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WIMJAD



**66<sup>th</sup> Annual CARPHA Health Research Conference**

**COVID-19 and Digital Health:  
Transforming, Connecting, Informing Public Health**

**September 15–17, 2022**

**Kingston, Jamaica**

**In-person and Virtual Conference**

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## **Caribbean Public Health Agency**



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### **COVID-19 and Digital Health: Transforming, Connecting, Informing Public Health**

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# CARIBBEAN PUBLIC HEALTH DAY JULY 2ND



**Public Health is what we do  
collectively to keep us all healthy**



Caribbean Public Health Day is held on July 2nd every year to highlight the contribution public health can make to the socio-economic development of the Region, and to sensitize Caribbean people about the importance of public health"

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## COVID-19 and Mental Health

*Professor Gerard Hutchinson, CARPHA Research Advisory Committee*

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### Introduction

The impact of the COVID-19 pandemic on mental health has been profound. According to the World Health Organisation (WHO) interest in mental health is at its highest ever level because of COVID-19 (1) and it has affected the mental health of people all over the world, including here in the Caribbean. It is estimated that about 1 billion people suffer with some form of mental health problem at any given time and the cost of these problems to the world's economy is expected to reach 6 trillion US dollars annually by 2030. The WHO report suggests that the pandemic has led to an increase in the prevalence of conditions such as anxiety and depressive disorders to the magnitude of at least twenty-five percent. The intersection of mental health and the effects of the COVID-19 pandemic also highlighted the degree to which mental and physical health are intimately intertwined and in turn impact significantly on public health. The mental health vulnerabilities arising out of the pandemic were due to its direct health impact and also as a result of the measures introduced to contain its spread.

### COVID-19 and the brain

Direct and indirect effects on mental health were predicted in the early phase of the pandemic especially as it was noted that the COVID-19 virus itself could affect the brain and nervous system directly and was likely to have neuropsychiatric effects in the short and long term (2). The effects of the covid virus on the brain and the body of those who contracted the virus – brain fog, intense fatigue, insomnia and long covid, stigma and interruptions to life activities have been a primary concern particularly for those who suffered more severe symptoms. Health services may need to brace for increased uptake on services particularly as there appears to be a strong overlap between the long-term effects of the virus and non-communicable chronic diseases, making the management of the latter more challenging. The presence of medical co-morbidities, particularly non-communicable chronic diseases became recognized as the greatest risk for increased morbidity and mortality during the pandemic.

### COVID-19 Stressors

In addition, some of the identified mental health stressors associated with the pandemic include the stress associated with 1. the fear of infection and the fear of death for oneself

and for one's family and friends; 2. the public health and social distancing measures implemented for the pandemic; 3. loss of income, unemployment, and financial insecurity and 4. uncertainty and misinformation regarding every aspect of the pandemic (1). There was also the evident mental health impact on health care workers and other frontline workers who were having to confront unprecedented levels of mortality and extended working hours alongside the use of physically restrictive personal protective equipment and also to worry about fears of acquiring and transmitting the virus to their loved ones. This has led to increased levels of burnout and dissatisfaction, and exacerbated previous concerns about working conditions and mental health support (3). In the Caribbean, one study (4) reported that contact with confirmed cases of COVID-19 was a significant predictor of depressive symptoms in health care workers. More generally, all workers as part of society's grappling with the pandemic required a greater engagement with their mental well-being. Employee wellness has therefore become a priority area for employers in order to preserve morale and maintain commitment to their work.

### Mental Health Services

Mental health services have had to adapt to these new demands while continuing to serve those already receiving mental health treatment who too would have been further undermined by all the factors listed above (5). Those already suffering with mental illness were identified as a particularly vulnerable group being more likely to contract the COVID-19 virus and also more likely to have a worse outcome particularly with the neuro-psychiatric manifestations of the infection (6). They were also further undermined by disruptions to the usual access to their services because of the impact of the pandemic.

### Grief and Loss

COVID-19 related deaths have also been reported as eliciting more severe grief reactions from loved ones because of the inability to say goodbye appropriately and the need for altered funeral arrangements. In addition, many relatives would have themselves been quarantined when their loved ones passed away adding another layer of difficulty to the bereavement process (7).

### **Substance Use and Intimate Partner Violence**

The effects of the mitigation and public health stay-at-home measures are also still emerging. Increases in substance use, for example more alcohol drinking at home, and in front of children, alongside drinking significant amounts of alcohol before 5pm. There was also a general increase in alcohol consumption reported during the pandemic. Higher levels of anxiety have been found to be associated with increased levels of alcohol consumption underlining the significance of mental health in the prevalence of heavy drinking during the pandemic (8). There were increased reports of domestic intimate partner violence during the pandemic with likely risk factors being increased alcohol use and economic and employment uncertainty (9). The Caribbean has had high rates of intimate partner violence before the pandemic and Jones (10) suggests that it represents a continuum beginning with child sexual abuse and socio-cultural norms that sanction violence in relationship contexts and that these were amplified by the lockdown measures during the pandemic. The inability to engage in previously relaxing stress reduction activities in social spaces as well as in sports and exercise may have also contributed to the decline in mental health and resilience and an increase in violence within the household.

### **Children and Adolescents**

The impact on children and adolescents has also been very significant though this demographic was at lesser risk of contracting the virus and of having serious illness in response to infection. School closures, disruptions to activities and greater interaction with screens were reported to have negative mental health consequences including anxiety, depression, and post-traumatic stress responses. They were also negatively affected by parental stress. In the aftermath of these issues, developmental and behavioural problems such as school violence, school dropouts, absenteeism and increases in deviant and inappropriate behaviour are also likely to become more prevalent. Substance use and bullying especially cyber bullying are also likely to increase in prevalence. Decline in academic performance particularly for those already operating under disadvantaged circumstances can also be expected with profound implications for the perpetuation of social and health disparities and loss of developmental mobility. Self-harm and suicidal behaviour have also increased during the pandemic demanding a greater sensitivity to these issues from mental health and paediatric services (11).

### **The Elderly**

There are also specific mental health concerns for the elderly who were at increased risk for COVID-19 and negative outcomes because of the greater likelihood of them having co-morbid medical illness. The elderly would also be more affected by social isolation and were therefore at increased risk for depression, anxiety, and other mental

health problems. Infection with COVID-19 also contributes to an additional risk for dementia- which is also a burgeoning problem in the Caribbean region. Greater attention and regulation need to be placed on long term care facilities where many elderly persons reside and mental health support is a critical component of this attention (Llibre-Guerra et al, 2020). Mental health resources need to specifically address the mental health of the elderly to avoid even greater demands on health care resources.

### **Conclusion**

The onus is now on the leadership in the Caribbean to increase the value placed on mental health promotion and the prevention of mental health problems. This will involve facilitating greater mental health resources and facilitating positive interactions between health and social sectors in order to provide the best environment for positive mental health. According to the WHO (1), better mental health for all requires that mental health is valued and protected, that every individual has the opportunity to thrive and to exercise their human rights. Every individual must also be able to access the mental health care that they need whenever it may be needed.

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# ACTS OF Love



**Protecting yourself and others from  
COVID-19 is an act of love.**

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• **Vaccinate**



**66<sup>th</sup> ANNUAL CARPHA HEALTH RESEARCH CONFERENCE**  
**AC HOTEL MARRIOTT**  
**Kingston, Jamaica**  
**September 15–17, 2022**

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**DAY 1: Thursday 15th September, 2022**

**Session 1                    OPENING SESSION**

**8:00 am                    FEATURE LECTURE 1**

**Title: The COVID-19 Pandemic in the Caribbean – Thirty (30) months and counting. Is it over?**

**Speaker: J. St. John**

**Chairperson:**

**Room: Rocksteady 2 & 3**

**8:45 am                    Keynote Address:**

**Title: Using Digital Health to Improve Health Equity**

**Speaker: L. Pace**

**Chairperson:**

**Room: Rocksteady 2 & 3**

**9:45 am                    COFFEE BREAK/ EXHIBITS**

**POSTER FORUM 1**

**Room: Rocksteady 2 & 3**

**Time                        Session 2: Emerging Research Themes**

**Chairperson: D. Ramdath**

**Room: Rocksteady 2 & 3**

**10:30 am                    (O-01) COVID-19 Vaccine Hesitancy in the Jamaican Populace: Prevalence and Associated Factors**

*P Thomas-Brown, D Wynter-Adams*

**10:45 am                    (O-02) Perspectives of primary care providers and policy makers on the impact of COVID-19 on the health system in Dominica**

*K Celestine, H Harewood*

**11:00 am                    (O-03) Psychological effect of COVID-19 on health care workers in primary care during the SARS-CoV-2 pandemic in Trinidad for the period March 2020 to March 2021**

*N.D. Maharaj*

**11:15 am                    (O-04) The association of birth weight and body composition during Infancy in 1-year-old Jamaican children**

*P Hall, M Gossell-Williams, G Gordon-Strachan, M Thame*

<b>Time</b>	<b>Session 2: Emerging Research Themes</b>
	<b>Chairperson:</b> D. Ramdath
	<b>Room:</b> Rocksteady 2 & 3
<b>11:30 am</b>	<b>(O-05) Uncovering the driving forces behind the trend in coronary heart disease mortality in Barbados from 2009–2018</b> <i>F Carter, W Jones, NP Sobers</i>
<b>11:45 am</b>	<b>(O-06) Assessment of pre-hospital measures on outcomes in snake envenomation</b> <i>C Hatcher, N Nguyen, S Bidaisee</i>
<b>12:00 noon</b>	<b>(O-07) A biological active enquiry of Tradescantia zebrina (Wandering Jew/ Red Watergrass) on blood glucose levels in normal Sprague-Dawley rats</b> <i>S Newman, L Lindo, I Amarakoon</i>
<b>12:15 pm</b>	<b>(O-45) An Investigative Study on the Perception and Acceptability of a COVID-19 Vaccine of the Public in Trinidad and Tobago</b> <i>A Ali, A Dosumu, A Governor, A Manduru, A Mohammed, A Nabbie, A Paul, K. Rocke, A Trim, J Mohan</i>
<b>12:30 pm</b>	<b>LUNCH/POSTERS/EXHIBITS</b> Room: Rocksteady 2 & 3
<b>1:30 pm</b>	<b>FEATURE LECTURE 2:</b> <b>Title: Empowering local health care professionals to improve cure rates in children with cancer and blood disorders in the Caribbean: Lessons from the SickKids-Caribbean Initiative</b> <b>Presenter:</b> V. Blanchette <b>Chairperson:</b> <b>Room:</b> Rocksteady 2 & 3
<b>Time</b>	<b>Session 3: COVID-19 Pandemic/Digital Health: Impact on Children</b>
	<b>Chairperson:</b> M. Thame
	<b>Room:</b> Rocksteady 2 & 3
<b>2:15 pm</b>	<b>(O-08) A comparative study of the spectrum of non-COVID-19 diagnosis among children visiting one of the pediatric primary health center during the COVID-19 pandemic and the immediate pre-pandemic period in Barbados</b> <i>A Kumar</i>
<b>2:30 pm</b>	<b>(O-09) COVID-19 in Barbados – lessons from a paediatric perspective</b> <i>PM Lashley, NP Sobers, GHE Gay</i>
<b>2:45 pm</b>	<b>(O-10) Caribbean Children and the COVID-19 pandemic: A call for data-driven planning</b> <i>T Evans Gilbert, PM Lashley, E Lerebours, C Sin Quee, I Singh-Minott, M Fernandes, J Walter Thomas, B Nelson, J Braithwaite</i>
<b>3:00 pm</b>	<b>(O-11) Nutritional status and COVID-19 in children: a Caribbean inpatient survey</b> <i>T Evans-Gilbert, I Hambleton, C Taylor-Bryan, C Sin Quee, S Young-Peart, PM Lashley, B Gilbert, R-Ann Brown, M Fernandes, V Singh, The Paediatric Collaborative COVID Group</i>
<b>3:15pm</b>	<b>(O-12) The use of Telehealth during the COVID-19 pandemic - Practices and attitudes of Jamaican physicians who care for children and adolescents</b> <i>V Julien-Pierre, M Gooden, A Garbutt, R Melbourne-Chambers, A Harrison</i>
<b>3:30 pm</b>	<b>COFFEE BREAK /POSTERS/ EXHIBITS</b>

<b>Time</b>	<b>Session 4: COVID-19 Pandemic: Public Health Impact</b>
	<b>Chairperson:</b> C. Macpherson
	<b>Room:</b> Rocksteady 2 & 3
<b>4:00 pm</b>	<b>(O-13) Registered Nurses' perceptions of their comfort and safety levels in the work environment during the COVID-19 pandemic at five (5) selected health institutions in Guyana</b> <i>N Goodman, L Ramroop, S Russell</i>
<b>4:15 pm</b>	<b>(O-14) Resilient Coping is More Important than Previous Experience with Virtual Learning: Predicting Stress Experienced by Pharmacy Students in Trinidad and Tobago During the COVID-19 Pandemic</b> <i>MH Campbell, S Maharaj, K Khan, B Sa, OP Adams, MAA Majumder</i>
<b>4:30 pm</b>	<b>(O-15) COVID-19 mortality in Suriname; a comparison of socio-demographic factors and hospitalization duration between epidemic waves</b> <i>AR Gokoel, M Jairam, A Mendeszoon, L Liauw Kie Fa, F Poese, AV Jarbandhan, V Jairam, F Abdoel Wahid</i>
<b>4:45 pm</b>	<b>End of Session</b>
<b>6:30 pm</b>	<b>Opening Ceremony</b>

