

Poster Abstracts

P-01

The outcomes of neonates placed on the Conventional CPAP Machine vs the Makeshift CPAP Apparatus in Neonatal Intensive Care Unit at Georgetown Public Hospital during December 2020–August 2021

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Objective: The objectives were to compare patients placed on the Makeshift CPAP Apparatus vs the Conventional CPAP Machine based on indications for CPAP, NICU progress and prognosis.

Design and Methods: An Observational Comparison Study was done. The sample population was neonates born at GPHC with respiratory compromise who required CPAP support, admitted to the NICU and placed on either a Makeshift CPAP Apparatus or a Conventional CPAP Machine. Neonatal charts were reviewed. Data were analysed with SPSS.

Results: In the study eighty-three (83) neonates were placed on CPAP. They were divided thus – twenty five (25), on the makeshift CPAP (Group 1) compared with fifty-eight (58), placed on the conventional CPAP (Group 2). In Group 1, 72% had APGAR scores of 7–10, 88% had moderate Silverman's scores, 4% required surfactant and 28% required Aminophylline. In Group 2, 77% had APGAR scores of 7–10, 65% had moderate Silverman's scores, 3% required surfactant and 22% required Aminophylline. Indications for CPAP were RDS-52, TTN-32, MAS-26, Congenital Pneumonia-37 and Birth Asphyxia-19. There was no difference in time on CPAP support (6.3 and 5.8 days, $p = 0.0504$). There was no significant difference in the length of hospital stay (13 and 10.5 days, $p = 0.077$). No neonates were stepped up to Mechanical Ventilation. No deaths were recorded.

Conclusion: The Makeshift CPAP Apparatus is as effective as the Conventional CPAP Machine in terms of resolution of respiratory distress, decrease in mechanical ventilatory support requirement and timely discharge from the hospital. A longer study period with a much larger sample population is needed to confirm these findings. However, a preliminary

recommendation would be to increase teaching sessions in order to increase awareness of the makeshift CPAP.

P-02

The Epidemiology of Dermatological Diseases at a Jamaican Paediatric Hospital

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Objective: Given the dearth of published data regarding paediatric dermatological conditions in the English-speaking Caribbean, we aimed to characterize the spectrum of conditions presenting to the paediatric dermatology clinics at Bustamante Hospital for Children (BHC), Kingston, Jamaica.

Design and Methods: A retrospective, descriptive study was conducted on children (0–12 years) attending outpatient services of the Accident & Emergency Dermatology (during 2012) and the Dermatology Clinic, Outpatient Department (OPD) (2012 to 2016), at the BHC, Kingston, Jamaica. Collated data including demographics and specialist-determined diagnoses were summarized and explored using univariate analyses to determine prevalence of dermatological conditions, patterns of occurrence and any associations of factors.

Results: Skin infections and infestation (42.5%), eczema (27.7%) and the urticarias and erythemas (12.4%) were the most prevalent categories. Fungal infections were the commonest subcategory among infections (23.3%); and tinea capitis (16.5%), atopic eczema (12.2%) and papular urticaria (10.6%) the most prevalent individual diagnoses overall. Infection and infestations ($p < 0.05$), eczema ($p < 0.01$) and disorders of skin appendages ($p < 0.001$) were more frequent among males during 2012. Infections and infestations ($p < 0.001$) and papulosquamous disorders ($p < 0.01$) were most prevalent among referrals from the Kingston Metropolitan Area. Eczema comprised 33% of all diagnoses among clients presenting to OPD (2012–2016).

Conclusion: The most common categories of skin diseases presenting to the Paediatric Dermatology clinic are infections and infestations, eczema and urticarias and erythemas. The commonest diseases are tinea capitis, atopic eczema and papular urticaria which highlight need for public health interventions.

P-03

Measurement for Change: Using lessons learnt from key stakeholders to inform changes to the Reach Up early childhood parenting intervention

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Objective: To highlight the perspectives and recommendations of programme managers, funders, researchers and implementers familiar with the Reach Up intervention and how these informed the development of new, and modified programme materials and resources.

Design and Methods: Data was collected from August to October 2019. Qualitative interviews were conducted with a non-random sample of 14 participants including persons leading implementation in the countries and key stakeholders from funding agencies, NGOs and research organizations. Thematic analysis of the responses was done using a mixture of pre-defined and data-driven categories.

Results: Three important findings from the interviews were (1) advocacy and communication involving decision makers and other key stakeholders are critical components to ensure effective implementation of the intervention, (2) additions to the curriculum were necessary to extend the age range and build on concepts underlying the intervention and (3) a need to provide additional content in the training and other supporting manuals.

Conclusion: It is important to learn from, and share with, our global community partners, to continuously adapt and strengthen the Reach Up intervention. The feedback from interviewees drove additions and modifications to some aspects of the intervention, such as the creation of new knowledge goods and resources and enhancements to existing programme materials and resources which will help to support ongoing implementations and the process of transitioning to scale.

P-04

Vulnerable subpopulations in Caribbean children and adolescents hospitalized with COVID-19

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Objective: To identify factors associated with the need for supportive hospitalised care among children admitted for COVID-19.

Design and Methods: A multicentre retrospective descriptive cohort of children <17 years, hospitalized with COVID-19 in nine hospitals in Barbados, The Bahamas, and Jamaica from September 2020 to July 2021. The need for supportive therapy was explored by age, and among children with and without a range of comorbidities.

Results: Among 238 hospitalized children, 56% were < 5 years of age. Comorbidities were present in 107 (45%), with proportionately more comorbidities among older children (> 5 years of age, $p < 0.001$). Comorbidities included asthma 21(9%), sickle cell disease 20 (8%), neurological 12 (5%) or cardiac 11 (5%) diseases, and diabetes 11 (5%). Multisystem Inflammatory Syndrome (MISC) was present among 32 (13%) children, and of these the largest proportion 12 (29%) were between 5 and 9 years of age ($p = 0.04$). All diabetic children had diabetic ketoacidosis (DKA), and 83% of neurology cases had seizures. Oxygen use was common among children with asthma (50%), obesity (75%) and MIS-C (40%). Blood products were required among children with MISC (40%), or with malignancy (50%). Almost three-quarters of children with MISC had additional complications, including liver dysfunction, acute kidney injury, and anaemia, and these children regularly required inotropes (22%), non-invasive ventilatory support (12%), or ICU admission (34%).

Conclusion: Children with asthma, obesity, malignancy, diabetes and neurological disease require additional support with more ICU support needed in MISC cases. Care of vulnerable groups and early recognition and intervention for severe MISC should be prioritized

P-05

Assessment of pharmacists' knowledge, attitude and practices regarding non-prescription antibiotic use and antibiotic resistance in Guyana.

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Objective: To assess pharmacists' knowledge, attitude, and practice regarding non-prescription antibiotic use and antibiotic resistance in Guyana.

Design and Methods: A descriptive cross-sectional study was conducted among a sample of 143 pharmacists using a convenient sampling method. Data was collected using a self-administered piloted questionnaire. SPSS version 20 was used for analysis using a 5% level of significance. Contingency tables were used as methods of analysis, and scores were computed and categorized according to 60% of the maximum score of each parameter. Knowledge (Good = 60% of 68), Attitude (Positive = 60% of 32) and Practice (Good = 60% of 46).

Results: A total of 143 pharmacists participated in this survey. Overall, the participants displayed good knowledge (89.5%) about non-prescription antibiotic use and antibiotic resistance. 71.3% had positive attitude towards non-prescription antibiotic use but 55.2% displayed positive attitude towards antibiotic resistance. 83.9% displayed good practice regarding the safety of antibiotic use without medical prescriptions, and 81.8% displayed good practice regarding the use of antibiotics for specific health conditions without medical prescriptions.

Conclusion: Pharmacists in Guyana have demonstrated good knowledge, positive attitudes, and good practices regarding antibiotic use and resistance. Overall, these findings are in accordance with findings reported by other studies globally. However, there were some gaps in assessing the practice of the pharmacists and this warrants attention. The assessment of the prevalence of prescribing antibiotics without a medical prescription is a critical component when evaluating the overall practice of pharmacists.

P-06

The Caribbean Vector Borne Disease Network (CariVecNet): A Platform for Exchange of Evidence-Based Information to Reduce the Burden of Vector Borne Diseases in the Caribbean

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Objective: The objective of the CariVecNet is to improve detection, monitoring, prevention and control of Vector

Borne Diseases (VBDs) in CARPHA Member States (CMS).

Design and Methods: This project adopted a multi-strategic approach and focuses on the use of evidence-based information. Network conceptualisation and planning activities focused on a collaborative approach with regional and international partners to promote information sharing, capacity building, research collaboration, harmonise the regional use of technologies and protocols and foster the integration of community engagement into VBD control.

