

Poster Abstracts

P-1

Descriptive analysis of a Community Paediatrics Hybrid Telemedicine/Face-to-Face service during implementation of community mitigation strategies in response to the COVID-19 pandemic

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Objective: To describe reasons why patients accessed the service during the implementation of community mitigation strategies for COVID-19.

Methods: Patients who accessed the service from September to October 2020 were included. This was a descriptive study looking at morbidity data for these patients. Data were recorded on Microsoft Excel, and percentages of patients who accessed the service were recorded. Odds ratios (OR) were calculated to compare subgroups.

Results: There were 204 consultations: 114 (55.9%) telemedicine and 90 (44.1%) face-to-face. Ninety-nine (48.5%) were new patients. The odds that parents of new patients *versus* existing patients attended face-to-face consultations were similar (OR: 0.27; 95% confidence interval (CI): 0.15, 0.49; p 0.0001). Seven children (3.4%) attended face-to-face to complete assessments. Ten (5%) children attended but were not required to be present. Forty-two (20.6%) attended for Disability Assistance Grant (DAG) forms to be completed. The odds that a parent of a child with autism spectrum disorder (ASD) or suspected ASD attended regarding the DAG form was higher compared to the rest of the group (OR: 2.25; 95% CI: 1.1, 4.5; p 0.02). Twenty-two (10.8%) consulted for special educational needs (SEN) medical reports. Thirty-four (16.6%) attended for prescriptions: 14 (7%) Risperidal and 12 (6%) Methylphenidate. Eight (4%) consulted regarding face masks, and six (3%) consulted for behavioural problems.

Conclusion: Consultations were mainly telemedicine and face-to-face without the child. Reasons for consultations included DAG forms, prescriptions, SEN reports, behavioural problems and letters regarding face masks. Further

research regarding the effectiveness of the hybrid telemedicine/face-to-face system is required.

P-2

Development of an instrument for the selection of Coronavirus-19 diagnostic test kits in the Caribbean Community

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Objective: To design a simple, user-friendly instrument to assist national and other stakeholders in the evaluation and selection of diagnostic tests to be used for the COVID-19 response in CARPHA Member States.

Methods: The regional reference laboratory for the Caribbean Community (CARICOM) developed criteria which national public health and other national stakeholders should consider when determining the selective advantages of a particular *in vitro* diagnostic kit or testing approach. The criteria were presented as an instrument which incorporated 14 different parameters, with a scoring system that assigned 0, 1 or 2 points to each parameter. Depending on the final score assigned to the diagnostic kit under review, it fell into one of five categories, Categories A to E.

Results: The scoring system allowed for real-time comparison of various types of diagnostic test kits which were available for use. The inclusion of examples also allowed for a combination approach for the detection of SARS-CoV-2 for diagnostic or surveillance testing at ports of entry or in the community.

Conclusion: An implementation gap remained for countries which needed to make steps towards recovery in the tourism economy while maintaining measures which would safeguard their populations against introduction of new strains/variants of the SARS-CoV-2 virus. The usefulness of this selection and evaluation tool, developed within the context of the Caribbean, will be seen through uptake and use by the national Ministries of Health of the CARPHA Member States.

P-3

Emergency readiness in primary healthcare – a case study of seven health centres with Family Medicine Residents in Guyana

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Objective: To understand emergency response in primary healthcare in Guyana. To investigate the frequency and status of emergency preparedness at seven healthcare centres in Guyana with Family Medicine Residents. To inquire if the seven centres are equipped with human and other resources to respond to emergencies, and to suggest measures to improve emergency responses at the seven centres.

Methods: This study was based on case-study research. The sample population consisted of 39 Family Medicine Residents and other doctors who had experience with emergency preparedness at the facilities. Nurses, non-medical personnel and other staff at the centre under study were excluded. The period of study was for one fiscal year, January to December 2018. Questionnaires were utilized as the primary research instrument, and data were analysed using SPSS 23.

Results: Emergency cases were very frequent: 69.4% of the respondents indicated that emergency cases were frequent with one to three cases per week. The most common emergencies were asthmatic attacks, chest pain, severe trauma and lacerations. Most of the respondents had three to five years of medical experience while only 72% had been fully registered. About 88.9% of the respondents indicated that there were no existing emergency protocols at the centres, and 5.6% conducted case simulations.

Conclusion: There was a need to better integrate and mainstream optimally emergency medical response at the seven centres. The centres were not prepared with the necessary drugs and equipment to respond to emergencies. It is recommended that necessary equipment and drugs, support facilities and training be readily available at the centre to respond to emergencies.

P-4

Social and economic influences on disparities in the health of racial and ethnic group Canadian immigrants: profiling Caribbean descendants

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Objective: To examine social, economic and migratory influences on the health of racial and ethnic minority groups in Canada, with a special focus on Caribbean immigrants.

Methods: Combined annual cycles (2011–2016) of the Canadian Community Health Survey data totalling over 300 000 adult Canadian residents were aggregated. Descriptive statistics and multivariable logistic regression models were used to examine the prevalence and associated factors of: (a) cardiovascular disease diagnosed by a healthcare professional; and (b) self-rated general health among racial and ethnic groups.

Results: Caribbeans in general, Black (adjusted odds ratio (AOR) = 1.82; 95% confidence interval (CI): 1.43, 2.31) and other non-White (AOR = 1.14; 95% CI: 1.04, 1.22) Canadians had significantly higher odds (adjusted for age/gender) of reporting any cardiovascular disease compared with White Canadians. Only Caribbean non-Blacks had higher odds (AOR = 1.49; 95% CI: 1.21, 1.85) of self-rated fair or poor general health compared with White Canadians. Multivariate logistic regression models revealed that after controlling for social and demographic factors, immigration status and years since migration, Caribbean non-Blacks (AOR = 1.85; 95% CI: 1.53, 2.24) and Black Caribbeans (AOR = 1.82; 95% CI: 1.43, 2.31) were at higher odds of having a doctor-reported cardiovascular health condition compared with White Canadians. Caribbean non-Blacks also had higher odds (AOR = 1.40; 95% CI: 1.10, 1.78) of fair or poor self-rated health than White Canadians.

Conclusion: The results highlighted the need for additional investigations of other potential influences on physical health statuses, especially among migrants and those of African ancestry who might be more prone to adverse health outcomes.

P-5

Hygiene practices among street food vendors operating in the Stabroek block, Regent and Robb street vicinities of Georgetown, Guyana

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Objective: To examine whether lack of knowledge among street food vendors results in poor hygiene practices.

Methods: This was a cross-sectional quantitative study that used the convenience sampling method to conduct studies on 100 street food vendors. Hygiene practices such as food hygiene, environmental hygiene and personal hygiene were obtained by a structured self-administered questionnaire and a covert observation method using a checklist guided by the code of hygiene outlined by the Guyana National Bureau of Standard. Pearson's Chi-square test was used to obtain associations among the variables.

Results: Personal hygiene: 71% ($p > 0.05$) of the street food vendors were not hygienic. About 99% were observed not

washing their hands. Environmental health: 73% ($p > 0.05$) of the respondents were very hygienic in their practices. Protective clothing: 76% ($p > 0.05$) were compliant in wearing their protective clothing. Food hygiene: almost half (46%) of the vendors sold food within two hours of preparation, but 70% did not have provisions for heating and reheating food. Chi-square testing of associations showed that more than half of the street food vendors had knowledge of hygiene practices, but were observed to be non-adherent. **Conclusion:** Street food vendors engaging in unwholesome practices poses a serious threat to public health. Hence, providing requisites and conducting regular inspections will help to curb those practices and thus protect consumers' health. Requisites that should be provided for the food vendors are lavatories *eg* toilet facilities, hand sinks for hand-washing and small shacks due to the dust from the road. It is also recommended to help them with food warmers to keep their food hot and prevent spoilage.

P-6

Knowledge, attitudes and practices of drivers towards road traffic regulations in Trinidad, West Indies

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Objective: To determine drivers' knowledge, attitudes and practices in relation to traffic regulations, speed, seat belt use, alcohol consumption, fatigue and distraction.

Methods: A survey was conducted on a convenient sample of 389 participants across various licensing offices in Trinidad. The assessment questionnaire comprised closed-ended questions and a quiz of 10 questions, selected from the Trinidad and Tobago traffic regulations booklet and road traffic laws. SPSS Version 25 was used for the analysis of the collected data.

Results: It was found that 78.7% of the respondents agreed that they were more likely to get into an accident if they sped; yet, 56.8% of the respondents agreed that they enjoyed driving fast on open roads. Approximately twice as many males (36.7%) reported driving over 140 km/hr as opposed to females (18.9%). Most respondents (90.7%) agreed that seat belts mitigated the risk of injury, and 87.7% agreed that seat belts were necessary even if one drove carefully. In terms of alcohol consumption, 31% of males agreed that they could be over the alcohol limit and still be a safe driver as compared to 17.1% for females. Most respondents (96.0%) agreed that driving while they were tired increased chances of getting into an accident, but this did not translate into low levels of fatigued driving practices. Education level was associated to quiz total ($F = 4.922$; $p = 0.08$), and

education related to young adults who were < 30 years old was associated to passing the quiz ($\chi^2 = 0.04$; $p < 0.05$).

Conclusion: Male gender was strongly associated with dangerous driving practices as compared to females. Drivers between 18 and 30 years old were strongly associated with speeding and driving under the influence.

P-7

Hazard and risk assessment of rainwater harvesting systems in Carriacou, Grenada

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Objective: The structure and operation of 20 rainwater harvesting systems in Carriacou were observed and assessed to derive recommendations for the adoption of rainwater harvesting technologies for the safe supply of water in Grenada during seasonal shortages.

Methods: The study protocol was adopted from the World Health Organization and International Water Association Water Safety Plan Manual. A matrix was used to calculate risk scores based on the likely frequency and severity of hazardous events. This study focussed on hazardous events in three categories: physical (aesthetic), chemical and microbial. The observations were conducted by trained surveyors on July 29 and 30, 2019 at the start of the rainy season.

Results: Of the nine parameters, more than 50% of the 15 concrete tanks received high to very high risk scores in six areas. More than 50% of the five plastic tanks also received high to very high risk scores in six areas. Overall, when the average risk score was calculated, three systems received low risk scores, 10 systems received medium risk scores, and 7 systems received high risk scores.

Conclusion: The findings were indicative of moderate public health risk from the consumption of water on the islands. Public health safety could be improved through education and training of householders, regular monitoring of systems, and enforcement of implementation of safety mechanisms, such as first flush devices. Further research is also needed to better understand the significance of the risk factors on the mainland in Grenada to guide appropriate policies and implementation.

P-8

Epidemiologic surveillance of amputation in Grenada, 2010–2017

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Objective: The prevalence of limb amputation related to peripheral arterial disease (PAD) and diabetes has attracted

global attention as a major health problem. However, recent published studies are virtually absent on diabetes foot and lower limb complications in the Caribbean region that may result in a dearth in awareness about the relevance of interventions to reduce risk factors for amputations.

Methods: A retrospective, descriptive study was conducted in Grenada, a small Caribbean island, with secondary data from January 2010 to December 2017 of patients having had amputations at the Grenada General Hospital. Data on demographics, reason for amputation, type of amputation and co-morbidities were also collected in the study.

Results: A total of 654 persons who had an amputation at the General Hospital were recorded: 370 (56.6%) males, 284 (43.4%) females, and a median age of 64 years (< 1 to 105 years). The overall annual incidence of amputations ranged from 50.5 to 102.4 per 100 000 per year. Lower limb amputations ranged from 39.0 to 87.8 per 100 000 per year. Diabetes was a co-morbidity in 51.1% of the amputations.

Conclusion: Amputations can have negative effects on the quality of life of individuals. With indications of a potential global increase in the number of persons with diabetes, effective and timely diabetes prevention and management programmes are of utmost importance in Grenada to address risk factors for amputations. Other Caribbean countries may benefit from this study which creates awareness of the significance of the issue and the relevance for interventions to improve health outcomes in the region.

P-9

Causes of natural deaths in Guyana: an autopsy study from Georgetown Public Hospital Corporation's Pathology Department by the University of Guyana's School of Medicine

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Objective: To investigate the common causes of natural death from post-mortem examinations conducted at Georgetown Public Hospital Corporation's (GPHC) Pathology Department and to determine the common causes of death among diabetics and the elderly.

Methods: A retrospective study was conducted using data from autopsies at GPHC's Pathology Department from January 1 to December 31, 2018. This study examined post-mortem cases from hospital and forensic records. The data collected were analysed using Statistical Package for Social Sciences version 23.

Results: A total of 1595 autopsy reports were analysed (466 females, 1095 males and 34 no data). About 61% of the recorded deaths were of natural causes while 33% of the records were of non-natural causes. The most common

causes of natural deaths in Guyana were identified to be cardiovascular (51.2%), respiratory complications (20.2%), cerebrovascular (13.2%) and cancer (7.8%). Furthermore, the mean age of death among the diabetic population was 57.8 years; this results in approximately 11 potential years of life lost (per person). The most common causes of death among the diabetic population were cardiovascular (61.5%), cerebrovascular (16.7%), cancer (10.3) and sepsis (3.8), while the common causes of death among elders were cardiovascular (51.8%), respiratory infections (14.6%), cerebrovascular (9.1%), infectious (non-respiratory) (8.5%) and cancer (4.9%).

Conclusion: A significant cause of natural death in Guyana was cardiovascular complications. The risk of such death increased greatly in diabetic individuals. We recommend that a national approach be taken to better manage diabetes; such management should include prevention of risk factors, early detection of diabetes and adherence to treatment once diagnosed.

P-10

Causes of sudden non-natural deaths in Guyana: an autopsy study from Georgetown Public Hospital Corporation's Pathology Department by the University of Guyana's School of Medicine

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Objective: To investigate the common causes of non-natural deaths in Guyana and to determine the gender and age correlation associated with those non-natural deaths, particularly suicide.

Methods: A retrospective study was conducted using data from autopsies at the Georgetown Public Hospital Corporation's Pathology Department from January to December 31, 2018. This study examined deaths from hospital and forensic records. The data collected were analysed using Statistical Package for Social Sciences version 23.