**DAY 2: Friday 16th September, 2022**

<b>7:00 am</b>	<b>POSTER FORUM 2</b> <b>Room:</b> Rocksteady 2
<b>8:15 am</b>	<b>FEATURE LECTURE 3:</b> <b>Title:</b> Citizen centricity a foundation for trusted digital health system <b>Speaker:</b> J. O'Brien <b>Chairperson:</b> <b>Room:</b> Rocksteady 2 & 3

**Time** **CONCURRENT SESSIONS**

	<b>Session 5a:</b> <b>COVID-19 Pandemic: Vaccine and Testing</b> <b>Chairpersons:</b> <i>M. Reid</i> <b>Room Assignment:</b> Rocksteady 2	<b>Session 5b:</b> <b>Non-communicable Diseases I</b> <b>Chairpersons:</b> <i>S. Harding</i> <b>Room Assignment:</b> Rocksteady 3
<b>9:00 am</b>	<b>(O-16) Safety Monitoring of COVID-19 Vaccines in the Caribbean through Regional and Global Systems</b> <i>R Extavour, K Ottley</i>	<b>(O-21) Skeletal Muscle Adiposity is Associated with Lower Cognition in African Caribbean Women</b> <i>A Acevedo-Fontáñez, R Cvejkus, AL Kuipers, JM Zmuda, V Wheeler, C Rosano, I Miljkovic</i>
<b>9:15 am</b>	<b>(O-17) Rapid antigen tests: a screening tool for SARS-CoV-2 but not a diagnostic test</b> <i>CNL Macpherson N Cudjoe, N Noel, V Matthew-Belmar, B Sharma, E Chitan, TP Noel, and K Yearwood</i>	<b>(O-22) Preliminary Report of the First Epidemiologic Study of Cardiac Structure and Function in African Ancestry Adults in the Caribbean: The Tobago Heart Study</b> <i>AL Kuipers, R Katz, DK Gupta, R Mallugari, CN Thomas, I Gonzalez, RK Cvejkus, V Wheeler, I Miljkovic</i>

Time	CONCURRENT SESSIONS	
	<b>Session 5a:</b> <b>COVID-19 Pandemic: Vaccine and Testing</b> <b>Chairpersons:</b> <i>M. Reid</i> <b>Room Assignment:</b> Rocksteady 2	<b>Session 5b:</b> <b>Non-communicable Diseases I</b> <b>Chairpersons:</b> <i>S. Harding</i> <b>Room Assignment:</b> Rocksteady 3
9:30 am	<b>(O-18) The evolution of screening and diagnostic testing for SARS CoV2 in Grenada</b> <i>N Cudjoe, N Noel, P Fields, V Belmar-Matthew, B Sharma, E Chitan, T Khan, N Steele, S Charles, TP Noel, K Yearwood, CNL Macpherson</i>	<b>(O-23) Stroke hospitalizations before and during the coronavirus disease 2019 pandemic in the Academic Hospital of Paramaribo: A retrospective study</b> <i>AV Jarbandhan, V Jairam, RV Ramdass, DRR Lieu, JR Toelsie, R Bipat</i>
9:45 am	<b>(O-19) SARS-CoV-2 Variants and qRT-PCR Cycle Threshold Values</b> <i>V Matthew-Belmar, N Noel, E Chitan, B Sharma, T Khan, N Cudjoe, B Osei Boakye, P Fields, T Noel, A Alhassan, C Macpherson</i>	<b>(O-24) Assessing microvascular complications in Diabetic Foot using novel diagnostic equipment</b> <i>A Greenidge, KR Quimby, I Hambleton, R Landis</i>
10:00 am	<b>(O-20) The Caribbean Vessel Surveillance System- Using Digital Health to Enhance Regional Health Security in the Caribbean</b> <i>L Indar, A Bissoon-Pustam, K Daniel, F Mohammed, O Cyrus, S Kissoondan</i>	<b>(O-25) Risk Factors associated with Change in Transcranial Doppler Velocities in Sickle Cell Disease: A Jamaican Study</b> <i>C Bryan, JP Louboutin, M Reid</i>
10:15am	Co-Diagnostics Session Topic: Co-Dx PCR Home Platform Speakers: Denny Crockett and Cameron Gundry Venue: Rocksteady 2 (10 minutes presentation, 5 minutes Q&A)	
10:30 am	<b>COFFEE BREAK/POSTER/EXHIBITS</b> <b>Room:</b> Rocksteady 1 & Foyer	
11:00 am	<b>FEATURE LECTURE 4:</b> <b>Title: Improving Population Health: need for an enduring focus on prevention and equity</b> <b>Presenter:</b> <i>S. Harding</i> <b>Chairperson:</b> <b>Room:</b> Rocksteady 2 & 3	

Time	CONCURRENT SESSIONS	
	<b>Session 6a:</b> <b>Child Health</b> <b>Chairpersons:</b> <b>Room:</b> Rocksteady 2	<b>Session 6b:</b> <b>Non-communicable Diseases II</b> <b>Chairpersons:</b> <i>M. Reid, T. Davidson</i> <b>Room:</b> Rocksteady 3
11:45 am	<b>(O-26) Development, implementation and evaluation of a model for antenatal group care in Suriname: results from Perisur</b> <i>AD Hindori-Mohangoo, MP Hindori</i>	<b>(O-30) Diabetes Self-Care in a Barbadian Population: With and without diabetic foot</b> <i>A Greenidge, KR Quimby, I Hambleton, S Anderson, R Landis</i>

Time	CONCURRENT SESSIONS	
	<b>Session 6a:</b> <b>Child Health</b> <b>Chairpersons:</b> <b>Room:</b> Rocksteady 2	<b>Session 6b:</b> <b>Non-communicable Diseases II</b> <b>Chairpersons:</b> <i>M. Reid, T. Davidson</i> <b>Room:</b> Rocksteady 3
12:00 noon	<b>(O-27) Antenatal Corticosteroid and its Effects on Neonatal Health and Growth Parameters at the Georgetown Public Hospital Corporation from the period 2019–2020</b> <i>S Lall, P Persaud</i>	<b>(O-31) World Health Organization global evaluation of palliative care of six countries: results in Jamaica</b> <i>D Spence, CP Lin, K Thomas, K Segree, M Kodilinye, S Smith, K Brown, E Calvert, R Morecroft, R Harding</i>
12:15 pm	<b>(O-28) The most common respiratory condition admitted to the Pediatric Medical Ward (PMW) and the trend of admission of patients to the PMW and the pattern of pre and post COVID at the Georgetown Public Hospital Corporation (GPHC)</b> <i>S Wright, M Persaud</i>	<b>(O-32) A Stakeholder Analysis of the Saint Lucian Mental Health (MH) System</b> <i>KA Francis; AY Benjamin</i>
12:30 pm	<b>(O-29) The histopathology of steroid resistant nephrotic syndrome at the Bustamante hospital for children and the University hospital of the West Indies</b> <i>D Clayton, R Thomas-Chen, L Gabay, S Young Peart</i>	<b>(O-33) Barriers to mental health treatment among young adults aged 18–35 in Barbados: Exploring the Health Professional perspective</b> <i>R Cox, N Greaves</i>
1:00 pm	<b>NETWORKING LUNCH / LECTURE</b>	

Time	CONCURRENT SESSIONS	
	<b>Session 7a:</b> <b>CARPHA Qualitative Research Methods Workshop</b> <b>Chairpersons:</b> <i>Saran Stewart</i> <b>Room:</b>	<b>Session 7b:</b> <b>Research Skills Clinic</b> <b>Chairpersons:</b> <i>Calum MacPherson</i> <b>Room:</b>
2:00 pm – 4:00 pm	<p>This workshop provides attendees with an understanding of critical concepts and principles of qualitative research design. Attendees are provided with an opportunity to develop qualitative-based research questions and an overview of the five-main qualitative research designs. The workshop helps to develop the skills necessary for the proper understanding of sampling, data collection, analysis and interpretation of research findings. Attendees are provided with an opportunity to demonstrate these skills by undertaking an abstract template exercise.</p> <p>Led by: S. Stewart/RAC</p>	<p>RESEARCH SKILLS HELP DESK FOR ASSISTANCE WITH:</p> <ul style="list-style-type: none"> <li>• Polishing your manuscript</li> <li>• Analysing your data</li> <li>• Preparing a research proposal</li> </ul> <p>Led by: D. Ramdath/RAC in collaboration with Midway Research Center and Mayo Clinic</p>
4:00 pm	<b>End of Sessions</b>	
6:30 pm	<b>Awards Banquet</b> Venue: Terra Nova Hotel	

**Day 3: Saturday 17th September, 2022**

**8:15 am**                    **FEATURE LECTURE 5**  
**Chairperson:**  
**TITLE:**  
**Presenter J Hospedales**  
**Room:**

**Time**                    **CONCURRENT SESSIONS**

	<b>Session 8a:</b> <b>Nutrition</b> <b>Chairpersons:</b> <i>TA Samuels</i> <b>Room:</b> Rocksteady 2	<b>Session 8b:</b> <b>COVID-19 &amp; Digital Health: Impact on Infectious Disease Management</b> <b>Chairpersons:</b> <i>M. Ramgopal and Z. Temesgen</i> <b>Room:</b> Rocksteady 3
<b>9:00 am</b>	<b>(O-34) Improving Household Nutrition Security and Public Health in the CARICOM: project overview</b> <i>W Jones, MM Murphy, FJ Henry, L Dunn, TA Samuels</i>	<b>Impact of COVID-19 on tuberculosis and HIV services</b>  Lessons learned from the Covid pandemic, applicable to HIV and TB services
<b>9:15 am</b>	<b>(O-35) Food security and food safety: Implications for sustainable food systems in CARICOM</b> <i>H Harewood, N Greaves, A Foster-Estwick, A Dunn, TA Samuels, MM Murphy</i>	Real world examples of utilization of digital health tools to HIV and TB management during the Covid pandemic
<b>9:30 am</b>	<b>(O-36) Sodium and Potassium Consumption in Jamaica: National Estimates from the Jamaica Health and Lifestyle Survey 2016–2017</b> <i>TS Ferguson, N Younger-Coleman, K Webster-Kerr, M Tulloch-Reid, N Bennett, T Davidson, A Grant, KA Gordon-Johnson, I Govia, S Soares-Wynter, J McKenzie, E Walker, S Anderson, A Blake, J Ho, S Edwards, S McFarlane, S Spence, R Wilks</i>	<ol style="list-style-type: none"> <li>1. Summarize how COVID-19 has impacted TB disease diagnosis, treatment, and prevention</li> <li>2. Summarize how COVID-19 has impacted HIV diagnosis, treatment, and prevention</li> <li>3. Describe real-world examples of application of digital health tools to manage HIV and TB</li> </ol>
<b>9:45 am</b>	<b>(O-37) Socio-demographic and Dietary Influences of Eating Habit Perception in Jamaica</b> <i>A La Foucade, S Gabriel, C Laptiste, C Metivier, V Beharry, E Scott, K Theodore</i>	
<b>10:00</b>	<b>(O-38) Differences in Biomarkers of Iron stores and growth by Breastfeeding Status in infancy</b> <i>S Whyte, M Reid</i>	
<b>10:15</b>	<b>(O-39) The Microbial Burden in Poultry Broiler Chickens and the knowledge, attitudes, and practices of the poultry meat handler in Barbados</b> <i>J Browne, M Gittens-St. Hilaire</i>	
<b>10:30 am</b>	<b>COFFEE BREAK/POSTERS/ EXHIBITS</b>	

Time	CONCURRENT SESSIONS	
	<b>Session 9a:</b> <b>Communicable Diseases</b> <b>Chairpersons:</b> <i>L. Indar</i> <b>Room:</b> Rocksteady 2	<b>Session 9b:</b> <b>Special Workshops/Networking Sessions</b> <b>Led by RAC Members</b> <b>Room:</b> Rocksteady 3
11:00 am	<b>(O-40) A retrospective analysis of empiric prescribing patterns for Upper Respiratory Tract Infections at The University of the West Indies Health Centre</b> <i>H Williams, K Allen-Dougan, T Kennedy-Dixon, M Gossell-Williams</i>	<b>HELP DESK FOR ASSISTANCE WITH:</b> <ul style="list-style-type: none"> <li>• Polishing your manuscript</li> <li>• Analysing your data</li> <li>• Preparing a research proposal</li> </ul>
11:15 am	<b>(O-41) Adherence to antiretroviral therapy among adolescents living with HIV</b> <i>R Dyer , A Harrison , K Lewis-O'Connor, RB Pierre</i>	
11:30 am	<b>(O-42) The process of modelling the number of dengue outbreaks in Jamaica for the period 2000–2014</b> <i>N Guthrie-Dixon, J Campbell, M Taylor, I Hambleton, G Gordon-Strachan</i>	
11:45	<b>(O-43) Pharmacists knowledge, perception and practice regarding medication disposal in Trinidad</b> <i>S Jankie, A Villarroel Stuart, N Barsatee, V Dookhan, K Sookdeo, S Hernandez, C Mohammed</i>	
12:00 noon	<b>(O-44) Sociodemographic Characteristics, Prevalence and Clinical Outcomes of H. pylori Infection Among Patients Undergoing Upper Gastrointestinal Endoscopy at the University Hospital of the West Indies.</b> <i>YM Dawkins, S Rowe-Gardener, N Guthrie-Dixon, R Thompson, T Thompson, MG Lee, C Cunningham-Myrie</i>	
12:15pm	<b>Presentation of Prizes and Closing Remarks</b>	