Results: Technical working groups under the CariVecNet are developing standardized protocols and guidelines for the diagnosis, surveillance, clinical management and prevention, and control of Vector-Borne Diseases (VBD). The latter includes evidence gathering to inform community engagement strategies for promotion of behavioural change in CMS. The long term outcome of this intervention will be to strengthen mechanisms to reduce the burden of VBDs in the Caribbean Region.

Conclusion: CariVecNet brings together a range of regional and international VBD specialists to promote effective information sharing, explore synergies and reduce duplication of efforts in the regional fight against VBDs. This network is unique and connects stakeholders from French, Dutch, Spanish and English-speaking Caribbean countries, working across the spectrum of VBD prevention and control.

P-07

The prevalence of Chagas disease among blood donors in Guyana in 2010 and 2018.

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Objective: To compare the sero-prevalence of Chagas disease among blood donors in 2010 and 2018 and describe its relationship to risk factors such as age, sex and ethnicity.

Design and Methods: This study is a retrospective, cross-sectional study that evaluated data from blood donors at the National Blood Transfusion center in 2010 and 2018. A total of 7,738 blood donors in 2010 and 10,004 blood donors in 2018 were screened for Chagas disease using the Elisa Chagas III. Age, sex, ethnicity and year of sero-positivity of cases were among the variables recorded and analyzed using SPSS.

Results: There was 1 positive case of Chagas disease in 2010 compared to 82 cases in 2018. Males recorded a higher

sero-prevalence (54.2%) compared to females (45.7%). Male between the ages of 26–35 (36.4%) recorded the highest overall rate. In 2018 Indo-Guyanese has the largest seropositive outcomes of Chagas disease with 31.3% and the Amerindians the lowest outcome with 2.6%.

Conclusion: The results obtained here correspond with similar studies conducted in Guyana and the Americas. There was a significant increase in seropositive cases among blood donors in 2018 compared to 2010. These findings justify the compulsory screening of all blood products and organs for donation but also makes a case for increased screening and education among vulnerable groups such as migrants from endemic areas.

P-08

A retrospective analysis of empiric prescribing pattern for Bacterial Vaginosis infections at The University of the West Indies Health Centre.

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Objective: To identify the frequency with which antibiotics are used to treat Bacterial Vaginosis infections at the University Health Centre during the control period of September 2019 to October 2019.

Design and Methods: This descriptive retrospective study at the University of the West Indies Health Centre analyzed medical records of patients from September 2019 to October 2019 who were diagnosed with Bacterial Vaginosis. Data extracted included demographics, details of drugs including dose and route of administration, frequency, and duration of treatment. The Centers for Disease Control and Prevention 2015 Treatment Guidelines for Bacterial Vaginosis were used to evaluate the appropriateness of the therapy. The data obtained was subjected to descriptive statistical analysis.

Results: A total of eighty-one encounters were identified, ages ranged from eighteen to sixty years old. Nitroimidazoles were the most commonly used antibiotics (43.6%) followed by Macrolides (30.2%), Fluoroquinolones (7.9%), Cephalosporins (7.1%), Penicillin (4.8%), and Tetracyclines (6.3%), with most patients prescribed one antibiotic (56.8%). The oral route was the most commonly used route of administration and duration of therapy for most patients was one (1) day. For 46.9% of the patients the prescribed antibiotics were appropriate.

Conclusion: There is a high rate of inappropriate antibiotic prescribing for the treatment of Bacterial Vaginosis at the

University Health Centre. As such, interventions are needed to improve the empiric prescribing patterns.

P-09

Trends in Transfusion-Transmissible Infections Among Blood Donors at the National Blood Transfusion Service, Guyana

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Objective: The most adverse effect of blood transfusion is the acquisition of transfusion-transmissible infections (TTIs), which poses a serious threat in developing countries. This study aims to identify the trends of transfusion-transmissible infections among blood donors.

Design and Methods: This study was a laboratory-based retrospective study conducted using blood donors' records from January 2015 to December 2018, collected at the National Blood Transfusion Service, Guyana (NBTS). Analysis of data was performed using the Statistical Package for the Social Sciences (SPSS) version 22.0 software and the results were presented in tables and graphs. Chi-square and logistic regression were used to identify trends and influencing factors.

Results: A total of 39,308 blood donors were included in this study, of whom 2,418 (6.2%) donors tested positive to at least one pathogen. Among those donors, 4.4% were co-infected with at least one of the sixteen dual infection combinations. The overall sero-prevalence of HIV, HTLV, syphilis, HBV, HCV, Chagas, microfilaria, and malaria was 0.8%, 0.8%, 0.6%, 1.5%, 1.3%, 1.2%, 0.0%, and 0.0%, respectively. Trends of transfusion-transmissible infections showed an overall increase from the lowest prevalence, 5.1%, in 2015 to 7% in 2016, followed by decreases in 2017 (6.8%) and 2018 (5.8%).

Conclusion: Even though 98.6% of the donor population are volunteers, this study has shown that a significant percentage of blood donors harbour transfusion-transmissible infections. Stringent screening and preventive measures are very important to ensure the safety of the transfusion recipient.

P-10

Self-reported impact of COVID-19 on Quality of Life for Cervical Cancer Patients at Georgetown Public Hospital.

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Objective: To assess the self-reported impact of COVID-19 on the quality of life for cervical cancer patients at the Georgetown Public Hospital.

Design and Methods: A qualitative study was conducted with face-to-face interviews of 25 respondents using a modified European Organization for Research and Treatment of Cancer Quality of Life Score (EORTCQLQ-30) from Oncology Clinic and Ward E at Georgetown Public Hospital.

Results: 48% respondents were 48–55 years age group. 40% were Afro-Guyanese. 28% had diarrhoeal symptoms before COVID-19. 40% of the respondents worried about painful sex. 32% of the respondents had vaginal dryness during intercourse. 40% had pain or a burning feelings while urinating. 36% had problems doing work. 32% of respondents had psychological problems such as worry, depression, and difficulty in remembering things. 28% had expressed that medical treatment interfered with their family life, social activity (44%), financial difficulties (48%) and limited in pursuing hobbies or other leisure time activities (48%).

Conclusion: Cervical cancer patients after diagnosis, experience challenges related to treatment, diet, emotional function, social support, spiritual wellbeing, and pain which eventually lead to a deterioration of their quality of life.

P-11

Innovations in Continuing Medical Education during the COVID-19 pandemic

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Objective: To use the Enhances Learning, Innovation, Adaptation, and Sustainability (ELIAS) framework to map the adaptation of the continuing medical education (CME) programme at The University of the West Indies (The UWI) from a face-to-face to online format during COVID-19.

Design and Methods: The ELIAS framework comprises 5 phases: measurement – identification of discrepancy between required and projected outcome; disconfirmation – identifying changes needed to rectify the discrepancy; contextualization – formulating a plan that is congruent with the organizational structure; implementation – executing the plan; and routinization – embedding the innovation into the organization's processes.

Results: With COVID-19 directives prohibiting face-to-face meetings, we would be unable to supply the required annual CME credits to physicians. To rectify this, contextual changes were made, including shifting to an online format with shorter, more frequent sessions. We leveraged the technological and administrative armamentarium available at The UWI by piggybacking on the pre-existing Zoom

Webinar and TouchNet payment systems. The CME coordinator acted as change champion, gaining accreditation for the novel format from Medical Council, exploring and enabling online engagement of medical practitioners and facilitating activities that increased self-efficacy in users of the innovation. Evaluation 1-year post innovation reported an adequate supply of CME credits. Subsequent adoption and routinization of the online format were enhanced by the relative advantage over the face-to-face option and compatibility with the public health directives.

Conclusion: The online innovation was successful. Use of a framework to map the process adds scientific rigor and, if needed, can guide the expansion into a regional CME bod

P-13

Medical student satisfaction in online modified clinical clerkship curriculum during the COVID-19 pandemic.

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Objective: The COVID-19 pandemic has caused significant disruption to medical education and clinical training. This not only affected delivery of the clinical curriculum but also resulted in stressors which may impede learning. This study aimed to assess the impact of a modified on-line curriculum in selected clinical clerkships in the Faculty of Medical Sciences, UWI, Cave Hill Campus, during the COVID-19 pandemic.

Design and Methods: Fourth and Fifth year medical students completed an online survey in January 2021 covering the following areas: student satisfaction, self-efficacy (Online Learning Self-Efficacy Scale) and perceived effectiveness of online versus face-to-face learning. Students who agreed/strongly agreed to the statement “Overall, I was highly satisfied with the clerkship placement” were classified as satisfied.

Results: 88 of 131 students completed the survey (response rate = 67 %). More than half of students (51%) were satisfied with online clerkship delivery. Fewer than half of students (46%) believed online learning effectively increased their knowledge, compared to 56% for face-to-face learning. Perception of effectiveness of online learning and face-to-face teaching of clinical skills was 18% and 89%, respectively ($p < 0.0001$). Fewer students perceived online teaching to be effective for developing social competencies (27%) compared to face-to-face instruction (67%) ($p < 0.001$). Students satisfied with online learning were more likely to be female (OR = 2.6) and older respondents. Mean self-efficacy scores were higher for persons who perceived online teaching to be effective for increasing knowledge, improving clinical

skills, and social competencies. Students' perception of online learning was strongly associated with online self-efficacy.

