

 The Essequibo River, Guyana



Climate Change, Health, Sepsis and Justice Conference

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FOREWORD



I extend a warm welcome to all participants, speakers, and distinguished guests attending the Climate Change, Health, Sepsis, and Justice Conference. Welcome to the Co-operative Republic of Guyana!

This conference, a collaborative effort between the University of the West Indies, the Caribbean Sepsis and AMR Alliance, and the Ministry of Health in Guyana, represents a serious effort to address specific health challenges in the Caribbean.

The Caribbean, with its unique geographical and socio-economic features, faces a myriad of health challenges exacerbated by climate change. The impact of rising temperatures, sea-level rise, and extreme weather events has profound implications for public health. Climate change threatens to increase the prevalence of vector-borne diseases such as leptospirosis, dengue and chikungunya. It also contributes to the disruption of food and water security and places a strain on healthcare systems that are already burdened.

It is an ongoing enterprise of the countries of our region to better understand and mitigate these effects to safeguard the health and well-being of our citizens. This conference provides a vital platform for experts to share insights, formulate strategies, and propose solutions to these pressing threats.

A particular focus of this conference is the health challenge posed by sepsis, a life-threatening condition resulting from the body's response to infection. Sepsis remains a significant cause of morbidity and mortality worldwide, and the Caribbean is no exception. Despite advances in health management, our region needs to do more to compile comprehensive data on the incidence and outcomes of sepsis. There also is an urgent need for more research into the epidemiology, prevention, and treatment of sepsis in the Caribbean. This will allow for targeted and data-driven interventions.

Equally critical is the issue of antibiotic misuse and antimicrobial resistance (AMR). The misuse of antibiotics is a global concern that undermines the effectiveness of treatments and leads to the emergence of resistant pathogens. In the Caribbean, where there are known instances of the open sale of such medications without prescriptions, addressing antibiotic misuse is crucial. This conference aims to highlight the importance of prudent antibiotic use and the need for robust policies, public awareness campaigns and more stringent regulations to combat AMR.

The collaborative spirit of this conference stands a model for our approach to commitment to tackling these complex health challenges. By bringing together leading experts, healthcare professionals, policymakers, and researchers, the conference can create an environment conducive to knowledge exchange and finding solutions to these challenges.

It is my hope that the discussions and deliberations during this conference will lead to practical, concerted approaches to addressing the health risks associated with sepsis, climate change, and antibiotic misuse.

I extend my heartfelt thanks to the organizing committee, speakers, and participants for their anticipated contributions. Your collective efforts are essential in driving forward the health agenda in the Caribbean.

I wish the Climate Change, Health, Sepsis, and Justice Conference every success and look forward to the actionable outcomes that will emerge from it.

Dr. Mohamed Irfaan Ali
President of the Co-operative Republic of Guyana

PREFACE



Welcome to the University of the West Indies Conference on Climate Change, Health, Sepsis, and Justice. In today's interconnected world, it is crucial to adopt comprehensive and interdisciplinary approaches to address global challenges. This conference aims to bridge the gaps between different fields and create a collaborative environment for developing innovative solutions.

The Ministry of Health is pleased to partner with the prestigious University of the West Indies and the Caribbean Sepsis and Antimicrobial Resistance Alliance to host this conference. This collaborative effort reflects the Government of Guyana's commitment to advancing healthcare initiatives and fostering a platform for meaningful discussions and innovative solutions.

Climate change is a pressing issue with widespread effects on health and well-being. As global temperatures rise, heat waves become more frequent and severe. Prolonged exposure to extreme heat can result in heat exhaustion or heatstroke and worsen pre-existing health conditions such as cardiovascular and respiratory diseases. Older adults, children, and individuals with chronic illnesses are especially at risk of experiencing health problems related to heat.

Climate change can cause increased air pollution, resulting in higher levels of particulate matter in the air. This can worsen respiratory conditions such as asthma and chronic obstructive pulmonary disease (COPD). Additionally, higher temperatures can prolong the pollen season, leading to more intense allergies and asthma symptoms.

Changes in climate patterns can impact the spread of infectious diseases. Warmer temperatures and changes in precipitation can broaden the habitats of disease-carrying vectors like mosquitoes, ticks, and fleas, leading to the spread of diseases such as malaria, dengue fever, Zika virus, and Lyme disease to new regions.

The increased frequency and intensity of climate-related health issues put additional strain on healthcare systems, leading to higher patient loads, shortages of resources, and damage to infrastructure during extreme weather events. A recent example is the destruction caused by Hurricane Beryl. Strengthening healthcare systems to withstand and respond to climate impacts is crucial for protecting public health.

Based on the information in the abstracts, the conference will feature thought-provoking sessions, insightful panel discussions, and innovative solutions. Distinguished experts,

researchers, policymakers, and practitioners will share their knowledge and experiences, offering diverse perspectives on these complex issues. The conference aims to inspire new ideas, encourage partnerships, and drive meaningful action.