Results: A total of 1595 autopsy reports were analysed. About 33% of the deaths were as a result of sudden non-natural causes. There was statistical significance ($p = 0.0001$) between the number of males (41.3%) dying by non-natural means *versus* that of females (17.4%). Males were 2.4 times likely to die by non-natural means (mean age 39.5 years and 24.4 potential years of life lost (per male)). The common causes of non-natural death were acts of violence (31.8%), such as death caused by firearms, sharp instruments, blunt trauma, motor vehicular accidents (24.8%) and suicide (22.6%). Suicide continued to be a major cause of death in Guyana, largely affecting Indo-Guyanese of all age groups.

This study found that males were 5.2 times likely to die by suicide than females.

Conclusion: Males were more at risk of dying by all kinds of non-natural means and were also significantly at risk of dying by self-harm. Approximately, one-third of all non-natural deaths were as a result of acts of violence while a quarter of non-natural deaths were as a result of vehicular accidents.

P-11

Description of the cancer health services in Saint Lucia: diagnosis, treatment and pathways

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Objective: To describe and document cancer care pathways to diagnosis and treatment in Saint Lucia.

Methods: The patient's and the healthcare provider's perspectives were investigated through a retrospective cohort of cancer survivors and qualitative interviews respectively. Participants were selected on a key-informant basis and were interviewed using a structured questionnaire to ascertain their experience in cancer care. In addition, clinical data from patients residing in Saint Lucia were drawn from The Cancer Centre Eastern Caribbean (TCCEC). Ethics approval for this study was granted by the Medical and Dental Council in Saint Lucia, and we possess the necessary regulatory requirements to use the anonymized patient data from TCCEC.

Results: Eleven patients aged between 39 and 65 years were interviewed for the DCAP study with a median year of diagnosis of 2010 (2007 to 2019), and 63 Saint Lucian cases were included from the TCCEC dataset. The majority were patients with breast cancer; other cancer sites of the patients interviewed were endometrium, prostate and parotid gland. The patients accessed care in numerous establishments across the Americas. Overall, the estimated mean time from first diagnosis to first treatment in the DCAP dataset was 43 days (standard deviation (SD): 28.3 days). In the TCCEC dataset, the mean time was 151 days (SD: 131.9 days).

Conclusion: Cancer care was accessed in numerous countries in the Americas and could impact on the patient outcomes. The DCAP study is in the pilot phase, data collection is still ongoing, and further investigation is needed.

P-12

The National Health Insurance Authority: engaging the public in NHI Bahamas today for better health tomorrow

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Objective: To determine public opinion and support for: (a) the newly implemented National Health Insurance (NHI) Bahamas Primary Healthcare (PHC) programme; and (b) advancing a policy framework for NHI Bahamas High Cost Care coverage.

Methods: Data for each of the two initiatives in the study were obtained through varying modalities. Data for the Patient Experience Satisfaction Survey (PESS) of the PHC programme were obtained from 10 000 enrolled beneficiaries (an excess of 7709 of the target sample size needed for statistically significant results), primarily from telephone surveys conducted from March 28 to June 28, 2019 using a 2% margin of error and 95% confidence interval. The consolidated feedback from the public consultation was derived over 100 days from over 500 unique participants, 14 town hall meetings, 33 formal feedback forms and > 80 individual stakeholder meetings.

Results: The 2019 PESS revealed that 92.1% of beneficiaries strongly agreed (51.3%) or agreed (40.8%) that their NHI doctor cared for their health, 89.7% felt that their doctor was helping to improve their health, 93.6% felt that the quality of service received was excellent (54.4%) or very good (39.2%), and 57.6% were 'very satisfied' with their overall healthcare experience while 39.2% were 'satisfied'. The public consultation resulted in 11 key changes stemming from four main themes geared towards the individual, benefits, implementation and conducting business in The Bahamas.

Conclusion: Positive feedback and support from the public and input from key stakeholders on how to design the Universal Health Coverage programme are key factors in contributing to the design and long-term viability of NHI Bahamas.

P-13

Factors influencing choice of care provider for women diagnosed with breast cancer in urban Jamaica

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Objective: To examine the factors influencing the care choices of breast cancer survivors in an urban setting in Jamaica, with a view to identifying factors which were pivotal in determining the accessibility to care.

Methods: Female participants, aged 47–58 years, were purposively selected with the assistance of a cancer charity

on the island. Individual, face-to-face semi-structured interviews were conducted until the point of saturation (n = 10). All interviews were audio-taped and transcribed verbatim. Data were hand-coded and analysed using thematic analysis with constant comparison.

Results: Participants relied on the guidance of healthcare practitioners in navigating the healthcare system. However, patients' choice of care institution was influenced by factors such as patient confidence in the doctor based on previous unrelated healthcare experience, ability to access financial support, access to specialized health services, avoidance of long waiting times at the public healthcare facilities, and negative or positive anecdotal experiences of other cancer survivors.

Conclusion: The choice of public or private healthcare for cancer patients was influenced not only by the ability to obtain care financing, but also by the feeling of urgency, the perception of care in the public sector, and the guidance provided to patients by their physicians.

P-14

A qualitative investigation of the factors influencing the implementation of the Global Hearts Initiative in a small island developing state

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Objective: To identify the barriers and facilitators of implementation of the Global Hearts Initiative (GHI) for the control of hypertension in the small island developing state (SIDS) of Barbados and to explore the acceptability of the process and provide contextual insights for project management, monitoring and evaluation.

Methods: Seven policymakers/managers/healthcare professionals/academics involved in the implementation of GHI participated in individual, semi-structured interviews averaging 35 minutes. Interviews were audio-recorded, transcribed verbatim and subject to thematic analysis with constant comparison assisted by ATLAS-ti version 8 software.

Results: Participants had a thorough understanding of the GHI project and its theoretical implementation steps and believed in its usefulness as a beneficial health intervention. However, their ability to implement the project was negatively affected by pre-existing workload, competing work responsibilities and fluid national health priorities. Importantly, insufficient and inefficient access to data *via* health information systems negatively impacted project monitoring and evaluation.

Conclusion: A resource-stratified approach to the implementation of GHI with particular reference to human resource capacity and health informatics may be useful

SIDS. Policy support is vital for the successful implementation and sustainability of the GHI project in Barbados.

P-15

Feasibility and acceptability of using emergency NCD kits after natural disasters in the Caribbean

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Objective: In 2017, the Caribbean was devastated by its deadliest and costliest hurricane season. At least one third of the over 3000 deaths were due to non-communicable diseases (NCDs). World Health Organization (WHO) NCD kits provide essential medication and equipment for the management of common NCDs. The objective of this project was to assess the feasibility and acceptability of using these kits after natural disasters in the Caribbean to address the needs of people living with NCDs (PLNCDs).

Methods: In January 2020, a stakeholder engagement meeting was held to address methodology and define anticipated challenges. A stakeholder mapping exercise defined key informants for qualitative interviews; interviews were conducted over Zoom. A rapid qualitative analysis approach was used to identify key domains related to feasibility and acceptability of the NCD kits. Due to the ongoing COVID-19 pandemic, an understanding of the similarities and differences of managing NCDs during a disaster and during a pandemic was elicited.

Results: Rapid analysis of 12 interviews was presented. Main themes that emerged include: (a) the need for integration between NCD and disaster divisions; (b) COVID-19 had presented a unique opportunity to address the needs of PLNCDs in disasters; (c) the kits were viewed as acceptable; and (d) the kits were viewed as feasible: the logistics of training, storage and distribution, cost-sharing, and redistribution of unused medications were deemed possible.

Conclusion: The WHO NCD kits were feasible and acceptable to address the needs of PLNCDs in the setting of a natural disaster in the Caribbean.

P-16

Outcome of mammography at Georgetown Public Hospital Corporation from June to October 2019

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Objective: To determine the effectiveness of mammography within the first five months of its implementation at Georgetown Public Hospital Corporation (GPHC) and to compare it to international benchmarks.

Methods: A retrospective observational study was conducted of all patients over 40 years old and high-risk patients under the age of 40 years who had mammography at the Medical Imaging Department at the GPHC during the period of June to October 2019. Data were collected using the Ambra picture archiving and communication system. The Breast Imaging Reporting and Data System (BIRADS), diagnostic workup and pathology results were recorded.

Results: A total of 658 mammograms were performed from June to October 2019, 599 of which were screening and 59 were diagnostic. The callback rate for screening mammogram was 27.5%, positive predictive value (PPV) 1 was 1.8 %, PPV2 20%, PPV3 33%, and cancer detection rate for screening mammogram 5 per 1000 patients. The cancer detection rate for diagnostic mammogram was 135 per 1000 mammograms, PPV2 47% and PPV3 72%. The concordance rates for biopsies performed in screening and diagnostic mammogram were 78% and 73% respectively.

Conclusion: The mammogram programme effectively met the international benchmarks for cancer detection in both screening and diagnostic mammography within its first five months of implementation.

P-17

Nurses' assessment of chronic illness care in two Caribbean countries

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Objective: To describe nurses' assessment of the level of support for hypertension and diabetes care in two English-speaking Caribbean countries based on the Chronic Care Model.

Methods: This cross-sectional descriptive study included a convenience sample of 154 nurses from Trinidad and Tobago and Jamaica recruited *via* professional organization and snowball sampling to complete an online version

of the Assessment of Chronic Illness Care (ACIC) survey. The 28-item questionnaire, administered *via* Qualtrics, had six subscales: organization of the healthcare delivery (six items), community link (three items), self-management support (four items), decision support (four items), delivery system design (six items), and clinical information systems (five items). The Likert responses were scored on a scale of 0–11: 0–2 indicate little or no support for chronic illness care, 3–5 basic or intermediate support, 6–8 advanced support, and 9–11 optimal, or comprehensive, integrated care for chronic illness. Data were analysed using SPSS version 27 and included descriptive summary statistics (frequencies, percentages, means) and inferential statistics (t-tests).

Results: The sample included nurses practising in Trinidad and Tobago (n = 34) and Jamaica (n = 120): 72% were registered nurses, 13.7% were nurse practitioners, and 5.7% were public health nurses. The majority (77%) provided direct patient care and were employed in hospitals (62.8%). Based on the Chronic Care Model, the support for care of clients was rated similarly but not statistically significant for diabetes mellitus (5.1 ± 2.4) and hypertensive (5.1 ± 2.5) care in Jamaica (5.3 ± 2.4) and Trinidad and Tobago (4.4 ± 2.7) ($p = 0.108$). Support was basic or intermediate across all six subscales of the ACIC with mean scores ranging from 3.9 to 5.9. Post basic training was associated with higher scores for chronic illness care (nurse practitioners and public health nurses 5.89 ± 2.71 *versus* registered nurses 4.87 ± 2.37) ($p = 0.007$) as measured by the ACIC and each of its dimensions except clinical information systems for both hypertension and diabetes mellitus.

Conclusion: While care for persons with diabetes and care for persons with hypertension were similar across countries, there was a clear need to strengthen chronic illness care through the integration of the Chronic Care Model in the region. Training at all levels of professional development must be used as a strategy to increase its integration for improving the quality of care to clients with chronic non-communicable diseases in both countries.

P-18

The practice of global health diplomacy during Public Health Emergencies of International Concern with an added highlight on Caribbean diplomacy

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Objective: To examine the role of health diplomacy during times of Public Health Emergencies of International Concern (PHEICs) as declared by the World Health Organization (WHO) and explore how health diplomacy affected the global response to PHEICs.

Methods: Since 2009 (within the last decade), PHEICs had been declared six times by the WHO: H1N1 (2009), Polio (2014), Ebola (2014 and 2016), Zika (2016) and COVID-19 (2020). This study used these events as case series to create a descriptive report on the impact of health diplomacy during times of PHEICs.

Results: Health diplomacy through all of these PHEICs had proved to produce both agonistic and antagonistic results towards the global management of these communicable diseases. States came together in acknowledging and forming partnerships against a common threat as utilized by Caribbean nations. However, wealthier countries prioritized their own population to receive treatment ahead of the collective benefit as well as sought advantages in the post-pandemic setting.

Conclusion: Health diplomacy played a vital role in overcoming pandemics and if used masterfully could create multilateral partnerships. Caribbean nations need to invest more into health diplomacy to create alliances to be better prepared for PHEICs and pandemics.

P-19

Characterizing the burden and impact of menstrual and pelvic health disorders in women in Barbados: results from a cross-sectional survey

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Objective: To assess the impact of menstrual and pelvic health disorders on a convenience sample of Barbadian women.

Methods: Responses from a survey administered and taken online by a sample of 192 women living in Barbados (18–60 years) were assessed. Variables that were collected included age, condition(s) diagnosed and symptoms. The Work Productivity and Activity Impairment Questionnaire: Specific Health Problem was administered to describe the impact of menstrual and pelvic health disorders on work productivity and engagement in social activities. T-tests, Chi-square tests, odds ratios (ORs), analysis of variance (ANOVA) and multivariate analysis were conducted to estimate the associations among patient characterization, disorder characteristics and outcomes.

Results: The mean age at diagnosis was 25 years, and the mean time to diagnosis was 766.15 days ($p < 0.005$). Polycystic ovary syndrome was the most frequently reported diagnosis (55.73%). Endometriosis was the most reported co-existing illness when more than one diagnosis was reported (57.69%). The most frequently reported symptom was fatigue (53%). There was a risk estimate of 2.17 (95%

confidence interval (CI): 0.54, 8.74) of missing work due to menorrhagia and 2.60 (95% CI: 1.31, 5.17) for missing work if diagnosed with endometriosis. Subjects who reported diagnosis at an earlier age were more than two times less likely to miss social events (OR: 2.25; 95% CI: 0.64, 2.71) and work compared to those diagnosed later in life.

Conclusion: Pelvic and menstrual disorders had a significant impact on the health-related quality of life of Barbadian women. Symptoms of these disorders were associated with poor health associated outcomes. More research is necessary to elucidate the humanistic and economic impacts of menstrual and pelvic disorders and treatments on patient outcomes.

P-20

Perceptions of the ‘Reach Up’ programme: benefits and challenges for families

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Objective: Reach Up is an evidence-based early childhood parenting programme developed in Jamaica and implemented in 14 countries worldwide. We sought to ascertain perceptions of the programme from implementing agencies with a focus in this paper on the benefits and challenges for families.