Conclusion: Students perceived online learning to be least effective for enhancing clinical skills. Students' perception of effectiveness of online learning was strongly associated with online self-efficacy. Further research to examine how the perception of online delivery impacts student performance in online learning is recommended. Educators have been challenged to design online programmes that facilitate development of clinical and social skills. Understanding medical students' experiences and identifying unmet needs will help improve clerkship curriculum and support medical students during and after the COVID-19 pandemic.

P-14

Learning behaviours of medical students at the American University of Integrative Sciences, Barbados, during the COVID-19 pandemic.

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Objective: To examine the learning behaviours of medical students at the American University of Integrative Sciences, Barbados, during the COVID-19 pandemic.

Design and Methods: A cross-sectional web-based online survey was administered to medical students at AUIS from July until November, 2021. The data collecting instrument recorded students' demographic and learning behaviour information (Meo et al. 2020), perceived stress levels (PSS-4), and eating disorders (SCOFF questionnaire).

Results: The overall response rate was 55% (n = 66). The majority of the respondents were females (56.1%), MD5 students (28.8%) and residing in the USA (53%) during the time the survey was conducted. More than 80% of the respondents received COVID-19 vaccine and only 12.1% tested COVID-19 positive. In relation to the learning behaviours, students agreed with the following statements: deterioration in work performance/studying (45.5%), remembering contents appropriately (37.9%), concentration on the studies (37.9%), difficulty in performing two tasks simultaneously (37.9%) and performing mental calculations (33.3%), and recalling recent (33.3%), and old information (39.4%). Mean PSS-4 score for the respondents was 7.25/16 (average stress scores = 6 is classified as high levels of stress) and 24.2% screened positive for eating disorders as per SCOFF questionnaire (score =2 and indicates a likely diagnosis of anorexia nervosa or bulimia).

Conclusion: The results indicate that during the COVID-19 pandemic AUIS students developed academic difficulties,

and eating disorders, and experienced elevated stress levels. University policymakers should take appropriate measures to support a healthy learning environment and improve the mental wellbeing and eating behaviors of students.

P-15

Personal protective equipment (PPE) related adverse skin reactions among healthcare professionals at the main COVID-19 isolation centre in Barbados

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Objective: The aim of this study was to determine the prevalence and characteristics of PPE-related adverse skin reactions among HCWs working at Harrison's Point, the main COVID-19 isolation centre in Barbados.

Design and Methods: A cross-sectional web-based online survey among HCWs was carried out from 1 April 2021 to 21 June 2021. The questionnaire recorded self-reported demographic information, details of PPE use, and adverse skin reactions including severity and duration of onset of symptoms.

Results: The majority of the respondents were females (71.2%) and the nurses represented the largest group (45.2%) of HCWs. Most of the respondents used PPE for consecutive days (77.9%), 1–6 hours/day (59.2%), and more than a year (62.5%). More than 45% (n = 47) of participants experienced adverse skin reactions from the use of PPE. The adverse skin reactions were mostly observed in the cheeks (40.4%) and nose bridges (35.6%). Females had more reactions than their male counterparts ($p = 0.003$). The use of N95 masks and a combination of surgical and N95 masks at no discernable consistency produced adverse effects predominantly in the ears (60%) and cheeks (56.4%) respectively. Only 40.4% of study respondents reported that they attended PPE fit testing.

Conclusion: The PPE-related skin reactions were common among HCWs which mainly occurred due to prolonged and inappropriate use. Cheeks and nasal bridges were the most affected areas and female HCWs were more susceptible to adverse effects than males. Preventive measures inclusive of appropriate training of HCWs on the use of PPE are recommended to minimize these adverse events.

P-16

Knowledge, Attitudes and Practices towards the flu (influenza) vaccine and COVID-19 vaccines amongst University Staff and Students in Trinidad and Tobago

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Objective: Vaccine hesitancy is a major hindrance in attaining herd immunity during the COVID-19 pandemic. We evaluated the knowledge, attitudes and practices of University staff and students towards the influenza and COVID-19 vaccines.

Design and Methods: A convenience sample was electronically accessed, by issuing a 29 question survey to staff and students at The UWI, St. Augustine, via the Marketing and Communication Office. Data was analyzed using IBM SPSS Statistics 27. Descriptive statistics were reported and Chi-squared tests sought to detect significant association between demographics and measured variables. A p -value < 0.05 was considered significant.

Results: Among 357 respondents, 84.7% thought vaccines provided protection, 98.6% were previously vaccinated against a disease and 71.1% favored compulsory vaccinations. Only 43.7% thought vaccines were safe and 56.9% were willing to be vaccinated against COVID-19. More students (59.5%) were vaccinated against influenza. Participants aged 18–24 had significantly higher incidence of vaccinations ($X^2(2, N = 356) = 9.342, p = 0.009$). Participants aged 45 and older showed greater knowledge on the number of deaths prevented by vaccination ($X^2(2, N = 3440) = 7.890, p = 0.019$). The major reasons for vaccine hesitancy was uncertainty regarding safety and efficacy.

Conclusion: At least 71.1% of participants are in favor of compulsory vaccinations. Younger participants showed higher vaccination rates against the flu and older participants had a greater understanding of the benefits of vaccines. Vaccine hesitancy can be addressed by increasing knowledge and awareness campaigns, particularly around the COVID-19 vaccine.

P-17

The impact of the SARS-CoV-2 pandemic on surgical oncology cases at the University Hospital of the West Indies, Kingston, Jamaica

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Objective: To evaluate the effect of the COVID-19 pandemic on prostatectomies, mastectomies, colectomies, and hysterectomies done at the University Hospital of the West Indies (UHWI).

Design and Methods: Data was extracted from the records for the main operating theatre of the UHWI, for all cases done between January 1st, 2016, and September 30th, 2021. Patients who underwent any of these surgeries with a diagnosis of an associated cancer were included. The covid pandemic in Jamaica was considered to start March 1st, 2020, based on the detection of the first case in the island.

Results: 921 cases were identified, 145 colectomies, 280 mastectomies, 114 prostatectomies and 382 hysterectomies. Comparisons were made of the mean number of cases done monthly pre and post pandemic. The rates pre and post were, 4.12 and 4.11 for mastectomies ($p = 0.976$), 2.20 and 2.0 for colectomies ($p = 0.713$), 5.65 and 5.74 for hysterectomies ($p = 0.881$) and 1.88 and 1.16 for prostatectomies ($p = 0.012$). The proportion of males in the population decreased from 20% to 15% ($p = 0.155$). The mean age for patients pre and post were, 55.8 and 56.1 for mastectomies ($p = 0.842$), 63.2 and 63.7 for colectomies ($p = 0.82$), 58.5 and 58.4 for hysterectomies ($p = 0.91$) and 63.7 and 61.2 for prostatectomies ($p = 0.176$).

Conclusion: Except for prostatectomies, the pandemic has had little impact on the number of common oncological surgeries done at the UHWI. Investigation of the causes of the decreased number of prostatectomies is needed.

P-19

Vaccine hesitancy: the Grenada experience

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Objective: Vaccine hesitancy became a global issue of public health importance following vaccine introduction for SARS-CoV-2 in early 2021. Here, we present the ever-changing reasons for vaccine hesitancy in a Small Island Developing State which has an enviably high childhood vaccination rate for other vaccinatable infectious diseases.

Design and Methods: Longitudinal data on the stated objections to vaccination were recorded from individuals living in all 6 parishes of Grenada from the introductions of vaccines to the country in February 2021 until mid-February 2022.

Results: The expressed unwillingness to be vaccinated arose initially from a distrust of the speed of the production of vaccines, then the perceived blood clot risks from the AstraZeneca vaccine and numerous other factors including fear of needles, potential sterility, and a mistrust in the short and long term benefits of the vaccine. A second COVID-19 wave occurred in December which recorded approximately an equal number of vaccinated and unvaccinated individuals becoming infected, which increased hesitancy. Increased vaccine uptake was observed when vaccines were expiring, with the introduction of vaccine choices, and vaccine mandates for entering restaurants, employment, and latterly, travel regulations.

Conclusion: Despite being one of the first countries to receive vaccines, Grenada has recorded one of the lowest vaccine uptake rates in the region. The complex issues and lessons learned from frontline workers have shown that vaccine hesitancy in Grenada is multifactorial and constantly evolving. The key findings in this study can inform and help develop targeted public health measures regarding vaccination.