# 66<sup>th</sup> Annual CARPHA Health Research Conference 2022

## Poster Presentations

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### **Child Health**

- (P – 1) ***The outcomes of neonates placed on the Conventional CPAP Machine vs a Makeshift CPAP Apparatus in Neonatal Intensive Care Unit at Georgetown Public Hospital during December 2020–August 2021***  
C Naicker, PD Persaud
- (P – 2) ***The Epidemiology of Dermatological Diseases at a Jamaican Paediatric Hospital***  
A Burton, RB Pierre, A Clare-Lyn Shue, MA Richards-Dawson
- (P – 3) ***Measurement for Change: Using lessons learnt from key stakeholders to inform changes to the Reach Up early childhood parenting intervention***  
J Coore-Hall, JA Smith, S Walker, S Chang
- (P – 4) ***Vulnerable subpopulations in Caribbean children and adolescents hospitalized with COVID-19***  
T Evans-Gilbert, C Sin Quee, PM Lashley, J Knight-Madden, S Young-Pearl, B Gilbert, M Fernandes, V Singh, I Hambleton, on behalf of the Paediatric Collaborative COVID Group

### **Communicable Diseases**

- (P – 5) ***Assessment of Pharmacists' Knowledge, Attitude and Practice Regarding Non-prescription Antibiotic Use and Resistance in Guyana***  
S Lakhram
- (P – 6) ***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***  
G Punu; L G Boodram; R Ragoon
- (P – 7) ***The prevalence of Chagas disease among blood donors in Guyana in 2010 and 2018***  
K Hohenkirk, A Benjamin, C Satram, Q Jones, B Lalikar, R Agbo, W Torrington, D Bamne, S Mohite, T Logan, S Razzac, L Henry, K Cummings, C Nelson, T Williams, T Semple, G D'Aguiar, J Europe, N Elliot
- (P – 8) ***A retrospective analysis of empiric prescribing pattern for Bacterial Vaginosis infections at The University of the West Indies Health Centre***  
R Weathers, K Allen-Dougan, T Kennedy-Dixon, M Gossell-Williams
- (P – 9) ***Trends in Transfusion-Transmissible Infections Among Blood Donors at the National Blood Transfusion Service, Guyana***  
F Leitch, L Pooran, R Kurup, P Lewis, C Boston

### **COVID-19**

- (P – 10) ***Self-reported impact of COVID-19 on Quality of Life for Cervical Cancer Patients at Georgetown Public Hospital Corporation, Guyana***  
T Headley, K Knox, D Charles, L Stephanas
- (P – 11) ***Innovations in Continuing Medical Education during the COVID-19 pandemic***  
KR Quimby
- (P – 13) ***Medical student satisfaction in online modified clinical clerkship curriculum during the COVID-19 pandemic***  
PM Lashley, NP Sobers, MH Campbell, M Emmanuel, N Greaves, M Gittens-St. Hilaire, MM Murphy, MAA Majumder

- (P – 14) ***Learning behaviours of medical students at the American University of Integrative Sciences, Barbados, during the COVID-19 pandemic***  
S Rahman, B Roach, R Kirton, MT Villagomez M, A Podcheko, N Nourae, S Ahsan, JN Nisar
- (P – 15) ***Personal protective equipment (PPE) related adverse skin reactions among healthcare professionals at the main COVID-19 isolation centre in Barbados***  
A Bharatha, K Krishnamurthy, D Cohall, S Rahman, C A Forde, R Corbin-Harte, MAA Majumder
- (P – 16) ***Knowledge, Attitudes and Practices towards the flu (influenza) vaccine and COVID-19 vaccines amongst University staff and students in Trinidad and Tobago***  
J Phillips, J Dassyne, J Marjadsingh, J Maturasingh, K Hanna, K Narinesingh, K Narine, K Deonarine, S Jankie, S Singh
- (P – 17) ***The impact of the SARS-COV-2 pandemic on surgical oncology cases at the University Hospital of the West Indies, Kingston, Jamaica***  
K Brown, I Tennant, P Roberts, L Powell, P Toppin
- (P – 19) ***Vaccine Hesitancy: The Grenada Experience***  
CJ Noël, T Khan, T Ollivere, K Rush, S Bogollagama, L Sutton, M Charles, A Lyons, C Telesford Charles, N Noel, N Cudjoe, CN L Macpherson, NTC Steele, S Charles, TP Noël
- (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***  
PM Lashley, GHE Gay, NP Sobers
- (P – 21) ***Self-Reported Post-Vaccination Adverse Events of COVID-19 Vaccines among Bangladeshi Medical Students***  
MAA Majumder, AB Lutfur, ABMM Alam, S Rahman, MH Campbell, K Singh, U Gaur, A Bharatha, MS Razzaque
- (P – 22) ***An innovative, blended, and supplementary clerkship to minimize clinical training gaps identified during the COVID-19 pandemic***  
K Connell, K Krishnamurthy, MH Campbell, H Harewood, N Greaves, A Kumar, D Springer, M O'Shea, A Harvey, PM Lashley, OP Adams, MAA Majumder
- (P – 23) ***The Dengue COVID Syndemic in the Caribbean***  
T Evans-Gilbert, L Shu Xian, M Fisher, G Gonzalez-Escobar

#### **Digital Health**

- (P – 24) ***Visualization of scientific collaboration and themes for COVID-19 disease in the Caribbean***  
C Contaret, D Resière, R Césaire, A Cabié, M Dramé
- (P – 25) ***The integration of Digital Health Technology in polyclinics and its impact on patient care in the elderly: a Systematic Review***  
C Saroop, N Bhagan

#### **Medical Education**

- (P – 26) ***Item analysis of multiple choice and extended matching questions at the Faculty of Sciences, the University of the West Indies***  
A Kumar, C George, MH Campbell, K Krishnamurthy, V Singh, S Motilal, S Sakhamuri, T Thompson, C Sinquee-Brown, PM Lashley, C Bodkin, C Twort, B Sa, MAA Majumder

#### **Mental Health**

- (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***  
K Singh, MH Campbell, N Sobers-Grannum, OP Adams, A Mansingh, DM Maynard, D Devonish, LD Garner-O'Neale, N Foster, DO Akombo, MAA Majumder

- (P – 29) ***Occupational stress among non-clinical healthcare staff at the university hospital of the West Indies, Jamaica during COVID-19***  
S Burton

#### **Non-Communicable Diseases**

- (P – 30) ***Improving Polycystic Ovarian Syndrome Management in Kingston, Jamaica***  
K Sommerville
- (P – 31) ***Description of strategies for linking health fair participants to treatment after abnormal screening results for chronic diseases: A review of the literature***  
A Auguste, C Branford, P Regis-Andrew
- (P – 32) ***An Investigation Into The Occular Effects Of Chemotherapy In Breast Cancer Patients ages 35–65 at the Georgetown Public Hospital Oncology Department Georgetown Public Hospital, Guyana***  
T Fausett., E Alexander, T Gibson, G Wilkinson, I Yarde, G Ang, L Gooding, G Joseph, E Cummings
- (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***  
E Mandeville, N Greaves
- (P – 34) ***The Use of Cheminformatics to Determine Potential Drug Interactions between Popular Barbadian Botanical Medicines and Antihypertensive Drugs***  
A Evadgian, A Bharatha, D Cohall
- (P – 35) ***The Use of WhatsApp messages as a Support Mechanism for Type Two Diabetes Meletus (T2DM) in a community setting during COVID-19***  
B Toppin, N Greaves
- (P – 36) ***Physical activity and its influencing factors in a population of ambulating chronic community-dwelling stroke survivors***  
RV Ramdass, JR Toelsie, R. Bipat, DRR Liew, AV Jarbandhan

#### **Nutrition**

- (P – 37) ***Gender Analysis of Caribbean Food and Nutrition Security Polices to enhance noncommunicable disease reduction strategies***  
L Dunn, TA Samuels, W Jones
- (P – 38) ***Association between 1-km time trial cycling speed and recovery blood lactate at various intervals***  
S Gupta, A Stanula, A Goswami

#### **Public Health**

- (P – 39) ***Cross sectional study of the knowledge and attitudes of Medical Cannabis amongst prospective health care professionals in Trinidad and Tobago***  
S Jankie, W Smith, S Motilal, C Naraynsingh, J Johnson, N Farnon, K Mahadeo
- (P – 40) ***Yoga for Smoking Cessation: A Review of Effectiveness and Feasibility on Sex Differences***  
L Dass, K Mitchell
- (P – 41) ***Perceptions and Experiences of Six to Sixteen-year-old School Children in Barbados on Wearing Eyeglasses***  
W Jones, N Greaves, H Harewood, D Grosvenor
- (P – 42) ***An assessment of the sleep efficiency in healthy Medical Sciences staff members***  
T Channer-Wallen, P Dawson, P Thomas-Brown, M Gossell-Williams
- (P – 43) ***Biological Behavioral Surveillance Survey of HIV and STI in Guyana – Round 5***  
T Jagnarine
- (P – 44) ***Assessing the quality of patient referrals from primary care physicians at the South-West Regional Health Authority, Trinidad, 2019***  
K Dharamraj, N Maharaj, M Daniel, K Ramadhin, P Lalla

- (P – 45)    *Wastewater surveillance protocol development and implementation for the recovery of viral fragments of an enveloped virus***  
*K Farmer-Diaz, M Matthew-Bernard, S Cheetham, D Fitzpatrick, K Mitchell, C Macpherson, ME Ramos-Nino*
- (P – 46)    *Religious Leaders' Perspectives on Organ Donation & Transplantation in a Developing Country***  
*BJ Elcock-Straker*
- (P – 47)    *An assessment of the knowledge, attitude and practices of the utilization of personal eyewear among welders employed in large and small scale operations in Georgetown East Coast Demerara, Guyana***  
*H Benjamin, S Hetemeyer, T Morrison, S Rock, T Sowdagar, K Whyte, S Villarea, G Ang, E Cummings*
- (P – 48)    *Investigating the role Private Health Insurance plays in Universal Health Coverage in the Caribbean States***  
*L Pierre-Romain, R Thomas*
- (P – 49)    *Factors Associated with U.S. Virgin Islands' Students Perception of School Safety***  
*A Williams, N Michael, J Valmond, C Paul*
- (P – 50)    *Effectiveness of Initiatives to Minimize Blood Usage and Wastage at a Public Hospital Setting in Guyana***  
*R Kurup, A Anderson, R Bisnauth, S Pompey-Atkins, C Boston, P Mohamed-Rambarran*

# Travel

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### O-1

#### COVID-19 Vaccine Hesitancy in the Jamaican Population: Prevalence and Associated Factors

P Thomas-Brown<sup>1</sup>, D Wynter-Adams<sup>2</sup>

<sup>1</sup>School of Pharmacy, College of Health Sciences, The University of Technology, 237 Old Hope Road, Kingston 6, Jamaica and <sup>2</sup>Caribbean School of Sport and Sciences, The University of Technology, 237 Old Hope Road, Kingston 6, Jamaica

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**Objective:** To assess the prevalence and contributing factors towards COVID-19 vaccine hesitancy in the Jamaican population.

**Methods:** Following ethical approval, an exploratory online survey was distributed electronically to derive information on COVID-19 immunization behaviour and beliefs. Data were expressed as frequencies and analysed using Chi-squared followed by multivariate logistic regressions to determine associations and contributions of various factors towards the COVID-19 vaccine hesitancy. Significant associations were determined at  $p < 0.05$ .

**Results:** Of the 678 respondents assessed, 71.5% were females, 68.2% between ages 18–45 years, 83.2% obtained tertiary education and 61.2% were employed, with 10.6% being healthcare workers. Most were from urban communities (69.5%) in Kingston & St. Andrew (42.1%) and St. Catherine (31.3%). COVID-19 vaccine hesitancy was present in 29.8% of the population but the likelihood doubled with age  $< 36$  years (OR: 1.9 (95% CI: 3.6, 12.9)) and tripled in those who initially delayed acceptance of the vaccine (OR: 2.7 (95% CI: 12.3, 3.1)). Even with acceptance of the vaccine, parents were 3 times more likely to delay the vaccine for their child (OR: 2.6 (95% CI: 1.2, 5.3)). Likelihood of hesitancy decreased by  $> 6$  with belief that the vaccine was safe (OR: 6.2 (95% CI: 4.8, 7.8)), for ages  $\geq 56$  years (OR: 2.5, 95% CI: 1.8, 7.8), healthcare workers, higher education, and receipt of other recommended vaccines.

**Conclusion:** Prevalence of COVID-19 vaccine hesitancy was 29.8%, with increased odds amongst respondents younger than 36 years, with parenthood and delayed initial vaccine acceptance. Hesitancy decreased for persons older than 36 years, for healthcare workers and with higher education and belief that the vaccine was safe.

### O-2

#### Perspectives of primary care providers and policy makers on the impact of COVID-19 on the health system in Dominica

K Celestine<sup>1</sup>, H Harewood<sup>1</sup>

<sup>1</sup>The Faculty of Medical Sciences, The University of the West Indies, Cave Hill Campus, Bridgetown, Barbados

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**Objective:** To explore the perspectives of primary care providers and policy makers on the impact of COVID-19 on the health system in Dominica.

**Methods:** A qualitative study based on an interpretivist paradigm was conducted using audio-recorded one-on-one semi-structured interviews via Zoom. A gatekeeper assisted with the recruitment of a range of private and public primary care providers and health sector policy makers, in order to achieve maximum variation sampling. Purposive sampling, guided by the principle of saturation was discontinued at the 13th participant. Data management was facilitated by ATLAS.Ti 9 software. All audio files of interviews were subjected to verbatim transcription and analyzed using thematic analysis with constant comparison using an inductive theory-based coding frame. Coding was cross-checked by two researchers to ensure validation.

**Results:** Ten females and three males aged 30 to 60 years, participated in the study. Participants' perspectives identified that the health system's impact of COVID-19 is shaped not only by the government-implemented protocols but also by the perceived technical and human resource capacity of frontline healthcare providers and policy level stakeholders. This was captured in four organizing themes, two of which include; i) "Gaps in Health System Preparation" and ii) "Areas for Health System Strengthening/Capacity Building".