Methods: Data were collected from August to October 2019. Quantitative data were obtained by a self-administered questionnaire *via* SurveyMonkey[®] to 18 participants, and qualitative interviews were conducted with 13 participants. Participants comprised persons leading implementation in the countries and stakeholders from funding agencies, non-governmental organizations (NGOs) and research organizations. Content analysis was used to identify and analyse themes on issues relating to families in the programme.

Results: The intervention was delivered through home visits, small groups or a combination. Participants reported benefits to children’s development and caregivers’ psychosocial well-being and mental health, increased family cohesion and the lack of cost to families, as some of the positive outcomes/aspects. The main challenges reported were that caregivers were sometimes unwilling or unavailable to participate and some home visitors had difficulty in developing rapport with caregivers. Engaging other family members and training home visitors on interpersonal and communication skills were some measures employed to address these challenges.

Conclusion: Reach Up partners identified several benefits of the programme for family health and wellness. Challenges included engagement with some participants, high-

lighting the importance of adequate training of home visitors in building relationships. The findings add to earlier studies demonstrating that the programme was well accepted and feasible across varying contexts.

P-21

Caries prevalence and experience of 12-year-old children in Montserrat

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Objective: To determine the caries experience of 12-year-olds on the Caribbean island of Montserrat. In addition, any difference in the dental caries experience was explored by gender and socio-economic status.

Methods: A total of 46 12-year-olds were living on the island at the time of the study, and 32 (69%) participated in the survey. Caries experience was recorded using the Decayed, Missing and Filled Teeth (DMFT) index by a trained and calibrated examiner according to the British Association for the Study of Community Dentistry (BASCD) criteria. The Care Index was used to describe the level of dental care. Statistical software Dental Survey Plus and SPSS were used to analyse data.

Results: The findings showed that the 12-year-olds had a mean DMFT of 1.91, and 59% had active untreated caries with an overall Care Index of 16%. While the perception of oral symptoms was low, over a third of the children reported a functional impact caused by their oral condition.

Conclusion: There is a need for improved delivery of restorative care coupled with oral health promotion and dental health education.

P-22

For them – by them: ways to create a more inclusive physical activity school environment in secondary schools in Antigua

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Objective: To determine ways in which more physical activity (PA) could be incorporated into the secondary school day in Antigua.

Methods: Nine secondary schools were identified; eight physical education teachers were interviewed. A total of 48 first form students participated in nine focus groups, and all nine schools were assessed using the International Sed-

entary Assessment Tool (ISAT), a tool used to assess the PA environment in schools. Thematic analysis was used to analyse the focus group and interview data, and descriptive statistics were used to report on the ISAT data.

Results: Recommendations were informed by teacher and student feedback and the ISAT findings. Recommendations included creating a socially supportive environment for PA, encouraging student autonomy and contributions, increasing the number and diversity of PA opportunities offered throughout the school day, and providing supportive facilities, features and equipment to enhance the PA school environment.

Conclusion: Engaging teachers and students in discourse surrounding the PA environment in schools was critical to ensure context-specific recommendations. The recommendations can create more inclusive PA opportunities in secondary schools in Antigua and ultimately be used to inform school-related health policies and procedures that can contribute to a health-promoting school approach.

P-23

Trends in the prevalence of recurrent teen pregnancies in Region 4, Guyana, between 2013 and 2017

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Objective: To determine the socio-demographic and gynaecological patterns associated with recurrent teen pregnancy and to highlight the impact of repeat pregnancies on current national statistics.

Methods: A retrospective chart review was conducted on 10 033 records of teen pregnancy in Region 4 from 2013 to 2017, 1160 of which were found to be useful. The variables associated with the trends were analysed, and results were measured against similar studies conducted.

Results: Results indicated that the highest frequency of 41% of repeat teen pregnancy was centred in the east coast district. Teenage mothers of African ethnicity scored the highest for recurrent pregnancies in their teenage years with 373, and East Indians followed closely with 342 of the 1148 teen mothers included in the data analysis. Gravida values indicated that 98.8% of teen females had four or fewer pregnancies while in their teen years, with 75% having had two pregnancies. Pregnancy outcomes existed in one of the following: spontaneous vaginal delivery (SVD), lower segment Caesarean section, abortion and miscarriage. The most popular outcome for second pregnancy was SVD (80%) and third pregnancy also SVD (75%). There was found to be 21% of pregnancy recurrence among teen mothers in Region 4.

Conclusion: Recurrent teen pregnancy hinders contribution to the country's economy and thus places a burden on the population. The provision of youth-friendly services is paramount and should continue to be promoted along with client and caregiver awareness in contraceptive methods to continue to improve contraceptive uptake postpartum, in an effort to prevent repeat pregnancies.

P-24

Childhood maltreatment and teen dating violence in St Croix, USVI

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Objective: To determine whether there was a relationship between childhood maltreatment and teen dating violence on the island of St Croix, US Virgin Islands. The study evaluated whether adolescents who were in relationships where teen dating violence occurred had also experienced physical abuse, physical neglect, sexual abuse, emotional abuse or emotional neglect during childhood.

Methods: This was a correlational study designed to determine whether there was a relationship between childhood maltreatment and teen dating violence. The participants were high school students in 9th grade through 12th grade who attended public, private and parochial schools in St Croix, US Virgin Islands. A total of 179 adolescents were surveyed. Of those surveyed, 146 had been in relationships within the past year at the time of the study and were included as participants in this study. The Childhood Trauma Questionnaire assessed childhood maltreatment utilizing a five-point Likert scale. The Conflict in Adolescent Dating Relationships Inventory measured teen dating abusive behaviours.

Results: The data analysis indicated the following results: (a) childhood physical neglect and teen dating abuse (6.16%); (b) childhood sexual abuse (12.32%), childhood physical abuse (15%) and teen threatening behaviour; (c) childhood physical abuse and teen sexual abuse (18.49%); (d) childhood physical abuse (13.69%), childhood physical neglect (5.47%), childhood emotional abuse (8.9%) and teen relational abuse; and (e) childhood sexual abuse (19%), childhood emotional abuse (21.91%), childhood physical abuse (28%), and teen emotional and verbal abuse.

Conclusion: There was a relationship between specific types of childhood maltreatment and specific types of teen dating violence. This research will add to the literature on teen dating violence and its precursors on various levels.

P-25

A cross-sectional and an in-depth analysis of suicide ideation (thoughts and attempts) among adolescents and

young adults aged 15–21 years in Region 10, Linden, Guyana

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Objective: To identify the factors associated with abuse and self-harm among adolescents and young adults.

Methods: This research utilized a mixed approach and a cross-sectional design using a convenience sampling of 375 sampled students aged 15–21 years enrolled in fourth and fifth form. Risk factors such as thoughts of killing self, attempted to kill self, domestic abuse, substance abuse and demographic characteristics were obtained by a researcher self-reported questionnaire with open and closed questions.

Results: Data on 357 of 375 respondents were used for analysis. Of the study population, 32% were males and 68% were females. The mean age was 16.1 (standard deviation: 1.2) years, minimum age was 15 and maximum age was 20. Of the respondents, 58% were of mixed race, and 32% were African descendants. Nuclear (48%) and single-parent (32%) families recorded the highest rates of suicidal behaviours. Those from grade 10 recorded the majority (65%). About 80% of all students had some form of suicidal thoughts; it was particularly significant among females (84%) who also represented the majority for self-harm (82%) within the ages of 15–17 years. Of the students, 60% had heard unknown voices during their period of vulnerabilities. Abused adolescents were more likely to attempt self-harm (60%, 40%), with a *p*-value of 0.0001. Risk of suicide thoughts and attempts among victims of abuse were associated with a 60% increase. These factors resulted in psychological effects such as hopelessness (90%), worthlessness (31%) and depression (37%).

Conclusion: Abuse was associated with an increased likelihood of suicide thoughts which resulted in psychological effects such as hopelessness, depression and eventually suicide attempts. It is therefore crucial to understand the developmental, behavioural and social pathways so as to guide, prevent and protect our future generations.

P-26

Child maltreatment: investigating child neglect and child sexual abuse in Region 10, Guyana

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Objective: To provide an analysis of the causes and consequences of child neglect and child sexual abuse (CSA) in

Region 10, Guyana, in 2016–2018, and determine the associated risk factors.

Methods: In a mixed method research, 367 child neglect cases (86% of reported cases) and 205 CSA cases (83% of reported cases) for 2016–2018 were analysed. Interviews were held with social and clinical practitioners, educators, parents/carers, non-governmental organizations and 10 adult survivors of child neglect and CSA. An Assessment Framework for child safeguarding and promoting welfare was used to analyze the abuse. Meaning was co-constructed from information provided by a Guyanese sociologist familiar with the cultural context, familial and social complexities that affect adverse childhood experiences in Region 10.

Results: The study found high unemployment, poor living conditions and mental health, and single mothers working away from home for long periods. Absent fathers were not financially supporting their children. Young children were left alone at home, unsupervised, or left with abusive caregivers. There were many underage pregnancies. The region's mixed race children were the most abused. Risk factors included economic hardship, gender, family dysfunction, cognitive vulnerability, and social isolation.

Conclusion: Predisposing factors for the maltreatment were multi-factorial, ranging from socio-economic stressors to harmful cultural practices which increased CSA. Interviews with adult survivors highlighted the need for early intervention and postventions to support affected families. Contextual factors complicate the direct identification of neglect, and without a legislatively defined poverty line, identification of neglect potentially presents challenges for child protection officers and for conclusive research statements.

P-27

Prevalence of Caesarean deliveries due to non-reassuring foetal heart tracing and the associated perinatal outcomes at Georgetown Public Hospital Corporation

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Objective: To compare the prevalence of Caesarean deliveries at Georgetown Public Hospital Corporation (GPHC) before electronic foetal monitoring was introduced (2012) and five years after the introduction (2016). The research question was: what is the effect of non-reassuring foetal heart tracing on Caesarean delivery rates?

Methods: This was a cross-sectional study on 725 singleton pregnancies of all viable gestational ages who underwent Caesarean delivery due to non-reassuring foetal heart tracing detected by cardiotocography at GPHC from 2012 to 2016. The number of Caesarean deliveries due to all indications, gestational ages, five-minute Apgar (appearance, pulse, grimace, activity and respiration) scores and birth

weights were obtained from confinement books and the records department and then analysed.

Results: Out of the 5169 singleton pregnancies delivered by Caesarean section between 2012 and 2016, 725 were due to non-reassuring foetal heart tracing. There was a 14% rise in Caesarean deliveries due to non-reassuring foetal heart tracing over this five-year period. According to this study, most of the neonates were at term gestational (five-year M = 37 weeks 4 days (+/- 1.94 standard deviation (SD))). Out of the 3746 emergency Caesarean deliveries during the five-year period, 1082 (28.9%) were due to non-reassuring foetal heart tracing. Over the study period, there was an overall five-minute mean Apgar score of 9 (+/- 0.55 SD), with 640 (88.3%) neonates having Apgar scores of ≥ 7 while only 85 (11.7%) had Apgar scores of < 7 . The five-year mean birth weight for the study population was 3126 g (+/- 76.26 SD). There were 109 (15%) neonates with birth weights of < 2500 g while the majority (85%) had birth weights of ≥ 2500 g.

Conclusion: Over the five-year period, there was a 10.68% rise in the prevalence of Caesarean deliveries of any indication at GPHC. The prevalence of Caesarean deliveries due to non-reassuring foetal heart tracing showed an increase of 14% from 2012 to 2016. The increase in Caesarean deliveries could possibly be due to the increase in non-reassuring foetal heart tracing as an indication for Caesarean delivery. According to this study, the majority of neonates born *via* Caesarean deliveries due to non-reassuring foetal heart tracing had good immediate perinatal outcomes (a mean Apgar score of 9 (+/- 0.55 SD), and the mean birth weight for the study population was 3126 g (+/- 76.26 SD)). Therefore, the results suggest that a majority of Caesarean deliveries due to non-reassuring foetal heart tracing were possibly avoidable which could result in overall improved maternal morbidity and resource management.

P-28

Survival and associated long-term outcomes of very pre-term infants admitted to the Neonatal Intensive Care Unit at Georgetown Public Hospital Corporation from 2015 to 2017

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Objective: To evaluate survival of very preterm infants admitted to the Neonatal Intensive Care Unit (NICU) at Georgetown Public Hospital Corporation (GPHC) from 2015 to 2017, to assess associated long-term outcomes of these infants, and to make recommendations on the follow-up of very preterm infants.

Methods: For phase I (cross-sectional), charts for all pre-term infants admitted to the NICU at GPHC from 2015 to

2017 were pulled, and outcomes (discharge or death) were recorded. For phase II (retrospective cohort), surviving very preterm infants were randomly selected from a pool of 143 infants until a quota of 35 patients per year (105 total) was reached to achieve a confidence level of 95%. Parents were contacted by phone, and the Ages & Stages Questionnaires (ASQ) were conducted with consent.

Results: There was a significant association between gestational age (GA) and survival for preterm infants admitted to the NICU at GPHC from 2015 to 2017 ($\chi^2 (2) = 85.044; p < 0.001$). Very preterm infants scored poorly in all ASQ categories except gross motor category. There was no significant association between time spent in the NICU or mode of delivery and ASQ scores ($\chi^2 (68) = 79.137, p = 0.205$; $\chi^2 (2) = 1.879, p = 0.449$) or parental concerns ($\chi^2 (102) = 122.749, p = 0.079$; $\chi^2 (3) = 1.775, p = 0.620$).

Conclusion: Survival of preterm infants was directly proportional to GA. Moreover, overall survival of very preterm infants admitted to the NICU at GPHC was 51% during periods of study. Gross motor was the only developmental category that appeared to be on schedule for these very preterm infants. However, overall development among these infants was very poor, especially with language and speech.

P-29

Evaluation of the association between maternal exposure to indoor air pollutants and low birth weight

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Objective: Low birth weight, an emerging public health issue of significant concern, has been associated with maternal exposures to air pollution. Due to existing knowledge gaps on the effect of indoor air pollutants, recently published peer-reviewed journal articles were analysed to evaluate this association.

Methods: PubMed was used to search for English studies published between the years 2009 and 2019 that investigated the links between indoor air pollutants and low birth weight. A total of 17 articles met the inclusion criteria, with adjusted odds ratios being the compared statistic.