I want to express our sincere appreciation to all the participants, speakers, and organizers for their valuable contributions to this significant event. Your dedication and commitment to addressing the challenges of climate change, health, sepsis, and justice is truly commendable. Together, we can work towards creating a healthier, more equitable, and sustainable future.

Welcome to the UWI Conference on Climate Change, Health, Sepsis, and Justice.

Sincerely,

Dr Frank C. S. Anthony
Minister of Health, Guyana.

CLIMATE, HEALTH AND JUSTICE

Mala Rao

Signs of climate breakdown are reported from every region of the world as the rate of global warming escalates. Sunday 21 July became the hottest day ever logged by scientists.

The climate crisis is the greatest threat to global health, affecting human mortality and morbidity through complex pathways and multiplying risks as extreme heat, droughts, wildfires, air pollution, floods and storms affect health directly but also indirectly through their impacts on economic and social conditions and the status of health systems and the environment. But the impacts are not distributed equally across populations. The industrialised nations responsible for excess emissions are the least vulnerable to the health impacts while the most deprived people who contribute least to greenhouse gas emissions and have few resources to protect themselves and include women, children and racially minoritised and indigenous communities suffer the greater burden of ill health and deaths. Small island developing states (SIDS) including Guyana are in this group, enduring harsh health impacts despite contributing minimally to global emissions. The inequities between deprived and richer communities are replicated within countries too, but the wider picture is one of racism and discrimination on a global scale, with even the Intergovernmental Panel on Climate Change acknowledging the association between the climate crisis and colonialism.

There is a moral imperative for high polluting countries to cut their emissions and support others with funding and shared expertise to achieve climate mitigation and adaptation worldwide. They could also learn from the example of countries such as Guyana as to how to embed climate resilience into plans to address health and health care inequalities.

PLENARY

PL1: THE CARIBBEAN PROBLEM OF COPD AND EFFECTS OF CLIMATE CHANGE

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Chronic Obstructive Pulmonary Disease (COPD) affects 384 million people worldwide and accounts for 6% of all deaths – it is the third lead cause of death globally. It is estimated that over 50% of patients with COPD may be undiagnosed. It was traditionally believed that COPD is a disease of cold climates and societies with high smoking rates.

The Burden of Obstructive Lung Disease (BOLD) data globally has shown that the average prevalence of COPD is approximately 10.1% and that COPD is not solely attributed to smoking: never-smokers also exhibit a considerable prevalence of COPD, emphasizing the role of other risk factors in the development of the disease.

In the Caribbean three countries were selected to contribute to The BOLD study: Jamaica, Trinidad Tobago and Cuba. Data from Trinidad and Tobago showed that the national COPD prevalence in those over 40 years old was 9.5%. Most participants in the study were unaware of the diagnosis, data from Jamaica were similar. Compared to those aged 40–49 years, the adjusted odds ratio of airways obstruction (AO) by age group was 2.73 (60–69 years) and 3.30 (>=70 years). Risk factors for AO

were unemployment (OR 4.31), being retired (OR 2.17), smoking >=20 pack-years (OR 1.88) and exposure to dusty jobs for more than 1 year (OR 2.06). The risk of AO was significantly related to symptoms: a history of wheezing, unscheduled visits to the doctor or admission to hospital for breathing problems and in subjects with at least one respiratory symptom, at least one risk factor, either symptoms or risk factors and both symptoms and risk factors (greatest odds ratio).

These data show that in the Caribbean there are several risk factors for COPD apart from smoking. The bulk of the Health Burden in COPD arises from unscheduled physician visits for acute worsening of symptoms referred to as acute Exacerbations of COPD (ECOPD) and to mental health challenges which increase the risk of ECOPD. 20% of patients die within one year of their first severe ECOPD event. Patients who are left untreated within the population accrue a heavier health burden to society than those treated appropriately. The incidence of ECOPD and the health burden of COPD will worsen as climate change worsens because of the increased risk of extreme temperature fluctuations, rising atmospheric ozone and greater frequency of wildfires leading to worsened particulate air pollution. For example, a Brazilian study has shown that there was an increased COPD mortality risk in the São Paulo and Rio de Janeiro regions due to moderate heat, with a further increase due to extreme heat events.

Thus, climate change in conjunction with environmental, epidemiological and social change (e.g., ageing, urbanization and comorbidities) suggests a growing relevance of heat-related excess health burden and mortality in COPD in tropical regions. To decrease the health burden of these events our COPD patients must be optimally managed. This will be the challenge of the Public Health System throughout the Caribbean in the 21st Century.