**Conclusion:** Multiple stakeholder standpoints exist regarding the health system's impact of the COVID-19 pandemic. In addition to their own views, policy makers should capture the perspectives and experiences of frontline primary care providers and of the general public in order to inform the health system's response to COVID-19 in Dominica.

### O-3

#### **Psychological effect of COVID-19 on health care workers in primary care during the SARS-CoV-2 pandemic in Trinidad for the period March 2020 to March 2021**

*N D Maharaj*

*South-West Regional Health Authority, San Fernando, Trinidad and Tobago*

*Email: nalinimaharaj@swrha.co.tt*

**Objective:** To assess the psychological effect of COVID-19 on HCWs in primary care institutions (Health Centres) during the COVID-19 pandemic in Trinidad for the period March 2020-March 2021.

**Methods:** All staff at two sites were asked to complete a Google form questionnaire by convenience sampling. Demographics, DASS-21 and IES-R tools were collected. The scores were then calculated to determine the prevalence of depression, anxiety, stress and post-traumatic stress disorder, PTSD among health care workers.

**Results:** A total of 40 respondents completed the questionnaire in two health centres. From the total 40 HCWs, 32/40 (80%) were female whereas 8/40 (20%) were males, 16/40 (40%) were medical officers, 10/40 (25%) nurses, 9/40 (22.5%) auxiliary staff and 5/40 (12.5%) clerical staff. The DASS-21 tool revealed that anxiety presented with the highest prevalence, 47% (19 of 40 HCWs) followed by depression, 30% (12 of 40 HCWs) and stress, 22%, (9 of 40 HCWs). The IER-S tool revealed 15% (6 of 40 HCWs) had PTSD of clinical concern while 37.5% (15 of 40 HCWs) had a score high enough to suppress the immune system.

**Conclusion:** The COVID-19 pandemic has definitely had a psychological effect on primary HCWs. As such more mental health programs are needed to support staff and reduce occupational stress like SWRHA'S staff mental health hotline.

### O-4

#### **The Association of birth weight and Body composition during Infancy in 1-year-old Jamaican Children**

*P Hall<sup>1</sup>, M Gossell-Williams<sup>2</sup>, G Gordon-Strachan<sup>1</sup>, M Thame<sup>3</sup>*

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**Objective:** To investigate the association of birth weight (BW), and body composition (BC) in healthy, one-year-old infants in Jamaica.

**Methods:** A cross-sectional study where body composition measured as fat-free mass (FFM) and fat mass (FM) was

assessed by whole-body bioelectrical impedance analysis (BIA) and skinfold thickness measurements in a sample of 101 healthy one-year-old infants (58 girls and 43 boys). Pearson's correlation test and multiple linear regression were used to analyze the association between birth weight and body composition.

**Results:** Data on 101 infants was used in the analysis. Significant associations were observed between birth weight and fat-free mass ( $r=0.35, p=0.0001$ ) and fat mass ( $r=0.25, p=0.013$ ) at the simple bivariate level, weight and length significantly correlated with body composition using the multiple linear regression. Excess body fat was seen in 12% girls and 26% boys. Socioeconomic status did not impact the association of birth weight and body composition in this study.

**Conclusion:** In this sample of one-year-old infants, birth weight was associated with fat-free mass and fat mass, and weight and length were associated with fat-free mass, fat mass, and body fat.

### O-5

#### **Uncovering the driving forces behind the trend in coronary heart disease mortality in Barbados from 2009–2018**

*F Carter<sup>1</sup>, NP Sobers<sup>1</sup>, W Jones<sup>2</sup>*

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**Objective:** To investigate the risk factors contributing to trend in coronary heart disease (CHD) mortality over the ten-year period 2009–2018

**Methods:** Secondary data analysis was conducted on existing databases: the Barbados National Registry for chronic non-communicable diseases and the Non-Communicable Disease Risk Factor Collaboration. We calculated age-standardized incidence rate from 2009–2018. Using cases of myocardial infarction from the Barbados National Registry, we examined the impact of BMI, hypertension, diabetes and raised cholesterol on death before discharge, using multi-variable logistic regression analysis.

**Results:** In 2009, CHD mortality rates were higher in men 77.8 per 100,000 [95% UI 70.7–84.1] compared to women 63.0 per 100,000 [95% UI 55.5–68.9]. After declining to the lowest rates in 2015, they rose to 66.0 per 100,000 [95% UI 55.5–78.0] in men and 40.0 per 100,000 [95% UI 32.99–48.30] in women by 2018. Trends in risk factor prevalence revealed increases in diabetes and obesity and stable raised blood pressure and mean cholesterol rates. Patients with diabetes are 2.97 times [95% CI 1.93–4.56] more likely to die from CHD than non-diabetics. Hypertensives are 2.37 times [95% CI 1.42–3.96] more likely to die from CHD

than non-hypertensives. Previous aspirin use significantly reduced the odds of dying from CHD by 0.71 times [95% CI 0.64–0.79].

**Conclusion:** Gains made to decrease CHD mortality in Barbados appear to be reversing. Diabetes, hypertension and obesity appear to be the main drivers of this reversal.

#### O-6

##### **Assessment of Pre-Hospital Measures on Outcomes in Snake Envenomation**

*CHatcher, NNguyen, SBidaisee*  
*St. George's University, St. George's, Grenada*  
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**Objective:** To determine the common risk behaviours and circumstances associated with snakebite and determine if pre-hospital measures had clinical relevance on the outcome of envenomation.

**Methods:** Ethical approval was obtained from the Ministry of Health Ethics Committee. A cross-sectional study using data from snakebite cases was collected from the Eastern Regional Health Authority in Trinidad. Data collection involved reviewing patient records and interviewing the patients.

**Results:** Twenty-nine patients were admitted for envenomations during 2017–2019. Twenty-two were male and between 18–40 years old. Farmers accounted for 34.5% of the bites and 68.9% were bitten by the Mapepire Balsain. Of the bites 41.4% were occupational while 34.5% of bites were recreational. Pre-hospital measures included irrigation (10.3%), cutting (6.9%), tourniquets (44.8%), pressure immobilization (6.9%), topical applications (3.4%), and ingestion of a substance (6.9%). Hospital care was received within 1 hour of the bite in 34.5% of persons while 55.2% arrived at the hospital between 1–4 hours of being bitten. Hospital care was administered for local reactions (82.8%), coagulopathy (72.4%), compartment syndrome (17.2%), and cellulitis (3.4%). Treatments included vitamin K (13.8%), antibiotics (93.1%), and anti-venom (82.7%). Debridement was required in 10.3% of patients and 3.4% required a fasciotomy. The average stay in the hospital was 3.8 days.

**Conclusion:** Persons are most likely to be envenomated by the M. Balsain in Trinidad. These patients are commonly males ranging anywhere from 18–40 years presenting local reactions and coagulopathy needing admittance to the hospital.

#### O-7

##### **A Biological Active Enquiry of Tradescantia zebrina (Wandering Jew/ Red Watergrass) on Blood Glucose Levels In Normal Sprague-Dawley Rats**

*S Newman<sup>1</sup>, L Lindo<sup>1</sup>, I Amarakoon<sup>1</sup>*

*<sup>1</sup>Department of Basic Medical Science, Faculty of Medical Sciences, The University of the West Indies, Mona Campus, Jamaica.*

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**Objective:** Phytochemical(s) extracted from Tradescantia zebrina may significantly reduce blood glucose levels in normal Sprague-Dawley rats when compared with respective control groups.

**Methods:** The stems and leaves of the plant were collected, air dried and milled. The plant material was then packed into a column and sequentially extracted using hexane, ethyl acetate and ethanol. The crude extracts obtained were bio-assayed using normal Sprague-Dawley rats by intravenous administration using Oral Glucose Tolerance Test (OGTT). A phytochemical analysis was carried out according to a protocol by Roghini and Vijayalakshmi in 2018. An antioxidant inhibition assay was adapted and done as stated by Gul et al, 2017 using DPPH (2,2-diphenyl 1-1-picrylhydrazyl) as free radical.

**Results:** The crude extracts were found to contain multiple phytochemicals with the ethanol extract consisting of: Glycosides, Tannins, Flavonoids, Amino acids, Terpenoids and Coumarins. Both the ethanol and ethyl acetate extracts worked effectively as the positive control (ascorbic acid-known antioxidant scavenger) at the 200 ug/mL ( $p = 0.05$ ). The OGTT revealed that at 50 mg/kg BW there is statistically significant difference ( $p = 0.05$ ) between the ethanol extract and the control (DMSO) at the 120 ( $p = 0.002$ ), 150 ( $p = 0.011$ ) and 180 ( $p = 0.008$ ) min.

**Conclusion:** The ethanol extract of Tradescantia zebrina illustrated hypoglycaemic effects in normal Sprague Dawley rats.

#### O-8

##### **A comparative study of the spectrum of non-COVID-19 diagnosis among children visiting one of the pediatric primary health center during the COVID-19 pandemic and the immediate pre-pandemic period in Barbados**

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**Objective:** In this study, we look at the impact of the pandemic from a different perspective. We compare the spectrum of non-COVID-19 illnesses which necessitated visit to a pediatric primary health facility during this pandemic and the pre-pandemic times.



**Methods:** This descriptive report is based on a prospective routine clinical audit. Visits during the period April 1st 2020 through January 31st, 2022 were included in this report. Visits during the period April 2018 through March 2020 were used as historical control. The primary outcome was the difference in nature of the primary diagnosis during the pre-pandemic and pandemic periods.

**Results:** There were 1001 visits during the pandemic compared with 1964 visits during the pre-pandemic period. The proportion of visits from children in the age group 0–5 years during the pandemic (56.7%; 95% CI = 53.6%–59.8%) was significantly lower than the pre-pandemic period (63.3%; 95% CI = 61.1%–65.4%). The number of visits from ARC, Asthma phenotypes, Respiratory infections and AGE were all significantly reduced during the COVID-19 pandemic.

**Conclusion:** A decline in the visits for routine care which was almost entirely from allergic rhinitis, asthma phenotypes, respiratory infections and gastrointestinal infections during this pandemic, while the visits for other conditions did not change significantly.

## O-9

### COVID-19 in Barbados – lessons from a paediatric perspective

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**Objective:** To describe the case frequency, incidence, and case fatality rate attributed to COVID-19 in children and adolescents in Barbados for the period March 2020–December 2021.

**Methods:** Using published case registries over the 22-month study period, incidence and case fatality rates of COVID-19 cases and deaths were classified by sex in the 0 to 18 years age group. Logistic regression was used to examine associations between post COVID-19 symptoms and age, sex and clinical classification.

**Results:** A total of 6248 COVID-19 confirmed cases were documented in the 0 to 18-year age group, represented 21.7% of all reported cases, and constitutes 22.1% of the Barbadian population. Eighteen (0.3%) cases required hospital or specialist paediatric care. There was one fatality among hospitalized cases and one fatality attributed to multisystem inflammatory syndrome in children (MIS-C). In our sample of 292 children followed up at a pediatric clinic after discharge from isolation, the mean age was 8.8 years and 139 (47.6%) were male. Of 292, 37.5% were asymptomatic, 62.5% had mild/moderate symptoms. Post-COVID-19 symptoms were reported in 16 (5.5%, (95%

2.9%, 8.1%)) children. There were no significant differences in post-COVID-19 symptoms by gender or age. Children with mild/moderate symptoms were 9.7 times (95% CI 1.3, 74.5) more likely to have post-COVID-19 symptoms than those who were asymptomatic.

**Conclusion:** In Barbados, case frequency and case fatality rate in children and adolescents was similar to reported incidence in North America. Despite school closures, children's infection rate was similar to their population proportion.

## O-10

### Caribbean Children and the COVID-19 pandemic: A call for data-driven planning

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**Objective:** There are few published reports concerning the impact of the COVID-19 pandemic on children in the Caribbean. The specific impacts of COVID-19 on Caribbean children aged 0–19 are examined.

**Methods:** Using standardized online questionnaire, primary data and published reports the burden of COVID-19 among children is evaluated.

**Results:** Most islands have pediatric specialists, but few have designated pediatric hospitals. The higher number of cases among children is notable in islands with large populations such as Cuba, Jamaica, Trinidad, the Dominican Republic, and Haiti. The proportion of children among all cases in these islands range from 0.6%–16.9% compared with a global case rate of 20.2%. As of August 2021, there were 33 cumulative deaths among children in Haiti, Jamaica, in Trinidad and Barbados. The case fatality rates (CFR) for 0–9-year-old and 10–19-year-old were 2.8 and 0.7 for Haiti, 0.1 and 0.2 for Jamaica, and 0 and 0.14 for Trinidad compared with and globally. Higher CFRs in Haiti may be related to the testing strategy, which may not identify all cases. However, low socioeconomic status and a poor healthcare system may have had an impact.

**Conclusion:** Overall COVID-19 prevalence and mortality in children were consistent with global estimates. A standardized regional assessment and the multidimensional

impact of the COVID-19 pandemic among children warrants further examination in light of limited resources and the potential lifelong impact of secondary effects.

## O-11

### Nutritional status and COVID-19 in children: a Caribbean inpatient survey

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**Objective:** The objectives are to determine the incidence of malnutrition and anemia and evaluate the association of nutritional status and COVID-19-related clinical outcomes in children hospitalized for COVID-19.

**Methods:** This multi-island inpatient survey presents data from nine hospitals in three Caribbean islands in children from birth to 17 years from September 2020 to July 2021. We explore statistical associations with inpatient characteristics and potential differences between malnourished and well-nourished children.