Results: An increase in the risk of low birth weight after maternal exposure to solid fuels for cooking and second-hand smoking was generally observed. The small sample size resulted in some statistically insignificant findings, highlighting the need for larger studies on indoor air pollutants. Exposure to second-hand smoke and household and personal care products was also associated with a slightly increased risk of low birth weight.

Conclusion: Indoor air pollution is a global public health issue that has major implications for the Caribbean region including Grenada. These results suggest that there is a

need for research to focus on air pollution and its impact on maternal and foetal health. Inexpensive technology including improved ventilation and switching to low emission fuel sources demonstrated a notable mitigating effect from these environmental exposures, thus proving useful for informing public health recommendations and prevention strategies in the region.

P-30

Parental knowledge, beliefs and mediation practices of Jamaican children (0–8 years) regarding screen media use

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Objective: To determine parental knowledge, beliefs and mediation styles regarding their children's screen media use.

Methods: This was a cross-sectional study of primary caregivers of children aged 0–8 years seen at the Casualty Department of the Bustamante Hospital for Children. A questionnaire collecting socio-demographic data, children's screen media use and parental mediation style was administered during a face-to-face interview. A sample size of 325 main caregivers was used to achieve the 80% statistical power. Descriptive analyses were performed.

Results: A total of 325 main caregivers were interviewed. The median amount of time spent on screen media devices by children aged 0–8 years was 6 (2.7–10) hours. They had a median use of 2.5 (1–4) hours per weekday and 3.2 (1–6) hours on the weekend. Male gender and educational level of the primary caregiver and total household income influenced media use. Most primary caregivers were unaware of recommendations for children's use of screen media, and they believed that the main reason for their children's screen media use was for educational purposes ($n = 283$; 87.1%) and entertainment ($n = 173$; 53.2%). Caregivers ($n = 316$; 97.2%) reported monitoring their children's screen media use; however, the majority had no discernible mediation style.

Conclusion: The use of screen media by Jamaican children aged 0–8 years exceeded recommendations but mirrored international trends. There is a need for parental education about screen media use and regulation.

P-31

Neonatal outcome of twin pregnancies versus singleton pregnancies at the University Hospital of the West Indies: 2014–2018

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Objective: To compare the neonatal outcome of live born twin gestations to that of singletons at the University Hospital of the West Indies (UHWI), Jamaica.

Methods: This was a retrospective, descriptive, matched case-control study. Data on neonatal demographics, morbidity and mortality were extracted from 504 docketts (252 twins and 252 singletons) of neonates delivered at the UHWI between September 2014 and December 2018. Descriptive analyses were performed, and statistical significance was taken at the level of $p < 0.05$.

Results: A total of 504 neonates were enrolled in this study. Mean \pm standard deviation (SD) gestational age for singletons was 37.57 \pm 2.58 weeks compared to twin gestations 34.93 \pm 3.32 weeks ($p < 0.001$). Babies born from a twin gestation were more likely to be delivered prematurely (odds ratio (OR): 2.4; 95% confidence interval (CI): 2.0, 2.7). Singleton babies were found to be significantly heavier (mean \pm SD birth weight: 2959 \pm 634 g) than babies born from a twin gestation (mean \pm SD birth weight: 2247 \pm 620 g) ($p < 0.001$). Babies delivered from a twin gestation were more likely to be of a low birth weight (OR: 2.0; 95% CI: 1.7, 2.4), to be admitted at birth (OR: 1.8; 95% CI: 1.5, 2.2), and to die in the neonatal period (OR: 1.9; 95% CI: 1.6, 2.2) than their singleton counterparts. The most common reason for admission was prematurity.

Conclusion: Neonates from a twin gestation delivered at the UHWI had an increased incidence of prematurity, low birth weight, neonatal admission, neonatal morbidity, and neonatal mortality. Evidence-based strategies are needed to protect this vulnerable population.

P-32

Hypnatremic dehydration in breast-fed infants: lessons to be learnt from a baby-friendly hospital

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Objective: To review the incidence, presentation and outcome of all neonates admitted to the University Hospital of the West Indies, Jamaica, with a diagnosis of breastfeeding-associated hypnatremic dehydration during a 15-year period and make comparisons with an earlier study done at the institution.

Methods: A retrospective review of the files of neonates admitted to the neonatal unit with breastfeeding-associated hypnatremic dehydration between January 2002 and December 2016 was conducted. Data on maternal and neonatal demographics, presentation, laboratory results and outcome were extracted and descriptive analyses performed. Significance was taken at the level of $p < 0.05$.

Results: Eighty neonates were diagnosed with breastfeeding-associated hypnatremic dehydration, giving an incidence of 2.5 per 1000 live births. Fifty-five (70.5%) mothers were primiparous, with a mean age of 29.5 \pm 5.6 years and mean length of hospital stay 2.6 \pm 1.5 days. Fifty-six (70.9%) neonates were exclusively breastfed, with a mean age at presentation of 5.6 \pm 3.8 days, a mean weight loss of 16.3 \pm 6.1%, and a mean serum sodium of 156.1 \pm 8.3 mmol/L. Fifty-four (68.4%) neonates were admitted from home and 22 (27.8%) from postnatal ward. Complications seen included acute kidney injury (6; 7.6%), seizures (2; 2.5%), hypotonia (1; 1.3%) and bradycardia (1; 1.3%). Compared to neonates in the previous study, the neonates were detected earlier, presented with a significantly lower serum sodium, urea and creatinine ($p < 0.05$), had less severe complications and no deaths.

Conclusion: Early intervention can make a positive impact on the severity and complications of breastfeeding-associated hypnatremia.

P-33

Neonatal care and practices among post-natal mothers at Georgetown Public Hospital Corporation, Guyana

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Objective: To determine knowledge of essential neonatal care and practices among postnatal mothers at Georgetown Public Hospital Corporation (GPHC).

Methods: This was a prospective study conducted in July and August 2018. The sample population included mothers who had given birth to a live baby at GPHC. A structured questionnaire was administered and maternal charts reviewed. Data were analysed with SPSS.

Results: Of the 200 participants, 133 (66.5%) knew correct substances to apply to the eyes, 185 (92.5%) the cord and 173 (86.5%) described cord-cleaning correctly. Sixty-four (32%) described bathing, 76 (38%) changing diapers and 20 (10%) diaper-rash treatment correctly. A total of 183 mothers (91.5%) knew when to initiate, 187 (93.5%) the frequency and 82 (41%) the process of breastfeeding. One hundred and ninety-five (97.5%) mothers would vaccinate their child, 15 (7.5%) thought that vaccines were harmful, and 164 (82%) identified bacille Calmette-Guérin (BCG) as the first vaccine. One hundred and twenty-nine (60.5%) said

shaking was appropriate during play, 40 (20%) waking and 55 (27.5%) to comfort a baby. Sixty (30.0%) knew the correct sleep position, 44 (22.0%) suitable place and 18 (9%) unacceptable bed items. Eighty-four (42%) could swaddle a baby, 59 (29.5%) knew the milestones met by two months, 83 (41.5%) by four months and 81 (40.5%) by six months. Twenty-four (12%) used cultural substances.

Conclusion: There was good knowledge on cord care and vaccinations, adequate knowledge on eye care, and poor knowledge on bathing, diaper change, breastfeeding, risk factors for sudden infant death syndrome (SIDS) and milestones. Interventional and educational programmes should be designed to educate the public on appropriate care for a new-born.

P-34

Pilot study: the feasibility of teaching cardiopulmonary resuscitation to teachers in St George's, Grenada

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Objective: To assess the feasibility and acceptability of American Heart Association (AHA) Heartsaver Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED) courses by teachers in private schools.

Methods: Data were gathered from 44 private school teachers from institutions in the St George region of the island over two years. The AHA Heartsaver CPR/AED Course was conducted through the St George's University by AHA Basic Life Support Instructors. All participants received video-based and practice-while-watching instructions while using approved equipment. Participants were evaluated using AHA standardized checklists for various tests. Certification was to be valid for two years. A small cohort of five teachers took the re-certification course. On completion of the course, all teachers provided an anonymous post-course survey.

Results: The data showed that 100% of the participants found the course helpful and would recommend it to other teachers in Grenada. Of these, 89% did not have prior training in CPR. However, after the training, 86% were confident in performing CPR in emergency cardiac/respiratory situations, and 89% of participants were confident in their ability to recognize a medical emergency.

Conclusion: The study demonstrated that most teachers found the CPR training to be helpful and acceptable. Even though most were not previously trained in CPR, they welcomed the opportunity to be trained and were keen to refer others to the course. The data also suggested that after receiving training, more persons were confident in recognizing

an emergency and felt comfortable in performing CPR. The pilot study strongly supports the need for ongoing CPR training for teachers in Grenada.

P-35

Synergistic hypoglycaemic effect of *Heliotropium indicum* and *Azadirachta indica* in normal albino Sprague Dawley rats

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Objective: The leaf extract of *Azadirachta indica* (*A indica*) and the whole plant of *Heliotropium indicum* (*H indicum*) have been used in traditional medicine for ailments such as diabetes. This study sought to evaluate the hypoglycaemic effect of aqueous extracts of *H indicum* and *A indica* extracts in non-diabetic rats.

Methods: Normal Sprague Dawley rats of either gender weighing 120–250 g were divided into four test groups and one control group, with each group consisting of six rats. Rats were force-fed: 500 mg/kg aqueous extract of *H indicum*, 500 mg/kg aqueous extract of *A indica*, or 500 mg/kg 1:1 combination of both extracts and the standard drug glibenclamide (50 mg/kg). Sixty minutes following the administration of extracts or glibenclamide, rats were given 2 g/kg of glucose. Blood glucose levels (BGLs) were then measured at 0, 30, 60, 90 and 120 minutes using SD Code-Free glucometer (SD Biosensor Inc). Data were analysed using SPSS version 23; $p < 0.05$ was considered significant.

Results: Flavonoids concentrations in extracts of *H indicum* and *A indica* were found to be 424.44 ± 5.09 mg of quercetin equivalent (QE)/g of extract and 305.56 ± 5.09 mg of QE/g of extract respectively. Extract of *H indicum* and the 1:1 combination of *H indicum* and *A indica* resulted in a significant decrease in fasting BGL at 120 minutes. The hypoglycaemic effect of *H indicum* was significantly less than that of glibenclamide.

Conclusion: Findings indicated that *H indicum* and *A indica* extracts combined possessed synergistic hypoglycaemic potential compared to the individual extracts.

P-36

Risk factors, knowledge, attitudes and practices of type 2 diabetic patients attending Industry, Campbellville Health Centres and West Demerara Regional Hospital, Guyana

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Objective: To examine the risk factors and knowledge, attitudes and practices of type 2 diabetic patients seeking health services at regional centres in Guyana in May and June 2019.

Methods: This study utilized a descriptive, quantitative and cross-sectional design in which 114 diabetic patients who attended three selected healthcare facilities participated. Sampling technique used was non-probability and purposive sampling. Data were collected using a structured and pre-tested questionnaire. Data analysis was done using SPSS version 20.0 to derive descriptive statistics with cross-tabulation. Chi-square, analysis of variance (ANOVA) and Friedman test were also used.

Results: Study results confirmed that risk factors such as age, gender, ethnicity, family history, and body mass index had no significant relationship with the onset of diabetes. Findings suggest that results for random blood sugar, blood pressure, fasting blood sugar, HbA1C and lipid profile were high. Participants had moderate levels of knowledge and healthy practices. Some patients had challenges in accessing insulin and laboratory tests.

Conclusion: Accessibility to effective healthcare services and establishing self-care management programmes and public awareness programmes are critical in managing diabetes effectively.

P-37

Predictors of negative outcomes and causes of loss to follow up among cancer patients in Port-au-Prince, Haiti

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Objective: To determine predictors of negative outcomes and causes of loss to follow up (LTFU) in patients with breast cancer in Haiti.

Methods: Patients with breast cancer who attended Innovating Health International's (IHI) cancer programme (n = 939, with 279 deceased) were designated as LTFU after at least six months of non-contact (n = 101). Regression modelling identified risks for death and LTFU. Five rounds of calls were made to contact most of these LTFU patients and other LTFU non-breast cancer patients (n = 222), and reasons for patient LTFU were recorded.

Results: Excluding LTFU cases, death was associated with more advanced stage ($p < 0.0005$), higher ECOG ($p = 0.009$), and longer period in care ($p < 0.0005$). Excluding

deceased cases, LTFU was associated with these same variables (p -values of 0.02, 0.02, < 0.0005 , respectively) but was lower if patient had received prior treatments (0.02) or had a positive family history ($p = 0.03$). Next, 43% of LTFU patients were successfully contacted, and one-third of these were actually deceased. The most common reasons for living patients to fail to return were obtaining care elsewhere and difficulty accessing care (due to distance, unrest and money).

Conclusion: Reasons for LTFU are systematic and may introduce bias into studies, resulting in an underestimation of mortality and an exclusion of the most vulnerable patients. Conclusions support the need for an improved palliative care outreach. Furthermore, LTFU status in Haiti is in part due to difficulties accessing care because of politics, infrastructure and economics.

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Lifestyle risk factors in breast cancer patients at the Oncology Clinic, Georgetown Public Hospital Corporation

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Objective: To estimate modifiable lifestyle factors in relation to the development of breast cancer in women diagnosed with the condition. Breast cancer is the most common cancer and the second most common cause of death from cancer in women. Modifiable and lifestyle risk factors such as diet and physical activity can influence the development of the disease.

Methods: An analytical, quantitative, case-control study was conducted which employed a validated pre-tested questionnaire to interrogate the lifestyle practices of the case group that consisted of 68 women from the oncology clinic at Georgetown Public Hospital Corporation who were diagnosed with breast cancer and 68 age-matched controls from the outpatients department from the same hospital.

Results: With 5% level of confidence, five modifiable lifestyle factors were identified for breast cancer: age of first conception, consumption of fast foods, stress, use of anti-perspirant deodorants and the type of bra.

Conclusion: Prevention strategies for breast cancer should include healthy diet, stress management and reduction of use of anti-perspirant deodorants. Monitoring those who had their first conception before the age of 30 years and advice on the appropriate type of bra for use may also be helpful. Lifestyle changes may be incorporated as fairly easy, effective and economical strategies to assist in the primary prevention of breast cancer.

