vialva[2], A Samaroo[2]
[1]Trinidad Diabetic Eye Center, San Fernando and [2]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: nileshpersad@gmail.com

Objective: To determine the efficacy of subthreshold micropulse laser therapy (SMPLT) as a first line course of treatment for chronic and recurrent central serous chorioretinopathy (CSCR) in a single ophthalmology clinic in Trinidad and Tobago.

Methods: A sample of 23 patients presenting to the clinic between November 2016 and November 2022 with chronic or recurrent CSCR was selected. The data were collected through a review of patient notes which highlighted patient demographics, type of CSCR, stress levels, number of treatments, central retinal thickness and visual acuity before and after treatments, and patient satisfaction. Data were analysed through descriptive statistics and paired t-tests using SPSS Version 29.0.

Results: The majority of patients were male (70%) with chronic CSCR (87%) and high stress levels (52%). The mean age and number of treatments were 55.3 years and 1.2 treatments respectively. The results of the paired t-tests indicated that visual acuity increased, and central retinal thickness decreased after treatment (p < 0.05 in each case)

compared with before. Patient satisfaction with treatment (96%) was high.

Conclusion: Subthreshold micropulse laser therapy should be considered a first line course of treatment of chronic and recurrent CSCR across the public and private health sectors in Trinidad and Tobago as it decreases central retinal thickness and increases visual acuity.

P-25
Comparative assessment of determinants of utilisation of eye care services in urban and rural adult populations in Trinidad

K Ekemiri[1], AS Ali[2], SS Ali[2], AD Bachan[2], G Barhoo[2], SR Jaglal[2,] NN Kissoon[2], J Liu[2], S Sam[2]
[1]Optometry Unit, Department of Clinical Surgical Sciences and [2]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: kingsley.ekemiri@sta.uwi.edu

Objective: To compare the determinants of utilisation of eye care services in urban and rural adult populations in Trinidad.

Methods: This study was a survey of 245 participants 18 years and over who lived in urban and rural areas in Trinidad. Participants were identified through door-to-door visits and included acquaintances of the research team. Data were collected using questionnaires enquiring about participants' demographics, their utilisation of eyecare services and frequency of use. The data were analysed using Chi square tests (IBM SPSS Statistics 29.0).

Results: Most participants were aged 18-25 (53.5%), female (78.0%), of East Indian descent (71.8%), and had a monthly income exceeding $7 000 (48.2%). The urban population comprised 83.7% of participants, with 16.3% residing in rural areas. There was no association between participant residence and eyecare service utilization frequency. Participants typically used eyecare services every 2-3 years (42.0% in urban areas and 47.5% in rural areas). Among those not using eyecare services, reasons included unawareness of service locations (Urban: 33.3%, Rural: 28.6%) and a lack of eye problems (Urban: 32.5%, Rural: 33.3%). Additionally, financial constraints contributed to non-utilization (Urban: 9.4%, Rural: 4.8%).

Conclusion: This study provides valuable insights into the factors influencing the utilization of eye care services among urban and rural adult populations in Trinidad. Both urban and rural residents exhibited comparable utilization patterns, characterized by infrequent service usage among a substantial portion of respondents. These findings emphasize the critical need to tackle awareness gaps and financial constraints as key barriers to improving access to eye care and fostering better eye health within these communities.

P-26

Knowledge, attitude, and preference towards the management of myopia among patients and students in Trinidad

D Lawrence, S Oudit, K Ekemiri
Optometry Unit, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email:kingsley.ekemiri@sta.uwi.edu

Objective: To comprehensively assess the knowledge, attitudes, and preferences related to myopia management among a diverse group of adults aged 18-35, including students from the University of the West Indies (UWI) and patients from the UWI Optometry Clinic.

Methods: In this cross-sectional study involving 317 participants aged 18-35, we measured knowledge, attitudes, and preferences related to myopia management. Participants included 197 students from all UWI, St. Augustine Faculties and 120 patients from the UWI Optometry Clinic. Recruitment included a comprehensive process that involved identifying potential participants, applying specific inclusion and exclusion criteria, obtaining informed consent and utilizing random sampling. Data collection involved the administration of questionnaires to both UWI students and clinic patients, followed by analysis using SPSS software.

Results: The survey indicated that 47.3% of patients and 21.2% of UWI students had myopia. There was poor myopia knowledge in 58% of the sample while 86.1% displayed a positive attitude towards myopia management. Regarding management preferences, the preferred choices of treatment were spectacles (45.5%) and soft contacts (41.4%). Associations were noted between gender and attitude (p=0.006) as well as between age and knowledge and preference (p=0.043 and p=0.010 respectively).

Conclusions: This study demonstrated a lack of awareness of myopia management amongst patients and students. It shows the importance of raising awareness on myopia management due to an alarming increase in prevalence through the years. By educating individuals, we can slow down this increase as more people will come to know about it and accept treatment.

P-27

The epidemiology of retinopathy of prematurity in Trinidad and Tobago

N Persad, RA Joseph, NA Mandol, NR John, DPJ Lewis, C Kamal, ST Sookhoo, A Subero, G Roopnarine
Faculty of Medical Sciences, The University of the West Indies St Augustine
Email: nileshpersad@gmail.com

Objective: To describe the epidemiology of Retinopathy of Prematurity (ROP) in Trinidad and Tobago and its risk factors.

Methods: This retrospective study analysed 63 premature infants born at Port of Spain General Hospital (POSGH) over a two-year period. Analyses focussed on incidence rate, detection, management, gestational age, severity, intervention and risk factors using medical records. SPSS was used for data analysis.

Results: The mean gestational weights and ages of neonates were determined to be 1 222.6g and 28.9 weeks. The annual incidence rate was 16.7% of premature infants at POSGH. It was found that 71.4% of the neonates presented with no stage of ROP, while 28.6% possessed some stage of ROP. Forty-two (66.7%) of neonates reported no ROP in any particular zone, while 33.3% presented with ROP in some zone of the retina. Using Chi-square tests and odds ratios, it was found that duration of intermittent mechanical ventilation (IMV) and hyperoxia were significant risk factors for the development of ROP (p<0.05, OR>1) while gender was not. Neonates without ROP had higher mean birth weight at 1 293.50 ± 276.12, compared to neonates with lower mean birth weight at 987.69 ± 215.85.

Conclusion: It was found that 71.4% of neonates had no retinal opacity stage, while 28.6% had some. The incidence rate was 16.7% of premature infants, with the duration of IMV and hyperoxia being significant risk factors.

P-28

Improved diets of outpatients at two public health facilities during the early phase of the pandemic

A James[1], AJ Williams[2], C Kendall-Mapp[2], SR Hunte[2], MA Ivey[3], DT Simeon[2]
[1]Department of Mathematics and Statistics, Faculty of Science and Technology, [2]Caribbean Centre for Health Systems Research and Development and [3]Department of Para-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: akinij9@gmail.com

Objective: To examine changes in dietary intakes and measures of food security, pre- vs. during-pandemic, in outpatients at two public health facilities in Trinidad.

Methods: The study comprised 101 patients aged 18-74 years. Data were collected for the pre-pandemic period and during the pandemic via telephone and in-clinic interviews. The questionnaire included two items from the Food Insecurity Experience Scale (FIES) and changes in food intake between the two periods. McNemar's test was used to analyse pre- vs. during-pandemic differences.

Results: The following are the changes in dietary practices comparing pre- vs. during-pandemic:

Foods Consumed	Increased n (%)	Decreased n (%)	No Change n (%)
Preserved snacks	10 (9.9)	20 (19.8)	59 (58.4)
Fresh fruits	38 (38.0)	19 (19.0)	43 (43.0)
Fresh vegetables	34 (34.3)	12 (12.1)	53 (53.5)
Peas and beans	18 (18.6)	8 (8.2)	71 (73.2)
Meats	11 (10.9)	24 (23.8)	59 (58.4)
Fast foods	5 (5.0)	39 (38.6)	43 (42.6)
Sugar sweetened beverages	4 (4.0)	26 (25.7)	50 (49.5)
Alcoholic beverages	9 (8.9)	11 (10.9)	40 (39.6)
Water	63 (63.0)	1 (1.0)	36 (36.0)

Patients were asked if their food ran out or if they were worried whether it would run out before receiving money to buy more. There was no difference in this being ever true pre-pandemic (51.5%) vs. during-pandemic (48.5%).

Conclusion: There were no changes in the patients' food security, however they reported increased intakes of fruits, vegetables, peas, beans and water and decreased consumption of sweetened beverages and fast foods.

P-29
Sedentary behaviors increased in outpatients during the pandemic

AJ Williams[1], A James[2], C Kendall-Mapp[1], SR Hunte[1], MA Ivey[3], DT Simeon[1]
[1]Caribbean Centre for Health Systems Research and Development, [2]Department of Mathematics and Statistics, Faculty of Science and Technology and [3]Department of Para-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: Akil.williams@open.uwi.edu

Objective: To compare the lifestyle behaviours i.e., physical activity, screen time and sleep duration of outpatients pre- vs. during the pandemic.

Methods: The study comprised 101 patients aged 18–74 years who were recruited from two public health facilities. Data were collected using telephone and in-clinic interviews for two periods: pre-pandemic and during the pandemic. The questionnaire included items to measure physical activity, screen time (television, computers, devices) and sleep duration. Independent variables included demographics, and diseases status. Differences pre- vs. during-pandemic were examined using Wilcoxon Signed Rank, Kruskal Wallis and Mann-Whitney U tests.

Results: More patients met their weekly physical activity ($\geq$ 150 minutes per week) requirements; pre- (56%) compared with during-pandemic (43%). There was a significant decrease in the median weekly physical activity levels, pre-pandemic (180 minutes) compared with during-pandemic (120 minutes) ($p < 0.001$). The patients' level of educational achievement was the only demographic variable that predicted their change in physical activity, pre- vs. during-pandemic. There was a significant increase in daily screen time i.e., pre-pandemic (2 hours) compared with during-pandemic (3 hours) ($p < 0.001$). However, there were no differences in the changes in screen time pre- vs. during-pandemic by age, gender, education, occupation and disease status. There were no significant changes in sleep duration pre- vs. during-pandemic. The median for both periods was 7 hours.

Conclusion: The increase in sedentary behaviours of outpatients during the pandemic suggests a need to emphasize health promotion interventions, especially during public health emergencies.

P-30
Disease control of non-communicable disease outpatients: pre- and during the COVID-19 pandemic

AJ Williams[1], A James[2], C Kendall-Mapp[1], SR Hunte[1], MA Ivey[3], DT Simeon[1]
[1]Caribbean Centre for Health Systems Research and Development, Faculty of Medical Sciences, The University of the West Indies, St Augustine, Trinidad and Tobago, [2]Department of Mathematics and Statistics, Faculty of Science and Technology, The University of the West Indies, St Augustine, Trinidad and Tobago and [3]Department of Para-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: Akil.williams@open.uwi.edu

Objective: To examine changes in the disease control of non-communicable disease outpatients pre- and during-pandemic.

Methods: This retrospective cohort study comprised 101 patients aged 18–74 years enrolled at two public health facilities. Data were collected for two periods: pre-pandemic (January 2019–March 2020) and during-pandemic (April 2020–July 2022). Disease control was determined from the recorded laboratory (cholesterol, fasting blood sugar (FBS)) and clinical (blood pressure (BP)) data in the patients' medical records. McNemar's and Wilcoxon Signed Rank test were conducted to examine pre- vs. during-pandemic changes in disease control.

Results: The sample primarily comprised patients with hypertension (62%), diabetes (46%) and hyperlipidemia (50%). Most hypertensive patients had uncontrolled BP (Pre-pandemic: 72.1%; During pandemic: 71.4%). Similarly, most diabetics had uncontrolled FBS (Pre-pandemic: 65.2%; During pandemic: 60%). Pre-pandemic cholesterol was poorly controlled in 75% of patients diagnosed with hyperlipidemia, but this improved to 50% during pandemic. There was a statistically significant decrease in total cholesterol ($p = 0.01$) and low-density lipoprotein (LDL)

(p = 0.0005) from pre- to during-pandemic. There were no sex or age group differences in control of FBS or BP pre- or during the pandemic. However, males had better cholesterol control pre-pandemic (50%) than females (10.5%) (P=0.019).

Conclusion: More than 70% of hypertensives and 60% of diabetics had poor disease control prior to and during the pandemic. Most patients were also at-risk or had hyperlipidemia, with some improvement during the pandemic.

P-31
Access and utilization of public healthcare facilities and medication use by outpatients during the COVID-19 pandemic

A James[1], AJ Williams[2], C Kendall-Mapp[2], SR Hunte[2], MA Ivey[3], DT Simeon[2]
[1]Department of Mathematics and Statistics, Faculty of Science and Technology, [2]Caribbean Centre for Health Systems Research and Development and [3]Department of Para-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: akinij9@gmail.com

Objective: To examine outpatients' access to and utilization of healthcare facilities and their medication use during the pandemic.

Methods: The study comprised 101 patients aged 18-74 years, attending two public health facilities in Trinidad. Data were collected during the pandemic by trained interviewers via telephone and in-clinic. The questionnaire included items to measure clinic appointments; visits to the emergency room (ER) and hospital admissions; and access to and the taking of medications; demographics; and disease status. Data were analysed using cross-tabulations.

Results: Many patients rescheduled (30.7%) and did not attend their clinic appointments (26.7%) due to concerns about COVID-19. More persons who were diagnosed as overweight/obese rescheduled or did not attend appointments compared with the other patients (p<0.005). The analysis indicated that 18.8% and 9.9% of patients visited the Emergency Room and were admitted to hospital due to their conditions, respectively. More patients with heart disease had to visit the ER and were admitted compared with other patients (p<0.01). A quarter (27.7%) of patients had more problems getting their usual medications from the pharmacy. More heart and hypertensive patients had problems than before getting their medications than other patients (p=0.01). Notably, 25.7% of patients reported that they did not take their medications as prescribed in order to make them last until their next doctor's visit during the pandemic. Hypertensive patients were more likely to 'stretch' their medications than other patients (p=0.001).

Conclusion: Outpatients' access and utilization of healthcare facilities and medication use during the pandemic varied by disease status but not by demographics.

P-32
Dietary diversity of individuals with type 2 diabetes and foot ulceration in Trinidad and Tobago

S Deonarine[1], A Abdool[1], T Francis[1], J Nicholas Joseph[1], V Tewari[1], V Tewari[1], S Neeranjan[1], A Nath[1], E Augustus[2], JS Mohan[3]
[1]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine, [2]Faculty of Medical Sciences, The University of the West Indies, Cave Hill and [3]Department of Pre-Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: shivanand.deonarine@my.uwi.edu

Objective: To assess dietary diversity in adults with diabetic foot ulceration (DFU) in Trinidad and Tobago (T&T); compare dietary diversity in DFU and diabetics without DFU (Non-DFU) and explore associations between dietary diversity and clinical/laboratory variables.