**Results:** Among children hospitalized for COVID-19, 6.8% were stunted, 6.6% were underweight, 13.6% were overweight/obese, and 30% had anemia. Anemia was associated with multi-system inflammatory syndrome (MIS-C) in children but not with malnutrition. The prevalence of underweight children exceeded the 4.4% prevalence in the general pediatric population in islands and there was a greater-than-expected prevalence of overweight children hospitalized with COVID-19. No clear associations were detected between malnutrition and indicator outcomes. There were two deaths in children with severe malnutrition, COVID and septicemia identified after the study window.

**Conclusion:** Hospitalizations exceeded baseline population rates of undernutrition but no significant associations were detected possibly due to small numbers. T cell activity is associated with less disease severity in SARS-CoV-2 infection and the diverse repertoire of naïve T lymphocytes in children may confer protection to undernourished children. The deaths in two children with severe malnutrition and sepsis may suggest a compound effect on immunity by nutrition severity and COVID-19 disease. Overweight children in this cohort may reflect an increased prevalence of overweight children in the general population that requires further evaluation and intervention.

## O-12

### The use of Telehealth during the COVID-19 pandemic – Practices and attitudes of Jamaican physicians who care for children and adolescents

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**Objective:** To determine the practices and attitudes of Jamaican physicians regarding the use of telehealth to deliver health care services to children and adolescents during the COVID-19 pandemic.

**Methods:** A mixed methods study was conducted among physicians utilising online questionnaires and semi-structured interviews to explore physicians' attitudes and practices, perceived advantages, challenges and barriers in telehealth use. Descriptive and inferential statistical analyses were performed and thematic analysis on verbatim transcripts. Data collection was conducted September to November 2021 after ethical approval.

**Results:** The survey was completed by 136 participants, 78 (56.9%) physicians reported using telehealth. During the pandemic 58 (74.4%) of these physicians reported an increase in their telehealth use. Realtime was the most frequently used modality (93.5%), physicians practicing in both rural and urban areas rated real-time as more effective than those who practiced in rural areas only ( $p < 0.05$ ), with no difference in effectiveness rating of modalities by site (private/public) or job category. Themes identified through interviews included benefits (increased accessibility, affordability, safety, and efficiency of care) and challenges (sub-optimal technology/ infrastructure, lack of digital literacy, and providers' level of confidence in diagnoses). Most participants had an accepting attitude, high level of satisfaction and motivation to continued telehealth use.

**Conclusion:** Physicians sampled are utilising telehealth more to care for children and adolescents. The modality most frequently used is real-time with overall satisfac-

tion and acceptance towards telehealth. Minor barriers are reported while many benefits are acknowledged.

### O-13

#### **Registered Nurses' perceptions of their comfort and safety levels in the work environment during the COVID-19 pandemic at five selected health institutions in Guyana**

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**Objective:** To investigate the perceptions of Registered Nurses (RNs) Comfort and Safety levels in the work environment during the COVID-19 pandemic at five (5) selected health institutions in Guyana.

**Methods:** This study used a quantitative and cross-sectional design. A convenient sample of two hundred and forty-nine (249) RNs was obtained from the five (5) selected health institutions based on proportional allocation. The instrument used in this study was a modified version of the Original DiConFon Survey Questionnaire (DSQ). The Statistical Package for the Social Sciences (SPSS), 26th edition, was used to analyse retrieved data. The data obtained was presented using descriptive statistics. Participant confidentiality was maintained throughout the study.

**Results:** Data from 244 RNs were analysed and 38.1% of RNs were dissatisfied with their overall comfort level in the work environment; 35.2% of RNs reported inadequate availability of personal protective equipment. Of the RNs surveyed, 82.8% opined a high risk of contracting COVID-19 in the work environment. Of the 82.8%, 47.1% opined an extremely high risk and 35.7 % high risk. Training on COVID-19, infection prevention and control, testing, and use of personal protective equipment were deemed inadequate by 35.2% of RNs. The majority of RNs (63.9%) were dissatisfied (42.2% extremely dissatisfied and 21.7% dissatisfied) with their overall safety levels in the work environment.

**Conclusion:** Overall, RNs perceive a low level of comfort and safety in their work environment during the COVID-19 pandemic. Discussions between policymakers and nurses should prioritize facilitating appropriate interventions to improve nurses' perceptions of their comfort and safety.

### O-14

#### **Resilient Coping is More Important than Previous Experience with Virtual Learning: Predicting Stress Experienced by Pharmacy Students in Trinidad and Tobago During the COVID-19 Pandemic**

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**Objective:** To summarize pharmacy students' previous experience and current confidence with online learning and explore the association of prior experience with online learning and resilient coping with perceived stress at the beginning of the COVID-19 pandemic.

**Methods:** Students completed an online cross-sectional survey during April-June, 2020. Measures included Likert items for experience and current comfort levels with online learning; the Brief Resilient Coping Scale (BRCS); and the Perceived Stress Scale-10 Item Version (PSS-10). We summarized experience and comfort with online learning; reported scores and internal consistency for the BRCS and PSS-10; and estimated a regression model of perceived stress as a function of prior experience with online education, gender, and resilient coping.

**Results:** Of 113 respondents (response rate 41%, 78% female, mean age 22.3 years) >50% had only occasional prior experience with online learning, coursework, and examinations, but 63% expressed confidence with online learning. Mean PSS-10 and BRCS scores were 23.8 and 13.3 respectively, and both scales demonstrated good internal consistency ( $\alpha > .80$ ). BRCS score was the single predictor of PSS-10 score ( $r^2 = 0.18, p < 0.001$ ). Gender was not a significant predictor of perceived stress ( $p = 0.11$ ). A simultaneous regression model explained a moderate amount of variation in perceived stress (adjusted  $R^2 = 0.19$ ).

**Conclusion:** Most students had limited previous online learning, coursework, and examination experience. Responses indicated moderate levels of stress and coping skills after introducing online teaching. Lower resiliency scores, but not lack of virtual learning experience, predicted higher perceived stress. Results underscore the importance of efforts to enhance coping and resilience of students.

## O-15

### COVID-19 mortality in Suriname; a comparison of socio-demographic factors and hospitalization duration between epidemic waves

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**Objective:** Suriname is among the Caribbean countries with the highest COVID-19 incidence and mortality rate. This study focused on socio-demographic characteristics and duration of hospitalization related to COVID-19 mortality in Suriname.

**Methods:** All people in Suriname who died of COVID-19 (n = 1112) between March 13, 2020 and November 11, 2021, were included. Data were collected from medical records and included demographic variables and duration of hospitalization. Bivariate logistic regressions, chi-square tests, ANOVA models and a multinomial logistic regression were performed to determine differences in demographic variables and the survival time between epidemic waves.

**Results:** The case fatality rate over the total study period was 22 per 1000. There was a significant difference in the number of deaths per wave ( $p < 0.001$ ). The survival times during the four different waves were also significantly different ( $p < 0.001$ ). Patients were more likely to have a longer survival time during the first (OR 1.66; [0.98–2.82]) and third wave (OR 2.37; [1.71–3.28]) compared to the fourth wave. There was a significant difference in mortality between ethnicities for the four waves ( $p = 0.010$ ). When compared to the 'mixed and other' group, Creoles (OR 2.7; [1.33–5.29]) and Tribal Peoples (OR 2.8; [1.12–7.02]) were more likely to die during the 4th wave compared to the 3rd wave.

**Conclusion:** Tailored interventions are especially needed for males, the Creole, Tribal and Indigenous Peoples, the elderly (65+). Future studies need to include other socio-demographic factors, co-morbidities, as well as vaccination-status to more comprehensively identify vulnerable groups.

## O-16

### Safety Reporting of COVID-19 Vaccines in the Caribbean through Regional and Global Systems in 2021

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**Objective:** The objectives of this study are to: (i) identify the COVID-19 vaccines included in CARICOM adverse events following immunization (AEFI) reports in 2021, (ii) identify commonly reported AEFIs, and adverse events of special interest (AESIs), and (iii) describe the reporting rates of AEFIs and AESIs from CARICOM in 2021.

**Methods:** A cross-sectional census of case safety reports of AEFIs from CARICOM to the regional and global databases in 2021 was conducted. Counts and percentages of vaccines reported and reactions were calculated. For countries reporting to the global database, AEFIs and AESIs per 100,000 doses were determined.

**Results:** AEFI reports involved COVID-19 vaccine Astra-Zeneca (76%), Tozinameran (Pfizer-BioNTech, 19%), BIBP-Sinopharm (2.7%), COVID-19 Janssen (1.2%), and Sputnik V (0.4%). Commonly reported reactions (>10%) were: headache, pyrexia, fatigue, chills, dizziness, myalgia, arthralgia, vaccination site pain, malaise, and nausea. AESIs reported were: anaphylaxis (36% of AESI reports), ageusia (15%), Bell's palsy (15%), thrombosis (11%), seizures (11%), anosmia (6%), arrhythmia (2%), myocarditis (2%), pericarditis (2%), Guillain-Barré syndrome (2%), and vasculitis (2%). Based on doses administered, there were 73 AEFI reports per 100,000 doses, and 3 AESI reports per 100,000 doses in 2021.

**Conclusion:** The CARPHA VigiCarib network provides CARICOM states with opportunities to strengthen COVID-19 vaccine safety surveillance by collection and sharing of information on COVID-19 vaccine safety reports. Under-reporting at local levels, and underrepresentation by CARICOM states in the regional or global programmes for safety monitoring continue to be key challenges.

## O-17

### Rapid antigen tests: a screening tool for SARS-CoV-2 but not a diagnostic test

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**Objective:** Rapid antigen tests became an important surveillance method to identify individuals who were considered to be infective to others during the COVID-19 pandemic. Negative tests facilitated entry to large events and to access academic campuses. The sensitivity and specificity of the rapid test lent credibility to their role in helping to prevent transmission.

**Methods:** A voluntary and free rapid antigen test was implemented as a surveillance tool for individuals accessing a campus for a tertiary educational institution in Grenada following two mass screening programs in August/September 2021. Confirmatory diagnostic PCR tests were initially used for all rapid test positives. This practice was discontinued following a 100% concordance of positive results between the tests.

**Results:** On suspicion of false-positive rapid tests, PCR tests were reinstituted in January 2022. Sixty-five percent of 42 rapid tests were discovered to be false-positive when using a new batch of rapid tests.

**Conclusion:** Two outbreaks caused by the Delta and BA. 1 clade of the Omicron variant of SARS-CoV-2 were documented in Grenada in August/September 2021 and December/February 2022, respectively. Mass screening programs, with isolation of positive cases and quarantine for contacts who were subsequently tested, were introduced. Initially, these were PCR tests, but subsequently, the rapid antigen test was used. The discovery of a large number of false-positive rapid antigen tests reminds us that these tests are for surveillance and PCR tests remain the Gold Standard diagnostic test. All false-positive rapid test results came from a single batch of rapid antigen tests and are attributed to a manufacturing issue. Testing and subsequent isolation of positive cases and quarantine of contacts provided one of the non-pharmaceutical approaches to control COVID-19 in Grenada. Confidence in positive results, due to their implications remains paramount.

## O-18

### The evolution of screening and diagnostic testing for SARS CoV2 in Grenada

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**Objective:** To provide an overview on the screening, diagnostic methods, sample collection and compare the cycle threshold values from RT-qPCR testing from March 2020 – January 2022 in Grenada.

**Methods:** Samples were collected through the SARS-CoV-2 surveillance/ screening programmes at St. George's University or through the Government of Grenada. Samples were collected via nasopharyngeal swabs or saliva collection devices and were tested via RT-qPCR or lateral flow antigen testing. Subsequent samples were taken the same

day from individuals who tested positive on rapid antigen testing for RT-qPCR testing. The cycle threshold values were recorded for each positive sample identified through RT-qPCR testing.

**Results:** The first mandated screening session from August – September 2021, showed a positivity rate of 1.3% followed by no positive cases in the second mandated screening session in October 2021. The prevalence corresponded closely within the wider Grenadian community. Exposed individuals during the Omicron wave had a higher viral load in comparison to other infected individuals in the previous Alpha and Delta waves.

**Conclusion:** The developments in technology and increase in knowledge for the screening and diagnostic tools for SARS-CoV-2 continue to evolve. Screening and surveillance outcomes assist with public health decision making in a small island developing state.

## O-19

### SARS-CoV-2 Variants and qRT-PCR Cycle Threshold Values

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**Objective:** SARS- CoV-2 has developed many variants that are responsible for causing the coronavirus pandemic over the past two years. Sequencing of the variants provides valuable clinical, epidemiological, and public health information. The aim of the study was to sequence positive SARS-CoV-2 cases to examine the variants circulating in Grenada.

**Methods:** This study was conducted from the outbreaks of SARS-CoV-2 in Grenada during August/September 2021 and December/January 2022. Nasopharyngeal samples were obtained from persons stored on ice, transported to the laboratory and processed within a few hours using qRT-PCR, targeting the E gene. Aliquots of samples were stored at –80. and sequencing was performed using the Minlon MK1C sequencing platform. Only samples with a Ct value of = 25 were included in the study.

**Results:** A total of 104 samples were sequenced (57 samples the from first wave, 47 from the second wave), variants were detected in 52 of these samples with their lineage. In the first wave, 20 samples (35.08%) were found to be the Delta variant (Ct values 11.3–21.15), whilst in the second wave, 32 samples (68.08%) were found to be of the Omicron variant (Ct values 11.57–24.66).

**Conclusion:** Our data demonstrates that the first wave of COVID-19 in Grenada was due to the Delta variant in

August/September 2021 and by the Omicron variant in December/February 2022. It also confirms that the 2022 wave of infection in Grenada was due to the omicron variant; the same variant predominates globally

## O-20

### The Caribbean Vessel Surveillance System- Using Digital Health to Enhance Regional Health Security in the Caribbean

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**Objective:** High and increasing numbers of visitors to the Caribbean region amplifies the health, safety, and security risks posed to local populations. CARPHA's Caribbean Vessel Surveillance System (CVSS) aims to identify and monitor infectious diseases on cruise ships allowing for early detection and response to public health emergencies.