P-20

The role of non-Pharmacological interventions (NPI's) and school closure on the spread of COVID-19 in the childhood population of Barbados

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Objective: To describe the role of non-pharmacological interventions (NPIs) to the spread of COVID-19 in children and adolescents in Barbados for the period March 2020–December 2021.

Design and Methods: A descriptive cross-sectional study utilizing published case registries over the 22-month study period. The incidence of COVID-19 cases and deaths were calculated and classified by sex, gender, as well as the month and year of diagnosis to identify trends in the numbers related to the total number of cases reported in the 0 to 18 years age group. The incidence data was correlated to the time of school closures and other NPI's.

Results: A total of 6248 COVID-19 confirmed cases were documented in the 0 to 18-year age group, representing

21.7% of all reported cases, and constituting 22.1% of the Barbadian population. During the periods of school reopening the number of childhood cases remained low with small spikes following these periods. The incidence of COVID-19 was similar in the 0 to 4, and 5 to 14 age groups despite the 0 to 4 age group being in nursery school during the time of the second outbreak.

Conclusion: The surge in childhood cases in Barbados did not reflect opening of schools and day care facilities, but rather seemed to correlate with the general rise in cases in the community in general. NPIs continued to keep similar incidence rates as those in North America, despite low vaccination rates in the childhood and adolescent populations.

P-21

Self-Reported Post-Vaccination Adverse Events of COVID-19 Vaccines among Bangladeshi Medical Students

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Objective: To investigate self-reported post-vaccination adverse events for COVID-19 vaccines among medical students in Bangladesh.

Design and Methods: A cross-sectional study was conducted using an online questionnaire for Bangladeshi medical students (n = 3,545). Students who received at least one dose of COVID-19 vaccine were included. The study was carried out from October 2021 to January 2022 in 75 public and private medical colleges.

Results: The majority of respondents were female (60.6%) and third-year (26.5%) students. >11% had tested positive for COVID-19 infection, and 97.6% of respondents (n = 3,461) received both first and second doses of COVID-19 vaccination. Most students (79.1%) received Sinopharm and 11.2% got AstraZeneca. More than two-thirds (67.9%) indicated that COVID-19 vaccines are safe in the long term. 54.8% of respondents (n = 1,842) reported one or more adverse events. Pain at injection site (78.2%), fever (49.3%), tiredness and fatigue (46.8%), headache (41.1%), generalized body ache (21.4%), over sleepiness/laziness (18.4%) and myalgia (17.5%) were the most commonly reported adverse events. 47.4% of respondents characterised adverse events as “mild”. Majorities experienced symptoms within 12 hours of vaccination (68%) and for 1–3 days (56.8%). More than two-thirds (66.2%) of respondents had rest at home,

and almost one-third (31.8%) took painkillers. Thirty-nine respondents visited physicians, mainly due to high fever, severe body ache, and severe headache, but there was no need for hospitalization.

Conclusion: The majority of students reported adverse events, but symptoms were mild and of short duration. Further multi-centre studies with larger cohorts are required to monitor vaccine safety and strengthen public confidence in vaccines.

P-22

An innovative, blended, and supplementary clerkship to minimize clinical training gaps identified during the COVID-19 pandemic

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Objective:

1. To identify training gaps in junior clerkship rotations during the COVID-19 pandemic.
2. To develop a Clinical Transition Selective Clerkship (CTSC) during Year 4.
3. To seek student feedback on organization and management of the CTSC.

Design and Methods: An online cross-sectional survey of medical students was conducted during June-September 2021 to identify training gaps. In response to identified gaps, the 4-week CTSC was developed to provide further opportunities to develop core competencies.

Results: Just under half of students reported the opportunity to observe (45.7%) and perform (44.5%) core skills >3 times during the medicine junior clerkship. For the surgical clerkship, 48.3% observed and 44.2% performed core skills 1–3 times. For child health, 39.6% observed and 34.8% performed skills 1–3 times. More than half of respondents (55.3%) expressed concern that they missed the usual clinical clerkship training experiences during online rotations. Three-quarters (74.5%) expressed the need to acquire additional clinical experience. The majority of students rated the following aspects of the CTSC as 'Good' or better: clarity of goals and objectives (58.3%); educational value/amount learned (56.2%); professionalism of faculty (66.7%) and other clinical staff (75%); usefulness of feedback (75%); workload challenge/level of material appropriate (70.8%); overall rating/quality of CTS (60.4%). However, the following aspects were rated as 'Poor' or 'Fair': organization and coherency (77.1%); commitment of coordinators (64.6%); CTS achieved stated goals (62.5%).

Conclusion: Our study identified training gaps in junior clerkship rotations during the COVID-19 pandemic. The

CTSC provided opportunities to develop clinical competencies disrupted by the pandemic.

P-23

The Dengue COVID Syndemic in the Caribbean

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Objective: Similarities in clinical, laboratory, and cytokine responses have been demonstrated in Dengue Fever and COVID-19 diseases. This study aims to determine a geographical correlation between COVID-19 mortality and the prevalence of dengue fever.

Design and Methods: This is a geographical ecological study among 16 Caribbean islands. Using secondary online data sources, we compared COVID-19 and dengue mortality, with dengue incidence rates among Caribbean islands. To minimize the impact of vaccination on outcomes, data from 2020 was used. The percentage of the population > 65 years, income level, hospital beds/1000 people, physicians /1000 people, and nurses/1000 people were assessed for correlations with mortality outcomes. Pearson correlations were calculated using SPSS version 20

Results: Demographic, health system indicators, and COVID-19 mortality varied among islands with the widest disparity in dengue incidence rates. Dengue mortality and dengue incidence rate were found to be moderately positively correlated, $r(14) = .528$, $p = .036$. There was no correlation with dengue incidence rate and COVID mortality, $r(14) = .1$, $p = .713$. COVID-19 and dengue mortality were not associated with percentage population > 65 years or health system indicators

Conclusion: There was no ecological link in islands with high dengue incidence rates and COVID mortality. Dengue mortality correlated with high dengue incidence rates. This study did not demonstrate disease synergism. Further evaluation of cases of dengue COVID coinfections can provide additional insight into the dengue COVID-19 syndemic. A high index of suspicion should be maintained in dengue-endemic countries to avert delayed diagnoses.

P-24

Visualization of scientific collaboration and themes for COVID-19 disease in the Caribbean

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Objective: This study aimed to use bibliometric analysis to identify the contribution of Caribbean countries to scientific production regarding the COVID-19 and to describe their international scientific collaborations

Design and Methods: Bibliographic data related to COVID-19 diseases were collected from three international databases (Web of Science, Pubmed, and Scopus), filtered by Caribbean islands of affiliation. Scientific network analysis was performed with VosViewer often used to identify connections between countries or institutions and to identify research themes.

Results: The dataset comprised 800 indexed articles, with 52% of articles categorized in the top quartile of quality having at least one author from the Caribbean region. By scientific network analysis, the USA, was undoubtedly the leader in 275 publications in first or last position. Cuba was the first Caribbean island found to lead research on COVID-19, with a total of 88 articles. The USA was the major partner of Caribbean countries with 54 links and 400 publications. Key research topics were related to the description and the impact of COVID-19 on Public Health and on epidemiological research.

Conclusion: Co-authorship network analysis on COVID-19 revealed the dynamics of collaboration, and provides insights into Caribbean collaborations that deserve to be created and consolidated on further research on COVID-19

P-25

The integration of Digital Health Technology in polyclinics and its impact on patient care in the elderly: a Systematic Review

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Objective: To evaluate the impact of digital health technology on patient-care in the elderly population in polyclinics between the period 2010 to 2021.

Design and Methods: A mixed method of quantitative and qualitative research was done and secondary data collection methods were employed using a methodical process of a systematic review utilizing the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) Framework to screen the articles.

Results: 2904 articles were found, 0 articles were duplicated and 83 items were eligible for screening. Through the second tier of the PRISMA Framework, articles were then characterized based on the aim and objectives via the titles and abstracts. 72 Articles were excluded because they were

not aligned with the theme of the research, thus 12 articles were included after the inclusion and exclusion criteria were applied.

Common themes ran through the articles including: quality of care, inter-organizational relation, benefits, opportunities, barriers to accessing health care and health information, business process, clinical healthcare process, cost effectiveness, ethnic group differences, social determinants of health and patient participation and health seeking behavior.

Conclusion: There are many barriers and facilitators to initial Digital Health Technology uptake and engagement. This is dependent on the timing, the competency and confidence of the user, willingness to adapt and accept new technology, patient support, social and economic factors as well as physical health conditions of the elderly population. There are also many opportunities for development which includes education and training, tele-rehabilitation, community engagement especially those with ethnic minorities, and advocacy.

P-26

Item analysis of multiple choice and extended matching questions at the Faculty of Medical Sciences, the University of the West Indies

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Objective: This study was a comprehensive comparative analysis of the performance of EMQ and traditional MCQ formats in the written medicine and therapeutics component of final MBBS examination.