P-39

Non-communicable diseases among Seventh-day Adventist leaders in Jamaica: an empirical reality

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Objective: To evaluate the nature of non-communicable diseases (NCDs) among religious Seventh-day Adventist (SDA) leaders in Central Jamaica, to determine the extent of NCDs among religious SDA leaders in Central Jamaica, to assess the healthcare-seeking behaviour and prevalence of ill health experienced among religious SDA leaders who reported having an NCD, and to determine the percentage of religious SDA leaders who reported having hypertension and diabetes mellitus.

Methods: The study employed a correlational and cross-sectional design. The population for this research was leaders who served in the SDA churches in Central Jamaica ($n = 350$). The response rate was 58.9%, and a standardized questionnaire was developed to collect data and evaluate the research objectives.

Results: The most prevalent NCDs were hypertension (28.9%), high cholesterol (18.6%), arthritis (18.6%), chronic respiratory illness (8.8%), and diabetes (8.5%). About 72.2% of those who reported having an NCD sought medical care compared to 84.5% of those who did not report an NCD ($t(2) = 4.231; p = 0.042$). Leaders with NCDs were less likely to report good health than those who did not report NCDs ($t(2) = 25.048; p < 0.0001, r = -0.352$). About 32% of those who reported at least one NCD were 65+ years old.

Conclusion: NCDs among religious SDA leaders were showing worrying signs, and these must be affecting their decision-making capabilities.

P-40

Knowledge, attitudes and practices of women towards screening for cervical cancer: a systematic review

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Objective: To compile evidence from published research that assessed knowledge, attitudes and practices of women towards screening for cervical cancer in an effort to make recommendations to address these gaps in future studies.

Methods: Search strategy of this systematic review included 22 studies from three electronic databases (Google Scholar, JSTOR and PubMed). Published qualitative studies that examined KAP (knowledge, attitudes and practices) and its

correlation to the uptake of cervical cancer screening were included. A total of 15 studies were used in the review, and findings were analysed using content analysis.

Results: Findings reflected high awareness and knowledge of screening across the board. However, many countries had their own cultural and socio-economic predictors that affected attitudes and practices of women. Several barriers such as 'embarrassment', 'no symptoms, so no need for screening', 'viewing screening as painful', 'poor accessibility' and 'having a male practitioner administer the test' prevented them from undergoing the test.

Conclusion: Generally, the awareness, knowledge and attitudes were high among several studies. However, cultural and economic factors hindered adequate health-seeking behaviours. This in turn had a negative effect on the attitudes and practices ultimately. With a lack of support, inaccurate beliefs (such as screening was warranted only when symptoms of cervical cancer were present and that screening was also meant to treat cervical cancer instead of to screen for early signs of the disease) were the most common barriers found in this review.

P-41

Incidence of non-communicable chronic illnesses among middle-aged and older people in the BVI

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Objective: To assess non-communicable chronic medical problems (NCDs) among middle-aged and older persons living in the British Virgin Islands (BVI).

Methods: The data were obtained from the BVI Healthy Ageing Policy Survey. SPSS (version 24) univariate and bivariate procedures were done to assess the incidence of NCDs.

Results: The most frequently occurring NCDs mentioned were hypertension, diabetes, high cholesterol and arthritis/rheumatism. NCDs were more prevalent among females, those who were 65–69 and 75–79 years old, as well as those who were not working.

Conclusion: Knowing the incidence of NCDs is essential for determining adequate care and treatment of those with multiple NCDs.

P-42

Hypoglycaemic and hypotensive effects of Jamaican *Plectranthus blumei* (Joseph's Coat) crude extracts in normal healthy rats

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Objective: To investigate the effects of crude extracts from *Plectranthus blumei* (Joseph's Coat) on blood glucose levels and haemodynamic parameters in normal, healthy Sprague-Dawley rats.

Methods: Non-aqueous (hexane, ethyl acetate and methanol) crude extracts were obtained and bio-assayed on the normal Sprague-Dawley rats utilizing the Oral Glucose Tolerance Test (OGTT). A fasting blood glucose reading was obtained after which the extract or control (DMSO) was administered orally (200 and 300 mg/kg body weight (BW)) and intravenously (50 mg/kg BW). The CODA six machine was used to investigate the effect on haemodynamic parameters (systolic blood pressure, diastolic blood pressure and mean arterial pressure) at 50 mg/kg BW.

Results: Orally, at 200 mg/kg BW, the methanol crude extract showed the most significant hypoglycaemic activity when compared with the DMSO control at times: 60 minutes (4.82 ± 0.22 mmol/L versus 5.84 ± 0.34 mmol/L; $p < 0.05$); 90 minutes (7.52 ± 0.59 mmol/L versus 9.01 ± 0.27 mmol/L; $p = 0.05$) and 120 minutes (7.38 ± 0.32 mmol/L versus 8.64 ± 0.12 mmol/L; $p < 0.05$). However, the dose-dependent study indicated that ethyl acetate crude extract at 300 mg/kg BW showed hypoglycaemic activity throughout the entire OGTT. When administered intravenously, the ethyl acetate extract was significant throughout, especially at the 90-minute interval (5.24 ± 0.55 mmol/L versus 7.03 ± 0.44 mmol/L; $p < 0.05$). For the haemodynamic parameters, the methanol and ethyl acetate crude extracts showed hypotensive activity in the systolic blood pressure, diastolic blood pressure and mean arterial pressure.

Conclusion: The crude ethyl acetate extract showed the most significant hypoglycaemic activity, and both the methanol and ethyl acetate crude extract indicated hypotensive effects.

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The perceived role of social support in self-management among Barbadians 65 years and older living with Type 2 diabetes mellitus: a qualitative study

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Objective: To examine the perceived role of social support in Type 2 diabetes mellitus (DM) self-management among Barbadians aged 65 years and over.

Methods: A qualitative study was done using semi-structured interviews conducted *via* telephone. Participants were identified *via* gatekeepers and recruited by the researcher *via* purposive sampling with maximum variation using inclusion and exclusion criteria. After informed consent

was obtained, participants were asked about their experiences with Type 2 DM, its management and social support until data saturation was met. This yielded 12 participants (10 females and 2 males) aged 65–84 years. The researcher filled in contact summary sheets and conducted reflexivity for each interview. Interviews were audio-recorded, transcribed verbatim and coded, and data were analysed by thematic analysis with constant comparison supported by ATLAS.ti.

Results: Participants perceived themselves as self-reliant. Although not formally acknowledging a need for or receipt of social support, they described assistance from family, friends and healthcare providers. Participants perceived aspects of social support as facilitators and barriers to self-management. Social support which reduced independence and self-management capabilities was perceived negatively. During the COVID-19 pandemic, social support which was resisted by most prior to the pandemic was now accepted as it was a necessity.

Conclusion: Incorporation of social support into Type 2 DM self-management by Barbadians aged 65 years and older was threatened by the potentially negative interplay between accepting assistance and maintaining autonomy. Additional research would further clarify facilitators and barriers and determine the preferred social support required generally and during health emergencies such as COVID-19.

P-44

Microbiological analysis of microbial survival strategies for opportunistic pathogens in the oral cavity

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Objective: To analyse microbial survival strategies of oral opportunistic pathogens in the oral cavity.

Methods: Six oral opportunistic bacteria were isolated and sub-cultured in Blood and MacConkey agar. The isolates were *Streptococcus mutans*, *Staphylococcus aureus*, Methicillin Resistant *Staphylococcus aureus* (MRSA), *Klebsiella pneumoniae*, *Enterococcus* spp and *Pseudomonas aeruginosa*. The biofilm formation and planktonic growth kinetics of these pathogens were screened to determine the attachment. Extracellular polymeric substance (EPS) of the microbes was then extracted using an organic solvent for microbial total chemical content analysis.

Results: *Streptococcus mutans* and *Enterococcus* spp had the highest biofilm formation (0.06 Au) while *Pseudomonas aeruginosa* had the lowest biofilm formation (0.004 Au). *Klebsiella pneumoniae* had the fastest planktonic growth rate (0.0014 cells/minute) and generation time (49.5 minutes); *Pseudomonas aeruginosa* had the slowest growth rate (0.010 cells/minute) and generation time (69.3 minutes). The EPS content for *Streptococcus mutans* was the highest

followed by MRSA, *Staphylococcus aureus* and *Enterococcus* spp.

Conclusion: Planktonic growth kinetics influenced biofilm formation size and microbial population. Biofilm formation acted as a defensive mechanism of the pathogens during various stress conditions. The EPS is the major component in establishing functional and structural integrity of the pathogens. Therefore, understanding the survival strategies of these microbes is significant in future prevention and treatment of oral infections.

P-45

Urinary tract infection in pregnancy among antenatal mothers at Vreed-en-Hoop health centre: a retrospective study from January 2016 to December 2017

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Objective: To find out the prevalence of urinary tract infection (UTI) in pregnancy among antenatal mothers of Region 3, Guyana, for the period January 2016 to December 2017.

Methods: A retrospective study was conducted utilizing a quantitative research approach. The study/target population were all registered antenatal charts of the Vreed-en-Hoop health centre from January 2016 to December 2017. A purposive sampling technique was utilized, and 354 were reviewed as per inclusion criteria. Data were collected *via* a case reporting form and was statistically analysed by SPSS version 20.

Results: The study revealed a 25.4% prevalence of UTI in pregnancy at the health facility. This finding was found to be significant with a *p*-value of 0.0001, which is less than the Pearson Chi-square *p*-value (0.05). About 32% of the UTI cases belonged to the age range of 16–20 years, while 50% of UTI cases occurred during the second trimester. About 54% of the total population had good urinary screening done, with 72% of UTI cases occurring among same. Approximately 71% of the cases were symptomatic.

Conclusion: The prevalence of UTI was found to be significant. Therefore, it is imperative that attention is paid to early screening, health education and promotion of UTI among various populations of the society, especially pregnant women, thereby increasing awareness and better health-seeking behaviours.

P-46

Factors associated with virologic non-suppression in persons living with human immunodeficiency virus at treatment sites in St Catherine

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Objective: To determine the prevalence of virologic non-suppression and associated factors among patients taking antiretroviral therapy (ART) at treatment sites in the parish of St Catherine, Jamaica.

Methods: A cross-sectional study was conducted involving 283 human immunodeficiency virus (HIV)-infected persons on ART for more than six months in 2015 at St Catherine treatment sites. Review of patients' medical records and interviewer-administered questionnaires were used to obtain socio-demographic, clinical, virologic and adherence to therapy data. Bivariate and regression analyses were performed to determine independent risk factors associated with virologic non-suppression.

Results: The analysis revealed that 36% (*n* = 102) of the participants were experiencing virologic non-suppression. Independent risk factors associated with virologic non-suppression were: current CD4 count (odds ratio (OR) = 10.6; 95% confidence interval (CI): 5.1, 22.4), second line therapy (OR = 2.2; 95% CI: 1.1, 4.4), and self-reported adherence to therapy (OR = 5.3; 95% CI: 2.6, 10.6).

Conclusion: The virologic non-suppression in over a third of the participants warrants attention. Second line treatment, current CD4 count and self-reported adherence were associated with virologic non-suppression. There is a need to improve the management of people living with HIV (PLHIV) on ART in order to reduce this and minimize HIV disease progression and antiretroviral resistance. Interventions to improve adherence to ART and health literacy for all PLHIV must be improved if Jamaica is to reduce the prevalence of virological non-suppression.

P-47

Detection and prevalence of 'superbugs' among urinary isolates of patients with complicated urinary tract infections at a tertiary care hospital in the Caribbean – a pilot study

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Objective: To identify uropathogens and determine their antibiotic susceptibility in patients with complicated urinary tract infections (cUTIs) and to conduct phenotypic surveil-

lance for Extended-Spectrum Beta-Lactamase (ESBL) producing Gram negative (GN) superbugs.

Methods: In the absence of published prevalence data on aetiological agents associated with cUTIs, a cross-sectional pilot study was conducted. Between March and June 2018, 40 urine samples were obtained from adult patients at the Urology Clinic and various wards at the University Hospital of the West Indies, Jamaica, under aseptic conditions. Identification and susceptibility testing of isolates were performed according to Clinical Laboratory Standard Institute (CLSI) guidelines. Statistical analysis was done using Microsoft Excel 2013 and Statistical Package for Social Science, version 20 (SPSS, Inc, Chicago, IL, United States of America), to calculate proportions.

Results: Of 47 uropathogens isolated, *Escherichia coli* (*E coli*) (42.55%) and *Klebsiella pneumoniae* (17.02%) were the most prevalent species. GN bacilli were most susceptible to amikacin and meropenem, whereas Gram positive uropathogens were most susceptible to nitrofurantoin. ESBL positivity was detected in 37.5% of GN isolates, of which *E coli* (66.67%) was the predominant species. ESBL positive isolates ($n = 15$) showed 100% susceptibility to meropenem and amikacin, but 66.67% and 15.38% susceptibility to nitrofurantoin and norfloxacin respectively.

Conclusion: The Centers for Disease Control and Prevention in the United States of America ranks ESBL GN bacteria 'superbugs' as a serious threat. The relatively high prevalence of ESBL producers within the patient population described is concerning and warrants continued surveillance. Antibigram data placate where it showed 100% susceptibility to carbapenems among ESBL pathogens as they are the drugs of choice for serious infections.

P-48

The routine use of video-otoscopy in the diagnosis of otitis media

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Objective: To determine the incidence of otitis media and other ear pathologies among paediatric patients with ear complaints, cold-like illnesses (CLI) and febrile diseases, using video-otoscopy.

Methods: A cross-sectional evaluation study was conducted using video-otoscopy to screen for otitis media in patients who attended the Paediatric Outpatient Clinic at Georgetown Public Hospital Corporation (GPHC) with ear complaints, cold-like illnesses and febrile diseases. Screening for ear pathologies was done using the SEESI Video-Otoscope over a two-week period. The Modified OMGrade

Scale was used to grade each tympanic membrane based on the type of otitis media.