**Methods:** The CVSS is a novel electronic system created to enhance the monitoring and response to illnesses and outbreaks in passengers and crew on ships. It is designed to capture symptoms for the six syndromes under surveillance, including suspect COVID-19 cases. Real time alerts are sent to countries if illness thresholds are reached before the ship arrives, to trigger an informed rapid response from countries.

**Results:** From October 2021 to May 2022, 996 alerts were sent, based on CDC thresholds. With CDC Voluntary Programme for COVID-19 for Cruise Ships, the threshold was increased from 0.1% to 0.3% passengers and 1% for crew. The number of Yellow Alerts markedly increased from December to January 2022, likely due to Omicron. Following relaxation of restrictions globally, the number of Orange status ships over the last two months have increased, indicating spread on vessels beyond the update thresholds.

**Conclusion:** The CVSS alerts provided countries with relevant information before ships arrived, resulting in a range of responses (including denying entry/entry with only well persons disembarking, inspection before entry), thereby reducing disease spread across borders, and enhancing regional health security. The CVSS can provide a sustainable approach in monitoring illness on cruise ships, lending toward a healthier, safer travel in the Caribbean.

## O-21

### Skeletal Muscle Adiposity is Associated with Lower Cognition in African Caribbean Women

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**Objective:** Skeletal muscle adiposity (SMA) increases with aging and is recognized as a major risk factor for cardiometabolic diseases, disability, and mortality among older adults. Obesity is related to dementia and cognitive decline yet the relationship between SMA and cognition remains ill defined. The objective of this study was to assess SMA and cognitive function among African Caribbean women.

**Methods:** Cross-sectional analysis of 481 African Caribbean women in the Tobago Health Study (mean age, 55 years; range, 39–84 years). Cognition was assessed by the Digit Symbol Substitution Test (DSST), a test of information processing speed with a range of 0-90; higher scores suggest better cognitive function (faster information processing speed). Calf SMA (muscle density) was assessed with computed tomography (Stratec XCT-2000). Linear regression was used to assess the association of SMA with DSST adjusted for age, education, muscle area, waist circumference, alcohol intake, smoking, physical activity, diabetes, and hypertension.

**Results:** Participants had a BMI of 30.7 kg/m<sup>2</sup>. Mean (SD) DSST scores and SMA were 39.2 (13.1) and 71.7 (5.3) mg/cm<sup>3</sup>, respectively. After full adjustment, we found that one SD greater skeletal muscle adiposity was associated with a 1.40 lower DSST score (*p*-value=0.025).

**Conclusion:** Our findings suggest that in African Caribbean women, greater SMA is associated with slower information processing speed, an early indicator of future dementia risk. Future studies using an expanded battery of cognitive tests and longitudinal follow-up should further advance our understanding of the role of SMA and dementia risk among African ancestry populations.

## O-22

### Preliminary report of the first epidemiologic study of cardiac structure and function in African ancestry adults in the Caribbean: The Tobago Heart Study

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**Objective:** To assess prevalence and correlates of cardiac remodeling and dysfunction in Afro-Caribbean adults in Tobago.

**Methods:** Adults aged 55+ years were invited to participate in the Tobago Heart Study (THS) without regard to their health status. THS will enroll 1000 men and women in total; the current analyses reports preliminary data from 62 women. Participants underwent standard transthoracic echocardiography. Clinical health histories and examinations were also completed by trained staff. Statistical analyses included descriptive statistics, and unadjusted and age-adjusted Spearman correlations.

**Results:** These 62 women were middle-age to elderly (mean 61 years), obese (mean BMI 32 kg/m<sup>2</sup>), post-menopausal (97%), and hypertensive (83%). By echocardiography, abnormal left ventricular (LV) geometry was common (79%), including 8% with hypertrophy. Left ventricular diastolic dysfunction was present in 17.5% (15.8% grade I, 1.8% grade II, 0% grade III), while ejection fraction below 50% was present in 8% of women. Age significantly correlated with functional (cardiac output, right ventricular function and pulmonary hemodynamics); all P

**Conclusion:** Among middle-aged to elderly Tobago women, hypertension is highly prevalent with blood pressure correlating with cardiac remodeling and function. While cardiac remodeling was present in the majority, a minority displayed LV diastolic dysfunction or reduced ejection fraction. Completion of the THS will provide novel insights into determinants of cardiac structure and function in this understudied population.

## O-23

### Stroke hospitalizations before and during the coronavirus disease 2019 pandemic in the Academic Hospital of Paramaribo: A retrospective study

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**Objective:** The coronavirus disease 2019 (COVID-19) pandemic created additional barriers for patients seeking help with emergencies. The aim of this study was to compare the number of stroke hospitalizations and patient characteristics during COVID-19 in the year 2020 to corresponding months in the preceding year (2019) in the Academic Hospital of Paramaribo with the only stroke emergency department in Suriname.

**Methods:** Data from the Medical Registration was used retrospectively to compare all stroke admissions with an ICD 160-169 Code between March 1st–31st August in both 2019 and 2020. Patient demographics were collected. The

ANOVA, T-test and Chi-square tests were used for statistical analysis.

**Results:** There was no change in the number of stroke hospitalizations in 2019 (N = 417, 69 ± 8 persons/6 months) compared to those from 2020 (N = 440, 73 ± 8 persons/6 months),  $p = 0.45$ . Moreover, there was no difference in the mean age of the stroke patients from 2019 (63 ± 14 years) versus 2020 (64 ± 14 years), ( $F(1,849) = 1.3$ ,  $p = 0.24$ ). No difference was seen in the number of admissions based on gender in 2019 (190.; 227.) compared to 2020 (179.; 261.),  $p = 0.149$  or with ethnic groups from 2019 compared to 2020 upon hospitalization (chi-square (2,2) = 2.75,  $p = 0.25$ ).

**Conclusion:** During the COVID-19 pandemic, stroke related hospitalizations in Suriname did not decrease. However, longitudinal studies with trends are required to make sure that patients reluctant to seek urgent stroke care ultimately receive lifesaving procedures and secondary prevention treatments during pandemic-related closure of facilities.

## O-24

### Assessing Microvascular Complications in Diabetic Foot using Novel Diagnostic Equipment

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**Objective:** To investigate assessment of endothelial dysfunction, tissue oxygenation and neuropathy by non-invasive devices in diabetes and diabetic foot.

**Methods:** The Wound Healing Study is a case control study in adults with type II diabetes, recruited from healthcare facilities. Fifty cases (diabetic foot) and controls (no diabetic foot) were matched for age, sex and diabetes duration. Vascular assessments including endothelial function and arterial stiffness were measured using EndoPAT 2000 and oxygenation was assessed by the RM200 SO2 monitor. Vibration Perception Threshold readings were also taken using the Neurothesiometer. Odds ratios were determined using logistic regression; unadjusted and adjusted for age, sex and diabetes duration.

**Results:** 17.8% of cases and 36.7% of controls were categorised with impaired endothelial function (OR 2.85, 95% CI 1.04–7.76). There was no difference in the measurement of arterial stiffness between the two groups. 37.2% of cases vs 30.8% of controls were classified as having hypoxic limbs (OR 1.17, 95% CI 0.45–3.01). 18.6% of case measurements were hypoxic compared to 15.4% in the controls

(OR 1.00, 95% CI 0.98–1.03). 52.0% of cases and 18.4% of controls exhibited loss of the protective sensation in the feet (adjusted OR 5.42, 95% CI 2.07–14.21,  $p = 0.01$ ).

**Conclusion:** Endothelial dysfunction detected by EndoPAT, and tissue SO<sub>2</sub> detected by RM SO<sub>2</sub> do not have as great an input on microvascular damage in diabetic foot, as nerve damage, detected by Neurothesiometer.

## O-25

### Risk factors associated with change in transcranial doppler velocities in sickle cell disease: a Jamaican study

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**Objective:** To determine the association between the anthropometry and haematological variables with variation in Transcranial Doppler (TCD) velocities one year after baseline measurements (study period).

**Methods:** Eligible patients aged 2–16 years registered at the Sickle Cell Unit, University of the West Indies, Mona and who received a minimum of 2 TCD measurements 12 months apart for the period April 2012 to December 2020 were recruited. Mixed model regression analyses were performed to assess the relationship between variation in TAMV, haematology, anthropometry adjusting for Hydroxyurea usage. The study was approved by Mona Campus Research Ethics Committee.

**Results:** Forty-eight patients were included in the study (20 males, 28 females) with a mean ( $\pm$  SD) age of 6.7 ( $\pm$  2.4) years and 7.4 ( $\pm$  2.6) years at baseline and 1 year post respectively. There were no significant differences in haematological variables and TAMV by study period. Adjusting for Hydroxyurea use, increasing reticulocyte count was associated with higher TAMV ( $p < 0.031$ ). In contrast higher weight ( $p < 0.021$ ), haemoglobin concentration ( $p < 0.001$ ) and red cell counts ( $p < 0.025$ ) were associated with lower TAMV.

**Conclusion:** The findings suggest that anaemia, marrow activity and nutritional status could be targets for interventions to modulate TCD velocities.

## O-26

### Development, implementation and evaluation of antenatal group care in Suriname: results from Perisur

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**Objective:** To evaluate a model for antenatal group care (GC) in Suriname.

**Methods:** In 2014, antenatal GC was introduced by the Perisur network and implemented in three hospitals in Paramaribo. This innovative health care model included nine antenatal and one postnatal interactive group sessions of two hours facilitated by trained midwives. Women self-selected participation and completed socio-demographic and evaluation forms at the first and last session, respectively. Birth outcomes were collected from medical records.

**Results:** During 2015–2021, in total 21 groups were implemented with the majority at one hospital (18 groups; 214 women; 67% of partners participated). Median age of women was 30 years (interquartile range [IQR] 27–34). The majority had no (55%) or one (24%) previous pregnancy, had a mixed (34%) or Creole (33%) ethnic background, was from Paramaribo (66%) or Wanica (26%), had a tertiary (59%) or secondary (32%) educational level, was married or living together (73%) and had good Dutch comprehension (97%). Median [IQR] number of sessions attended by women and partners were 8 [7–10] and 5 [0–8], respectively. The topics breastfeeding (94%), delivery (94%), and care for the baby (93%) were evaluated as very useful. Rates of preterm birth  $< 37$  weeks (8.9% vs. 14.0%;  $p = 0.050$ ) and birth weight  $< 2500$  grams (7.3% vs. 15.1%;  $p = 0.003$ ) were significantly lower than average hospital rates.

**Conclusion:** Antenatal GC was successfully developed and implemented in Suriname, was positively evaluated and had better birth outcomes. Reaching more vulnerable women/couples is an important next step.

## O-27

### Antenatal Corticosteroid Therapy and its Effects on Neonatal Health and Growth Parameters at the Georgetown Public Hospital Corporation from the period 2019–2020

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**Objective:** To determine the effects of Antenatal Corticosteroid Therapy (ACT) on newborns' health and growth parameters at the Georgetown Public Hospital Corporation

**Methods:** This study was a comparative analytical cross-sectional study. Neonates of gestational age 34 weeks or less, delivered at GPHC from Jan 2019–Dec 2020, whose mothers were administered antenatal corticosteroids, were selected and assessed. Growth parameters, clinical progress and outcome were compared for those neonates who received one course (identified as Group 1) versus those who received multiple courses (identified as Group 2).



**Results:** There were differences in average percentile of head circumference and length, of 31.9 and 45.6 respectively, among neonates in Group 1 versus those in Group 2. Fisher's exact test found no association between weight and the number of courses of ACT received (test statistic = 5.2;  $p = 0.358$ ). Group 1 neonates had better 10 minute APGAR scores and less frequent NICU admissions, whereas group 2 neonates required shorter durations of respiratory support requirements, shorter duration of admission, and displayed better final outcomes.

**Conclusion:** Neonates in Group 1, who received one course of Antenatal Corticosteroid, had better measurements of head circumference and length, but no significant difference in weight compared to Group 2. Despite having better 10 minute APGAR scores and less NICU admissions, group 1 neonates required longer duration of respiratory support requirements, longer admission periods, and displayed worse outcomes, compared to group 2 neonates. The study was limited by discrepancies among group sizes; further studies are therefore required to consolidate findings.

## O-28

### The most common respiratory condition admitted to the pediatric medical ward and the trend of admission pre and post COVID at the Georgetown Public Hospital Corporation

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**Objective:** To determine the the clinical epidemiology of respiratory condition requiring admission at the Georgetown Public Hospital Corporation Pediatric Medical Ward (GPHC PMW).

**Methods:** Retrospective, cross sectional study design with a sample size of 531. Inclusion criteria included 29 days–13 years old, admitted to PMW from 1 Jan 2019–31 Dec 2020 with a respiratory diagnosis. Data such as date of admission, diagnosis, age and gender were collected from records. The study was approved by the Institutional Review Board. Data was analyzed using IBM SPSS

#### Results:

1. The most common respiratory pathology was Pneumonia 244 of the 531 cases. Mixed infections accounted for 132, Bronchiolitis 78, Asthma 69, croup 5, RAD 2, Tonsillitis 1.
2. The most frequent age group admitted were the Infants 44%.
3. The male gender dominated at 64% while female accounted for 36% of total admissions.

4. The most documented admissions occurred in the months of November at 11.1% followed by July at 10.9%.
5. Of the total admissions for respiratory pathology in this study, 90% occurred in the Pre-COVID era (2019) while 10% occurred Post-COVID (2020).

**Conclusion:** Pneumonia predominantly affected the younger generations, specifically the infants. With increasing age however, the infectious respiratory pathologies were less frequent while the obstructive causes took the lead. The increase in respiratory admissions was associated with a seasonal pattern and there was a significant decline in admissions in the early post COVID outbreak period.