Methods: A cross-sectional study using an interviewer-administered questionnaire (adapted, pre-validated Minimum Dietary Diversity for Women (MDD-W) developed by the Food and Agriculture Organization (FAO)) was conducted. A convenience sample of participants $\geq$ 18 years (n=214: 50 DFU; 164 non-DFU) was recruited from clinics in the North-Central Regional Health Authority and from the Diabetes Association of T&T. A Dietary Diversity Score (DDS) was developed utilizing the 10 FAO food groups (minimum dietary diversity being a score of $\geq$5). Data were analysed using independent t tests and logistic regression (STATA v17).

Results: The mean DDS was lower in the DFU group than in non-DFU (5.7 vs 6.2, p=0.026). Consumption of high-protein foods and foods high in vitamins and minerals tended to be lower in DFU, with unprocessed poultry being significantly lower (p=0.050). Body mass index was higher in the DFU group (p=0.010). The results of logistic regression, adjusted for potential confounders indicated that the odds of DFU decreased with each unit increase in dietary diversity [OR= 0.75, 95% CI= 0.59, 0.96, p=0.021].

Conclusion: Individuals with DFU had lower dietary diversity than diabetics without foot ulceration. Further assessment of dietary intake in larger samples is needed to identify specific nutritional inadequacies and to take measures to optimize healing or prevent ulceration.

P-33

An investigation of the efficacy of herbal medication compared to prescribed conventional medication in managing hypertension in Trinidad and Tobago

A Williams-Persad, A Brereton, S Baboolal, K Chinemilly, M Premchand, R Ramdial, A Ramroop, P Richards, T Seepersad, P Johnson
Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: alexia.brereton@my.uwi.edu

Objective: To investigate the most popular herbal preparations and efficacy compared to conventional anti-hypertensive agents among hypertensive patients ages 35 to 65 years old in Trinidad.

Methods: The study was conducted at selected Regional Health Authorities' Chronic Disease clinics using a convenient sample of 151 hypertensive patients. Participants included herbal and non-herbal medicine users. Data were collected using an online questionnaire. The IBM SPSS data analysis software was used to compare patients' past and present blood pressures among both herbal and non-herbal medication users.

Results: Overall, 50.7% (n =77) of hypertensive patients utilized homemade herbal medicines in addition to conventional medication while 13.9% (n = 21) utilized commercial herbal remedies with conventional hypertensive medicines. The most frequently used home herbal remedy included garlic and ginger 19.1% (n= 17), while 49.4% (n = 44) used a concoction of herbs. The difference in blood pressures between herbal and non-herbal users was not statistically significant.

Conclusion: This study serves to guide physicians about the use of herbal medicines together with conventional medicines and the implications on blood pressure control in hypertensive patients. Further research and clinical trials are warranted, including quantification of the most efficacious herbs.

P-34

Prevalence of risk factors for cardiovascular diseases among students at an Eastern School Health Unit in Trinidad

S Caruth-Turner
Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: sonia.caruth@my.uwi.edu

Objective: To determine the prevalence of risk factors or cardiovascular diseases in a school health unit in the Eastern Regional Health Authority (ERHA) and to compare these with previously published Trinidad and Tobago (T&T) data.

Methods: Data were extracted from the records of students in a school health unit under the ERHA in 2018 in the counties of St. Andrew and St. David. The data were collected on the students' entry to secondary school. Measurements included blood pressure, random blood glucose and Body Mass Index (BMI). These were compared with internationally accepted relevant reference values. BMIs were then classified as underweight, normal, overweight, obese; blood pressure was classified as normal or elevated; and blood glucose as normal, prediabetic or hyperglycaemia.

Results: The level of participation was 81.7%, with a final sample of 367 children comprising 53.7% girls and 46.3% boys. Average age was 12.83±1.01 years. Most children were aged 12 years (41.1%), 13 years (34.1%) and 14 years (18.8%). The largest ethnic groups were Mixed (44%), Afro- (33.8%) and Indo- (21.5%) Trinidadians. Most students lived in suburban areas (61.6%), followed by rural areas (30.5%) and remote areas (7.9%). Prevalence of obesity was 22.1% (CI:0.17.8, 26.3), overweight 10.0% (CI: 6.5, 12.5), prediabetes 4.4% (CI: 2.1, 6.1), hyperglycaemia 1.1% (CI: 0.3, 2.2), elevated systolic blood pressure 6.8% (CI: 4.0, 9.3) and elevated diastolic blood pressure 10.9% (CI: 7.7, 14.1).

Conclusion: There was a significant variation from previous T&T reports; with higher rates of obesity, prediabetes, hyperglycaemia, elevated systolic and elevated diastolic blood pressure in the sample studied.

P-35

The prevalence of overweight and obesity in children with autism spectrum disorder in Trinidad and Tobago

S Singh, P Bahadursingh
Child Health Unit, Department of Clinical Medical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: sebasingh1@gmail.com

Objective: Childhood obesity causes multiple health issues affecting almost all organ systems resulting in increased morbidity and mortality. The occurrence of overweight and obesity in children with autism spectrum disorder (ASD) has been recognized internationally but there were no local (Trinidad and Tobago) data. Rates could be higher in this group due to unique risk factors stemming from their diagnosis. This research seeks to determine the prevalence of overweight and obesity in children with ASD locally and to determine any associated co-morbidities and lifestyle factors.

Methods: A cross-sectional quantitative study was done from December 2022 to April 2023. The sample comprised 127 children and adolescents aged 2 to 18 years. A data collection sheet was completed comprising sociodemographic and lifestyle-related factors influencing overweight and obesity including hours of screentime, physical activity,

meal preferences and sleep quality and duration. Weight was determined using a calibrated scale in kilograms while height was measured using a stadiometer in metres.

Results: The prevalence of overweight and obesity in this sample of children and adolescents with ASD in Trinidad and Tobago was 13.4% and 19.7%, respectively. Greater physical activity was associated with decreased overweight and obesity. There were no significant associations between the other variables measured and overweight/obesity.

Conclusions: The globally increasing trend of childhood overweight and obesity applies to Trinidad and Tobago and to this sub-population studied. The findings would be disseminated within the wider medical community and the public to aid in the prevention and development of anticipatory guidance regarding overweight and obesity in this group. Further research is essential to mitigate this worldwide health crisis.

P-36
Audit of the chronic pain clinic at the Sangre Grande Hospital during the COVID pandemic

K Bhagaloo, L La Borde, S Mohammed
Department of Anaesthetics and Intensive Care, Sangre Grande Hospital, Eastern Regional Health Authority
Email: karishmabhags@gmail.com

Objective: To examine the pathology, age, sex, treatment options and limitations encountered, Hospital and Anxiety and Depression Score (HADS) and need for psychological input in a chronic pain clinic.

Methods: The audit covered the 2020–2022 COVID-19 pandemic (2 ½ year period). Data extraction forms were used to collect the relevant variables from medical records at the Chronic Pain Clinic, Sangre Grande Hospital.

Results: Data were collected for 101 patients aged 20-90 years, with 64.4% females. Diagnoses comprised lower back pain (46.5%), radiculopathy (13%), and failed back surgery syndrome (12%), with many referrals emerging within the SGH (43.5%). Most (96%) patients followed therapeutic suggestions and were satisfied with services, wishing they had accessed them earlier. As many as 67.6% and 64.7%, respectively, had HADS depression and anxiety subscales scores more than 8 points i.e., indicating the presence of significant symptoms. Sixty patients underwent interventional procedures such as nerve blocks and joint injections. Eighty-two patients required pharmacotherapy, with the majority requiring weak opioids and serotonin and norepinephrine reuptake inhibitors.

Conclusion: Sangre Grande Hospital offered Trinidad and Tobago's only publicly available chronic pain service. Despite limitations, patients expressed satisfaction. A Chronic Pain Management clinic with relevant specialists and therapeutic modalities can improve patient outcomes. Standardization, staff training, and patient-centeredness

optimize such services. An in-house psychologist would be needed to aid patients with anxiety and depression. Quality assessments and feedback would also improve patient-doctor relations.

P-38
A novel approach to non-invasive diabetes mellitus screening utilising smartphone-based computer-aided pixel analysis: A quantitative scale for Acanthosis Nigricans

AS Dhanoo[1], S Ramroach[2], S Gupta[4], B Modhagala[5,] F Hill-Briggs[3,] BN Cockburn [1]
[1]Department of Life Sciences, Faculty of Science and Technology, [2]Department of Electrical and Computer Engineering, Faculty of Engineering, The University of the West Indies, St. Augustine, [3]Feinstein Institutes for Medical Research, Northwell Health, New York, [4]Punjab Agricultural University, Department of Electrical Engineering and Information Technology, Punjab, India and [5]SIVISOFT, New Jersey, USA
Email: andrewdhanoo@hotmail.com

Objective: Using a novel Acanthosis nigricans (AN) smartphone grading method–"ANcam" to classify the severity of AN through colour and texture analysis to screen for type 2 diabetes (T2DM).

Methods: A total of 227 adults and juveniles, in Trinidad and Tobago, with and without T2DM were studied. Neck images, anthropometrics, selected medical history, and glycosylated haemoglobin (HbA1c) were recorded. A Python 3.10.1 algorithm analysed cropped images to extract colour and texture features from normal-pigmented (upper back) and hyperpigmented skin (dorsal neck). Independent raters also graded the images using the observational Burke scale. A Correlation matrix identified the best colour channels for hyperpigmentation, and a Receiver Operator Curve (ROC) was used to identify diagnostic thresholds. Five machine learning (ML) models were applied to predict diabetes status using all extracted features.

Results: CMYK_K was the best-correlated colour model with HbA1c cut-off of 5.7%/39 mmol/mol (r=0.45, p<0.001). Predictive accuracy (AUC = 0.854), at cutoff 7.67 CMYK_K units was high with 81.1% sensitivity and 70.3% specificity. ANcam had low inter-rater variance compared to Burke grading (p<0.001). Grey Level Co-occurrence Matrix (GLCM) was the texture feature with the highest contribution towards ML prediction. XGBoost and Random Forest ML models performed best, with 79.26% and 76.79% overall accuracy, respectively.

Conclusion: ANcam predicted diabetes status with almost 80% confidence from a single image. It is user-friendly and shows potential as a primary screening tool for diabetes, offering reproducible and sensitive results for various skin tones and lighting conditions.

P-39
Gender differences in the dietary habits among university students

J Henry, M Webb, S Bawa, S Beckford
Department of Agricultural Economic and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine
Email: marquitta.webb@sta.uwi.edu

Objective: To investigate the gender differences in the dietary habits among students at University of the West Indies, St. Augustine.

Methods: A quantitative, cross-sectional study was conducted among 376 students using an online self-administered modified Dietary Habits and Nutrition Beliefs Questionnaire. Chi-squared tests and independent samples T-test were used to identify significant differences in dietary habits. Significant level was set at $p \leq 0.05$.

Results: Most of the participants were female (64.6%) and mean age was 26.2 years. Intakes were significantly greater in females than males for addition of sugar to hot beverages ($p < 0.01$), white bread and bakery products ($p = 0.017$), butter ($p = 0.032$), milk and fermented milk beverages ($p < 0.01$), eggs ($p < 0.01$), and sweetened hot beverages ($p=0.034$). The intakes of males were greater than females for fast foods ($p = 0.042$), fried foods ($p < 0.01$), fresh cheese and curd products ($p < 0.01$), cold meats, sausages, and hot dogs, ($p < 0.01$), red meats ($p < 0.01$), tinned/jar meats ($p = 0.015$), tinned/jar vegetables ($p = 0.040$), and alcoholic beverages ($p = 0.013$).

Conclusions: Females drank more flavoured, sweetened beverages, consumed foods such as white breads, milk, butter, and eggs more frequently than male students. The consumption of fast and fried food, meats, tinned vegetables, fermented milk drinks, fresh cheese curd products and alcohol was more frequent among male than female students.

P-40
Evaluation of bacterial biofilm formation and antibiotic resistance in *Staphylococcus aureus* and *Pseudomonas aeruginosa* isolates from Trinidad and Tobago

WK Arneaud[1], CG Unakal[1], A Kurhade[1], R Thompson[1], PE Akpaka,[1, 2]
[1]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine and [2]North Central Regional Health Authority
Email: whitneyarneaud@yahoo.com

Objective: To investigate the antibacterial susceptibility pattern and biofilm production capacity of *Pseudomonas aeruginosa* and *Staphylococcus aureus* isolates.

Methods: Two hundred clinical isolates of *Staphylococcus aureus* (n=105) and *Pseudomonas aeruginosa* (n=95) were obtained from patients attending regional hospitals in the country. Susceptibility profiles were performed using modified Kirby-Bauer disc diffusion agar methods. Methicillin-resistant *S. aureus* (MRSA) was detected using the Cefoxitin disk test. Biofilm formation was detected using Congo Red Agar plate method. Statistical analysis was done using the SPSS (V29) and Chi-square tests were used to examine differences.

Results: *S. aureus* isolates (89%) were susceptible to vancomycin, linezolid, gentamicin, and clindamycin; while *P. aeruginosa* (91%) were susceptible to Cefepime, Ceftazidime, and Meropenem. *S. aureus* (43%) were strong biofilm producers and 21% were non-biofilm producers. *P. aeruginosa* (16%) were positive for biofilm and 84% were non-biofilm producers. Non-biofilm producers displayed antibiotic resistance to Cefotaxime and Erythromycin. Non-biofilm producers displayed antibiotic susceptibility to Ceftazidime and ciprofloxacin.

Conclusion: There was a poor correlation between biofilm producers and antibiotic resistance in the bacterial isolates studied. Although there are several options for antibiotic choices to treat *S. aureus* and *P. aeruginosa* infections, there is still a need for routine surveillance of antibiotic resistance and biofilm formation for these bacterial organisms to checkmate their resistance in Trinidad and Tobago.

P-41
Prevalence of *Candida* species in clinical specimens in Trinidad

D Anderson[1], CG Unakal[1], A Khurade[1], R Thompson[1], K Ashraph[1,] PE Akpaka[1,2]
[1]Department of Paraclinical Sciences. Faculty of Medical Sciences, The University of the West Indies, St. Augustine and [2]North Central Regional Health Authority
Email: dianncha_a@yahoo.com

Objective: To detect prevalent *Candida species* and their antifungal resistant genes from clinical specimens of patients attending a regional hospital in Trinidad.