Design and Methods: An item analysis of 80 EMQs and 200 MCQs administered to 532 examinees across four campuses/site in different Caribbean countries during final MBBS medicine and therapeutics examination of 2019. Exam performance measures included central tendency, item discrimination, reliability, item difficulty, and distractor efficacy.

Results: For the 532 students who sat the exam, the highest, lowest, and mean (+SD) scores for EMQs were 93, 41, and 69.0 (+9.8); for MCQs, the respective values were 82, 41 and 62.7 (+7.4). The predictive value of EMQ and MCQ scores for overall failure was 0.67 (95% CI = 0.39, 0.87) and 0.89 (95% CI = 0.65, 0.98) respectively. There were no

statistically significant differences in discrimination index (DI) scores by question type for any of the four cohorts. KR-20 coefficients for EMQs and MCQs ranged from 0.52 to 0.70 and 0.71 to 0.79, respectively. The proportion of questions with two or more functional distractors was consistently higher for MCQs than for EMQs in all four cohorts of students.

Conclusion: The wider spread of EMQ compared to MCQ scores suggests that the former are suitable for formative assessment. However, MCQ scores were more predictive of overall exam failure, which suggests that MCQs are more suitable for high-stakes assessments such as the final MBBS examination.

P-28

Impact of the COVID-19 Pandemic on Perceived Stress and Eating Behaviors of Undergraduate and Postgraduate Students of UWI, Cave Hill Campus, Barbados

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Objective: The impact of the COVID-19 pandemic on perceived stress, anxiety, depression, and eating behaviors of university students in Barbados was investigated.

Design and Methods: Students completed an online survey between June and July 2021 including the Patient Health Questionnaire (PHQ-4), SCOFF Questionnaire, and Salzburg Stress Eating Scale. We used bivariate and multivariable logistic regression to assess factors associated with eating behaviour and eating disorders.

Results: Of 506 respondents (mean age 26 years, 81.4% female, 85.2% undergraduates), 7.23% were underweight, 52.34% normal weight, 20.85% overweight, and 19.57% obese. PHQ-4 screening suggested anxiety prevalence of 46% (95% CI 42% to 51%) with 22% (95% CI 17% to 25%) severe anxiety, and 43% (95% CI 39% to 47%) depression

prevalence. 22.5 % of students screened positive for eating disorders on the SCOFF; positive screen for eating disorder was more likely positive in obese (36%) vs underweight (15%) students (p

Conclusion: The screening instruments indicated concerning levels of anxiety, depression, and eating disorders associated with the COVID-19 pandemic among university students in Barbados. These conditions may remain undetected unless students seek help or are referred. Proactive health services and educational outreach are needed. Prevalence estimates should be viewed with caution until cut-off scores are empirically established for students in Barbados.

P-29

Occupational stress among non-clinical healthcare staff at the University Hospital of the West Indies, Jamaica during COVID-19

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Objective: To understand how non-clinical healthcare workers at the University Hospital of the West Indies, Jamaica experience occupational stress during the COVID-19 pandemic.

Design and Methods: This qualitative exploratory study was conducted using semi-structured interviews and a focus group. The 12 research participants were employees at the University Hospital of the West Indies who were non-clinical healthcare professionals such as housekeepers and administrative staff. Data analysis was completed manually in Microsoft Excel concurrently with QCAmap using the principles of qualitative content analysis. Ethical approval was granted for this study by the University of Essex Online Ethics Committee and the Mona Campus Research Ethics Committee.

Results: There were three significant findings in this study. First, the events and conditions in the workplace which cause occupational stress among the sample during the pandemic occurred in three layers, latent, manifest, and antecedent. Secondly, there is an interrelation between occupational stress and the cultural, social, and financial situations in the participants' lives. That is, each component is related to one another which altogether contributes to the overall experience of occupational stress. Third, managers should demonstrate their interest in the well-being of non-clinical healthcare professionals by taking a risk-based approach to provide effective psychological support during the COVID-19 pandemic.

Conclusion: Non-clinical healthcare workers experience occupational stress similar to clinical healthcare workers and their psychological needs should be given similar priority.

P-30

Improving polycystic ovarian syndrome management in Kingston, Jamaica

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Objective: What are the opinions of general practitioners and women with polycystic ovarian syndrome (PCOS) using Metformin compared to lifestyle changes to treat menstrual irregularities in Kingston, Jamaica?

Design and Methods: This was a qualitative study using content analysis method held in the parish of Kingston & St. Andrew, Jamaica with women diagnosed with PCOS based on the Rotterdam criteria, and general practitioners who treat women. The data were collected via 12 semi-structured interviews with women with PCOS between the ages of 18 to 40 years and from 18 online surveys by general practitioners. Analysis was performed using a framework approach.

Results: The analysis of the data noted five themes and fifteen sub-themes from discussion with participants. These include: 1) Knowledge of PCOS (Hormonal imbalance, Insulin resistance and Infertility); (2) PCOS Diagnosis by General Practitioner (Menstrual dysfunction, Pelvic Ultrasound and Hormonal panel); (3) PCOS comorbidities (Type 2 Diabetes and Dyslipidemia); (4) PCOS Management (Oral contraceptive pills, Metformin and Lifestyle change) and (5) Openness to PCOS Trial (Resistance to medication, Resistance to lifestyle change, Financial constraints and Poor patient compliance).

Conclusion: Diagnosis of PCOS in Kingston, Jamaica appears to be standardized, however there are varied opinions of women with PCOS and general practitioners regarding PCOS management, as OCPs and lifestyle changes were most commonly used for menstrual irregularities. The management of women with PCOS could be enhanced by earlier diagnosis, increased knowledge on hormonal panel testing and improved lifestyle support.

P-31

Description of strategies for linking health fair participants to treatment after abnormal screening results for chronic diseases: A review of the literature

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Objective: The objective of this study was to highlight the strategies reported in the scientific literature aiming to link health fair participants to treatment following an abnormal NCD screening exam.

Design and Methods: The databases, PubMed, Scopus and Google Scholar were used to search for all the relevant articles published up to July 2020. We included in our final analysis: Articles that demonstrate an increase in screening for non-communicable diseases through participation in the health fair regardless of the study design. We extracted information strategies that improve the management of people following an abnormal result and barriers and/or levers to screening during health fairs.

Results: Of the 46 studies found from screening abstracts, 30 studies were included into our review. After full-text reviews, 21 met our criteria. All studies took place in the USA except for two (Kenya and Uganda, and Japan). The strategies used for better compliance to follow-up included: reminder phone calls, brochures, instructions, and mammogram results sent by mail, on-site health education, and tracking. Physicians, study oncologists, nurses, peer health advisors, patient navigators and lay health worker facilitated these strategies. In certain studies, the emphasis was placed on the use of culturally appropriate facilitators.

Conclusion: Phoning and mailing using culturally appropriate facilitators were common. These strategies can help our communities in the Caribbean in designing health fairs to better prevent chronic disease. However, these data are scarce in low-and-middle-income countries where health fairs are most important. More interventional/quasi-experimental studies evaluating these strategies are needed.

P-32

An Investigation into the Ocular Effects of Chemotherapy in Breast Cancer Patients Ages 35–65 at the Georgetown Public Hospital Oncology Department Georgetown Public Hospital, Guyana

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Objective: Investigate the ocular effects of chemotherapy in breast cancer patients'

Design and Methods: A cross-sectional study design was done involving 112 previously diagnosed breast cancer patients, aged 35 to 65 that were divided into 3 groups (Never received Chemotherapy, Currently Chemotherapy and Finished Chemotherapy. A questionnaire was adminis-

tered to the study group in addition to being subjected to an eye test. The main questions included, chemotherapy status, stages of cancer, presence of ocular issues and family history.

Results: Sixty-five percentage (65%) of patients had ocular effects from chemotherapy which was significant. 100% of the patients who were currently on chemotherapy had experience ocular effects. The effects of the drugs on the patient's vision increased by 83% while those who completed chemotherapy they ocular problem decreased by 87.5%. Blurred vision along with severe light sensitivity was the most common ocular effect caused by chemotherapy as it was observed in 21% of total patients.

Conclusion: Prior studies and research in the literature review relatively shown evident that the effects of chemotherapy drugs on Breast cancer patient's vision was significant, which correlates to this study. 100% of patients who were currently on chemotherapy experienced one or more ocular effects in their vision.

P-33

Understanding Factors that Influence Adherence to Pharmacological Treatment among Type 2 Diabetes Mellitus Adults and The Role of Social Inequalities: A Systematized Review

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Objective: To understand the factors that influence pharmacological adherence amongst patients of lower socio economic status who have a diagnosis of Type 2 Diabetes

Design and Methods: A systematized review was conducted from October, 2021 to December, 2021 using the following databases: Pubmed, LILACS, Cochrane Clinical Answers, Cochrane Methodology Register, Cochrane Central Register of Controlled Trials, Cochrane Database of Systemic Reviews, CINAHL, Medline Complete and Psyc Articles. Full-text English language publications from 2006 to 2021 were chosen. The search aimed to review Caribbean and Latin American literature around the concepts of pharmacological adherence among social inequalities and type 2 diabetes mellitus patients. One researcher extracted the data, and two researchers independently assessed the quality of the articles using pre-established eligibility criteria.