## O-29

### The histopathology of steroid resistant nephrotic syndrome at the Bustamante Hospital for Children and the University of the West Indies.

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**Objective:** This study aims to document the histopathological lesions and risk factors associated with steroid resistant nephrotic syndrome (SRNS) in Jamaican children. In view of the difficulties managing SRNS, we aim to determine if there is a change in the most common histopathological lesion found in SRNS to focal segmental glomerulosclerosis (FSGS).

**Methods:** This was a retrospective, descriptive study of children = 12 years diagnosed with nephrotic syndrome and presenting for management at the Bustamante Hospital for Children and the University Hospital of the West Indies between January 1, 2009, to December 31, 2019. The data was collected using a data extraction sheet. The Pearson's chi square test was used to compare proportions. A  $p$  value  $< 0.05$  is considered statistically significant.

**Results:** Fifty-one children were available for review. The mean age was  $4.41 \pm 3.3$  yrs with a male to female ratio of 1.2:1. A renal biopsy was indicated for 87.8% of the patients. SRNS accounted for 66.7% percent. Overall, MCD was the most common histopathological lesion and FSGS was the most common in SRNS. Gross haematuria, hypertension and renal impairment were among the identified risk factors. **Conclusion:** FSGS was the most common lesion in patients with SRNS. FSGS has an increased risk of progression to ESRD and due to its debilitating effects, plans must be put in place to manage not only these children in their current conditions but also to incorporate future planning for genetic testing and possible dialysis and renal transplantation.

### O-30

#### Diabetes self-care in a Barbadian Population: with and without Diabetic Foot

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**Objective:** To elucidate aspects of diabetes self-care which may be risk factors for having a non-healing foot ulcer

**Methods:** The Wound Healing Study (WHY Study) is a case control study in adults with type II diabetes, recruited from the public Queen Elizabeth Hospital, Polyclinics and private physicians. Fifty Cases (diabetes and foot wounds) and 50 controls (diabetes and no foot wounds) were matched for age, sex and duration of diabetes. The Summary of Diabetes Self Care Activities (SDSCA), a questionnaire on diabetes self-management which quantifies the management of various aspects of a diabetes care management regiment such as general diet, specific diet, blood-glucose testing, exercise, foot care and smoking, usually over the previous seven days was administered. Summary measures for diet, blood-glucose testing, exercise and foot care were the mean number of days per week on a scale of 0–7.

**Results:** Cases consumed their carbohydrates evenly throughout the day significantly less days per week than the controls, 0.8 days vs. 1.8 days respectively (adjusted OR 0.81 95% CI 0.66–0.99;  $p = 0.04$ ). Cases exercised less than controls during the week, an average of 0.2 days of specific physical activity such as swimming, biking or walking for a minimum of thirty minutes, compared to the 1.5 days of the controls (adjusted OR 0.61 95% CI 0.43–0.86;  $p = 0.01$ ).

**Conclusion:** There may be inadequate understanding among the diabetic population on the importance of self-care activities in affecting diabetes complications and their progression.

### O-31

#### World Health Organization Global Evaluation of Palliative Care of six countries: results in Jamaica

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**Objective:** To measure structures, processes, outputs, outcomes and costs for hospice palliative care services in Jamaica.

**Methods:** This mixed-methods prospective cohort study recruited new patients and family caregivers with self-report questionnaires and qualitative interview data. Descriptive analysis of baseline data is reported here using the 6-point Likert multidimensional measure of symptoms and concerns (Palliative Outcome Scale, response levels 0 to 5, higher scores indicate greater severity of symptoms/concerns).

**Results:** N = 104 patients and N = 83 caregivers participated mean age (SD) 60.1 (13) majority female (66.7%) and Black-Caribbean (66%). Patients' most burdensome symptoms on admission (i.e., scored 3–5) were pain (n = 49), poor mobility (n = 38) and weakness (n = 33) and poor appetite (n = 23). Patients reported to have good family support (median score = 4) and reported low worry about illness (median = 2). Family caregivers reported to have adequate information (median = 3.5) and feel confident on patient care (median = 4), but still worried about the patients sometimes (N = 48, 62% reporting score 3–5).

**Conclusion:** Pain control remains a priority for advanced patients, and worry is a main concern for family members. Care focused on both the patient and family is crucial. Routine care must include pain assessment and management and person-centered care is a core element of good quality care for people facing the challenges of incurable illness.

### O-32

#### A stakeholder analysis of the Saint Lucian Mental Health system

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**Objective:** To examine stakeholders' views, experiences, and expectations in the Saint Lucia Mental Health (MH) Delivery System in order to determine how system components interact to obstruct MH policy implementation. What are the hindrances to enactment and implementation of mental health policy in Saint Lucia?

**Methods:** A qualitative methodological approach using semi-structured interviews to acquire primary data was chosen. Eighteen participants were selected based on profession, experience as a beneficiary of MH services, or other

interaction with the system. Braun and Clark's (2006) six-step thematic analysis was then conducted for data extraction and interpretation.

**Results:** Three broad issues - cultural differences, political attitudes, postures, and behaviours, and inadequate leadership - emerged as major hindrances to the development and implementation of MH policies, and system expansion. With Stigma as a pervading theme, significant disproportionate power distributions systematically disadvantaged those who interacted with the system as service users. This skewed dynamic resulting from various factors, formed the basis for other forms of structural harm manifested as economic, political, legislative and other inequalities that hindered the advancement of MH policy and service development as well as agency, health, and social progress of MH clients in Saint Lucia.

**Conclusion:** Pervasive stigma embedded in institutions of power stymies MH policy and institutional growth and creates discriminatory frameworks against Saint Lucia's mentally ill. By explicitly integrating and mainstreaming mental health-related issues into other priority health alliances and programmes, laws and policies, a multidimensional Mental Health system capable of meeting complex and cross-sectoral needs may be developed.

### O-33

#### **Barriers to mental health treatment among young adults aged 18-35 in Barbados: Exploring the health professional perspective**

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**Objective:** This study investigated the perceived and experienced barriers and facilitators to mental health treatment amongst young adults ages 18-35, in Barbados from the perspective of health professionals actively involved in care provision.

**Methods:** Purposive sampling using the principle of maximum variation was done in three primary health care centres and the lone psychiatric hospital on the island of Barbados. Resulting in the conduct of 9 semi-structured virtual interviews. Interviews were audio-recorded, transcribed verbatim by the interviewer and subject to thematic analysis with constant comparison. Data was managed by Atlasti. 8 software.

**Results:** Twelve thematic variables were identified as influencing mental health treatment seeking among young adults. Of these low mental health literacy, stigma and non-supportive environments negatively influenced initial help-seeking behaviour. While beliefs pertaining to the side effects of medication and waiting times associated with accessing services were found to interrupt long term

compliance with treatment regimes. Importantly treatment was facilitated by a triad of family support, the quality of services and the presence of a trust relationship between patients and health care providers.

**Conclusion:** Whilst many factors influenced treatment access and continuity of care, it is likely that strategies which simultaneously reduce stigma, and increase mental health literacy in the general population will be useful. Further research is needed to gather the perspective of youth (those with and without mental health illness) to develop a holistic view of this phenomenon as a means of informing future service design and delivery.

### O-34

#### **Improving household nutrition security and public health in the CARICOM: project overview**

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**Objective:** To provide an overview of the 'Improving Household Nutrition Security and Public Health in the CARICOM' (Food and Nutrition: FaN) project's objectives, design and methods, and summarize some of its core activities and achievements.

**Methods:** The three project countries were Jamaica, St. Kitts and Nevis, and St. Vincent and the Grenadines. To answer the research question, "What are the most effective, gender-sensitive ways to improve food sovereignty, household food security, and nutrition in CARICOM states?", there were four objectives - two research objectives including scoping reviews and stakeholder engagement; and two objectives to design and assess interventions. The project was originally planned for execution January 2018 to January 2022. However, a 6-month no-cost extension was granted due to coronavirus disease 2019 (COVID-19)-related project delays.

**Results:** Thirteen COVID-modified interventions were pursued under the categories schools, communities, and CARICOM supports and included revision of Primary and Secondary school curricula and development of school nutrition standards. Regional capacity was strengthened through community interventions, two Master of Public Health scholarships, and upgrading of lab equipment to test foods for fats, sodium, and sugar in Jamaica, among others. Dissemination was undertaken under the re-branded slogan and logo, "Food 4 Change Caribbean". The project website

(www.food4changecaribbean.org) hosts reports and videos to ensure that resources can be accessed beyond the project time frame.

**Conclusion:** Despite challenges precipitated by the COVID-19 pandemic, including tabling of planned in-person activities, the project team was able to re-group and re-design interventions to accommodate the new reality.

### O-35

#### **Food security and food safety: Implications for sustainable food systems in CARICOM**

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**Objective:** To elucidate the social and economic drivers of the diets being chosen and consumed by populations in Jamaica, Saint Kitts and Nevis, and Saint Vincent and the Grenadines.

**Methods:** Qualitative methodology allowed in-depth exploration of the perceptions and lived experiences of purposively recruited participants involved in the food system from production to consumption. The study was undertaken in two phases: Seventy public, private and civil society stakeholder interviews conducted June–August 2018 (Jamaica: 41; St Kitts and Nevis: 14 and St Vincent and the Grenadines: 15); and fourteen 8-participant focus groups conducted May–July 2019 (Jamaica: 6; St Kitts and Nevis: 4, and St Vincent and the Grenadines: 4). Thematic data analysis was supported by Dedoose software.

**Results:** Analysis identified several substantive themes representing stakeholders' explanation about the factors determining which items are imported, distributed and consumed. An overarching theme was that threats to the local food supply and consumption are multi-factorial. Economic rather than health concerns determined which foods are supplied and consumed and unhealthy foods seemed more affordable. Climate change threatened food security through reduced crops and loss of livelihood. Women of single-headed households and women in agriculture were more at risk for food insecurity. Local and regional foods though preferred by some participants were inconsistently avail-

able. Wide ranging food safety concerns included pesticide residues and imported allegedly “fake food”.

**Conclusion:** Interventions to improve access to healthy foods need to be gender sensitive. Sustainable intra-regional trade may be an important pillar for improving household nutrition and health.

### O-36

#### **Sodium and Potassium Consumption in Jamaica: National Estimates from the Jamaica Health and Lifestyle Survey 2016–2017**

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**Objective:** To estimate dietary sodium and potassium consumption among Jamaicans using spot urinary analyses.

**Methods:** We conducted a cross-sectional analysis of data from the Jamaica Health and Lifestyle Survey 2016–2017. Participants were non-institutionalized Jamaicans, =15 years. Trained staff collected sociodemographic and health data via interviewer administered questionnaires and collected spot urine samples. Formulae from the Pan American Health Organization were used to estimate 24-hour urine sodium and potassium excretion. High sodium was defined as = 2000 mg/day and low potassium as <3510 mg/day (World Health Organization criteria). Associations of these outcomes with sociodemographic characteristics and health behaviours were explored in sex specific models.

**Results:** Analyses included 1009 participants (368 males, 641 females; mean age 48.5 years). Mean sodium excretion was 3582 mg/day (males 3943 mg/day, females 3245 mg/day,  $p < 0.001$ ). Mean potassium excretion was 2052 mg/day (males 2210 mg/day, females 1904 mg/day,  $p = 0.001$ ). The prevalence of high sodium consumption was 66.6% (males 72.8%, female 60.7%,  $p < 0.001$ ) and low potassium intake was 88.8% (85.1% males, 92.3%

females,  $p < 0.001$ ). In sex-specific multivariable models, high sodium consumption was associated with age category (prevalence ratio [PR] 1.18,  $p = 0.017$  for age group 35–54 vs. 15–34 years) and current smoking (PR 1.20,  $p = 0.015$ ) among men. There were no significant associations with these variables among women.

**Conclusion:** The majority of adult Jamaicans have diets high in sodium and low in potassium. Urgent public health interventions are needed to reduce salt consumption and increase potassium intake to address the burden of hypertension and cardiovascular disease currently being experienced.

### O-37

#### Socio-demographic and Dietary Influences of Eating Habit Perception in Jamaica

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**Objective:** To evaluate how socio-demographic factors affect survey respondents' view of their diet quality and the role food intake plays in that process.

**Methods:** This cross-sectional analysis is based on a non-probability sample of 374 participants in Jamaica, age 18 years and above. The three-stage process used a simple random sample to select three parishes. The main commercial areas of each Parish were thereafter chosen. The sample included retail, hospitality and tourism, public sector, NGOs and other private sector establishments to ensure the inclusion of a representative as possible cross-section of participants. Employees and patrons completed a questionnaire regarding their food consumption and diet quality self-perception. Multiple Correspondence Analysis (MCA) was used to evaluate the non-linear relationships among the variables. The MCA results guided the specification of a multivariate logistic regression used to estimate the relationship between the socio-demographic factors, food intake and perceived eating patterns.

**Results:** The average predicted probability of a perceived unhealthy diet is reduced when the respondent is either a male, economically active, in good health, is married or in a common-law relationship. The probability is increased for respondents with a college degree and those living in a male, single-headed household. Consuming healthful items reduces the poor diet perception and vice versa, indicating

possible connections between food intake, diet quality perception and actual diet quality.

**Conclusion:** This exploratory analysis established a link between perceived diet quality, eating habits and socio-demographic factors. The impact can be negative or positive depending on the variable under consideration.

### O-38

#### Differences in biomarkers of iron stores and growth by breastfeeding status in infancy.

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**Objective:** To determine the differences in biomarker iron status, IGF-1 concentrations and body composition at 1 year by early breastfeeding status.