Methods: This cross-sectional study was carried out over a 10-month period. Clinical samples from one of the regional health authorities were analysed at the Microbiology Laboratory of the Paraclinical Sciences Department, Faculty of Medical Sciences, University of the West Indies using conventional and molecular methods including Kirby Bauer, Chromogenic agar and polymerase chain reaction (PCR) (Quigen Rotor gene Q). The PCR quantified antibiotic expression of Erg11 genes in the *Candida* species.

Results: Overall, 251 clinical samples were collected with most females (82.5%). The *C. albicans* was most prevalent *Candida species* (72.1%), followed by *C. tropicalis* (10%), *C. glabrata* (9.6%) and *C. krusei* (8.4%). High vaginal swab

was the source of the most isolates (50.2%), followed by urine (33.9%) and other sources (15.9%). Antifungal susceptibility showed more than 90% of *C. krusei* were susceptible to fluconazole, *C. tropicalis* (88%), *C. albicans* (79.5%), and least in *C. glabrata* (66.7%). PMA1 gene expression for resistance and susceptibility was calculated for the *Candida* species, and over 15% were positive for the resistant genes.

Conclusions: Chromogenic agar rapidly identified *Candida* species, was easy to set up and cost effective. Several of the Candida species had the PMA1 gene expressing resistance. Azole resistance of more than 10% in the *Candida species* should be of great concern to the country.

P-42
Emergency physicians' perceptions of the benefits and challenges of the implementation of an electronic medical record system in the Emergency Department at the San Fernando General Hospital, Trinidad and Tobago

S Deen[1], R Sankar[1], S Varachhia[1,2], R Debie[1], A Sankar[3], K Manohar[4], R Naraynsingh[1]
[1]Emergency Department, South-West Regional Health Authority, [2]Emergency Medicine Unit, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, [3]Department of Mathematics and Statistics and [4]Department of Computing and Information Technology Faculty of Science & Technology, The University of the West Indies, St. Augustine
Email: ramona.sankar@yahoo.ca

Objective: To survey Emergency physicians' (EPs') initial perception of the benefits and challenges encountered with the Electronic Medical Record System (EMRS) implementation in the Emergency Department (ED) and to re-evaluate their experiences.

Methods: An online questionnaire was administered to the EPs of the Emergency Department, San Fernando General Hospital. The questionnaire was distributed in March 2023 (Cycle 1) and repeated in May 2023 (Cycle 2), with 53 and 51 responses, respectively. The data collected was visualized using infographics and analysed to determine usage, perceptions, challenges, and desired improvements.

Results: Most EPs, 86.8% in Cycle 1 and 88.2% in Cycle 2, always used the EMRS. The results in both cycles showed that ≥ 88% of EPs agreed that an EMRS was beneficial due to increased access and improved quality of medical records. The superior choice of device was the laptop at 92.5% in Cycle 1 and 88.2% in Cycle 2. Despite these perceived benefits, there were perceived challenges. The lack of devices (73.6% and 86.3 %), time-consuming process (77.4% and 78.4%) and inadequate skills (7.5% and 19.6%) were the main challenges in the 2 cycles. Others included internet/server reliability and software choice for a busy ED.

Conclusions: Despite the perceived and documented benefits of implementation (clinical, organizational, and societal), the EMRS challenges identified seemed unchanged. This study of EPs' feedback can assist with quality improvement initiatives to improve utilization and overcome the challenges experienced.

P-44
Prevalence survey of antibiotic usage in a secondary-care hospital

G Dhanraj-Singh[3], D Dookeeram[1,3], S Gajadhar[3], F Mac Donald[3], D Maharaj[3], R Nagassar[2,3], K Persad[3], A Phillips[3], S Poonwassie[3], S Solomon[3]
[1]Emergency Medicine Department, Sangre Grande Hospital, [2]Microbiology Department, Sangre Grande Hospital and [3]Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: alyssa.phillips@my.uwi.edu

Objective: To determine the prevalence of antibiotic use at a secondary care hospital in East Trinidad.

Methods: The World Health Organization methodology for point prevalence survey on antibiotic use in hospitals was used to collect data at the Sangre Grande Hospital during March to May 2023. Researchers reviewed medical records of all patients present at the hospital on consecutive Thursdays. Information collected included antibiotic class, dosages, frequency, duration of course, and indication. Data were analysed using SPSS.

Results: There were 543 patients with 218 (40.1%) prescribed antibiotics. The most frequently prescribed classes included cephalosporins 104 (48%), penicillins 63 (29%) and nitroimidazoles 57 (26%). Among the cephalosporins, 56 (54%) were third generation. The most common route of administration was parenteral. Antibiotics were most frequently administered as medical prophylaxis (66.3%). Emergency medicine was the service with the highest use of antibiotics (28.2%). The most frequent systemic indication for antibiotic use was skin and soft tissue 69 (32%), Obstetrics and Gynecology conditions 40 (18%) and sepsis 28 (13%). There was no indication listed for 38 (17%). Out of 218 patients receiving antibiotics, only 9 (4%) cultures were identified as taken. Four bacteria were identified: *Klebsiella pneumoniae*, *Staphylococcus haemolyticus*, *Escherichia coli* and a Gram-positive bacterium, and were treated based on susceptibility reports.

Conclusion: There was greater utilization of broad-spectrum antibiotics. This suggests inappropriate utilization. This provides an opportunity for improvement of antibiotic stewardship.

P-45

Evaluating the performance of three risk assessment tools on cardiovascular patients in Trinidad and Tobago

S Ramkhelawan, A Joseph, R Clarke
Department of Physics, Faculty of Science and Technology, The University of the West Indies, St. Augustine
Email: Sasha.Ramkhelawan@my.uwi.edu

Objective: Risk assessment tools have been developed around the world to aid in the management of cardiovascular diseases (CVDs), which are the leading cause of death globally and locally. This study aims to investigate the ability of three risk tools in identifying cardiovascular patients as high-risk individuals in Trinidad and Tobago.

Methods: Medical records of 139 patients with cardiovascular disease admitted to a private hospital in Trinidad and Tobago between January 2015 and March 2021 were utilized for the calculation of cardiovascular risk using three risk tools calibrated for use on the population of Trinidad and Tobago: HEARTS, WHO Risk Chart, and Globorisk. Frequency tables were created in SPSS (version 29) to display the number of CVD patients who were identified as 'high-risk' individuals.

Results: Out of the three risk tools investigated, HEARTS had the highest sensitivity while Globorisk had the lowest. HEARTS was able to predict 43.2% of patients as 'high-risk' while WHO predicted 25% and Globorisk predicted 15.1%. Additionally, HEARTS, WHO and Globorisk were unable to determine the risk for 42.4%, 44% and 46% of patients respectively due to missing relevant data or values being outside an acceptable range.

Conclusions: Although HEARTS performed the best out of the three tools examined, it was able to identify less than half of the patients as 'high-risk.' As such, it should be used with caution on this population. Studies that aim to improve the performance of these risk scores, or to develop a more suitable risk score, are recommended.

P-46

A pilot study: Turnaround time for laboratory specimens in the Biochemistry Department at the San Fernando General Hospital

R Mycoo[1], C Stephens[2]
[1]San Fernando General Hospital, South-West Regional Health Authority and [2]Health Sciences & Health Administration, The University of Trinidad and Tobago
Email: ravina.mycoo@gmail.com

Objective: Turnaround time (TAT) is a tool used by laboratories to measure overall performance and quality. This study aimed to identify the factors influencing TAT at the pathology laboratory in San Fernando General Hospital (SFGH) and to give recommendations to reduce and improve TAT.

Methods: The study comprised two phases. The first was a TAT observation survey to establish TAT for biochemistry tests in the pathology laboratory. The second phase included questionnaires for medical laboratory professionals (MLPs) and doctors to identify the factors that influence TAT and recommendations to improve TAT.

Results: Results indicate that median TAT for the biochemistry tests exceeded the 60-minute international benchmark for stat biochemistry TAT. Troponin, CRP (C-reactive protein), Beta HCG (human chorionic gonadotropin), HbA1c (glycosylated haemoglobin), and Electrolytes had median TAT of 115, 112, 176.5, 106 and 81 minutes respectively. Most (94.4%) of MLPs and 79.2% of doctors indicated that there was a need to improve TAT for biochemistry tests. They reported that the main factors influencing slow TAT were unavailability of reagents and resources, delays in sorting and registering samples, laboratory equipment breakdown, lack of staff, heavy workload, and laboratory information system issues.

Conclusion: It is recommended that the international standards for TAT be executed at SFGH for biochemistry tests, and an appropriate standard operating procedure for the biochemistry department be created and implemented to improve TAT.

P-47

Prospective audit of fasting times in patients in an obstetric unit at Sangre Grande Hospital

K Sewlal, S Mohammed
Department of Anaesthetics, Sangre Grande Hospital, Eastern Regional Health Authority
Email: kristy_s17@hotmail.com

Objective: To determine the length of fasting times in obstetric patients undergoing caesarean sections and their satisfaction with the time spent fasting. Secondary objectives included the impact of maternal fasting time on neonatal blood glucose and to identify any differences in patients with maternal diabetes.

Methods: The prospective study was conducted over six months using an author-developed survey. Patients undergoing caesarean sections at Sangre Grande Hospital (SGH) were randomly selected and interviewed using questionnaires upon arrival to the operating theatre. They were also followed up until discharge to the ward, taking note of the newborn blood sugar readings.

Results: The study comprised 50 patients and the average maternal age and fasting time were found to be 30.7 years and 10.3 hours, respectively. Most (72%) were non-diabetic, while 28% were diabetic. Neonates had a mean initial blood sugar of 81.5 mg/dL. All patients reported satisfaction with fasting times. There was no correlation between fasting

duration and neonatal blood glucose at birth. Older mothers (≥ 35 years) fasted longer. Diabetic patients showed higher average neonatal blood glucose, but the difference was not statistically significant.

Conclusions: Despite prolonged fasting times, maternal satisfaction was high. There was no significant correlation between fasting time and neonatal blood glucose. The non-significant increase in mean initial neonatal blood glucose among diabetic mothers could warrant a larger study to further explore this observation. Limitations included a small sample size and potential bias in patient satisfaction reporting due to concerns that responses might have impacted quality of care.

P-48
Implementing a sepsis protocol for rapid recognition and management of adult patients with sepsis–A quality improvement project

FA Oben
MSc in Critical Care, College of Medicine and Veterinary Medicine, Dean of Clinical Sciences, The University of Edinburgh
Email: fidosjr@gmail.com

Objective: To create, implement and observe the effect of a local guideline for the management of adult patients presenting to the emergency department with sepsis.

Methods: A 3-month retrospective review of patients' notes was conducted to establish a baseline for assessing the intervention. Subsequently, a sepsis screening tool and management protocol guidelines were developed based on recognised international standards. Two Plan-Do-Study-Act (PDSA) cycles were carried out over 14 weeks to implement and monitor the intervention. The data were analysed with run charts.

Results: There was an increase of 50% in the number of patients who received all components of the sepsis bundle (a surrogate marker for mortality rate at the Emergency Department) i.e., from 36% pre-intervention to 54% 14 weeks post-intervention. Whereas there were no statistically significant changes in time to antibiotics administration, there was a remarkable overall improvement of 207% in triage times. The percentage of patients being triaged within 10 minutes of sepsis recognition increased from 14% to 43%.

Conclusions: The findings of this study indicate that implementing a sepsis protocol that includes timely screening and standardised management guidelines can result in improved outcomes such as triage times, and time to sepsis bundle administration (a surrogate for mortality). Other medical facilities can consider implementing this approach.

P-49
Self-reported prevalence of kidney stones in Trinidad and Tobago: Preliminary results of a national survey

S Persaud[1], R Andrews[2], S Jankie[3], MJ Morris[4], S Varachhia[5]
[1]Department of Urology, San Fernando General Hospital, [2]Department of Physics, Faculty of Science and Technology, [3]School of Pharmacy, Faculty of Medical Sciences, [4]School of Veterinary Medicine, Faculty of Medical Sciences and [5]Emergency Medicine Unit, Department of Clinical Surgical Sciences, Faculty of Medical Sciences, University of the West Indies, St Augustine
Email: Satyendra.persaud@sta.uwi.edu

Objectives: To estimate the prevalence of kidney stone disease in Trinidad and Tobago and to investigate the epidemiology of the disease.

Methods: An online survey using SurveyMonkey® was distributed among members of the public via instant messaging and social media. The survey captured data relating to the stone status and demographics of respondents.

Results: A total of 1219 individuals completed the survey of whom 46.5% were males and 53.5% were females. Respondents were well distributed throughout the country. Less than a fifth (16.74%) indicated that they were affected by kidney stones, confirmed by some form of imaging. One-third (34%) indicated that they had kidney stones at some point in life and 33.8% indicated that they had a close family member affected by kidney stones.

Conclusion: There is a high self-reported prevalence of kidney stones in Trinidad and Tobago. Appropriate resources should be directed towards the management and research of kidney stones locally.

P-50
Development of a bioinformatics application to support genomic analysis: A work in progress

S Nicholls, A Ramjag, C Carrington
Department of Preclinical Sciences, Faculty of Medical Sciences, University of the West Indies, St. Augustine
Email: soren.nicholls@gmail.com

Objective: Genomics is becoming a routine component of healthcare and public health. However, some software tools/bioinformatic pipelines for genomic data analysis and visualisation exist in forms that are daunting for users with limited bioinformatics/programming backgrounds. Our goal was to provide users with easy access to appropriate bioinformatics tools and an intuitive graphical user interface (GUI) to perform specified analyses on sequencing data.

Methods: We developed an application that uses Conda environments to install the appropriate packages to facili-

tate specified analyses. Since some sequencing technologies were only supported by specific software, users chose the technology that generated their genomic data and were then provided with suitable tools for their specified analyses. Since an analysis might have required several software packages, pipelines were provided that allowed the use of several tools sequentially.

Results: This tool was deployed in the Department of Preclinical Sciences, University of the West Indies, St. Augustine to facilitate genomic analysis of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), for viral metagenomic analyses on bats and human samples using software such as Flye and Kraken, and to prepare sequencing results for sharing with initiatives/platforms such as Global Initiative on Sharing All Influenza Data (GISAID), Genomic Quality Assessment (GenQA) and the New Variant Assessment Platform (NVAP, UK). It also provided several visualizations of sequencing analyses, and for the entire sequencing effort with an intuitive dashboard.

Conclusion: With the steady increase in bioinformatic software globally, we provided a convenient platform for integration of these tools for users with limited computational backgrounds. Prospects include adding support for other types of analyses (e.g., DNA methylation, phylogenetics) and other sequencing platforms.