Results: Seven articles were retained based on eligibility and quality criteria. The literature showed that low socioeconomic status among patients with type 2 diabetes mellitus had a significant impact on pharmacological adherence. Several factors contributed to pharmacological adherence including lack of resources, lifestyle modification issues, access to medications, lack of family support, mental health disorders, personal problems and cultural beliefs. A multi-

disciplinary team approach inclusive of innovative models with community workers, healthcare providers, and health system support has been recommended. However, the nature of innovations (including the use of digital technology) has not been clearly elucidated

Conclusion: Pharmacological adherence in patients with type 2 diabetes mellitus who are also of low socioeconomic status is influenced by multiple factors. Effective care requires a multidisciplinary approach which includes innovations. Further research is needed on the potential benefits of digital technology to improve pharmacological adherence among this population in the Caribbean.

P-34

The Use of Cheminformatics to Determine Potential Drug Interactions between Popular Barbadian Botanical Medicines and Antihypertensive Drugs

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Objective: Bajans have a rich traditional use of medicinal plants, especially among the older population. This study aims to identify possible drug-herb interactions between popular herbal remedies used to manage elevated blood pressure and conventional anti-hypertensive drugs.

Design and Methods: In this study, in silico molecular docking experiments with AutoDock Vina (Scripps Research Institute, La Jolla, CA), apart of Yasara Structure software, version 20.12.24 were used to screen 30 potential phytochemicals from 11 popular plants in Barbados that are used for high blood pressure and could influence the pharmacology of the most prescribed antihypertensive drugs in Barbados.

Results: Thiazide and Thiazide-like Diuretics, Calcium Channel Blockers, ACE Inhibitors, and ARBs are the most prescribed antihypertensive drugs. Twenty-seven phytochemicals show dissociation constants (K_d) $<10 \mu\text{M}$ with pharmacologic drug targets. *Catharanthus roseus* (L) Don, *Phyllanthus niruri* L, *Petroselinum crispum* (Mill.) Fuss and *Lantana involucrata* L contain various compounds that show high binding affinities in all experiments. Possible interactions could affect renal excretion (Thiazide-like diuretics), CYP metabolism (CCB), absorption (ACE-I), hepatic CYP and Phase II metabolism (ARBs). Oleanolic acid shows high binding affinities to almost all protein targets. This study also reveals potential candidates for the drug targets: Cav 3.3 (psychiatric diseases), PEPT1/2 (influencing bio-availability) and BK-channel (epilepsy).

Conclusion: There should be greater awareness of potential drug-herb interactions with *Catharanthus roseus* (L) Don, *Phyllanthus niruri* (L), *Petroselinum crispum* (Mill.) Fuss and *Lantana involucrata* (L) with antihypertensive medi-

cation. Further in-vitro and in vivo studies are needed to unravel the exact effects on pharmacology.

P-35

The Use of WhatsApp messages as a Support Mechanism for Type Two Diabetes Meletus (T2DM) in a community setting during COVID-19

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Objective: To explore the role and applicability of the social media platform WhatsApp for supporting Type II-Diabetes Meletus self-management in a community setting.

Design and Methods: Qualitative Secondary Analysis of 155 A4 pages of single text WhatsApp messages occurring from March 2020 to August 2020 between five female patient participants and seven health care support personnel in a community-based diabetes project in Barbados. Support personnel were five trained lay persons (Health Advocates) one nutritionist and a researcher. An interpretivist philosophical paradigm informed inductive coding and thematic analysis with constant comparison. Data was managed with Atlas.ti 9.

Results: Participants perceived that the WhatsApp chat assisted them with successfully normalizing Blood Sugar, improving their dietary habits and weight-management. Additionally, the social media tool aided diabetes reversal by increasing self-management, and resilience in lock-down periods during the COVID-19 pandemic outbreak in Barbados; providing access to health care in the context of disrupted face-to-face support.

Conclusion: Diabetes self-management and reversal can be aided in the virtual setting using low-cost social media 2.0 tools such as WhatsApp. These tools may be useful in NCD management in the context of other socially isolating circumstances- including on non- pandemic related situations e.g., persons who live in remote rural, or alone. More research is needed to assess the usefulness and ease of implementation of such virtual interventions.

P-36

Physical activity and its influencing factors in a population of ambulating chronic community-dwelling stroke survivors.

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Objective: Little is known about physical activity (PA) levels in stroke survivors from low- and middle-income countries compared to high income countries. This study aims to explore PA level, PA intensity and their influencing factors in chronic community-dwelling stroke survivors in Suriname, a middle-income country.

Design and Methods: Fifty participants were recruited from the database of the Rehabilitation Center Paramaribo and the local community. The Garmin forerunner 225 was used to measure PA level (step counts) and intensity (Energy Expenditure, EE). BMI was categorized as normal, overweight and obese. Ethnic background was categorized as Asian, African and other. The Mann-Whitney test was used to assess the association of PA intensity with sociodemographic and (non-)modifiable risk factors.

Results: The mean age of the participants was 58 ± 9.5 years and the majority were female ($N = 26, 52\%$), of Asian background ($N = 28, 56\%$), had an ischemic stroke ($N = 46, 92\%$), and had a good functional balance ($N = 44, 88\%$). The median PA intensity was 24.2 cal/kg/day (min 15.9 – max 31.5) and the median PA level was 5016.2 (min 571.4 – max 16371.0) steps/day. We found an association between EE and ethnic background ($U = 189, p = 0.018$), BMI category ($U = 174, p = 0.016$), and the use of a walking aid ($U = 235, p = 0.033$).

Conclusion: The PA level and intensity in chronic stroke survivors are well below the recommended levels for cardiovascular health enhancement. More exploratory research is necessary to better understand the influence of sociodemographic and (non-) modifiable risk factors on PA in this population to develop tailored PA promotion and rehabilitation programs.

P-37

Gender Analysis of Caribbean Food and Nutrition Security Policies to Enhance Noncommunicable Disease Reduction Strategies

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Objective: To assess coherence between food and nutrition security policies, global and national commitments to gender equality in CARICOM, Jamaica, St Kitts and Nevis and St Vincent and the Grenadines and to suggest entry points for including gender perspectives as part of strategies to reduce the high levels of non-communicable diseases

Design and Methods: In July 2020, gender was used as an analytical tool to review food security and nutrition policies in the caribbean community (CARICOM) including the three member states which were the study sites for the

IDRC-funded project 'Improving household nutrition security and public health in the CARICOM', (fan). Gender analysis tools were used to assess coherence between commitments to gender mainstreaming and the four food security and nutrition policies reviewed.

Results: Coherence varied in integrating gender in the four food security and nutrition policies reviewed. Three policies used some gender-sensitive language, but there was limited use of sex-disaggregated data and gender indicators for monitoring and evaluation.

Conclusion: To improve coherence between policy commitments to gender equality, promoting food and nutrition security and reducing risks of non-communicable diseases, public health policy makers and practitioners should adopt a rights-based approach to public health and adopt gender mainstreaming as a strategy to improve gender equality in health outcomes. Key entry points include: gender budgeting; training public health practitioners to integrate gender issues in health policies and programmes, using inclusive gender-sensitive language in policies to identify vulnerable groups; collecting and analysing gender disaggregated data and developing gender indicators to support monitoring and evaluation.

P-38

Association between 1-km time trial cycling speed and recovery blood lactate at various intervals

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Objective: Major objectives of this study were to determine (1) the relationship between cycling speed and blood lactate concentration ([BLa]) at various intervals following 1-km Time Trial cycling (1-kmTT), (2) the arrival time of peak blood lactate ([BLa]peak) during recovery, and (3) heart rate (HR) response during 1-kmTT.

Design and Methods: In 12 track cyclists, [BLa] was determined at 3 min ([BLa]3min), 5 min ([BLa]5min), and 7 min ([BLa]7min) of the recovery period following 1-kmTT race. The highest [BLa] among the 3 recovery blood samples was recorded as the [BLa]peak. Heart rate was recorded during the race. Correlation (r) and effect size (ES) between average cycling speed and [BLa] at various intervals following recovery were determined.