**Methods:** A longitudinal and observational study with 30 child-mother pairs recruited from the University Hospital of the West Indies. Breast milk intake was measured at 6 weeks using dose to mother deuterium dilution technique. Haemoglobin levels, Ferritin and IGF-1 concentration were measured at 12 months. Summary statistics was used to summarise the data and presented as mean (standard deviation) and multiple linear regressions analyses were used to examine the relationships between breast milk intake, iron status, IGF-1 and growth and body composition with a significance level of 0.05.

**Results:** Ten infants were found to be exclusively breastfed with mean intake of breast milk to be  $1001.6 \pm 278.5$  g/day contrasting with 20 infants who were not exclusively breastfed consuming  $697.9 \pm 374.2$  g/day of breastmilk. Haemoglobin, ferritin and IGF-1 levels at 12 months in the exclusively breastfed group were  $11.1 \pm 1.2$  g/dL,  $2.87 \pm 1.1$  ng/mL and  $2.6 \pm 0.5$  ng/mL while the mixed fed group values were  $11.5 \pm 0.8$  g/dL,  $3.58 \pm 1.1$  ng/mL and  $3.0 \pm 0$  ng/mL respectively. The mean level of all three markers were not significantly different between the two groups of infants. The growth parameters were not significantly different between the groups.

**Conclusion:** In this study, all the infants were receiving breastmilk at 6 weeks. The additional foods given to the infants who were mixed fed, may not have been sufficient to produce a measurable effect on the markers in question.

### O-39

#### The Microbial Burden in Poultry Broiler Chickens and the knowledge, attitudes and practices of the poultry meat handler in Barbados

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**Objective:** To determine the correlation between the findings of Knowledge Attitude Practice survey (KAPs) administered to poultry processing plant workers with the microbial burden of poultry.

**Methods:** A cross-sectional study was deployed to poultry workers randomly selected from 18 poultry plants across the seven polyclinics under the Ministry of Health & Wellness in Barbados. Consenting respondents completed an administered KAP questionnaire composed of 48 questions based on killing, evisceration, cutting, packing, and training history in the poultry processing plant. Responses were uploaded to REDCap and statistically analyzed using Stata Version 16.1. Chicken breast meat sample data obtained from results as part of the “CISARA” from the Veterinary Services in Barbados were also analyzed. A multivariate regression model was used to analyze the possible impact of the level of food safety training compared with respondents’ sex, age, and experience.

**Results:** Respondents (n = 201) were comprised of managers (n = 18) and food handlers (n = 183) (M 28.4%, F 71.6%). Food handlers’ odds of food safety training decreased by 42% for every additional year of experience (OR = 0.58,  $p < 0.001$ ). Isolates of *Campylobacter* spp. and *Salmonella* spp. were spread across all catchment areas with highs ranging from 6% and 91% respectively, in the Randal Phillips catchment to lows of 2% and 2% respectively, in the David Thompson catchment.

**Conclusion:** A comprehensive training program is needed to address gaps in knowledge, attitudes and practice found in the study to improve the handling practices of poultry meat workers.

#### O-40

**A retrospective analysis of empiric prescribing patterns for Upper Respiratory Tract 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 upper respiratory tract infections at the University Health Centre during the control period of September 2018 to October 2018.

**Methods:** A retrospective, non-experimental study was done to investigate the frequency and pattern of use of antibiotics in the treatment of URTI. The sample included all patients who were prescribed an antibiotic during the

period of September 2018 to October 2018 by the resident physicians employed at the University Health Centre. The respective dosage regimen was included along with the URTI being treated. The appropriateness of the different treatment approaches was assessed based on the NICE and CDC guidelines for the management of URTIs.

**Results:** A total of fifty-six encounters were identified, ages ranged from nine months to sixty-eight years old. Azithromycin was the most commonly used antibiotic (37.5%) followed by Amoxicillin (35.7%), Cefuroxime (12.5%), Levofloxacin (8.9%), Doxycycline (3.6%), and Tinidazole (1.8%). Approximately forty-eight percent (48%) of the prescribed antibiotics were optimally prescribed

**Conclusion:** There is a high rate of inappropriate antibiotic prescribing for the treatment of URTI at the University Health Centre. As such, interventions are needed for improving empiric prescribing patterns and possibly implement a standardized local treatment guideline.

#### O-41

**Adherence to antiretroviral therapy among adolescents living with HIV**

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**Objective:** To characterize adherence patterns to antiretroviral therapy (ART) and identify factors affecting optimal adherence among adolescents living with HIV (ALHIV) in Kingston, Jamaica during the COVID-19 pandemic

**Methods:** During August-October 2021, we conducted a cross-sectional study on adherence (no missed doses in preceding four days) among adolescents 10-18 years attending three outpatient departments in the Kingston Metropolitan Area. Adherence factors were evaluated using a self-administered, interviewer-assisted structured questionnaire. Biochemical and clinicopathological information were retrieved from patients’ medical records. Multivariate logistic regression was used to determine likelihood of adherence for given adherence factors.

**Results:** Of 65 participating clients, 92.3 % were perinatally infected, mean (SD) age 15.4 (2.0) years and 61.5% were female. Overall self-reported adherence was 66.1% (43/65) and higher among adolescents in residential care versus family care ( $p = 0.002$ ). Median (IQR) viral load 19 copies/ml/103 (IQR 19-51) was lower ( $p = 0.010$ ) and median (IQR) CD4+ count 701 cells per  $\mu$ L (IQR 501-1052) higher ( $p = 0.016$ ) among adolescents in residential care compared to family care. Adherence was 4X more likely among adolescents at UHWI (OR = 4.53, 95% CI (1.25, 16.43), knowledgeable about ARVs (OR = 4.31, (1.09,17.04), and

with reduced appointments due to COVID-19 pandemic (OR = 5.36, (1.09, 26.41) and 4X less likely if cared for by relatives, experiencing side effects, higher pill burden or hospitalized with complications.

**Conclusion:** Medication, caregiver-related and health system management factors are both enablers and barriers of adherence for ALHIV, and the importance of caregivers' support, treatment literacy and simplified treatment regimens are highlighted

## O-42

### The process of modelling the number of dengue outbreaks in Jamaica for the period 2000–2014

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**Objective:** To develop a statistical model aimed at modelling the number of dengue outbreaks in Jamaica for the period of 2000–2014 based on the lagged effects of climatic factors of maximum temperature and rainfall.

**Methods:** A retrospective study was performed to ascertain the relationship between climatic factors and dengue counts for the 2000–2014 study period. Data concerning the dengue presentations was sourced from the Ministry of Health and Wellness, Jamaica and that concerning the climate parameters from the Climate Studies Group Mona (CSGM) at the Department of Physics, University of the West Indies, Mona Campus, Jamaica. Graphical displays were generated to highlight the patterns for dengue events and the climatic conditions over the period. With dengue being a seasonal epidemic, seasons were defined in 3-month periods of June to August (JJA), September to November (SON), December to February (DJF) and March to May (MAM). To a baseline negative binomial model using nested random effects (Month<Season<Year), varying derivatives of the climatic parameters were added independently and jointly to create additional models.

**Results:** The dengue incidence rate was greatest in 2012 at 207.6 per 100,000 person-years. Superimposed graphs provided justification for using lagged responses of the climate variables. On adding varying derivatives of the climate variables to the baseline model (AIC = 1463.866), the final model selected (AIC = 1417.415) revealed significant asso-

ciations with 4-month lagged Lowess smoothed maximum temperature (IRR = 8.96,  $p < 0.001$ ) and 5-month lagged rainfall (IRR = 1.06,  $p = 0.001$ ).

**Conclusion:** Lagged responses of climate parameters can be used as a tool to predict future dengue outbreaks.

## O-43

### Pharmacists knowledge, perception and practice regarding medication disposal in Trinidad

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**Objective:** To investigate the knowledge, perception and practices of pharmacists regarding medication disposal in Trinidad.

**Methods:** A cross-sectional study was conducted electronically over 4 months amongst public and private sector pharmacists using a self-administered questionnaire. The questionnaire comprised 32 questions and four sections - demographics, knowledge, perception and practice regarding medication disposal. Ethical approval was obtained from the four Regional Health Authorities in Trinidad, and the Ministry of Health, Government of the Republic of Trinidad and Tobago. Data was analysed using IBM SPSS Statistics Version 24. Chi-squared tests sought to detect significant association between demographics and responses.

**Results:** Of 400 pharmacists, (response rate 52.0%) most were female (63.0%), had less than 5 years' experience (47.1%), and worked in a community pharmacy (68.0%). Most (79.3%) believed that improperly disposed medications can negatively impact the environment but only 45.2% thought that improperly disposed antibiotics can lead to antimicrobial resistance. Most returned expired drug to the pharmaceutical distributor (80.8%), or disposed through the Drug Inspectorate (63.9%), but 32.3% still disposed of expired medicines in the workplace garbage, with community pharmacies were more likely to carry out this practice ( $p = 0.011$ ). Most pharmacists (36.5%) do not counsel patients on medication disposal and although most pharmacists (64.4%) would not recommend flushing expired drugs down the toilet, only 20.7% would recommend flushing narcotics which is considered best practise to prevent accident poisoning.

**Conclusion:** Continuing education for pharmacists is needed to increase awareness of the best practice, along with an awareness campaign on medication disposal.

#### O-44

### Sociodemographic Characteristics, Prevalence and Clinical Outcomes of H. Pylori Infection Among Patients Undergoing Upper Gastrointestinal Endoscopy at the University Hospital of the West Indies

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**Objective:** To determine sociodemographic characteristics, prevalence of H. pylori infection and clinical outcomes among adults undergoing esophagogastroduodenoscopy (EGD) and histology at University Hospital of the West Indies (UHWI) between May 2018–December 2020.

**Methods:** Cross-sectional study of patients (= 18 years old), who underwent EGD and histological evaluation for H. pylori infection. Significant associations between H. pylori positivity and exposure-related variables in bivariate analysis ( $p < 0.25$  criterion) informed multivariable logistic regression models for association with H. pylori positive status and gastric cancer. Odds ratios and 95% confidence intervals (CIs) were calculated for H. pylori positivity, gastric cancer status and sociodemographic/clinical variables and endoscopic findings.

**Results:** The sample included 323 participants (mean age  $58.6 \pm 17.8$  years, 54.2% females). H. pylori prevalence was 21.7% ( $n = 70$  of 315), 5.6% had gastric neoplasia (GN), 15.5% gastric atrophy, 3.7% dysplasia on histology. Mucositis (64.5%), gastric ulcer (14.9%) and duodenal ulcer (13.9%) were the most common endoscopic findings. Participants who were H. pylori positive had significantly higher odds of peptic ulcer disease (PUD) (unOR = 4.0;  $p = 0.017$ ), gastric cancer (unOR = 9.5;  $p = 0.003$ ) and gastric atrophy (unOR = 12.8;  $p < 0.001$ ) but after multivariable analyses only gastric atrophy remained significant. Participants with gastric cancer had significantly lower odds of mucositis (unOR 0.1;  $p = 0.035$ ) and significantly higher odds of dysplasia (unOR 8.0;  $p = 0.042$ ) but these were no longer significant after multivariable analyses (aOR = 0.2;  $p = 0.156$  and aOR = 18.9;  $p = 0.070$  respectively).

**Conclusion:** H. pylori prevalence is lower than previously reported in Jamaica. Gastric atrophy is a significant predictor of H. pylori positivity.

#### O-45

### An Investigative Study on the Perception and Acceptability of a COVID-19 Vaccine of the Public in Trinidad and Tobago

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**Objective:** To assess the perceptions and acceptability of a COVID-19 vaccine and recommend measures to promote COVID-19 vaccine acceptance among the adult population of Trinidad and Tobago.

**Design and Methods:** A cross-sectional study was conducted using an online survey which was distributed via social media platforms between April–June 2021. A convenience sample of persons residing in Trinidad and Tobago, aged  $\geq 18$  years, completed the survey. Descriptive statistics and logistic regression analyses were conducted using SPSS v.27.

**Results:** Of 927 respondents, 78% believed that vaccines were effective against infectious diseases. Almost eighty-two percent (81.6%) agreed to accept the COVID-19 vaccine and those who believed that vaccines were effective were more likely to agree to accept this vaccine [OR: 7.34; (95% CI: 4.57, 11.80)]. The most common reasons for agreement to vaccine acceptance were protection of oneself (94%) and others (90%) while those who would not agree to vaccine acceptance expressed concerns about the pace of its development (84%), its side effects (81.7%) its safety (75.6%) and effectiveness (70.4%). The World Health Organization (WHO) was a trusted source of information on the vaccine in 86% of respondents and 69.5% preferred to receive information about their vaccine concerns from the Ministry of Health.

**Conclusion:** Agreement to accept the COVID-19 vaccine was high among adults in Trinidad and Tobago. Nevertheless, concerns remain about vaccine development, side effects, safety, and effectiveness. Communication with the public on these topics by the Ministry of Health would help to alleviate concerns and further promote COVID-19 vaccine uptake.



# BREAK THE MENTAL ILLNESS STIGMA

It's okay to talk about mental health

Get help. Speak to someone you trust.



## Poster Abstracts

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### 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  $58 \pm 9.5$  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 ( $18.15 \pm 2.80$  mmol/L) was the highest followed by [BLa]5min ( $17.32 \pm 2.65$  mmol/L) and [BLa]7 min ( $15.80 \pm 2.58$  mmol/L), whereas [BLa]peak was  $18.23 \pm 2.78$  mmol/L. Peak heart (HRpeak) ( $189.4 \pm 4.2$  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 ( $14.31 \pm 0.53$  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  $22.88 \pm 3.22$  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**

*T Jagnarine*

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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  $0.75 \pm 0.08$  for the HCl treated sample compared to  $0.86 \pm 0.06$  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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