P-51

A review of the outcomes of head and neck cancer in a developing country

D Ramsingh, N Figaro, R Ramoutar, FA De Verteuil, D Samaroo, J Jurawan, J Phillip
Department of Otolaryngology, Eric Williams Medical Sciences Complex, North-Central Regional Health Authority
Email:deepakramsingh@hotmail.com

Objective: To retrospectively review the outcomes of a new head and neck service started at Eric Williams Medical Science Complex (EWMSC) and compare them to international standards.

Methodology: Data from 24 patients requiring surgical intervention for head and neck cancers were accessed through a Notion-based database dedicated to patients diagnosed and operated at EWMSC. Data collection was conducted prospectively. The outcomes included the time between a multidisciplinary team discussion and surgical intervention (waiting time). Lymph node yields were also calculated and an examination of the resection margins was done to seek a better understanding and predict difficult resections. Finally, the success rate of functional reconstructions was determined. The data were exported to a spreadsheet and calculations were performed in Microsoft Excel and SPSS.

Results: All (100%) patients that accessed surgical care were discussed at a national multidisciplinary team meeting. The overall waiting time for a patient was 55.6 days. The overall average lymph node yield was 25.5 nodes. Resection margins were clear (R0) for all T1-T3 tumours and 66.6% R0 resection achieved for T4 tumours. Overall, 90% of cases yielded no tumour at the margin. An overall 93.8% regional flap reconstruction rate was achieved.

Conclusion: Our retrospective review has shown that our measured outcomes were meeting and in many cases exceeding the standards outlined by international institutions (USA, UK and Europe).

P-52

A prospective audit of the incidence of ventilator associated pneumonia in the Intensive Care Unit at Sangre Grande Hospital

K Bhagaloo, S Mohammed
Department of Anaesthetics and Intensive Care, Sangre Grande Hospital, Eastern Regional Health Authority
Email: karishmabhags@gmail.com

Objectives: To determine the incidence of ventilator associated pneumonia (VAP) in the Intensive Care Unit (ICU) of Sangre Grande Hospital from October to December 2022, and adherence to established evidence-based VAP preventative strategies.

Methodology: A standardised real time questionnaire was used to collect the data during the three-month period. Sample included ICU patients mechanically ventilated for over 48 hours.

Results: The incidence of VAP in the ICU was 30%. Most cases were diagnosed clinically with positive microbiological cultures. All cases were late onset VAP with multidrug resistant pathogens detected in 66% of cases. Endotracheal tube cuff pressures were checked in 5% of cases and the incidence of patient's bed head being elevated (30 to 45°) was 80 %. Venous thromboembolism and peptic ulcer disease prophylaxis were given to all patients once appropriate. Early enteral feeding was attempted once feasible.

Conclusion: Ventilator associated pneumonia was prevalent in the ICU at Sangre Grande Hospital with all cases being late onset VAP. This has led to increased antimicrobial use, slow weaning off mechanical ventilation, and hence increased hospital and ICU stays. These affect medical costs and have implications for the allocation of scarce resources. A VAP preventative bundle checklist and implementation of subglottic endotracheal tubes can improve this outcome. After these modifications, we plan to reassess VAP incidence between August and October 2023.

P-53

Return to theatre following total hip and knee replacement: A retrospective cohort study

G Julein[1], A Gooding[1], C Rampaul[1], L Boodram[1], N Gokool[1], A Ali[1], D Maharaj[1], Z Quamina[1], MM Mencia[2]
[1]Department of Paraclinical Sciences and [2]Clinical Surgical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: Marlon.mencia@sta.uwi.edu

Objectives: To determine the rate of return to theatre (RTT) in patients undergoing lower limb total joint arthroplasty (TJA).
Methods: A consecutive series of 175 patients who underwent TJA at a private hospital in Trinidad over two years (2021–2022) was investigated. We examined the medical records of all patients and collected data on demographics, type of surgery and postoperative complications. Patients were divided into two groups: those who returned to theatre (RTT) and those who experienced an uncomplicated surgical course.
Results: Out of the 175 patients, a total of 19 individuals (10.9%) required a return to the operating theatre. Patients who returned to theatre were older, more likely to be female with higher body mass index (BMI). Persistent wound drainage (65%) was a common reason that patients returned to the theatre.
Conclusions: The findings of our study demonstrate the need for multicentre prospective randomized studies to examine the factors influencing RTT following TJA in Trinidad and Tobago.

P-54

Birth rates in East Trinidad during the COVID-19 pandemic

AS Bridgelal-Gonzales, SDR Mahabir
Public Health Observatory, Eastern Regional Health Authority, Trinidad
Email: artee.bridgelal-gonzales@erha.co.tt

Objective: To assess the birth rates in East Trinidad during the COVID-19 pandemic.
Methodology: Data were collected from 16 primary care health centers in counties St. Andrews/St. David and Nariva/Mayaro and one tertiary care unit, the Sangre Grande Hospital in East Trinidad, from January 2018 to December 2022. The following variables were collected: the yearly birth rate in East Trinidad, the rate of teenage pregnancies, and the number of Caesarean sections, stillbirths and antenatal clinic attendances.
Results: In East Trinidad during the 5-year period (2018-2022), there was an overall 29.5% decline in birth rate. The birth rates per 1 000 were 19.0 for 2018, 18.1 for 2019, 16.2 for 2020, 15.0 for 2021, and 13.4 for 2022. Declines were also observed over the period for the following variables: rate of teenage pregnancy (32.0, 31.2, 27.7, 25.6, 18.4), the number of Caesarean sections performed (478, 485, 469, 401, 346), the number of first visits to antenatal clinic at both primary care (1 455, 1 521, 1 287, 1 281, 1 274) and tertiary care (710, 655, 602, 517, 510). Return visits to tertiary care were also reduced from 2018 (5 056) to 2021 (2 484). The number of stillbirths was low over the 5-year period (ranging from 8 to 3).
Conclusion: There has been a decline in the birth rates observed in East Trinidad during the COVID-19 pandemic. More research is necessary to determine the cause of the decline and to appropriately prepare the health system for future pandemics.

P-55

The incidence of Histoplasmosis and Cryptococcal antigenemia among patients attending a large HIV Clinic in Trinidad

J Edwards[1,2], S Todd[2], J Edwards[2], W Samaroo-Francis[2], N Lyons[2], G Boyce[2], DW Denning[3]
[1]University of the West Indies, Department of Paraclinical Sciences, St Augustine, [2]Medical Research Foundation of Trinidad and Tobago, Port of Spain and [3]Manchester Fungal Infection Group, The University of Manchester and Manchester Academic Health Science Centre, Manchester, UK
Email: Jeffrey.Edwards@sta.uwi.edu

Objective: Histoplasmosis and cryptococcosis are significant causes of mortality among HIV-infected patients. The study aimed to determine the incidence of disseminated histoplasmosis and cryptococcal antigenemia among patients attending a large HIV Clinic in Trinidad.
Methods: As of June 2022, there were 5 200 patients enrolled at the HIV Clinic, Medical Research Foundation of Trinidad and Tobago. Over the period November 2021–June 2022, 280 patients with a CD4<350 cells/mm^3 were recruited for the study. Sera were screened for cryptococcal antigen (CrAg) using the Immy CrAg Enzyme Immunoassay (EIA) and the Immy CrAg lateral flow assay (LFA). Urine was screened for *Histoplasma* antigen using the Immy EIA and the Optimum Imaging Diagnostics (OIDx) LFA. Data were analysed by SPSS. The 95% confidence intervals for sensitivity and specificity were obtained by the Clopper-Pearson exact method and Cohen's kappa index was used to measure test reliability.
Results: The incidence of disseminated histoplasmosis and cryptococcal antigenemia were 6.4% (18/280) and 2.5% (7/280) respectively. The sensitivity and specificity of the Immy *Histoplasma* EIA were 100% (95% CI, 81.5%–100%) and 98.5% (95% CI, 96.1%–99.6%) respectively as compared to the OIDx *Histoplasma* LFA of 88.9% (95%

CI, 65.3%–98.6%) and 93.9% (95% CI, 90.3%–96.5%), respectively, with substantial agreement between the 2 test kits (Kappa value=0.76, 95% CI, 0.68, 0.84).

Conclusion: The incidence of disseminated histoplasmosis was approximately 2.5 times that of cryptococcosis among study patients, hence testing for disseminated histoplasmosis in HIV patients is very important in endemic areas.

P-56
The consumer perception on locally grown fruits and vegetables in Trinidad and Tobago: A social media study

A Garcia, M Webb, S Bawa, S Beckford
Department of Agricultural Economic and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine
Email: marquitta.webb@sta.uwi.edu

Objective: To examine consumers' perspectives of locally grown fruits and vegetables in Trinidad and Tobago.

Methods: In this cross-sectional descriptive survey, 268 social media users, ≥18 years completed an online survey, which captured consumer food purchasing habits, attributes, and perceptions. Data were analysed using the student's t-test to compare the means of locally grown fruits and vegetables. Analysis of variance (ANOVA) was used to compare differences consumer perception among different demographic variables.

Results: Most participants (72.3%) were females, in the 20–29 age group (37.7%), of mixed descent (54.0%), attended secondary school (42.3%), and had an income between TT$5,001–10,000 (34.8%). Many participants purchased their fruits and vegetable from roadside vendors (59.6%). Almost all participants (97.7%) rated purchasing of locally grown fruits and vegetables as important. No significant associations ($p > 0.05$) were observed between the importance of purchasing locally grown fruits and vegetables and socio-demographic variables. Most participants (59.1%) felt that locally grown fruits and vegetables were tastier, 65.5% felt that they had better quality, 63.6% agreed that they were healthier, and 67.0% thought that they were more natural.

Conclusions: Most consumers thought that buying locally grown fruits and vegetables was important. However, no significant associations were observed between the importance of purchasing locally grown fruits and vegetables and socio-demographic variables. Consumers in Trinidad and Tobago had a positive attitude towards locally grown fruits and vegetables as they felt that they were tastier, of better quality, healthier, and natural.

P-57
A prospective study on maternal satisfaction with spinal anaesthesia for caesarean section and cervical cerclage

C Wilson, K Frenche-Vincent, S Mohammed
Department of Anaesthesia and Intensive Care, Sangre Grande Hospital, Eastern Regional Health Authority
Email: camwilson129@gmail.com

Objective: To evaluate maternal satisfaction with spinal anaesthesia among patients presenting for caesarean section and cervical cerclage.

Methods: The study comprised 75 patients, ≥ 18 years, presenting to the Sangre Grande Hospital either electively or emergently for caesarean section or cervical cerclage. Patients were counselled prior to the spinal anaesthesia and consent was obtained. Interviewers administered questionnaires on Days One and Three post-operatively with emphasis on maternal understanding and satisfaction with the explanation of the spinal procedure, side effects relating to the anaesthetic, pain management and willingness to accept spinal anaesthesia in the future. Data were analysed and results presented using descriptive statistics.

Results: There was 100% dissemination of verbal information, with 85% of patients receiving education about spinal anaesthesia prior to arriving in the operating theatre. There was 98% maternal understanding of the information presented, and 80% of patients expressed great satisfaction. Shivering (29%), nausea (25%), itching (24%) and discomfort (5%), were reported by patients post spinal anaesthesia. Post-operative nausea and vomiting were more prevalent among elective cases (12%) in comparison to emergency cases (5%). Only 27% of patients required additional opioid analgesia post-operatively. Most (81%) patients expressed willingness to accept spinal anaesthesia in the future if required; 11% expressed uncertainty and 8%, were unwilling. Data between elective and emergency groups were comparable.

Conclusion: Patient feedback favoured spinal anaesthesia. This could be based on the safety profile and explanation provided prior to surgery. Further dissemination of written information and visual aids can enhance patient satisfaction.

P-58
A mixed methods study assessing absenteeism among pharmacists at the San Fernando General Hospital

K Hodge, S Glasgow
Health Sciences Unit, University of Trinidad and Tobago
Email: kyhodge88@live.com

Objective: To assess the prevalence of absenteeism and investigate factors that contribute to absenteeism among pharmacists at the San Fernando General Hospital (SFGH).

Methods: An explanatory sequential mixed-method design was utilised. In phase one, all pharmacists at the Pharmacy Department at the SFGH were asked to complete a self-administered questionnaire. In phase two, 10 pharmacists from phase one were selected via purposeful sampling to

participate in semi-structured interviews. The quantitative data collected via the questionnaires were analysed using the Mann-Whitney Test, medians, and correlation analysis (JASP 0.14.1) and the qualitative data were analysed using thematic analysis.

Results: The response rate for phase one was 71%. The majority of respondents were female (88.5%), between 26-30 years old (69%), married (73%), and childless (80.7%). The absenteeism rate was 4.2% and there was a statistically significant difference in absence days based on type of employee contract (p=0.02) and policy awareness (p=0.04). The most commonly reported reasons for work absence were fatigue (42%), illness (26.9%), family commitment (23.1%), and job frustration (7.7%). Of the 10 interview participants, 80% were female, 60% were married and 70% had no children. Themes related to reasons for absences were work-life conflict, poor supervisory-employee relations, prevailing organizational norms, and heavy workloads.

Conclusions: The absenteeism rate was not alarmingly high. However, the findings indicated that fatigue and work-life conflict were the main contributors to absences among staff. Management should work with pharmacists to reduce organisational and personal-related factors contributing to absenteeism thus, reducing the likelihood of increasing rates.

tioning legal and regulatory system, funding allocations and utilisation and community engagement. Additionally, recommendations included clarifying regulatory requirements and harmonizing them with those of other countries; identifying unnecessary obstacles and reducing bureaucracy; shortening ethics and regulatory review timelines; and relying on the decisions of other authorities wherever possible.

At the organizational and individual levels, training/education on clinical research, trial methodology, and research ethics–through university modules, continuing education courses, workshops, etc.–were found to improve knowledge, technical skills, and leadership capabilities. Integrated theoretical and practical programmes that provide hands-on experiences improved researchers' expertise. Funding/incentives (fellowships, awards, and subsidised programmes) encouraged participation in research, by both researchers and participants. Additionally, collaboration allowed for the exchange of knowledge, skills, and expertise; pooling and redistribution of resources; and capacity building.

Conclusion: Strengthening capacity to conduct clinical trials in T&T requires changes at the system, organizational and individual levels. A review of existing organizational research and/or ethics policies/guidelines is needed, along with an assessment of facilitators and barriers and training needs of researchers.