Results: The [BLa]3min (18.15 ± 2.80 mmol/L) was the highest followed by [BLa]5min (17.32 ± 2.65 mmol/L) and [BLa]7 min (15.80 ± 2.58 mmol/L), whereas [BLa]peak was 18.23 ± 2.78 mmol/L. Peak heart (HRpeak) (189.4 ± 4.2 beats/min) of the cyclists attained at the end stage of 1-kmTT was $97.8 \pm 1\%$ of their maximal heart rate. Average

cycling speed (14.31 ± 0.53 m/s) showed best correlation with [BLa]peak ($r = 0.582$, $p = 0.047$, ES = LARGE), followed by [BLa]3min ($r = 0.561$; $p = 0.058$, ES = LARGE), [BLa]5min ($r = 0.48$; $p = 0.114$, ES = MEDIUM) and [BLa]7min ($r = 0.382$; $p = 0.221$, ES = MEDIUM).

Conclusion: The results conclude that: (1) 1-kmTT performance is best correlated with [BLa]peak, (2) usually [BLa] peak arrives 3 min following the race, and (3) heart rate reaches close to the maximum, during race.

P-39

Cross sectional study of the knowledge and attitudes of Medical Cannabis amongst prospective health care professionals in Trinidad and Tobago.

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Objective: This study aimed to determine the knowledge and attitude of prospective health care providers with respect to medical Cannabis.

Design and Methods: A self-administered online questionnaire comprising 21 questions to assess the knowledge, attitude and perception of medical Cannabis was distributed via google forms among students at the Faculty of Medical Sciences, University of the West Indies, St Augustine Campus. Chi-square analysis was used to detect significant associations between demographics and measured variables. A p -value < 0.05 was considered significant.

Results: The response rate was 17.6% ($n = 388$) and the mean age of respondents was 22.88 ± 3.22 years. The three most popular perceived therapeutic benefits of Cannabis were chronic pain (91.2%), anxiety (84.2%) and seizures (71.1%). Identification of the risks associated with the use of Cannabis was low amongst respondents with psychotic symptoms (71.3%), memory problems (66.1) and respiratory symptoms (65.9%) being most commonly identified. Users of Cannabis were able to identify indications and symptoms that can be treated with Cannabis but were less aware of the adverse effects of the drug than non-users ($p < 0.001$). More than three quarters (87.3%) believed they could identify therapeutic uses and adverse effects but only 14.2 % were ready to answer queries from patients. The main source of Cannabis information was the internet and information was lacking in the medical school curriculum.

Conclusion: The majority of students were not able to identify indications and adverse effects of the drug. There is a need to improve training for all prospective medical personnel to cater for the change in legislation status in T&T.

P-40

Yoga for Smoking Cessation: A Review of Effectiveness and Feasibility on Sex Differences

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Objective: Containing more than 7,000 chemicals, cigarette smoke is attributable to 8 million preventable deaths globally each year. Despite the availability of smoking cessation medication, in 2018, only 7.5% out of 55% of adult smokers who attempted to quit, succeeded. The reasons behind a low successful quit rate are dependent on many factors, including sex differences. Women have been reported to have a more difficult time quitting and achieving abstinence. Women tend to smoke to regulate mood, whereas men are shown to be more sensitive to the effects of nicotine, facilitating physical dependence. Given that yoga has already been shown to have some success in smoking cessation, we discuss the feasibility of developing a yoga-based intervention using sex differences as a guide.

Design and Methods: PubMed was used as a primary search engine with the search algorithm ["smoking cessation," AND "yoga"] to obtain articles evaluating smoking cessation programs, comparing variables by sex.

Results: Yoga increased the odds of 24 hr smoking cessation in women (OR 4.19) but did not significantly contribute to maintaining long term abstinence. Women were more likely to experience withdrawal (41.6% vs 34.9%) and anxiety (41.6% vs 34.9%) symptoms during quit attempts but showed greater attendance rates for yoga classes. More women expressed concern for weight changes (15% vs 0%). Confidence was a point of similarity between both sexes.

Conclusion: Women may benefit more from yoga-based smoking cessation methods, while men may respond more to a wellness focused approach. Due to lack of papers on this topic, more research is needed to design effective interventions.

P-41

Perceptions and experiences of six to sixteen-year-old school children in Barbados on wearing eyeglasses

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Objective: To explore the perceptions and experiences of school children in Barbados on eyeglasses and their use.

Design and Methods: A qualitative approach informed by an interpretivist paradigm and the philosophy of ontological relativism was used. Children from ages 6 - 16 years old in Barbados who were wearing glasses for 1 year or more

were recruited from public and private paediatric eye clinics using purposeful sampling. Data were collected using semi-structured, one-on-one interviews. These explored experiences associated with finding out spectacles were required, receiving glasses and being a spectacle-wearer. Data was analysed by thematic analysis with constant comparison, supported by Atlas.ti 9 software.

Results: Participants described various emotions on finding out they needed to wear glasses, perceptions that glasses-wearers are "smart" and beliefs that using glasses could be a cure or harm. Emerging themes included: 1) Wearing glasses affects the social perspectives and emotional health of children; 2) Beliefs about glasses and visual health.

Conclusion: Children have a stake in how their visual health is managed. Clinicians should explore the paediatric patient's emotions and beliefs about glasses when prescribing

P-42

An Assessment of the Sleep Efficiency in Healthy Medical Sciences Staff Members

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Objective: To describe the sleep parameters of latency, total sleep time, wake after sleep onset, total time in bed and sleep efficiency in healthy members of the faculty of medical sciences.

Design and Methods: This study recruited 14 healthy adults between age 25–50 years, employed at the Faculty of Medical Sciences, with no known history of sleep disorders. Sleep parameters were assessed using Phillips Respironics Actiwatch-2® on non-dominant wrist from Monday to Thursday for two weeks. Participants were classified as good sleepers at a SE = 85% and as poor sleepers below this threshold. Descriptive statistics involved median and interquartile range (IQR) and frequencies. Medians were compared using the Mann-Whitney U test and considered significant at $p < 0.05$.

Results: Nine females and five males completed the study with median age of 37[17] years. On average SL was 17 minutes, WASO was 53 minutes, TST was 377 minutes and TIB was 453 minutes. Females spent a significantly longer time in bed ($p = 0.007$) and slept longer ($p = 0.012$) than males. We found that 71.4% of participants exhibited poor SE ($< 85\%$) and 78.6% were sleeping for < 7 hours, despite being in bed for > 7 hours. Poor sleepers also had significantly longer WASO durations over the study period. No participant reported any medication use.

Conclusion: Most (71.4%) staff members from the faculty of medical sciences were poor sleepers with SE < 85%, who were sleeping for < 7 hours nightly due to increased WASO durations. TIB and TST were significantly longer for females than males.

P-43

Biological Behavioral Surveillance Survey of HIV and STI in Guyana -Round 5

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Objective: To estimate the size of the population of sex workers, men who have sex with men, transgender persons, describe risk characteristics of those populations in addition to miners and loggers, and identify places where key populations can be reached with outreach activities.

Design and Methods: The objectives of the study were met through the implementation of a study using Priorities for Local AIDS Control Efforts (PLACE). PLACE is a cross-sectional data collection technique that recruits participants from spots where target populations socialize

Results: The highest HIV prevalence rates were found among MSW (7.7), Transgender (11.1), and FSW (2.2). More specifically, HIV prevalence rates are highest in Region 4 and 10. Further, high prevalence rates were seen among <25 years old transgender (25) and >25-year-old FSW.

The highest syphilis prevalence rates were among Transgender (7.4), FSW (6.9), and MSM (5.8). Specifically, high prevalence rates were seen among <25 years-old transgender (16.7%), >25-year-old FSW (8.9), and >25-year-old MSM (7.7). Syphilis prevalence rates are highest in Region 10 (11.8) and 5 (7.0). Notably, Region 4, 7, and 1 recorded syphilis prevalence of 5.5, 5.3, and 4.8 respectively.

Conclusion: It is imperative that we continue to deliver evidence-informed strategies and activities to achieve prevention, particularly among the most vulnerable – youth, sex workers, men who have sex with men, and drug users.

P-44

Assessing the quality of patient referrals from primary care physicians at the South-West Regional Health Authority, Trinidad, 2019

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Objective: To assess the adequacy and justification of referrals from primary care physicians (PCPs) to specialized care services.

Design and Methods: Descriptive, retrospective, cross-sectional. In 2019, 1366 patient referrals from PCPs working at 23 centers, obtained via consecutive convenient sampling were audited. Parameters of the referral were assessed using the 'SWRHA Tool for Assessing the Adequacy of Outgoing Referrals from Primary Health Care,' by senior PCPs. Descriptive Statistics were used to calculate the proportions of degree of adequacy and completeness of referral parameters and the distribution of referral scores; referral rates; proportion of referrals to specialized care services and proportion of justified and unjustified referrals.

Results: The referral rate was 5.28%. In terms of adequacy and completeness: Demographics – 77.96% – partially adequately completed; Diagnoses – 91.65% adequately completed; History – 83.82% partially adequately completed; Examination findings – 43.70% – adequately completed. In 57.54% of referrals the treatment given was not completed. In most referrals, sections that were adequately completed include: recent labs – 57.54%; current medications – 48.83%; footer – 55.20%. The scores ranged from 5 to 21; Median – 15; Mode – 16. Based on the senior PCPs' perception, 94.36% of the outgoing referrals were justified. Most patients, 63.84%, were referred to the out-patient clinics and 33.89% to Emergency Department.