Results: A total of 194 ears of 97 patients aged 0 month to 12 years and 6 months were examined in this study. A diagnosis of not possible to determine (NPD) was made in 34 ears (17.5%) due to obstructing soft cerumen. Of the remaining 160 ears evaluated, 118 ears (73.8%) were found to have no pathologies, while at least one ear pathology was found in 42 eardrums (26.2%). Otitis media was found in 17 ears (10.6%), impacted cerumen in 23 ears (14.4%), otitis externa in 4 ears (2.5%), and polyps in 2 ears (1.3%).

Conclusion: Otitis media is a global health problem, and we found that 10.6% of eardrums evaluated among GPHC paediatric outpatients with ear complaints, cold-like illnesses and febrile diseases had otitis media. Children should be screened using otoscopy aids to limit the complications and sequelae of otitis media. Accurate and timely diagnosis can further avert complications avoiding antibiotic overuse and resistance.

P-49

Risk of gastrointestinal bleeding in patients receiving antiplatelets and anticoagulants at the University Hospital of the West Indies

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Objective: To determine the prevalence of antiplatelet and anticoagulant use among patients diagnosed with gastrointestinal bleeding (GIB), and describe the clinical features and outcomes of those discharged from the University Hospital of West Indies (UHWI) with GIB.

Methods: Chart review of patients at the UHWI ≥ 18 years old and discharged between January 1, 2015 and December 31, 2018 with a diagnosis of GIB was conducted. Fisher's exact test and Mantel-Haenszel odds explored the strength of the associations among aspirin, non-steroidal anti-inflammatory drugs (NSAIDs), antiplatelets and anticoagulants and parameters of interest.

Results: A total of 467 patients (53% males; mean age: 66 ± 18 years) were included. Comorbid illnesses were reported in 78%, with hypertension and diabetes most frequently reported (80% and 38%). Overall, 354 (76%) participants were on aspirin, NSAIDs, antiplatelets or anticoagulants where 58% and 42% had upper GIB (UGIB) and lower GIB respectively. Among participants with UGIB, 97% (264) were on aspirin (38%), NSAIDs (31%), antiplatelets (17%), warfarin (6%) or direct oral anticoagulants (6%). Overall, 26% had a major GIB (MGIB), 4% recurrent GIB, 3% underwent surgery, and mortality was 4%. MGIB was three

times more likely in those on warfarin (odds ratio (OR): 3.5; 95% confidence interval (CI): 1.5, 8.3; $p < 0.01$) and two times more likely for those on direct oral anticoagulants (OR: 2.6; 95% CI: 1.1, 6.1; $p = 0.2$).

Conclusion: About 75% of patients with GIB were taking aspirin, NSAIDs, an antiplatelet or an anticoagulant. There was an increased risk of MGIB only in those on warfarin and direct oral anticoagulants.

P-50

Neonatal sepsis at the Bustamante Hospital for Children: 2017–2018

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Objective: To describe the pattern of new-born infections at the Bustamante Hospital for Children, Jamaica, over a two-year period.

Methods: This was a retrospective, descriptive study which examined neonates with culture-positive sepsis admitted to the Bustamante Hospital for Children between January 1, 2017 and December 31, 2018. Data on demographics, clinical features, antimicrobial pattern, sensitivities and outcome were recorded. Descriptive analyses were performed. Differences between neonates who had a poor outcome and those who did not were analysed using the Chi-square test for categorical variables and the Student's t-test for continuous variables. Multiple logistic regression was used to determine independent predictors of poor outcome. Statistical significance was taken at the level of $p < 0.05$.

Results: There were 274 cases over the study period, accounting for 319 positive cultures with 391 isolates: 58% (184) urine, 37% (118) blood and 5% (17) cerebrospinal fluid. Gram-negative bacteria accounted for 63% (248) of the isolates, and Gram-positive bacteria represented 37% (143). The most common Gram-negative organisms were *Klebsiella* sp (23%) and *E coli* (22.3%), while Coagulase negative staphylococci (19.25%) was the most common Gram positive. The sepsis-attributable mortality rate was 4% (11/274), with *Klebsiella* species 63.6% (7) being the most common causative organism. Independent predictors of poor outcome included thrombocytopenia, hypoxia on admission, low birth weight and early onset of sepsis ($p < 0.05$).

Conclusion: Empiric antibiotic regimes for neonatal sepsis must be guided by the major contribution of Gram-negative organisms to poor outcome of neonates with sepsis.

P-51

Drug sensitivity patterns of blood culture isolates in high-risk departments at the Georgetown Public Hospital Corporation during a six-month period

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Objective: To determine drug sensitivity patterns of micro-organisms identified in positive blood culture results at the Georgetown Public Hospital Corporation (GPHC), Guyana, and to compare these sensitivity patterns.

Methods: A retrospective, cross-sectional study was conducted at GPHC. Data from relevant patient blood culture results from January 1 to June 30, 2019 were collected from the blood culture logbooks at the GPHC medical laboratory for inpatients who were managed by the Intensive Care Unit, Biocontainment Unit, Neonatal Intensive Care Unit and Paediatrics Department. All data were analysed using SPSS version 26 and included descriptive analyses for quantitative data while dichotomous and categorical data were presented using proportions and percentages.

Results: The bacteria isolation rate was 12.1%, with coagulase negative Staphylococci being the most common isolate, found in 28.5% of culture specimens. Collectively, Gram-negative bacilli (GNB) accounted for most (56%) bacteraemia, followed by Gram-positive cocci (GPC) accounting for 42%. The second and third most commonly identified organisms were *Pseudomonas* spp, not including *Pseudomonas aeruginosa* and *K pneumoniae*. Most (74.1%) positive cases were from the paediatric population. The Paediatric High-dependency Unit was found to have the highest resistance to most drugs, and the most commonly identified GPC and GNB microorganisms displayed multi-drug resistance (MDR).

Conclusion: We demonstrated the prevalence of MDR among commonly identified micro-organisms. Since patterns can vary widely, consistent evaluations of antimicrobial studies need to be done at the GPHC. Further research of this nature is needed to inform antibiotic policies which ultimately should be based on the local context and serve to develop much-needed antimicrobial stewardship programmes.

P-52

Barriers and facilitators to the uptake of HPV vaccine among parents/caregivers of adolescent girls: a systematic review

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Objective: To compile evidence from published research that explored the facilitators and barriers to the uptake of

the human papillomavirus (HPV) vaccine among adolescents girls, their parents and caregivers.

Methods: A comprehensive literature search was conducted through five electronic databases (PubMed, CINAHL, Cochrane Library, Medline and Google Scholar) from April to July 2020 to identify eligible studies that examined the barriers and facilitators to the uptake of HPV vaccination among adolescent girls. Eleven studies were selected using the PRISMA study selection flow chart. Thematic analysis was used to analyse the results.

Results: The main facilitators were seen as: (a) parental acceptance; (b) physician/healthcare provider recommendation; (c) health insurance coverage; (d) government-sponsored programmes; and (e) the vaccine being offered through a trusted school-based programme. Cost of the vaccines and lack of information about HPV, the HPV vaccine and cervical cancer were seen as major barriers to the uptake of the HPV vaccine. Parental concerns relating to vaccine safety, age of administration and promotion of sexual activity among adolescent girls also presented as barriers for administration.

Conclusion: A multi-faceted approach is required to reduce inequalities in the HPV vaccine uptake. Health professionals played a key role as information providers; thus, they must be better trained to provide clear and timely information. The development of communication skills and transparent discussions about the pros and cons of vaccination may reduce fear of adverse events and increase trust in vaccination. The creation of a public health network around vaccination would allow sharing information and attitudes on vaccinations so that homogeneous messages could reach the target population.

P-53

Mayaro virus detection in patients from rural and urban areas in Trinidad and Tobago during the Chikungunya and Zika virus outbreaks

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Objective: This study focussed on the demonstration of the possible co-circulation of the Mayaro virus (MAYV) with the Chikungunya virus and Zika virus during the outbreaks that occurred in Trinidad and Tobago (T&T) in 2014 and 2016, respectively.

Methods: Clinical samples from the T&T Public Health Laboratory were sent to the Caribbean Public Health Agency during the Chikungunya and Zika outbreaks in 2014 and 2016, respectively. Cerebral samples from patients who had previously tested negative for Chikungunya, dengue and Zika and were specifically exhibiting joint pain were selected and

investigated for the presence of the MAYV genome using Real Time RT-PCR techniques.

Results: Nine persons were shown to be positive for the MAYV during the Chikungunya outbreak of 2014 but none during the Zika outbreak in 2016. Five results corresponded to persons who lived in highly urbanized areas across Trinidad.

Conclusion: Our findings indicated that the MAYV was circulating during the 2014 Chikungunya outbreak in T&T, but it was not detected in our study during the 2016 Zika outbreak. Additionally, our findings demonstrated the occurrence of five MAYV cases in patients from urban zones on the island of Trinidad. To our knowledge, this is the first report of MAYV infections in patients residing in urban areas in the Caribbean. The urban cases of MAYV described in this study could be a consequence of an increased competence to bear the virus by mosquito species other than *Haemagogus* spp (eg *Aedes* spp). More studies are needed to determine the possible role of *Aedes* spp and *Culex* spp as potential vectors for MAYV and the relationship to urban cases.

P-54

Consumers' views on labelling of locally prepared fast foods in Georgetown, Guyana

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Objective: To determine if labelled fast food menus at fast food establishments promoted healthy eating choices and eating habits practised by consumers through the assessment of their perceptions.

Methods: A total of 198 consumers from six fast food establishments were randomly selected to take part in the study. A questionnaire was used to collect data, and the data were analysed using SPSS version 22.

Results: Consumers believed that providing nutritional information about fast foods sold to the public was a great initiative that demonstrated commitment to consumer health. This influenced fast food manufacturers to be more cognizant of consumer needs*. Consumers also posited that the implementation of a menu-labelling regulation in Guyana would be a worthy public health strategy that would have many health benefits to consumers making informed food choices.

Conclusion: There was conclusive evidence which pinpointed that fast food menu labelling would motivate consumers to make more informed food choices at the point of purchase. Hence, in an effort to promote and protect consumers' health, there must be collaborative effort by all stakeholders involved in ensuring that the implementation of systems and legislative policies is fundamental in the safe delivery of food to its consumers. The information collected for this report provides a broad overview of the importance of consumers in the construction of effective health policies.

* Roberto CA, Khandpur N. Improving the design of nutrition labels to promote healthier food choices and reasonable portion sizes. *Int J Obes (Lond)* 2014; **38 (Suppl 1)**: S25–33.

P-55

Compliance with food labelling laws in Guyana

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Objective: To evaluate the level of compliance by food manufacturers and food importers with labelling laws for pre-packaged foods in Guyana.

Methods: This research utilized a prospective research design. The study was conducted at the Government Analyst – Food and Drug Department during the period of the research process. The targeted population was a convenience sample of food manufacturers and food importers of pre-packaged foods in Guyana. The data were entered and analysed in SPSS version 20.

Results: Compliance by food manufacturers in relation to being registered with the Food and Drug Department was 100%. However, only 56% of compliance was identified among the food importers. On the aspect of having food labels regularly examined by Inspectors of the Food and Drug Department, there was only 56% compliance among the food manufacturers and a meager 28% compliance among the food importers in this study. The Food and Drug Regulation No 10 of 1997 section 18 subsection 2 specifically outlined the information required by law that should be placed on a food label.

Conclusion: It can be concluded that there was partial compliance with regards to the food labelling requirements. As such, the compliance varied as some other key information was missing from food labels. This shows a lack of enforcement of regulatory laws, which can be on the account of numerous factors.

P-56

The ban on sugar-sweetened beverages: perceptions of parents

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Objective: To understand parents' perceptions of the implemented ban on sugar-sweetened beverages (SSBs) in Trinidad and Tobago and its impact on their children.

Methods: A qualitative approach was utilized. Ten focus group sessions were held with parents from two educational

districts. Responses were captured *via* notes and an audio recording device. Qualitative data obtained were encoded using thematic analysis. Quotes were examined for common themes and grouped together by content analysis. To ensure reliability of data interpretations, analyses were carried out independently by two researchers. Doubts or disagreements were discussed with two other researchers until consensus was reached.

Results: The six emergent themes were the implementation of the policy, food and beverage marketing, environmental factors, health-related beliefs, sensory characteristics of SSBs, and cost. Most parents felt that they should have been a part of the decision-making process prior to the implementation of the ban, especially since it directly impacted their children. Parents were also concerned that the ban addressed only what was sold in the school environment but did not limit other places, such as groceries and shops, as well as what was marketed on television and different types of media.

Conclusion: Parents agreed with the banning of SSBs. They understood their role in managing behaviour change. However, they felt that the sole responsibility did not rest with them. A national marketing drive promoting nutrition may aid in the re-programming of the nation's children and their immediate environment.

P-57

Co-development of a school-Polo Base (primary care) indigenous adolescent health promotion programme: findings from the Xunati Uti study in the indigenous Tereré village, Mato Grosso do Sul

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Objective: To jointly develop with students, village leaders, practitioners and parents an indigenous adolescent health promotion programme that could be jointly implemented by schools and the Polo Base. The research question was: can indigenous community health workers be embedded in school health programmes for indigenous students?

Methods: A mixed methods feasibility study is in progress in the indigenous Tereré village, Mato Grosso do Sul, Brazil. Art-based enhanced concept mapping was conducted separately with indigenous leaders, teachers, health practitioners and parents (n = 15), and with students aged 9–17 years (n = 40). Readiness Assessments evaluated the enablers/constraints for a school-Polo Base-community partnership, *via* interviews with senior school and Polo Base staff.

Results: In participatory analyses of concept mapping data, adults identified 10 themes, with an emphasis on disease prevention, access to healthcare, school and Polo Base support, parent-child communication problems, and loss of culture. Students' themes emphasized on family life, friendships, economic disadvantage and sports. Barriers to intervention included poor access to internet and computers, long distances between villages and the Polo Base, absence of integrated school-community health programmes, inadequate number of indigenous community health workers, and previous negative experiences with non-governmental organizations. Numerous meetings among researchers, school and Polo Base staff and village leaders established a dialogue of trust and led to a significant impact of commitment and enthusiasm for a joint school-Polo Base programme.

Conclusion: Intergenerational differences in perspectives about programme content and delivery were evident, with adults emphasizing on systemic factors while students on factors proximal to health. Collaborative consensus-building across students and care providers led to a promising action plan which informed the next phase of the Xunati Uti study.