P-59

Key interventions for strengthening capacity to conduct clinical trial research in Trinidad and Tobago: A rapid synthesis of the evidence

A Arman[1], D Bhagirati[1], Z Celestine[1], J Chotack[1], J Duke[1], S Holder[1], D Hosein[1], AL Chong[1], K Barker[2], A Williams[3], S Hunte[2]
[1]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies (The UWI), [2]Caribbean Centre for Health Systems Research and Development (CCHSRD), The UWI, St Augustine and [3]Caribbean Public Health Agency
Email: anusha.arman@my.uwi.edu

Objective: To summarise the best available evidence on interventions/strategies to strengthen Trinidad and Tobago's (T&T's) capacity to conduct/participate in high quality clinical trials.

Methods: Using a systematic search strategy, PubMed and Google Scholar databases were searched (March–May 2023) to identify relevant systematic reviews, high-quality primary studies, international guidelines, etc. on interventions that can strengthen capacity in resource-constrained settings. Evidence from 25 documents was extracted and synthesized.

Results: At the system level, creating an enabling environment for clinical trial research included establishing a func-

P-60

Medical cannabis: Knowledge, attitudes and perceptions of medical and allied health students at a Caribbean University

AA Abdool[1], V Ahay[1], RA Aziz[1], B Bux[1], K Edwin[1], A Mcleod[1], LDL Mills[1], E Poliah[1], S Sambrano[1], A Sidoo[1], A James[2], MA Ivey[1]
[1]Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of West Indies, St. Augustine and [2]Department of Mathematics and Statistics, Faculty of Science and Technology, The University of the West Indies, St. Augustine
Email: akiel.mcleod@my.uwi.edu

Objective: To determine the knowledge, attitudes, and perceptions (KAP) of Medical and Allied Health Sciences (MAHC) students at the University of the West Indies (UWI), about medical (MC) and recreational cannabis (MRC) and their inclusion into the curriculum.

Methods: A cross-sectional study of 4th and 5th year students was conducted across six programmes at the Faculty of Medical Sciences (FMS), The UWI, St. Augustine, using convenience sampling. A five-section self-administered questionnaire assessed students' KAP towards MC and MRC. Knowledge and perception questions were assigned scores (maximum scores: 40 and 80, respectively). Descrip-

tive statistical analysis and Chi-Square tests were conducted using SPSS v27.

Results: There were 146 respondents:72% were female; 84% aged 18–26 years; 38% and 25% were studying Medicine and Nursing, respectively; majority were Christian (50%); and 39% and 34% were of East Indian and African descent, respectively. Most respondents (53%) scored below average in assessed knowledge about MC, however 74% perceived themselves to be knowledgeable about MC. The majority had used a form of MRC (58%), reported use among family/friends (82%) and had a positive attitude toward the inclusion of MC into the curriculum (87%). More than half (53%) had a negative perception of MC.

Conclusion: More than half of respondents showed below average knowledge and negative perceptions about MC which indicates the need for MC education and awareness among MAHC students through potential curriculum changes. There is a positive attitude that supports its inclusion.

P-61
Healthcare seeking practices and demographics of multiple sclerosis patients in Trinidad and Tobago

H Bailey[1,2], A Panday[3], S Lucky-Samaroo[2], A Maharajh[4]
[1]Department of Economics, Faculty of Social Sciences, [2]HEU, Centre for Health Economics, [3]Department of Clinical Medical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine and [4]Department of Internal Medicine, Eric Williams Medical Sciences Complex, North-Central Regional Health Authority
Email: henry.bailey@sta.uwi.edu

Objective: To capture the health-seeking behaviours and demographics of multiple sclerosis (MS) patients in Trinidad and Tobago (T&T).

Methods: All MS patients at neurology clinics in T&T were invited to participate in a health outcomes telephone survey that included demographic and healthcare-seeking behaviour-related questions. This included time spent in various healthcare and self-care related activities, frequency of utilization of clinical services and private/public mode of access. MS-treating neurologists were also interviewed.

Results: Of 102 known patients, 97 completed the survey. This group was highly productive with 63% of the patients having completed university education (versus 11% for the general population) and an 80% labour force participation rate (versus 55% for the working-age T&T population). Less that half (41%) of the patients were in marital or other cohabiting relationships; 29% spent 4+ hours per month on healthcare-related/seeking activities; and 27% visited the Emergency Room at least once in the last year. In terms of support, 25% of patients had caregivers, 21% received physiotherapy, 18% had been prescribed drugs for infection

and 7% had been admitted to hospital for infections. Few patients reported needs with a lack of access: 5% for physiotherapy, 1% for bladder training, and 2% for MS treatment.

Conclusion: The demographic profile combined with the very low prevalence rate in T&T suggest the existence of undetected cases in some demographic groups. Service utilization data point to some possibilities for improving health outcomes through some changes in service delivery.

P-62
Effectiveness of in-person vs online delivery of nutrition intervention plans at improving nutrition knowledge and attitudes of amateur adolescent basketballers in eastern Trinidad and Tobago

CJ Samuel, M Webb, S Beckford
Department of Agricultural Economics and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine
Email: Marquitta.webb@sta.uwi.edu

Objective: To evaluate the effectiveness of in-person and online nutrition intervention plans in improving nutrition knowledge and attitudes of amateur adolescent basketball athletes in eastern Trinidad and Tobago.

Methods: A single case intervention study of 69 adolescent athletes of aged 10–19 years completed a self-administered nutrition knowledge and attitudes multiple choice questionnaire in-person and online. Assessment scores were recorded before and after implementation of the (in-person) Intervention 1 i.e., "Nutrition Basics" and (online) Intervention 2 i.e., "Supplementation, Sports Drinks and Label Reading".

Results: Paired t-test indicated significant increase for both Intervention 1 (mean pre-test = 68.2 ± 12.0, mean post-test = 76.4 ± 10.6; p= 0.01) and Intervention 2 (mean pre-test = 66.7 ± 11.5 mean post-test = 88.2 ± 10.2; p<0.01). However, the online intervention was more effective at improving participant nutritional knowledge and attitude with a 21.6 ± 11.5 mean change between pre and post-test scores compared to in-person interventions which had a mean change of 8.2 ± 10.3. In-person nutrition education had significantly more learner engagement and had a 93.1% participant completion rate compared to 61.7% completion for the online Intervention 2.

Conclusion: Online interventions were more effective at improving overall nutrition knowledge and attitude scores of adolescent basketball players compared to in-person interventions. The latter produced greater learner engagement and participation.

P-63
Knowledge, attitudes and practices of ultra-processed foods among residents of Trinidad and Tobago: A Social Media Study

D Makoonsingh, M Webb, S Beckford, S Bawa
Department of Agricultural Economic and Extension, Faculty of Food and Agriculture, The University of the West Indies, St. Augustine
Email: marquitta.webb@sta.uwi.edu

Objective: To examine the knowledge, attitudes and practices of ultra-processed foods among social media users who reside in Trinidad and Tobago.
Methods: In this cross-sectional study, an online self-administered questionnaire was used to collect knowledge, attitude and practice data from a convenient sample of 512 social media users, ≥18 years old. The data were analysed using SPSS version 29. Descriptive statistics was used to summarise the data.
Results: Most of the sample of social media users were female (59.4%), in 18–24 age group (22.2%), single (47.9%), of Afro-Trinidadian decent (41%), earned between TT$10,001–15,000, had a secondary school education (32.6%), and employed full-time (56.6%). Half (50.4%) of the participants did not know what were ultra-processed foods (UPF). Additionally, 31.4% of the participants reported that their primary sources of information regarding UPF was the internet.
Conclusion: The social media users in the present study had limited knowledge of appropriate nutrition and was unaware of many ultra-processed food products. .

P-65
The representation of alcohol in popular music in Trinidad and Tobago and implications for health: A content analysis

K Singh, X Kowlessar, C Mahase, R Maraj, A Mathura, S Mocombe, A Ramnarine, R Romero, RG Maharaj
[1]Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: keston.singh@my.uwi.edu

Objective: To explore how alcohol is represented in popular music in Trinidad and Tobago (T&T).
Methods: Popular songs in T&T including calypso, parang, soca, and chutney genres, which contained references to alcohol, were identified through online searches, discussion with friends and family and local Disc Jockeys (DJs), and personal knowledge. The lyrics were obtained via online sources or transcribed by the researchers. A database of songs was created. Songs were divided among pairs of researchers who then coded for references to alcohol, such as rum, drink, drunk, etc. Through immersion in the lyrics, utterances (key lyrics in the songs related to alcohol) were identified. Researchers compared utterances until agreement was achieved. Saturation was achieved when no new utterances were identified. Working as a group, utterances were analysed to determine the concepts and themes of the songs.

Results: Fifty-seven songs were identified. There were 10 concepts and three themes. Themes included, firstly, 'encouragement to consume' alcohol through discussion of one's freedom to drink, the celebratory state, the nostalgia, and the aphrodisiac effects induced by drinking. Secondly, 'drivers to consumption' included one's loss of personal freedom, loneliness, and stress relief. Lastly, 'discouragement to consume' alcohol through highlighting addiction, shame, and the consequences of consumption.
Conclusion: International evidence suggests that the representation of alcohol in music can lead to increased consumption, yet there continued to be wide representation of alcohol in popular music in T&T. Although many of the themes suggest that T&Ts popular music encouraged alcohol consumption, there was also some evidence to the contrary.

P-66
Garbage codes as underlying causes of out-of-hospital deaths in East Trinidad, 2022-2023

A Bridgelal-Gonzales[1], V Gajadhar[2]
[1]Public Health Observatory and [2]Quality Department, Eastern Regional Health Authority
Email: artee.bridgelal@gmail.com

Objective: To determine the proportion of garbage codes reported as the underlying cause of out-of-hospital deaths in East Trinidad.
Methods: Data on deaths occurring in the communities of East Trinidad from January 2022–August 2023 were reported by District Medical Officers. Variables collected were the address of deceased, date of birth, date of death, age at death, sex, ethnicity, medical cause of death, post-mortem requested and the county at which the deceased body was located. The medical cause of death was coded into International Classification of Diseases (ICD11) and classified as garbage codes using World Health Organization (WHO) Digital Open Rule Integrated cause of death Selection (DORIS) tool. Data were analysed using Excel® version 2108, SPSS® version 27.
Results: Of the reported 150 deaths, 85 (56.7%) were male and 64 (42.7%) were female. The mean age was 66.3 years (SD 19.8 years). The most common underlying cause of death included Cardiopulmonary arrest (11.6%), Brought-in-Dead (10.3%), Diabetes Mellitus (6.8%) and Certified (6.2%). Lack of specificity, abbreviations, use of immediate and intermediate causes of death were noted. Of the underlying cause of death, 70 (46.3%) were garbage codes such as Brought-in-Dead (n=13), Cardiopulmonary Arrest (n=7), Certified (n=9), Indeterminate Natural Cause (n=3), Myocardial Infarction (n=3) and (n<3): Kidney Failure Unspecified, Gun-Shot-Wound, Ischemic Heart Disease unspecified, Malignant neoplasms of colon unspecified, Epilepsy. Of the decedents with garbage codes, 31 (44.3%) were subsequently referred for postmortem.

Conclusions: There is a need to improve the quality of data reported as medical cause of deaths to accurately inform on burden of diseases and population statistics in a community.

P-67

Medical marijuana knowledge and attitudes: A survey of pharmacists in a small island developing state, Trinidad and Tobago

S Maharaj[1], L Lutchman[2], CST James[2], S Seemongal[2], M Sutherland[2], S Scott-Campbell[2], D Maharaj[2], R Rampersad[2], M Manickchand[2]
[1]School of Pharmacy and [2] Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: luke.lutchman@my.uwi.edu

Objective: To determine the knowledge and attitudes of pharmacists towards medical marijuana use in Trinidad and Tobago.
Methods: A quantitative cross-section analysis of pharmacists in Trinidad and Tobago was done. All data were collected online using surveys distributed to members of the Pharmacy Board of Trinidad and Tobago. The 51-item questionnaire captured demographics, knowledge of medical marijuana and the attitudes towards medical marijuana. The data were analysed using SPSS.
Results: Fourteen pharmacists completed the questionnaire. Two pharmacists had a high or professional level of knowledge about medical marijuana. Most (71.5%) had a positive attitude towards the medical efficacy of medical marijuana efficacy. Also, most pharmacists strongly agreed (53.8%) and agreed (42.6%) that more education should be conducted on the use of marijuana for medical purposes. Lastly, the majority of pharmacists strongly agreed (41.7%) or agreed (41.7%) that they would feel more comfortable discussing medical marijuana with patients if it was Food and Drug Administration (FDA) approved.
Conclusion: Most pharmacists lacked a substantial or high level of knowledge about medical marijuana but had a positive attitude toward medical marijuana efficacy. More education on medical marijuana, FDA approval and government legislation could further improve attitudes and increase the level of knowledge of pharmacists towards medical marijuana in Trinidad and Tobago paving the way for better patient counselling.

P-68

The knowledge, attitudes, beliefs and practices of complementary and alternative medicines used by diabetic patients at two outpatient clinics in Trinidad and Tobago

K Chotai[1], K Punilal[1], T Dillon[1], A Galbaran[1], N Gangaram[1], J Mohan, V Moonilal[1], K Ramkairsingh[1], S Jankie[2], S Singh[2]

[1]Department of Para Clinical Sciences and [2]School of Pharmacy, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: kaleb.chotai@my.uwi.edu

Objective: To investigate the knowledge, attitudes, beliefs, and practices (KABP) of complementary and alternative medicines (CAMs), among diabetic patients in clinics at the North Central Regional Health Authority (NCRHA) and the Eastern Regional Health Authority (ERHA), Trinidad and Tobago.
Methods: This cross-sectional study utilized convenience sampling. An interviewer-administered questionnaire collected demographic and KAPB data on CAM usage. Analyses were conducted using IBM SPSS Statistics (Ver 29). Differences between variables were examined using Chi-squared tests and multivariate logistic regression identified predictors of CAM usage.
Results: Of the 238 patients, 47.9% utilized CAMs, 66.8% were from the NCRHA, 67.9% were female, 88.7% were > 50 years of age. Spices were most frequently used (32.1%), 72.7% thought CAMs were safe while 96.6% of CAM users reported no side-effects. CAM usage was higher in the NCRHA (p=0.019) and was associated with perceived knowledge (p<0.001). Attitude to CAM was positively associated with accessibility (p<0.001). Users believed it was superior to traditional medicine (31.5%), and useful in diabetes management (46.6%). The results of the logistic regression indicated that a preference for spices (p<0.001) and a belief in the effectiveness of CAMs (p<0.001) predicted CAM usage.
Conclusion: CAMs were used by almost half of diabetics in the study. Spices were most popular. Patients generally trusted in the perceived effectiveness, superiority and reduced adverse effects of CAMs over traditional medicine. Further studies are required to determine the effectiveness of these treatments in diabetic populations.