Conclusion: Most referrals were justified. The adequacy can further be assessed by an expert panel of end-users. Addressing gaps identified in the referral system should enable cost-effective use of specialized and primary health care services.

P-45

Wastewater surveillance protocol development and implementation for the recovery of viral fragments of an enveloped virus

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Objective: In the summer of 2021, Grenada experienced its first wave of severe acute respiratory syndrome corona-

virus 2 (SARS-CoV-2) cases. Wastewater-based epidemiology (WBE) is an effective methodology to monitor the community spread of pathogens and has been implemented on numerous university campuses to identify potential outbreaks. Standardized effective methods to detect enveloped viruses like SARS-CoV-2 are needed to effectively utilize WBE, as most methods implemented have been validated for non-enveloped viruses.

Design and Methods: *Pseudomonas syringae* bacteriophage (F6) was added to wastewater samples in triplicate to test the efficiency of the VIRuses ADsorption ELution method with two different conditions. Samples were either untreated (NT) or pre-treated with hydrochloric acid (HCl) to a pH of 3.5. The membrane filters were eluted with Tris-EDTA-NaCl buffer followed by Trizol RNA extraction and reverse transcription quantitative polymerase chain reaction to quantify viral particles. This filtration method was implemented at a university campus in Grenada

Results: The ratio of F6 Ct .R / PMMoV Ct .R for both treatments was calculated and compared using t-tests to evaluate significant differences. Results showed a mean ratio of 0.75 ± 0.08 for the HCl treated sample compared to 0.86 ± 0.06 for the non-treated sample. The results were statistically significant ($p = 0.04$).

Conclusion: Membrane filtration using acidification (pH = 3.5) with HCl and elution with Tris-EDTA-NaCl buffer shows to be an effective methodology for the detection of enveloped viruses in WBE. The epidemiological and public health implications of this result will be presented.

P-46

Religious Leaders' Perspectives on Organ Donation & Transplantation in a Developing Country

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Objective: This study evaluated Religious Leaders' personal knowledge and attitudes to organ donation and transplantation (ODT) and whether this changed after an educational video. It used this to gauge if ODT education of these leaders can increase knowledge and acceptance of organ donation in the local communities.

Design and Methods: Approval for research was granted by the NWRHA Ethics Committee. Primary data was gleaned by an Online survey of Religious Leaders' personal knowledge of ODT issued to the leaders of the main religious denominations in T&T via telephone request & email message with the invitation. Views were assessed before and after an educational PowerPoint video on ODT to determine if this can improve OD, brain death dialogue and bereave-

ment counselling as part of end-of-life care, making them community change agents.

Results: Religious Leaders showed supportive positive attitudes to ODT, the majority understood Brain death, and one issued a policy position on deceased organ donation.

Conclusion: Religious Leaders' ODT education can enhance end-of-life care, bereavement counselling and community change.

P-47

An Assessment of the Knowledge, Attitude and Practices of the Utilization of Personal Protective Eyewear Among Welders Employed in Large and Small Scale Companies in Georgetown and East Coast Demerara, Guyana.

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Objective: This research aimed to evaluate the prevalence of ocular injuries and safety practices among welders in the study sample.

Design and Methods: A cross-sectional study design using the qualitative method was used to collect data anonymously from welders aged 17 to over 45 years of age in small and large scale industrial companies in Georgetown and East Coast of Guyana. Data collection was obtained by using pre-tested paper and pencil structured questionnaires; consisting of open and close-ended questions.

Results: A 95% confidence interval was used to determine the significant associations of the variables. A total of 72 respondents, with 96% response rate, were interviewed. All of the participants were male with the median age of respondents being 17–25. Arc eye 61 (84.7%) was the most common injury welders were exposed to, followed by cuts 60 (83.3%). 59 (81.9%) reported that they experience burns while 54 (75%) experienced foreign body. Electric shock 52 (72.2%) had the least amount of reported injuries. A vast majority of the respondents documented that they utilized protective devices frequently with that being 46 (68.1%) goggles, 59 (81.9%) face shields, 61 (84.7%) helmets, 63 (87.5%) gloves, 29 (40.3%) overalls and 36 (50%) using sunglasses as alternative protective device.

Conclusion: The majority of welders in this study are aware of welding-associated ocular health hazards and devices to protect the eyes during welding. However, there were still reported cases of ocular injuries among the study popula-

tion. As such, occupational eye health Programs should be implemented by stake holders.

P-48

Investigating the role Private Health Insurance plays in Universal Health Coverage in the Eastern Caribbean States.

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Objective: This study aimed to understand the role private health insurance plays in Universal Health Coverage in the Eastern Caribbean States. Specifically, the objectives were to determine the percentage of the population covered by private health insurance, the impact of private health insurance on out-of-pocket costs and the barriers to accessing private health insurance.

Design and Methods: A literature review was done for this study searching various databases with keywords “private health insurance” and “universal health coverage”. A total of 18 articles were selected.

Results: The use of private health insurance (PHI) is low in the OECS, particularly among nations without legislation for Universal Health Coverage (UHC). In Antigua and Barbuda, which is the only nation to legislate UHC, the out-of-pocket (OOP) cost and the government transfers are lower than the other nations. Socio-economic status, health literacy, expected benefits and media could be determined as barriers to accessing PHI.

Conclusion: As the OECS makes strives to achieve Universal Health Coverage (UHC), it is important to determine the role of private health insurance (PHI). More research is needed in specific countries of the OECS to understand how impactful PHI can be on UHC.

P-49

Factors Associated with U.S. Virgin Islands' Students Perception of School Safety

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Objective: To examine the factors associated with the perception of U.S. Virgin Islands adolescents of safety in their schools.

Design and Methods: This study represents a secondary analysis of existing datasets. The primary study was conducted utilizing the 2017 Youth Risk Behavior Survey developed by the CDC and adapted for use in the USVI – 10

jurisdiction added questions were included). The methodology used in the primary study is described in detail elsewhere (Valmond, J.M., et al., 2021).

Results: Bullying in school: 35.9% of middle school students reported being bullied on school property. There was a statistically significant association between being bullied in school and feeling safe at school (Chi-square (1, n = 1195) = 25.96; $p < .001$). Cyberbullying: 12.4% of middle school students reported experiencing cyberbullying. There was a statistically significant association between cyberbullying and feeling safe at school (Chi-square (1, n = 1201) = 19.43; $p < .001$).

Bullied on school property: 15.7% of senior high school students reported being bullied on school property. There was a statistically significant association between being bullied in school and feeling safe at school (Chi-square (1, n = 1639) = 59.30; $p < .001$). Cyberbullying: 9.8% of senior high school students reported experiencing cyberbullying. There was a statistically significant association between cyberbullying and feeling safe at school (Chi-square (1, n = 1638) = 47.04; $p < .001$).

Conclusion: Results have implications for educators, public health providers, and policymakers, particularly with respect to exploring interventions to reduce bullying and gang activity in schools, improve the school environment, and increase student safety.

P-50

Effectiveness of Initiatives to Minimize Blood Usage and Wastage at a Public Hospital Setting in Guyana

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Objective: This is a cross-sectional descriptive follow-up study which analysed the pattern of blood usage and wastage after initiatives were taken following the initial study done in Guyana from 2012 to 2014. This study also assessed the healthcare personnel's knowledge regarding blood transfusion.

Design and Methods: A study was conducted concerning blood product usage and wastage using data from the laboratory blood bank information system in 2016–2018 in the public hospital. Information on knowledge, attitude, practices and administrative guidance of healthcare personnel was assessed using a self-administered questionnaire on different areas of transfusion medicine. Usage of blood products was calculated as a percentage, and wastage of blood products was calculated as the number of units wasted due to each reason divided by the total number of units wasted. The data were entered and analysed in SPSS 21.0.

Results: A total of 29,577 units of blood were issued by the National Blood Transfusion Service. Each year, a blood unit collection of 9,745 (32.9%), 9,765 (33.0%), 10,067 (34.0%) units, respectively, was recorded. Data indicated that 3,851 units (13.0%) of blood were wasted at the Georgetown Public Hospital Cooperation due to various reasons. Packed red blood cells were the most commonly used blood product that was issued (52.5%) and platelets (47.8%) were the most commonly wasted product. In comparison to the previous

study, blood wastage decreased from 25.4% to 13.0% after implementing simple interventions. Results of examination of knowledge, attitude, practices and administrative guidelines of health personnel were not satisfactory.

Conclusion: Simple and relatively cheap interventions introduced following the previous study had a dramatic impact on reducing blood wastage in the public hospital in Guyana.



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