P-58

Nutritional status among middle-aged and older people in the BVI

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Objective: To determine the significant predictors of nutritional status among a sample of middle-aged and older people in the British Virgin Islands (BVI).

Methods: The data were obtained from the BVI Healthy Ageing Policy Survey. A two-step sequential approach was used to identify statistical significance between the dependent and independent variables of interest. At the first level, Chi-square and tests of mean differences were performed. At the second level, variables significant in bivariate examination ($p = 0.10$) were entered into the Chi-square Automatic Interaction Detector (CHAID) programme to identify the 'best' predictor of nutritional status.

Results: Of all respondents, 6.9% had an adequate nutritional intake. The nutritional intake was borderline for 50.6% and poor for 42.5% of them. In CHAID segmentation modelling, the 'best' predictor of nutritional intake was frequency of communication with friends and relatives.

Conclusion: There is a need to assess the types and sources of information about dietary intake. Examining social network participation can help to identify how best to design educational and informational campaigns to improve nutritional intake.

P-59

Children's perspectives of healthy eating: an evaluation of school meal programmes in St Kitts and Nevis

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Objective: School meal programmes can have a significant impact on the eating habits of young children. This study aimed to examine the children's perspectives of healthy eating by an evaluation of school meal programmes in St Kitts and Nevis.

Methods: Seven focus groups were conducted in three primary schools: two in St Kitts (three focus groups per school) and one in Nevis (one focus group). Focus groups were audio-recorded and transcribed verbatim. Thematic analysis was conducted with constant comparison of emerging themes.

Results: The children were knowledgeable about healthy foods, their uses and benefits. However, nutritional knowledge did not necessarily influence them to eat healthy foods. The children consumed school meals when they had no other option or if they liked what was on the menu on a specific day. Factors important to them included meal temperature, texture, taste, appearance and smell. There was no difference in the attitudes and behaviours around healthy eating between children who attended schools where the meal programme had been modified to include healthier options and those who attended schools with the traditional school meal model. Easy access to unhealthy food options at school influenced consumption of such over the school meals.

Conclusion: Modifying school meal programmes to include healthier options needs to incorporate opinions of the children consuming the foods to encourage uptake and to avoid food wastage. Restricting access to unhealthy options in the school vicinity is necessary through parents and schools.

P-60

Priority setting for occupational carcinogen exposure among doctors, nurses and pharmacists at the Grenada General Hospital

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Objective: To identify and prioritize carcinogens present in the Grenada General Hospital and to estimate the exposure prevalence for doctors, nurses and pharmacists who worked at this hospital.

Methods: Priority carcinogens and exposure circumstances identified by the CAREX (CARcinogen Exposure) Canada programme were used as a guide for creating a priority list contextualized for local exposures. Occupational settings were assigned an exposure category, and the prevalence of exposure to each priority agent or exposure circumstance for each occupational setting was calculated.

Results: After review, 13 agents and exposure circumstances were selected for prioritization among doctors, nurses and pharmacists at the Grenada General Hospital. Among doctors and nurses, the highest prevalence of exposure with 53.76% and 100% respectively was attributed to night shift work. Formaldehyde was another notable exposure circumstance with a prevalence of exposure of 53.76%, 32.52% and 100% for doctors, nurses and pharmacists respectively. The most significant exposure circumstance for pharmacists was to antineoplastic pharmaceuticals, where all pharmacists were in the high exposure category. Notably, 26.42% of all nurses were also grouped in this high exposure category.

Conclusion: Thirteen agents and exposure circumstances (generally grouped as pharmaceuticals, industrial chemicals and radiation) were prioritized for Grenada General Hospital. Nurses and pharmacists were generally considered high exposure groups due to their frequent and intentional contact with these circumstances. Though improvements in engineering controls are likely to have the greatest impact, the financial limitation that they present highlights the need to focus on lower-cost interventions including administrative controls and the use of personal protective equipment.

P-61

An assessment of benzene, toluene, ethylbenzene and xylene (BTEX) concentrations in the ambient air of gas stations and the health risks for their workers in Greater Georgetown

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Objective: To measure the concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) compounds in the ambient air of gas stations located in Greater Georgetown, Guyana, in order to calculate the health risks to gas station workers and determine the level of their knowledge with regards to the risks associated with working at a gas station.

Methods: The study followed an experimental design that utilized a mixed method approach. Five gas stations were included in the study, and 54 gas station workers were randomly selected to participate in the study. Data analysis was done using SPSS version 13.3.

Results: The average concentrations found at the five stations were 12.143 ppm, 11.456 ppm, 11.914 ppm and 35.284 ppm for BTEX respectively, all of which were significantly lower than the exposure limits established by the National

Institute for Occupational Safety and Health (NOISH) in the United States of America. The cancer risk of benzene was found to be slightly higher than the acceptable range. The level of education and training among gas station workers can be classified as good.

Conclusion: There is a need for continuous monitoring of BTEX to recognize changes in concentrations.

P-62

An assessment of health hazards to which healthcare workers are exposed in Accident and Emergency Unit at Georgetown Public Hospital Corporation

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Objective: To assess the health hazards exposed to by healthcare workers while on the job.

Methods: A quantitative and cross-sectional study was conducted among 50 doctors, nurses and technicians who worked at the Accident and Emergency Unit, Georgetown Public Hospital Corporation. Sampling technique used was purposive and convenient sampling. Data analysis was done using SPSS.

Results: More than half of the respondents experienced a hazard: approximately 85% experienced non-biological and 78% biological hazards. Stress (76%) and sharp injuries (52%) were reported as the highest non-biological and biological hazards experienced. Personal protective equipment was not used mainly because of shortage or lack of appropriate size. Registered nurses were recorded to experience most of the hazards. No association was found between working overtime and experiencing a health hazard ($p = 0.853$). Lack of monitoring and training in occupational safety and health and poor hazard corrective measures were barriers to quality improvement in healthcare.

Conclusion: Healthcare workers in this setting experienced a number of hazards while on the job. Associated factors included working overtime, job-related pressures and lack of sleep. Interventions should include frequent monitoring by the Health and Safety Officer, training in occupational safety and health for healthcare workers, and implementation of hazard corrective measures according to international standards.

P-63

Remedial action against molds in offices and residential buildings in Mandeville: an environmental health investigation

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Objective: Mold growth had been posing problems to persons living in Mandeville, Manchester, Jamaica. The purpose of this study was to assess the prevalence of mold species in affected buildings, and study their ecological distribution, structural characteristics, virulence, and different remedial action against these indoor molds.

Methods: Twenty questionnaires were administered to occupants of housing in Mandeville. Mold samples (70) were collected from infested sites. Samples were cultured on Sabouraud Dextrose agar (SDA). Growth characteristics, morphology and colour were ascertained. Four buildings were chosen at random. The walls of a randomly chosen room in these buildings were cleaned with bleach, Lysol, Capsicum chinense, or Allium cepa extracts. The open air in these buildings was then left exposed for one to two weeks to the agent that was used to clean the walls.

Results: About 70% reported mold in the buildings. Individuals reported experiencing allergic rhinitis (50%), difficulty breathing (43%), headaches (29%), itchy eyes (36%), and congestion (50%). About 66% of the samples showed growth on SDA. Further sub-culturing and analysis of the 66% samples identified the genus: Mucor, Pleospora, Vericillium, Paecilomyces, Nigrospora, Cladosporium, Fusarium, Aspergillus, Trichoderma, and Penicillium. Remedial action resulted in the clearing of the molds on the walls. Individuals in the homes also felt better.

Conclusion: The presence of molds is implicated in the symptoms of sick building syndrome. Remedial actions are needed to reduce this effect. Exposure to agents (bleach, Lysol, Capsicum chinense, and Allium cepa extracts) to the open air in the building for one to two weeks may prove more effective than bleaching the wall.

P-64

The climate is changing; why aren't we?

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Objective: Over the last year, the severity of the climate emergency and biodiversity collapse had become apparent. From protests to educational campaigns, people were raising their awareness regarding the future of our world under global warming. The emotional impact of this existential threat was taking its toll on people's mental health, with health professionals reporting a widespread increase in 'eco-anxiety'. The purpose of our study was to explore this

phenomenon and assess the degree of concern among the population in Trinidad and Tobago.

Methods: At the end of routine outpatient consultations, patients were asked their views on climate change and consented testimonials noted over a one-week period in November 2019.

Results: All 88 respondents expressed notable environmental concern. About 77.27% reported the perceived high severity impact of climate change, across a range of sectors from Tourism (28.4%) and Health (26.14%) to Agriculture (19.32%), Fishing (14.77%) and Energy (11.36%). Testimonials extended from whimsical recollection to pro-active measures, with many people feeling that individual action was insignificant. There was notable anxiety (28.41%), anger (10.23%), sadness (11.36%) and indifference (4.55%), but also motivation (25%).

Conclusion: Trinidadians were indeed aware of the looming threat of climate change and the dire consequences should action not be taken. They recognized that meaningful impact could be made through working with others of similar beliefs to lobby institutions and to channel evoked emotions into constructive action.

P-65

Behavioural/psychological health status of adults in the aftermath of two Category 5 hurricanes

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Objective: To assess the behavioural/psychological health status of vulnerable families in the US Virgin Islands (USVI) in the aftermath of Hurricanes Irma and Maria.

Methods: A concurrent, mixed-methods design (JW Creswell, 2009) was used. Quantitative data collection included the use of a battery of instruments, targeting adult residents receiving primary care from one of the two federally qualified health centers in the USVI. A convenient sample of clients was used, with 470 clients targeted, based on available funding. SPSS version 25 was used for quantitative data analysis.

Results: Of the 473 study participants, 45% were 40–64 years of age, and another 32% were between 25 and 39 years old. While 54% reported being in households with no children, 21% of respondents with children indicated that their children relocated after the hurricanes. Approximately 89% of participants self-identified as Black and 21% as Hispanic. Center for Epidemiological Studies Depression Scale-10 (CESD-10) assessed symptoms of depression. About 60.2% of participants had scores to suggest depressive symptoms ($\alpha = 0.79$). The Perceived Stress Scale (PSS) measured stress. About 71.4% of participants reported mod-

erate stress ($\alpha = 0.75$). The Post-traumatic Stress Disorder (PTSD) Checklist (PCL) estimated PTSD. About 57.5% of respondents showed possible PTSD symptoms ($\alpha = 0.94$). Findings showed a significant positive relationship between self-efficacy (General Self-Efficacy Scale/GSE) and resilience (Brief Resilience Scale/BRS) ($p < 0.001$) and a significant negative relationship between resilience (BRS) ($p < 0.001$) and depression (CESD-10).

Conclusion: The results had implications for policymakers and healthcare providers around support services, particularly related to behavioural and psychological health in the aftermath of disruptions.

P-66

Depression and anxiety among The University of the West Indies, St Augustine, students: prevalence and associated factors with special emphasis on type of diet

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Objective: To determine the prevalence of depression and anxiety among The University of the West Indies (The UWI), St Augustine, students and assess the differences and relationships among the prevalence of these disorders and dietary, socio-demographic and lifestyle-related factors.

Methods: A cross-sectional study involving 405 participants was conducted using a self-administered questionnaire which included the Depression, Anxiety and Stress Scale-21 (DASS-21), Alcohol Use Disorders Identification Test – Consumption (AUDIT-C), Heaviness of Smoking Index (HSI), and a self-developed food-frequency questionnaire. Proportional, convenience sampling was used to select participants to reflect the existing demographics at The UWI, St Augustine, with respect to gender, Faculty and level of study.

Results: Most students had symptoms of depression ($n = 219$; 54.07%) and anxiety ($n = 237$; 58.52%). Students who were undergraduates ($p < 0.001$), vegetarians ($p = 0.017$), had a family history of depression ($p < 0.001$) or anxiety ($p < 0.001$), had higher alcohol-related behaviour risk ($p = 0.009$), and had higher levels of stress ($p < 0.001$) had higher levels of depression. Similarly, students who were undergraduates ($p = 0.002$), vegetarians ($p = 0.009$), had a family history of depression ($p < 0.001$) or anxiety ($p < 0.001$), had higher alcohol-related behaviour risk ($p = 0.009$), and had higher levels of stress ($p < 0.001$) reported statistically higher levels of anxiety. The female gender ($p < 0.001$) was also statistically significantly related to anxiety; however, no gender differences were observed for depression.

Conclusion: There was a high prevalence of depression and anxiety among The UWI, St Augustine, students. This sug-

gests a need for interventions to help manage and reduce the prevalence of these disorders among students. Further examination of the predictors identified in this study may be helpful in better understanding their relationship with either disorder.

P-67

Major depressive disorders among religious leaders in Central Jamaica

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Objective: To evaluate the mental health status among religious leaders in Central Jamaica, examine the state of fatigue and emotional well-being among these leaders, and assess whether these differed based on self-reported major depression.

Methods: A correlational research design was utilized, using a sample of 206 religious leaders in Central Jamaica, which represented 60% of the population. A standardized questionnaire was developed to evaluate the research objectives. Data were entered and analysed using Statistical Packages for the Social Sciences for Windows Version 25.0.

Results: Of the sampled respondents, 3.4% indicated that they suffered from a major depression disorder. On the other hand, general fatigue was high among the sampled respondents (50.1 ± 11.3 , 95% confidence interval: 48.5, 51.7, from a maximum value of 85.0). It was found that only emotional well-being and age emerged as factors of general fatigue among religious leaders in Central Jamaica ($F[2|173] = 12.847$; $p < 0.0001$) that accounted for 11.9% of the variance of general fatigue (adjusted R-squared).

Conclusion: Major depressive disorders affecting these religious leaders pose a problem to effective leadership and themselves and should be targeted for support.

P-68

Magnification assessment of radiographs for knee replacement (MARKeR) – introducing a pre-operative templating system in a developing country

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Objective: To determine the institutional magnification of knee radiographs in patients awaiting total knee arthroplasty (TKA).

Methods: A cohort of 80 patients awaiting TKA at a tertiary medical institution was selected from the joint registry.

Patients had radiographs of their knee joints taken using a standardized protocol. A 22mm metallic sphere was used as a marker. Magnification was then calculated by two specialist officers at two different times separated by one week to determine intra- and inter-observer variability.