P-69

The systematic review of the impact of Ayurvedic Medicine on COVID-19 patients

S Hitlal[1], S Gopaul[1], R Ali[1],S Dalipsingh[1], A Khan[1], Z Pandohie[1], P Ramnath[1], T Samlalsingh[1], R Dahiya[2]
[1]Department of Para Clinical Sciences, Faculty of Medical Sciences and [2]School of Pharmacy, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: salina.hitlal@my.uwi.edu

Objective: To systematically review the efficacy of ayurvedic medicine on the resolution of symptoms and clinical recovery of COVID-19 patients.
Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed. Eligible studies included randomized and non-

randomized clinical trials containing the keywords "Ayurvedic medicine" and "COVID-19", written in English. PubMed, Cochrane, and the World Health Organization (WHO) COVID-19 Research Database were searched and reports that met these criteria were reviewed and further screened. Risk of bias was assessed using Cochrane risk-of-bias tool for randomized trials and a summary generated for each study.

Results: The search yielded 15 eligible randomized clinical trials that examined the efficacy of ayurvedic formulations in the management of asymptomatic, mild, and moderate COVID-19 infections. All 15 trials reported shortened period to recovery with the use of add-on ayurvedic treatment, while one reported a reduction in SARS-CoV-2 viral load, using Kabsura Kudineer. BV-4051 formulation also reduced severity of symptoms and along with AYUSH-64, reduced proinflammatory markers like Interleukin-6. No adverse reactions or drug interactions were observed in any trial.

Conclusion: This review identified potential ayurvedic formulations such as Kabsura Kudineer, AYUSH-64 and Ashwaghanda which could be used in COVID-19 management. However, while these formulations proved beneficial as an add-on therapy in asymptomatic and mild cases, more research is needed to warrant their use in critical cases or as a sole intervention. This justifies further prospective investigations on the impact of Ayurvedic Medicine on COVID-19 patients.

P-70
A systematic review of the use of medical oils in the treatment of Alzheimer's Disease

TC Hay[1], AK Persad[2], MS Ismaila[1]
[1]Department of Basic Veterinary Sciences and [2]Department of Clinical Veterinary Sciences School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: theana.hay@gmail.com

Objective: To determine and identify various medicinal oils that had been used in the treatment and prevention of Alzheimer's Disease (AD) and their mode of action.

Methods: A systematic and comprehensive literature search was conducted using the Google Scholar PubMed database from April 2018 to April 2023 using different combinations of the following keywords: essential oils, dietary oils, and Alzheimer's Disease. The information extracted included the type of oils used, concentrations, routes of administration, test assays, and mechanisms.

Results: Essential and dietary oils can target various pathways that contribute to the onset and progression of AD. Aromatherapy oils possess terpenes and phenols, which have antioxidant and anti-inflammatory properties. Their use can decrease agitated behaviour in AD patients, reverse amyloid beta-induced impairments, improve cognition and memory deficiencies, and have neuroprotective effects in both in vitro and in vivo studies. Dietary oils such as coconut oil provide an alternative energy source to counteract the impaired glucose mechanisms in AD-affected brains. Olive oil possesses oleocanthal and phenolic compounds, which can reduce the incidence of AD. Dietary oils high in omega 3 and 6 fatty acids have protective effects against various AD mechanisms. Cannabis oil derivatives have exhibited potential as a treatment based on their effects on the endocannabinoid system.

Conclusion: Dietary oils and aromatherapy with essential oils have shown promise as adjuvant therapies in AD in human and animal models. They also have prophylactic potential by reducing the occurrence of AD. However, their exact mechanisms have not yet been determined.

P-71
Traditional Chinese medicine: A systematic review of its impact on COVID-19 patients

S Salandy[1], S Mohammed[1], A Ablack[1], J Ali[1], F Brooks[1], K Ali[1], J Lynch[1], L Maholtra[1], R Dahiya[2]
[1]Department of Para Clinical Sciences and [2]School of Pharmacy, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: solange.salandy1@my.uwi.edu

Objective: To systematically review, evaluate and compare the efficacy, mechanisms and value of traditional Chinese medicine (TCM) alongside Western medication in treating symptoms of COVID-19 in adults.

Methods: Research was conducted using relevant reference lists and databases including PubMed, Medline, ScienceDirect, and the Traditional Chinese Medicine Systems Pharmacology Database and Analysis Platform. Data extraction and risk of bias assessment were performed for the reports using the Cochrane data extraction form. The review assessed clinical, virological, quality of life, and adverse event outcomes.

Results: This systematic review included 14 randomised controlled trials which involved several TCM interventions alongside standard care. In most trials, the control group received standard care alone which involved supportive oxygen therapy, administration of antivirals, and symptom management. TCM included Xiyanping and Reduning injections which were most effective in treating fever, cough and recovery from SARS-CoV-2 infection compared to the control groups. Other TCM showed slight improvement in chest distress, fatigue, and mental health when compared to standalone standard treatment.

Conclusion: The Xiyanping and Reduning injections were safe and showed effectiveness in improving clinical symptoms such as fever and cough, promoting recovery in patients with mild to moderate COVID-19. However, fur-

ther trials with larger sample sizes are needed to confirm these findings and establish the widespread clinical utility of TCM intervention as a complementary approach to standard care.

P-72
Quality of Life on Renal Replacement Therapy: Exploring the association between the kidney disease quality of life questionnaire components and EuroQol measures for patients in Trinidad and Tobago

S Sanchez[1], H Bailey[2], S Teelucksingh[1]
[1]Department of Medicine, Faculty of Medical Sciences and [2] Department of Economics, Faculty of Social Sciences, The University of the West Indies, St Augustine
Email: sanchezsharlene32@yahoo.com

Objective: To compare Quality of Life (QoL) of haemodialysis (HD), peritoneal dialysis (PD) and renal transplantation (TX) patients and to evaluate the impact of the physical and mental component scores (PCS and MCS) of the Kidney Disease Quality of Life Questionnaire (KDQOL-36) on EQ-5D-3L (European Quality of Life–5 Dimensions, 3 Level Version).
Methods: A total of 350 HD, 80 PD, and 100 TX patients completed EQ-5D-3L and KDQOL-36. Rates of reporting EQ-5D-3L problems were compared by renal replacement therapy mode. Ordinary least squares regression models with robust standard errors for EQ-VAS (EQ visual analogue scale) and EQ-5D-3L index values were developed for MCS and PCS controlling for age, gender and dummy variables for HD and PD for comparison to TX. Ordered logit models were then used to obtain odds ratios for the EQ-5D-3L dimensions with PCS and MCS scores as independent variables, controlling for age and sex.
Results: PD and HD were associated with decrements of 8.62 and 25.74 in EQ-VAS scores, and decrements of 0.08 and 0.20 in index values respectively compared to TX (p<0.001). PCS and MCS coefficients were significant in both composite scale models (p<0.05) with index value coefficients of 0.015 and 0.01 and EQ-VAS coefficients of 1.42 and 1.10 respectively.
Conclusion: The QoL of TX patients was considerably better than that of PD and HD. The relative sizes of the PD and HD coefficients in the direct comparison models also highlight the substantial difference in health status between PD and HD patients. Higher PCS and MCS were associated with reduced odds for reporting problems on EQ-5D dimensions.

P-73
Evaluating the impact of neuropathy on quality of life for diabetes patients in Trinidad and Tobago

SS Lucky-Samaroo[1], H Bailey[1,2], S Teelucksingh[3]
[1] Department of Economics, Faculty of Social Sciences, [2]HEU, Centre for Health Economics, Faculty of Social Sciences and [3]Department of Clinical Medical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: sorita.luckysamaroo@my.uwi.edu

Objective: To quantify the impact of neuropathy on the Quality of Life (QoL) of diabetic patients in public clinics in Trinidad.
Methods: Data on the health outcomes and demographics were obtained via telephone interviews from a sample of 148 patients from three public diabetic outpatient clinics in Trinidad. Of these, 53% had neuropathy. EQ-5D-5L (European Quality of Life–5 Dimensions, 3 Level Version) and the QoL-DN (Quality of Life-Diabetic Neuropathy) were used as the health outcomes measures in this study. IBM SPSS was used to conduct ordinary least squares regression models with robust standard errors and tabulate reporting rates on EQ-5D dimensions. These were used to evaluate the effect that diabetic neuropathy had on the EQ-5D measures controlling for age and sex.
Results: Neuropathy was associated with a 14 point decrease in EQ VAS (visual analogue scale) score (p=0.002) and a 0.1 decrease in index value (p=0.021). Diabetic patients who did not have neuropathy were more likely to report level 1 on all EQ-5D-5L dimensions—and less likely to report problems on the remaining 4 levels—than diabetic patients who had neuropathy.
Conclusion: These findings quantified the impact of neuropathy on the QoL for this patient group and were consistent with findings from studies in other countries. Patient education programs in Trinidad and Tobago should be reviewed to ensure that sufficient coverage is included about the impact of diabetic neuropathy on QoL and about slowing the advance of the disease to prevent progression of diabetic neuropathy.

P-74
A 20-year study on the self-reported sexual orientation of HIV-infected male clients upon their enrollment at the Medical Research Foundation of Trinidad and Tobago

S Soyer, G Boyce, K Julien-Serrette, J Edwards
Medical Research Foundation, Port-of-Spain
Email: sharonsoyer@yahoo.com

Objective: The aim of the study was to determine if there were any changes in the self-reported sexual orientation of male clients on enrollment to the HIV clinic over a 20-year period.
Methods: Quantitative data on self-identified sexual orientation of male clients from 2002–2022 were extracted from electronic medical records, and classified as heterosexual OR men who have sex with men (MSM). Data were strati-

fied into 5-year and 10-year periods and analyzed using SPSS for inferential and descriptive analysis.

Results: Over the 20 years, 5 417 males were enrolled in the clinic; 1 019 (19%) were excluded due to incomplete data. Of the remaining 4 398 males, the self-reported sexual orientation was 3 158 (72%) heterosexual and 1 240 (28%) MSM.

Stratification in sequential 5-year periods, the data revealed:

Years	Males	Heterosexual	MSM
2002–2007	1 172	979 (84%)	193 (16%)
2008–2012	1 355	1 051 (78%)	304 (22%)
2013–2017	1 068	719 (67%)	349 (33%)
2018–2022	803	409 (51%)	394 (49%)

There was a statistically significant increase in self-identification as MSM over the study period (p< 0.001). There were 16% MSM during the 2002–2007 period compared with 49% MSM in 2018–2022. Comparing age groups, the proportion of males identifying as MSM was highest among those 20–29 years of age (p< 0.001).

Conclusion: Results indicate a significant increase in the number of younger males identifying as MSM attending the HIV clinic over the study period. Public health strategies including behaviour modification programmes, targeted HIV/STI prevention interventions for sexual networks, and intensified HIV testing and linkage to care, with early initiation of anti-retroviral therapy need to be implemented among members of this key population.

P-75
Assessing the quality of life among patients with urolithiasis in Trinidad

A Maharaj[1], S Persaud[1], B Bhagwandeen[2], S Smart[2], A Mohammed[2]
[1]Department of Urology, San Fernando General Hospital and [2]Department of Mathematics and Statistics, The University of the West indies, St Augustine
Email: arista.v.maharaj@gmail.com

Objective: To assess the quality of life among patients with urolithiasis in Trinidad using the Wisconsin Quality of Life (WISQoL) tool.
Methods: Patients with urolithiasis were recruited from the San Fernando General Hospital from January to August 2023. Controls were recruited primarily from shopping malls. A questionnaire was used to collect data on demographics, WISQoL and health related quality of life (HRQoL). All domains of the WISQoL and the total score displayed good to excellent internal consistency. Cronbach alpha ranged from 0.853 to 0.941. Independent samples t-tests and analysis of variance (ANOVA), where appropriate, were used to compare mean scores. Analyses were conducted using SPSS.
Results: A total of 310 persons participated in the study, comprising 170 kidney stone formers and 140 controls. There were 165 (53.2%) females and 227 (73%) East Indians. The kidney stone former group was older (50.5 vs. 42.3 years) and had more diabetics (27.6% vs. 9.3%) and hypertensives (34.1% vs. 8.6%). Significantly lower WISQoL scores were observed for females compared with males. All four of the WISQoL domain scores, i.e., social, emotional and disease impact, as well as impact on vitality were significantly lower for stone formers compared with non-stone formers (p ≤ 0.001), indicating a worse quality of life. However, the differences were no longer significant after controlling for ethnicity and the presence of comorbidities.
Conclusion: Kidney stones can negatively influence multiple facets of health. The WISQoL questionnaire was a reliable instrument to measure health related quality of life in patients with urolithiasis.

P-76
A cross-sectional study on the quality of life and its predictors among women over the age of 18 diagnosed with endometriosis in Trinidad and Tobago

R Khan, M Aimable, V Bujhawan, J Cumberbatch, EJ Marbella, D Phagoo, S Ramjattan, A Shavili, T Wallace
Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: terika.wallace@my.uwi.edu

Objective: To assess the quality of life (QoL), severity of pain and acceptance of illness (AoI) among women with physician-diagnosed Endometriosis in Trinidad and Tobago.
Methods: Questionnaires were disseminated among 160 women, ≥ 18 years, who were members of Trinidad and Tobago Endometriosis Association. Data were collected using a self-administered survey capturing demography, endometriosis-influenced QoL, severity of pain (scores ranged from 0–16), attitudes and AoI (scores ranged from 0–40). Scores for General QoL range from 0 and 5 while the scores for its domains (Physical Health, Psychological Health, Social Relationship and Environment) ranged from 0 and 20. Regarding the instrument's internal consistency, Cronbach's alpha ranged from 0.91 for the Environment domain to 0.71 for the Physical Health domain. Data were analysed and results presented as means. Regression utilising alternating least squares was also conducted to identify predictors (SPSS Version 28).
Results: The mean age of the respondents was 38.6 years, ranging from 23 to 55 years. The general QoL score was found to be 3.41. The 'environment' domain had the highest score (12.84) and social relationship the lowest (11.88). The mean scores for AoI and pain intensity were 24.15 and 6.57, respectively. Regression analysis indicated that mari-

tal status, overall health and AoI were significant predictors of the Physical Health and Psychological Health domains.

Conclusion: AoI played a crucial role in patients' adjustment and overall quality of life, enabling them to cope with the challenges associated with endometriosis. This underscores the need for increased awareness and holistic approaches in addressing endometriosis.

P-77
A preliminary review of a client satisfaction study administered at an HIV Clinic in Trinidad

S Soyer, G Boyce, K Julien-Serrette, J Edwards
Medical Research Foundation, Trinidad and Tobago
Email: sharon_soyer@yahoo.com

Objective: Client satisfaction has been linked to improved anti-retroviral therapy adherence and increased HIV viral suppression (HIV viral load<50 copies/ml). The aim of the study was to determine clients' perceptions of personal comfort, services, and physical setting at an HIV clinic.
Methods: A structured questionnaire was administered to 165 randomly selected clients attending the clinic between April–June 2023. Data were managed in Excel.
Results: Of 165 participants, 90 (55%) were females; 134 (81%) were heterosexual, 31 (19%) were men who have sex with men; 97 (59%) were employed; 159 (96%) were nationals of Trinidad and Tobago; 128 (78%) attained secondary school education or higher; 147 (89%) clients were virally suppressed. Most clients (84%) felt welcomed by staff upon entry to the clinic; 160 (97%) reported feeling their privacy was maintained and 158 (96%) reported feeling respected at the clinic. The overall quality of care was rated as Excellent 110 (66%) by clients and the waiting time experience rated as Excellent 58 (35%), Good 50 (30%), Fair 43 (26%). Importantly, 159 (96%) clients said they felt comfortable discussing anti-retroviral use with staff, and interactions with staff were rated as Excellent with doctors (111 [67%]), nurses (123 [74%]), and pharmacists (108 [65%]). Clients rated the clinic location as Good-Excellent 116(70%), Fair 29 (18%), and Poor-Terrible 20 (12%). The cleanliness of the building was rated as Good-Excellent by 125 (76%) clients, Fair 28 (17%), and Poor-Terrible 11 (7%). The main waiting area was rated Good-Excellent by 84 (51%) clients, Fair 44 (27%), and Poor-Terrible 36 (22%).
Conclusion: The results suggest a general satisfaction with the staff and services, whereas the physical setting might need improvement.

P-78
Factors influencing job satisfaction among registered nurses working in primary care settings: A Barbadian perspective

E Daniel[1], P Cummings[2], K Lootawan[1]
[1]The UWI School of Nursing, Faculty of Medical Sciences, University of The West Indies, St. Augustine, Trinidad and Tobago and [2]Randal Phillips Polyclinic, Ministry of Health and Wellness, Barbados
Email: Esther.Daniel@sta.uwi.edu

Objective: To conduct an exploratory study on factors influencing job satisfaction among Registered Nurses (RNs) in Barbados.
Methods: A cross-sectional web-based survey was conducted. The study comprised 101 RNs working in polyclinics participated in the study. The short form of the Minnesota Satisfaction Questionnaire (MSQ) was used to collect data. The instrument included a 5-point Likert Scale (20 items), ranging from a Very Dissatisfied (score of 1) to Very Satisfied (score of 5). Data were analysed and presented using descriptive statistics. Chi-square tests, and the Mann-Whitney U tests were used to examine differences.
Results: The study comprised 90 (89.1%) females and 11 (10.9%) males. Overall, 85.1% (n=86) of respondents were satisfied and 14.9% (n=15) were dissatisfied (Mean=3.56, SD=0.45). Among the participants, 95% (n=96) expressed satisfaction with intrinsic factors (mean=3.79, SD=0.43). Three main areas of satisfaction were the ability to assist others (90%), chance for stable employment (87%), and a sense of accomplishment (86%). Only 65.3% (n=66) of participants reported dissatisfaction with extrinsic factors (Mean=2.92, SD=0.63). Three main areas of dissatisfaction were with pay packages (81%), career advancement (50.5%), and company policies (37%). The results from the Personal Protective Equipment survey indicated that the highest level of dissatisfaction was the provision of N95-type respirators.
Conclusions: Job satisfaction has a significant impact on healthcare quality, productivity, effectiveness, and healthcare costs. The findings of the present study can assist policymakers in retaining RNs and engaging and motivating staff.

P-79
EQ-5D-5L valuation study for Trinidad and Tobago

H Bailey[1], B Roudijk[2]
[1]Department of Economics, Faculty of Social Sciences, The University of the West Indies, St Augustine and [2]EuroQol Research Foundation, Rotterdam, the Netherlands.
Email: henry.bailey@sta.uwi.edu

Objective: To develop an EQ-5D-5L (European Quality of Life–5 Dimensions, 5 Level Version) value set for Trinidad and Tobago (T&T).
Methods: A representative sample (age, sex, geography) of 1,079 adults completed the standard EQ-VT (EuroQol Group's standardised valuation technology) valuation tasks in face-to-face interviews. Each respondent completed 10

Composite-Time-Trade- Off (cTTO) tasks followed by 12 Discrete Choice Experiment (DCE) tasks. The cTTO and DCE data were analysed using several hybrid models that corrected for heteroskedasticity and accommodated the censored nature of the cTTO data.

Results: The final model produced all internally consistent, significant (p<0.05) coefficients and the lowest Akaike information criterion (AIC), Bayesian information criterion (BIC) and mean absolute error (MAE). Compared to the existing T&T EQ-5D-5L crosswalk value set, the new value set has more negative values (7.6% versus 0.7%). Differences were observed among the coefficients: e.g., for the Anxiety-Depression dimension, state 11112 had an index value 7% higher than the crosswalk value, however for 11115 the new index value was 37% lower than the crosswalk value.

Conclusion: The EQ-VT study was successfully carried out in T&T. Lower and more frequent negative values in the new value set can be explained by greater willingness to trade life-years in the EQ-VT protocol than in the modified UK protocol used in the 2015 EQ-5D T&T valuation study upon which the crosswalk set was based. Differences in patterns among the coefficients could also be associated with societal change from 2015 to 2022: e.g., greater awareness of mental health might have influenced the Anxiety-Depression coefficients and the COVID-19 lock-down might have brought increased salience of the Usual-Activities dimension to respondents. Such changes highlight the need for revisiting/updating EQ-5D value sets.

P-81

An examination of the delivery of nursing care to children with cancer at the Wendy Fitzwilliam Paediatric Hospital

C George [1], C Stephens [2]
[1]Wendy Fitzwilliam Paediatric Hospital and [2]The University of Trinidad and Tobago
Email: georgecorey@live.com

Objective: To critically examine the delivery of nursing care to children with cancer at the Wendy Fitzwilliam Paediatric Hospital by identifying the benchmark and standard of practice for paediatric oncology nursing care, and gaps in the delivery of nursing care.

Methods: A qualitative study was conducted with 65 participants using purposive sampling. Nine were Registered Nurses (RNs) and 56 were parents/guardians of children with cancer who attended the outpatient clinic and who were on the Just Because Foundation Specialty Unit. Semi-structured interviews were conducted, and data analysed using a thematic approach via Quirkos.

Results: Eight main themes emerged regarding gaps in nursing care: 1. Parents/Guardian nursing interaction: most nurses were kind, educated and supportive but there was

room for improvement. 2. Patient education: the parents received information, but its effectiveness and impact were unclear (3) The parent experience: some thought that there was a breakdown in communication between physicians and nurses as evidenced by the near misses. (4) Parents expectations: nurses who were not trained in paediatric oncology were less understanding and lacked compassion. (5) Policy: there was no policy document that guided nursing care to children with cancer. (6) Specialization and nursing regulation: nurses who were specialized faced challenges using their skills on the ward due to regulatory issues. (7) Scope of practice: the delivery of care was based on the regulations and standards set by the Nursing Council and not the specialized training received through continued education. (8) Barriers to care: there was a need to address policy gaps, guidelines and nursing regulations.

Conclusion: To address the gaps, a policy must be developed utilizing the International Society of Pediatric Oncology (SIOP) Baseline Nursing Standards as a short term and long-term solution.

P-82

Accessibility of primary health care services in rural areas in the South West Regional Health Authority

N Ram-Bhola [1], C Stephens [2]
[1]Couva District Health Facility, South-West Regional Health Authority and [2]Health Sciences & Health Administration, The University of Trinidad and Tobago
Email: nadiarambhola1@gmail.com

Objective: Trinidad and Tobago (TT) has one of the highest rates globally for non-communicable diseases (NCDs); 62% of deaths each year are a result of NCDs. The Ministry of Health (MoH) promotes primary health care (PHC) as the main strategy to address the scourge of chronic disease. Access to PHC is the top-ranking health priority for rural areas. This qualitative study investigated the accessibility to PHC services in rural areas in the South-West Regional Health Authority (SWRHA).

Methods: Data were collected using questionnaires and observations at seven rural PHC facilities within the SWRHA. Participants were recruited using convenience sampling and 46 questionnaires were completed across the sites. of participants who met the selection criteria. Data was analysed using interpretive phenomenological analysis.

Results: Seven subthemes were identified: affordability, availability, accessibility, accommodation, acceptability, communication and transportation. The results pointed to the need to adopt more client-centred measures to improve patient accessibility to PHC services in rural areas of the SWRHA.

Conclusion: Recommendations applying the Chronic Care Model to address barriers to the accessibility of PHC were formulated. The most feasible recommendation element was

the delivery system design, which could be implemented immediately. Persons of lower socioeconomic status were identified as the demographic facing the greatest challenge.

P-83

A quantitative study on the prevalence and effects of polycystic ovarian syndrome on the overall well-being of young women aged 18-40 years in Trinidad

T Esnard[1], TN St Louis[2], A Hanumansingh[2], SK Amrit[2], CG Teesdale[2], DS Dipchansingh[2], SL Ali[2], JS Parker[2], TN Muir[2]
[1]Department of Behaviour Sciences, Faculty of Social Sciences and [2]Department of Paraclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: Tyrese.stlouis@my.uwi.edu

Objective: To describe and analyse the well-being (emotional, mental, and physical) of women aged 18-40 years with polycystic ovarian syndrome (PCOS).
Methods: A cross-sectional study design was used, and the data were collected using an online questionnaire adopted from the polycystic ovarian syndrome health-related quality-of-life tool. The data were analysed using the IBM SPSS Statistics software (Version 22) to generate frequencies and conduct inferential analyses including analysis of variance (ANOVA) and Pearson's correlation.
Results: Two hundred and sixty-women with PCOS participated in the survey. The findings indicated generally average to high levels of wellbeing for women who participated in the survey, with higher numbers in the former. However, there were significant age group differences in the women's emotional ($p=0.007$), mental ($p=0.001$), and physical ($p=0.03$) wellbeing. Experiences living with PCOS were strongly correlated with emotional ($r=0.80$), mental ($r=0.78$) and physical wellbeing ($r=0.92$). However, the correlations were lower between the length of time with the disease and emotional ($r=0.21$), mental ($r=0.24$) and physical ($r=0.27$) wellbeing.
Conclusion: The findings indicate that most women were managing their symptoms of polycystic ovarian syndrome. However, differences existed based on age as well as length of time and the nature of their experiences with the disease.

P-84

A PESTLE analysis on the global ageing population, a healthcare perspective in Trinidad and Tobago.

ND Maharaj
Department of Primary Care, County St. Patrick, South West Regional Health Authority
Email: nalinimaharaj@swrha.co.tt

Objective: To assess external factors affecting healthcare for Trinidad and Tobago's ageing population.
Methods: Local and international policies and articles were identified using PubMed and Google Scholar searches and used to extract external factors affecting healthcare in the ageing population using a PESTLE (Political, Economic, Social, Technologic, Legal and Environment) analysis.
Results: Trinidad and Tobago's life expectancy significantly increased from 63 years in 1960 to 74 years in 2020, following global trends and posing several challenges to the healthcare system. The PESTLE challenges included: *Political:* Government plays a vital role through its health and labour policies. *Economic:* Delaying pension receipt has a positive governmental effect but a negative individual impact on health for the lower socio-economic class. *Social:* Migration and childlessness lead to loss of support for the elderly, burdening social services. *Technological:* Information technology (IT) developments in medical diagnostics and intervention are boosting the health and social involvement of the elderly. *Legal:* Globally, World Health Organization calls for Universal Health Coverage for the elderly and locally, the Division of Ageing focuses on ageing initiatives to protect the rights of the elderly, preventing elder abuse. *Environment:* Climate change, rise in non-communicable diseases and susceptibility to infectious diseases evident by the pandemic burdens the elderly.
Conclusion: Healthcare policy reform, regulatory oversight and fortification of information systems could address the challenges of Trinidad and Tobago's ageing population.

P-85

An investigation of air quality above recommended global threshold levels in thirteen geographical locations in Trinidad

PA Henry[1], H Baboolal[2]
[1]Department of Paraclinical Sciences, Faculty of Medical Sciences, University of the West Indies, St Augustine and [2]Department of Environmental Sciences, University of Trinidad and Tobago
Email: phenry_tt@yahoo.com

Objective: Identification and quantifying of pollutants are a pre-requisite for evaluating increased public health risks. This study seeks to measure particulate matter ($PM_{2.5}$ and PM_{10}) and volatile organic compounds (VOCs) in ambient air in 13 geographical areas in Trinidad. Exceedance was determined using World Health Organization (WHO) 2021 guidelines for particulates, and levels >1ppm for VOCs.
Methods: A cross-sectional observational study was conducted in 2022 and sampled locations representative of different land usage patterns and exposures to prevailing winds. A portable HoldPeak HD-5800D device was used to measure particulates, while toxic gases were detected using a Gasmet DX4040 portable multi-gas Fourier Trans-

form Infrared spectroscopy (FTIR) monitor. Data collected in duplicate on separate sampling days, for a one-hour period, were tabulated and analysed using Excel. There was a strong correlation between $PM_{2.5}$ and PM_{10}, (Pearson's $r=0.895$, $p<0.001$). $PM_{2.5}$ was therefore used for the results for particulates.

Results: $PM_{2.5}$ was in exceedance of WHO's guidelines 76.9% of the time . The highest level was found on the north-eastern coast exposed to Saharan dust events and the north-east trade winds, with the second highest levels in the industrial west. Elevations in $PM_{2.5}$ occurred with the passage of diesel trucks along roadways, while VOCs exceedance was associated with the use of organic chemicals, road traffic and a leaking oil pipeline. Levels of $PM_{2.5}$ decreased 32.3-55.2% after heavy rainfall. These findings were consistent with global data.

Conclusion: Air quality is compromised in Trinidad. Interventions and policies that address risks can protect public health.

P-86
Building a Caribbean climate change and health workforce

CAL Oura
Department of Basic Veterinary Sciences, Faculty of Medical Sciences, University of the West Indies, St Augustine
Email: chris.oura@sta.uwi.edu

Objective: The University of the West Indies, St. Augustine is implementing a Climate Change and Health fellowship programme to ensure that Caribbean healthcare systems are more climate resilient. The goal of the fellowship is to create a network of interdisciplinary working professionals across 16 Caribbean countries, with the common goal of strengthening resilience to Climate Change, guided by a "One Health, One Caribbean" approach.