Results: The marker was visible in 35 patients. The mean weight of those without a marker (Group B) was significantly greater than those in whom the marker was visible (Group A) (84.7 kg *versus* 76.7 kg, one sided t-test $p = 0.01$). The mean anterior-posterior magnification was 15.3% while the mean lateral magnification was 12.1% ($p < 0.0001$). The intra- and inter-observer reliability was excellent.

Conclusion: The mean magnification ranged between 12.1% and 15.3% and was significantly different on orthogonal views. Magnification and visualization of the marker were both related to weight but not body mass index. The mean magnification was a close approximation to the template magnification of the knee arthroplasty system used at this institution.

P-69

An audit of day-of-surgery cancellation of orthopaedic cases at the Port-of-Spain General Hospital

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Objective: To investigate the rate and reasons for cancellation on the day of surgery of orthopaedic cases at the Port-of-Spain General Hospital.

Methods: We conducted a retrospective review of the case notes for all patients scheduled to undergo surgery under one orthopedic unit over 12 months. Information was gathered on patient demographics, diagnosis, type of procedure, number of cancellations, and the reasons provided for cancellation. The reasons for cancellation were broadly classified into four groups. Data were analysed using Analyse-it (Analyse-it Software Ltd, Leeds, United Kingdom).

Results: Ninety-seven patients were booked for surgery during the study period. Forty-three patients were cancelled resulting in a 44.3% cancellation rate. Patients whose surgery was cancelled were older and had a higher ASA (American Society of Anesthesiologists Physical Status Classification System) class compared with patients who did not have their surgery cancelled ($p = 0.0027$ and $p = 0.0005$ respectively). About 72.1% of all cases were cancelled due to hospital-related factors, with a lack of operating theatre time being the most common reason, followed by a lack of blood products.

Conclusion: The results indicated a high rate of day-of-surgery cancellation for orthopaedic cases at the Port-of-Spain General Hospital. The majority of cancellations were due to institutional deficiencies, in particular, a lack of operating theatre time.

P-70

Knowledge, attitudes and practices of orthopaedic surgeons in Trinidad towards operation note-taking

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Objective: To determine the awareness of and adherence to international guidelines on operation note-taking among doctors working in orthopaedic departments in Trinidad.

Methods: We conducted a cross-sectional, 25-item paper-based survey of all doctors with a minimum of six months' working experience in orthopaedics. Doctors working at the four Regional Health Authorities in Trinidad were included. Four broad categories were explored, and the data were analysed using Analyse-it (Analyse-it Software, Ltd Leeds, United Kingdom).

Results: Sixty completed questionnaires were available for analysis (response rate: 75%). Half of the respondents were currently enrolled or had completed a postgraduate training course, but 53% were not aware of international guidelines on operation note-taking. There was a general dissatisfaction with the current method of note-taking, and 85% of doctors thought a more structured form was needed. About 92% highlighted legibility as an issue, and 82% supported the implementation of an electronic medical record (EMR) system. House officers and registrars were equally likely to write operation notes while consultants rarely performed this duty. Although not involved in the procedure, more than 70% of doctors admitted to authoring surgical notes.

Conclusion: Awareness of international guidelines was poor among doctors working in orthopaedics across Trinidad. The majority of doctors were dissatisfied with the current method of note-taking and recommended the implementation of an EMR. The dangerous practice of writing notes when not participating in the operation was very prevalent locally.

P-71

An examination of the public health and economic benefits of subsidizing pre-exposure prophylaxis for citizens of Guyana

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Objective: To prove the public health and economic benefits of subsidizing pre-exposure prophylaxis (PrEP), especially among high-risk groups.

Methods: A quantitative study that employed the use of secondary data collection was conducted to achieve the established aim. The use of secondary data collection was determined to be the most appropriate method to gather quantitative data pertaining to the average costs of human immunodeficiency virus (HIV) treatment and the efficacy of PrEP in HIV prevention.

Results: The results collected through secondary data collection revealed that PrEP use was inversely proportional to HIV diagnoses. With HIV, a yearly average decrease of 1.45 diagnoses per every 100 000 persons was observed for a corresponding average of 25 new PrEP users annually. In addition, the study found that the cost of treating HIV in the Sub-Saharan African region varied from US\$269 to US\$1177. Within this region, over a five-year period, it was observed that 200 to as many as 94 100 HIV infections were averted with a corresponding estimate of 30 to as many as 12 600 HIV-related deaths.

Conclusion: The results obtained established that PrEP was, as advertised, an effective tool in HIV prevention. Subsidizing PrEP, especially among high-risk groups, will result in the prevention of new HIV infections. Effectively, this will have a significant economic benefit as it effectively reduces spending on HIV treatment and any associated costs.

P-72

Assessing attitudes and behaviours to data-sharing in the Caribbean

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Objective: There is a wide consensus among governments, funding agencies and researchers for the need to share collected data. However, the proportion of researchers sharing their data remains relatively low. A collaborative research group (The University of the West Indies (The UWI) and Yale University) conducted a needs assessment to understand data-sharing practices in the Caribbean.

Methods: The questionnaire included modules on collecting, managing and analysing data; attitudes, behaviours and barriers towards sharing data; use of personal data; training needs; and demographic information. It was administered in-person (n = 56) at the 2019 Caribbean Public Health Agency Conference and online (n = 57) with ECHORN/Yale-TCC consortium members. The UWI Institutional Review Board reviewed and approved the project.

Results: Respondents agreed with the need to share data but lacked the practical means to do so. The primary barriers were: (a) concerns around participant confidentiality; (b) misuse by a third party; (c) data reuse permissions; (d) time needed to prepare a data resource for sharing; and (e) funding needed for long-term data preservation. Among academics, a reluctance to share was partly fostered by uncertainty around a clear attribution pathway for their work. More than 80% of the participants reported knowing how to share data; yet, over half also reported not having the skillset needed.

Conclusion: Our needs assessment offered an early insight into data-sharing perceptions among Caribbean researchers and professionals. Areas for action include training in the handling of research data, strengthening infrastructures for organization and technical data-sharing, and developing regional policies to guide secure and ethical data-sharing.

P-73

The attitudes, perceptions and experiences of healthcare professionals towards the use of electronic medical records in public primary healthcare facilities in Barbados: a qualitative study

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Objective: To explore the attitudes, perceptions and experiences of healthcare professionals towards the use of electronic medical records in public primary healthcare facilities (polyclinics) in Barbados.

Methods: This qualitative study captured the perspectives of purposively selected participants *via* semi-structured in-depth individual interviews. Data saturation was met at the 12th participant. Individual interviews were audio-recorded, transcribed verbatim, coded and analysed *via* thematic analysis with constant comparison, supported by Atlas-ti software.

Results: The results revealed that MedData was a multi-faceted electronic medical records system which had both positive and negative elements that could influence the delivery of patient care. These positive attributes included having easy access to patient records from any polyclinic, which improves continuity of patient care, and improving workflow, which reduces patient waiting times and increases efficiency. The negative attributes included system characteristics such as the lack of a notification system for priority patients and the difficulty in generating statistical or medical reports. Thus, the participants determined that there were areas for refinement in MedData, which could be leveraged to improve the delivery of patient care and to avoid potential medico-legal implications.

Conclusion: The participants' recommendations included the addition of an alerting system for prioritized patients,

improvements to the reporting capabilities of the system, provision of continuous training for users as needed, and facilitation of dialogue between the users and the administrators about the management of the system. These results would inform efforts of the Ministry of Health and Wellness, Barbados, to enhance MedData experiences for patients and staff.

P-74

A qualitative exploration of the barriers and facilitators of exclusive breastfeeding (on the Essequibo Coast, Region 2, Guyana, South America) from the health professional perspective

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Objective: To identify factors influencing exclusive breast feeding (EBF) for six months among mothers living on the Essequibo Coast, Guyana, as perceived by health professionals providing their ante- and post-natal care.

Methods: An interpretivist qualitative methodology was used. Healthcare professionals (Medexes, nurses, nursing aides and doctors) who provided care at five public primary healthcare centres on the Essequibo Coast were purposively sampled. Healthcare professionals participated in individual, semi-structured, in-depth telephone interviews conducted by a medical practitioner with training in qualitative research. Interviews averaged 28 minutes, were audiotaped, transcribed verbatim and subject to thematic analysis with constant comparison using an inductive coding method. Saturation was confirmed at the 11th interview. Data management was facilitated by ATLAS-ti.8.

Results: Formula use was perceived as a desirable status symbol by some ethnic groups. This view, coupled with unrestricted marketing of formula in the region, acted as a barrier to EBF. In addition, pain experienced while breastfeeding and cultural beliefs also served as barriers. However, maternal knowledge of the benefits of EBF obtained through active and passive interactions with the health system (such as 'health talks' or seeing breastfeeding posters) facilitated EBF. Ultimately, successful EBF hinged on a mother's ability to balance breastfeeding with employment and home duties (especially in multi-generational homes).

Conclusion: Social, cultural, maternal, economic and health service factors interacted in a complex manner to influence the likelihood of EBF. Further work is needed to inform EBF health promotion activities that specifically explore and address the factors identified.

P-75

A quantitative cross-sectional study on job satisfaction among registered nurses at four regional public hospitals in Guyana

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Objective: To examine the various hygienic and motivational factors affecting job satisfaction among registered nurses at the four regional public hospitals in Guyana.

Methods: Using the stratified random sampling technique, a quantitative cross-sectional design was undertaken in which 296 registered nurses participated from four regional public hospitals in Guyana. These institutions were Georgetown Public Hospital Corporation (n = 143), Linden Hospital Complex (n = 91), New Amsterdam Regional Hospital (n = 33), and West Demerara Regional Hospital (n = 29). The instrument used was the self-administered modified Minnesota Satisfaction Questionnaire. Data were analysed using descriptive statistics, analysis of variance, Kendall's W Test, Pearson Chi-square, univariate, bivariate and correlation analysis.

Results: The mean age and years of experience were 29.8 (standard deviation (SD) = 29.81 ± 5.394) and 6 years (SD = 6.1 ± 4.2) respectively. Registered nurses employed at the four regional hospitals confirmed moderate levels of job satisfaction. The strongest positive correlations were identified as social services (83.8%), achievement/education (59.5%) and working hours (57.5%), while the strongest negative correlations were found to be pay/compensation (84.4%), advancement/promotion (67.2%) and company policies (54.4%). The *p*-value for Pearson Chi-square test (0.007) was less than the level of significance (0.05), which indicated that there was an association between the hospital studied and the increased intention of the nurses (82%) to migrate.

Conclusion: The motivational factors were significant elements contributing to the registered nurses' job satisfaction while the hygienic factors were the major determinants of job dissatisfaction. Improving these hygienic factors may corroborate greater levels of satisfaction and thus retention.

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A study investigating the knowledge, attitudes and practices of pharmacists in Barbados towards generic drugs

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Objective: To estimate the prevalence of generic drugs prescribed by pharmacists in Barbados and assess their knowledge, attitude and practices regarding generic drugs.

Methods: A descriptive cross-sectional study with 168 pharmacists was conducted using an anonymized self-administered paper-based questionnaire distributed to public and private pharmacists randomly selected from the 2018 official gazette list of professionals.

Results: The prevalence of pharmacists who frequently dispensed generic drugs was estimated to be 63%. Over 60% of the pharmacists agreed that generic drugs were equivalent to branded drugs, and three-quarters were comfortable substituting generics. Public pharmacists were 1.54 times more likely (confidence interval (CI): 0.98, 2.42; $p = 0.02$) than private pharmacists to agree that generic drug training should be mandatory. Public pharmacists were less likely to attend continuing education sessions. Public pharmacists were five times more likely to dispense more generic drugs with Barbados Drug Service prescription forms compared to private pharmacists (odds ratio = 4.67; CI: 1.12, 19.52; $p = 0.04$).

Conclusion: There was a moderate level of acceptance of dispensing generic drugs. There were gaps in knowledge, attitudes and practices of pharmacists in both sectors. Public pharmacists were more supportive of mandatory training. Private pharmacists were less likely to substitute generics. Implementing continuing professional activities for pharmacists could increase generic drug awareness and possibly enhance government's cost-containment strategy.

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Religious capital in the Kalinago Territory drives co-development and implementation: findings from the CONgregations Taking ACTION against non-communicable diseases

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Objective: To assess the feasibility of embedding churches into the primary healthcare pathway in the Kalinago Territory, Dominica, for the prevention and control of non-communicable diseases (NCDs).

Methods: Concept mapping with pastors, nurses, Kalinago leaders and congregants identified actionable priorities for the recruitment and training of Kalinago health advocates (HAs), intervention content and partnership building. Preparedness of churches and primary healthcare centres (PHCs) was assessed *via* interviews with practitioners and religious leaders, and captured systems capacity, community collaborations and willingness to implement the intervention. Live mixed-method evaluation used the RE-AIM framework to iteratively adapt and fit the intervention to the context.

Results: Four churches and two PHCs in the Kalinago Territory participated. Preparedness assessments identified enablers including high church attendance, regular church activities for embedding health promotion, enthusiasm for infusing sermons with health messages, and skilled congregants including nurses. PHC nurses were enthusiastic despite under-resourcing and heavy workload. Five HAs were trained using storytelling and interactive sessions, with regular updates. Over 34 weeks, the following were delivered with high fidelity: 20 NCD education sessions; 10 screening sessions of 129 congregants, of whom 66% were overweight/obese, 34% were hypertensive of whom 46% were new cases and referred to the PHC; and 731 hours of churchyard gardening which included growing and harvesting of vegetables (*eg* lettuces, tomatoes, cucumbers, peppers, cabbages) which were shared with the community.

Conclusion: Evaluation signalled positive results with key enablers being the religious capital that bonded congregations and bridged churches and health centres, and supportive partnerships with the Kalinago Council and Ministry of Agriculture.

CARIBBEAN PUBLIC HEALTH AGENCY

GOAL, MISSION AND VISION

VISION

Healthy People, Healthy Spaces,
Healthy Caribbean.

GOAL

A Caribbean in which
people are resilient, living
longer and healthier lives
in a more supportive
environment.

MISSION

As a professional organisation to
build Member States capacity to
prevent disease and promote
health and wellness through
leadership, partnership and
innovation in Public Health.

The Vision, Goal and Mission are grounded in the mandate
and the guiding principles of the Agency.