Methods: The fellowship has been designed using an adaptively managed curriculum. Opportunities for practicing what has been learnt, for peer-peer learning and for learning through shared experiences are maximised. A "Learning by Doing" approach is followed, with each fellow implementing a project and running a symposium. Weekly online-themed sessions include local/regional experts, so experiences are grounded in local realities and learning is tied to tangible 'real-world' issues.

Results: To date, a network of multidisciplinary Caribbean professionals from multiple sectors including government, academia, civil society, and the private sector, from 11 Caribbean countries, have been armed with the necessary skills to turn plans and policies into action. Each fellow is a working professional in different aspects of their respective country's healthcare system and is currently shaping and implementing policies to make their populations more climate resilient.

Conclusions: Creating a network of informed, motivated, and highly qualified multidisciplinary professionals, who can support governments and communities, as well as each other, to ensure that Caribbean healthcare systems are resilient to the effects of Climate Change, is a crucial step to building needed capacity, which will ensure that Caribbean health is better protected in the face of Climate Change.

P-87
Molecular detection of *Sarcoptes scabiei* and associated predictors of canine sarcoptic mange in Trinidad and Tobago

C Wong, L Koma, C Sant, KC Georges
School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: Corinne.Wong@sta.uwi.edu

Objective: To molecularly detect *Sarcoptes scabiei* infestation of domestic animals in Trinidad and Tobago and identify predictors for canine sarcoptic mange.

Method: A syndromic surveillance of 181 domestic animals (155 (85.6 %) dogs, 15 (8.3%) pigs, 6 (3.3%) goats and 5 (2.8%) sheep) showing signs associated with sarcoptic mange was conducted. Skin scrapings were examined microscopically for the presence of mites. DNA was extracted and competitive PCR (cPCR) performed using primers RIB-18-F and RIB-3-R which amplified a 450-460 bp fragment of the internal transcribed spacers (ITS) 2 gene. Data on risk factors were obtained using a questionnaire and logistic regression models were used to identify predictors of canine sarcoptic mange.

Results: Forty-four animals (24.3%) (34 dogs, 5 goats, 3 pigs and 2 sheep) were positive for *S. scabiei* by cPCR. Seventeen (9.4%) were positive by both microscopic examination and cPCR. Sour odour (OR=5.56, 95% CI=1.46,2.17), pruritus (OR=4.06, 95% CI=1.38,11.92) and crusting (OR=2.40, 95% CI=1.07,5.38) were significant predictors of a definitive diagnosis of canine sarcoptic mange. The zoonotic potential of this parasite was evident as the owner of a *S. scabiei* positive dog developed clinical signs consistent with scabies.

Conclusion: Although microscopic examination is the gold standard, this study showed that cPCR is a useful diagnostic tool to confirm the presence of these mites in affected animals which may be applied to humans. Sarcoptic mange may be a primary differential when dogs present with sour odour, pruritus and crusting.

P-88
Knowledge, attitudes, and practices among staff and students of a tertiary education institute regarding Human Papillomavirus (HPV) infection, cervical cancer, screening and HPV vaccination

SK Khan, A Changoor, E Jodhan, GCH James, MR Ramdeo, NR Ramdeo, PT Radhay, S Bunsee, JE Foster
Department of Preclinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: jerome.foster@sta.uwi.edu

Objectives: To assess knowledge, attitudes, and practices (KAPs) among both staff and students regarding Human Papillomavirus (HPV) infection, cervical cancer, cervical cancer screening and HPV vaccination at The University of the West Indies, St. Augustine Campus.
Methods: An online survey was used to collect data on the KAPs towards HPV, its vaccination and cervical cancer screening. Data were analysed using Pearson's chi-square test.
Results: The sample comprised 177 persons and there was no significant gender difference in HPV knowledge. Only 19.1% of the sample was aware that HPV causes cervical cancer. Most females (76%) and males (86%) were also unaware that HPV caused anal cancer in males. Participants' knowledge of HPV did not impact their sexual practices, as most engaged in unprotected oral (91.7%) and penetrative intercourse (89.8%). Lack of knowledge was associated with poor vaccination rates particularly among males Females cited fear of side effects as the main reason for lack of vaccine uptake. In the sample, 26.5% of females had received an HPV vaccine compared to only 6% of males (p=0.004). A majority of females (71.9%) had not taken Pap smear tests. Reasons included lack of information (42.1%,), lack of accessibility (10.5%) or fear of screening (11.6%).
Conclusions: Future HPV vaccination strategies should target both sexes equally, address growing vaccine hesitancy, and educate the population on negative health outcomes caused by lack of screening and risky sexual behaviour.

P-89

Investigations into the introduction, evolution and epidemic behaviour of SARS-CoV-2 lineages in Trinidad and Tobago

NSD Sahadeo[1], S Nicholls[1], N Mohammed[1], A Hinds[2], C Whittaker[3], NR Faria [2,4], KV Parag[3], CVF Carrington[1]
[1]Department of Preclinical Sciences, Faculty of Medical Sciences, The University of the West Indies (UWI), St. Augustine, [2]Ministry of Health, Republic of Trinidad and Tobago, [3]MRC Centre for Global Infectious Disease Analysis, Department for Infectious Disease Epidemiology, Imperial College London, London, United Kingdom and [4]Departamento de Moléstias Infecciosas e Parasitárias e Instituto de Medicina Tropical da Faculdade de Medicina, Universidade de São Paulo, São Paulo, Brazil
Email: nikita.sahadeo@sta.uwi.edu

Objective: Understanding the origin, evolution, and epidemic behaviour of emerging viruses provides insights that can inform monitoring and control efforts. We are investigating the introduction and transmission dynamics of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) lineages and variants of concern (VOC) most frequently identified in Trinidad and Tobago (T&T).
Methods: SARS-CoV-2 genomic sequences from T&T generated by the University of the West Indies COVID-19: Infectious Disease Molecular Epidemiology for PAthogen Control & Tracking (COVID-19 IMPACT) project laboratory from December 2020 to May 2023, with over 90% coverage, were grouped by Pango lineage assignment. Data sets for the most frequently identified lineages were compiled, maximum likelihood phylogenies estimated, and phylodynamic/phylogeographic analyses subsequently performed. Transmission rates were also estimated from epidemiological data.
Results: As of May 30, 2023, the COVID-19 IMPACT laboratory generated 4 028 T&T SARS-CoV-2 genome sequences. A total of 150 individual lineages were identified, with R.1, Gamma, Delta and Omicron identified most frequently, including 91 sub-lineages of Omicron. The most closely related sequences to T&T sequences for these four lineages were from the USA, UK, Germany, Canada, and Brazil. Preliminary analysis of Gamma and R.1 suggests that more stringent public health control measures were required to slow local transmission of Gamma than for R.1.
Conclusions: At least 150 distinct lineages of SARS-CoV-2 had circulated in T&T during the pandemic. More in-depth phylogeographic analyses will be performed on the datasets generated to determine the rates of their evolution, specific dates of introduction, and the most probable source locations for the main lineages/VOC identified and to compare their transmission dynamics within T&T.

P-90

Detection and characterization of potential emerging and emergent arboviruses in mosquitoes in Trinidad

SDB. Ramnarine[1], C Oura[2], L Ramharrack[1], IVCD[3], C Carrington[1]
[1]Department of Pre-clinical Sciences and [2]School of Veterinary Medicine, Faculty of Medical Sciences, University of the West Indies, St Augustine and [3]Insect Vector Control Division, Ministry of Health, Trinidad and Tobago
Email: stephen.ramnarine@gmail.com

Objective: Arboviruses are an emerging problem, exacerbated by climate change and changing land-use. Traditional polymerase chain reaction (PCR)- and cell culture-based approaches for virus surveillance underestimate viral diversity, such that viruses of known or potential public health importance may be missed. In contrast, metagen-

omic sequencing can provide a much more comprehensive picture. We are using a nanopore metagenomic sequencing protocol to detect and characterise viruses in Trinidad mosquito populations.

Methods: Global Positioning System (GPS)-tagged CO_2-baited Centers for Disease Control and Prevention (CDC) light traps were deployed in five forested areas (10 nights; February–June 2023) with traps set in the evening, retrieved next day and immediately stored on dry ice. Mosquitoes were sorted based on morphology using taxonomic keys, grouped into pools up to 50 and stored at –80ºC until viral metagenomic screening.

Results: To date, 1 249 mosquitoes had been collected [*Culex* (43.7%), *Wyeomia* (21.1%), *Aedes* (15.7%), *Sabethes* (1.1%), *Anopheles* (0.9%), *Haemagogus* (0.8%), *Coquillettidia* (0.6%), *Psorophora* (0.5%), 5 unclassified groups (15.6%)]. These will be divided into species pools of 50, homogenized, and extracted nucleic acids used for species confirmation via molecular barcoding and for viral metagenomic sequencing.

Conclusions: Mosquito genera collected include vectors of arboviruses of public health importance, including Dengue, Chikungunya, Zika and Mayaro viruses. Previous work also identified Mucambo, Caraparu, Oriboca, Bimiti, and Wyeomyia viruses mainly from *Culex* and *Wyemoia* species which dominated samples in the present study. Our data will provide baseline information on viruses present in different Trinidad mosquito populations and whether the identified viruses could emerge as a public health concern.

P-91

An investigation into the knowledge, attitudes and beliefs about the Human Papillomavirus Vaccine and barriers preventing uptake among undergraduate students over the age of 18 at the University of the West Indies, St. Augustine

LFX O'Young, L Ferreira, PB Harridan, AP Harridan, CL Achee, Z Choon, DH Gopaul, CH Clarke, A Maharaj, CA Alexander
Department of Para Clinical Sciences, Faculty of Medical Sciences, The University of the West Indies, St. Augustine
Email: luc.oyoung@my.uwi.edu

Objective: To examine the factors surrounding the barriers preventing uptake of the Human Papillomavirus vaccine among adult undergraduate students at the University of the West Indies, St. Augustine (UWI, STA).

Methods: Data was collected from 400 undergraduate students, 50 from each Faculty, 18 years and over, at the UWI, STA. The data were collected via questionnaires which captured participants' demographic information along with their knowledge, attitudes and beliefs regarding the Human Papillomavirus vaccine and their knowledge of its availability on campus. The data were analysed using Chi-squared tests and descriptive statistics.

Results: Most participants were female (53.2%), heterosexual (80.3%) and unvaccinated (63.0%) with an average age of 21.5 years. The average knowledge score was 3.045/5 and those with a score of 1 or lower were significantly more likely to be unvaccinated (p<0.01).

Females scored higher than males (3.23 vs. 2.84) and were significantly more likely to know about HPV beforehand (p<0.01). The main motivating factor for getting the vaccine was a doctor's recommendation (64%) which was significantly associated with being vaccinated (p<0.01). The main barrier to vaccination was limited knowledge of the benefits of the vaccine (34.25%).

Conclusions: Lack of knowledge regarding the benefits of the vaccine was the main barrier preventing uptake of the HPV vaccine among the participants. Public awareness programmes and recommendations from trusted medical practitioners are good ways to increase vaccine uptake among the undergraduate population at the UWI, STA.

P-92

A Cross-sectional study of the knowledge, attitudes and practices of medical students at the University of the West Indies, St. Augustine campus towards mandatory and recommended vaccinations

L Merritt-Charles [1], T Balraj[2], K Bobb[2], T Wiggins[2], A Deonarine[2], A Roopnarine[2], J Sookdeo[2], J Parris[2], K Ragbir[2]
[1]Department of Clinical Surgical Sciences and [2]Department of Preclinical Medical Sciences, Faculty of Medical Sciences, The University of the West Indies, St Augustine
Email: teveer.balraj@my.uwi.edu

Objective: To examine the knowledge, attitudes and practices of medical students of toward mandatory and recommended vaccination.

Methods: A cross-sectional survey of medical students across years 1-5, at UWI was conducted between March and June 2023. Data was collected through an online distribution of an expert reviewed, pilot-tested 92-item questionnaire, which was structured to assess knowledge, attitudes and practices. Data analysis was conducted using independent T-test and crosstabulation on SPSS.

Results: There were 58.3% females and 52% preclinical students (years 1 and 2) among the 103 respondents. Forty-nine percent (49%) of clinical students (years 3, 4 and 5), compared to 0% of preclinical students demonstrated good knowledge. No association was found between attitude and either knowledge or gender. Clinical students received HPV (49%), COVID 19 (100%) and Influenza (53.1%) vaccination, compared to 51.9%, 88.9% and 33.3% respectively, in preclinical students for these recommended vaccines. All students received the measles, mumps, rubella (MMR) vaccine, but compliance with mandatory vaccines was not 100%. Current coverage against tetanus was 95.9% in clinical and 96.3% in preclinical students. Varicella and Hepa-

titis B vaccine coverage was lower among preclinical students. There was a correlation between practice and attitude (p=0.013).

Conclusion: Clinical students demonstrated better knowledge than preclinical students. Mandatory entry requirement vaccination guidelines were not adhered to. There is a need for targeted educational interventions to improve knowledge and practice among medical students.

P-93

Capacity building to support infectious disease genomic surveillance in Trinidad and Tobago

AB Jordan,N Sahadeo, A Ramjag, V Ramkisson, S Nicholls, N Mohammed, C Carrington
Department of Preclinical Sciences, Faculty of Medical Sciences, University of the West Indies, St. Augustine
Email: arianne.brown-jordan@sta.uwi.edu

Objectives: To build capacity for pathogen whole genome sequencing in Trinidad and Tobago (T&T) to support infectious disease research and surveillance for improved public health outcomes.

Methods: Rapid scale up of whole genome sequencing in T&T was necessary to address the SARS-CoV-2 surveillance needs for the COVID-19 pandemic in the Caribbean. The UWI-based initiative provided necessary laboratory services and technical support for genomic surveillance for the region and continues to serve T&T. As the pandemic progressed, we sought to gain a better understanding of the health systems landscape in order to improve our operations and develop protocols, procedures and strategies to enhance future academic - public health partnerships for public health emergencies.

Results: Capacity established at the UWI for pathogen surveillance (using rapid pathogen-specific whole genome sequencing and pathogen-agnostic metagenomic sequencing) has potential to be scaled and adapted to other healthcare and research needs. Better understanding of how institution clinical laboratories and public health laboratory networks function, and consideration of needs and hurdles identified can inform preparedness for future public health emergencies and other pathogen genomic surveillance initiatives. In particular, coordinating with the necessary funding partners, establishing collaborations and organising manpower is key to building a genomic surveillance system that can easily adapt to future needs.

Conclusions: Pathogen genomic surveillance systems can support country specific priority issues and programs and add substantial value to national and regional public health but must be situationally aware if they are to produce agile and effective responses.