PL2: POST- GRADUATE TRAINING AND BUILDING RESEARCH CAPACITY

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STA*

The Caribbean basin has suffered tremendously due to a brain drain which has created numerous challenges which we are still trying to cope with. In the field of medicine this is even more evident resulting in us lagging into the first world with regards to the healthcare we provide our citizens. We have tried to overcome this by opening of medical schools (University of the West Indies and University of Guyana being the main ones) to train doctors and this has been complemented by the countless offshore medical schools.

So, we are certainly not short of medical doctors and in fact may be overproducing. What we are short of are trained specialists and this is across all regions. Even with

post-grad programs created at UWI and UG and the importation of specialists from Cuba, India and Africa among other territories, the challenge is a persisting one. To lift the standard of healthcare emphasis must be placed on postgraduate training and a multifaceted approach using all the available resources within the Caribbean must be used. One must also focus on research as a driving force for change.

UWI is well placed to assist with both post-grad training and research. However, the Caribbean will still require assistance from the first world and using our diaspora to assist in this regard may be the most feasible approach. This presentation seeks to outline what opportunities are available to the Caribbean, the challenges we face and the potential solutions to the problems of post graduate training and research to meet the growing needs of the region.

PL3: CHALLENGES AND OPPORTUNITIES FOR A CARIBBEAN ALLIANCE TARGETING SEPSIS REDUCTION

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Sepsis is a life-threatening condition resulting from the body's extreme response to infection and presents a significant healthcare challenge globally. The Caribbean comprise a unique socio-economic and healthcare infrastructure, and coupled with the effects of climate change can further complicate the

management and treatment of sepsis. The impact of Sepsis is compounded through other conditions as it is a common pathway for many conditions. Infections in the community or hospital settings caused by bacteria, viruses, fungi and parasite can all lead to the development of Sepsis. The high incidence of non-communicable diseases within the Caribbean such as diabetes, chronic obstructive pulmonary disease, cancer and chronic kidney disease all make patients more susceptible to infections which can lead to sepsis. Accidents and injuries such as severe trauma and burns, and even post-surgical infections following surgery can increase the risk of sepsis development. It is frequently a final common pathway to death for many infectious diseases worldwide.

The Caribbean is characterized by diverse healthcare systems, varying from well-established facilities to those in remote settings which may be under-resourced. This diversity poses unique challenges in the early identification, management, and treatment of sepsis. Limited access to advanced medical technologies, inadequate staffing of healthcare professionals and antimicrobial resistance are critical barriers to effective sepsis management. It has been shown that a large portion of Sepsis cases originate within the community and if public awareness of sepsis and its symptoms is low, this will contribute to delayed diagnosis, treatment, and eventually poor outcomes.

Despite these challenges, the Caribbean region also presents numerous opportunities to improve sepsis care.

Emphasis should be placed on the importance of regional collaboration and knowledge sharing to develop standardized protocols and guidelines tailored to the Caribbean context, culminating in national action plans for the management of Sepsis. Engaging healthcare professionals, policymakers, and community leaders, the Caribbean Sepsis Alliance can enhance the quality of sepsis care and ultimately improve patient outcomes across the Caribbean region.

PL4: YOUTH IN THE CARIBBEAN CARING ABOUT CLIMATE, COVID-19 AND THEIR FUTURES

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Background Information: Planetary Health is an evolving field globally and relatively new to the Caribbean Region. Although the field is multifaceted, the paper will seek to look at the nexus

between climate change mental health and COVID-19.

Objective: The main objective is to describe and explain the impact of Climate Change and COVID-19 on youth Mental Health.

Method: From September 2021 to April 2022 an anonymous cross-sectional survey was distributed online to youths (ages 18-24) in Barbados, Trinidad and Tobago and Guyana via Facebook advertisements, use of social media influencers and youth ambassadors. The survey looked at the impact of climate change and COVID-19 on Youth Mental Health

Findings: At the time of the survey, youth reported a high level of anxiety (45% meeting GAD cut of 10), some stress, and neutral life satisfaction. Climate Change brings Mixed Emotions including Interest and Distress for High Agentic Youth. They worried about climate and COVID, but more often about their finances, careers, or studies. Good jobs, good education, but also public safety and access to health services.

Conclusion: Youth in the Caribbean have been affected by climate change and COVID-19.

PL5: SEPSIS: THE HIDDEN THREAT

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Sepsis is a global health priority due to its high incidence, morbidity, mortality and enormous societal cost. Sepsis is characterized by a dysregulated host response to infection manifesting as organ failure. Sepsis is a medical emergency which, if not diagnosed and treated expeditiously, can lead to death. The optimal management of sepsis is highly dependent on adequate and rational allocation of healthcare resources, however, access to nutrition, education, vaccination, and healthcare carries substantial inequities. However, sepsis management is undermined by the rapidly emerging issue of antimicrobial resistance due to misuse of antibiotics and aggravated by climate change. In recent years, extreme weather conditions, food insecurity, military conflicts, and pandemics have further exacerbated global inequities. Sepsis is a disease of poor and disadvantaged populations, and the Caribbean is no exception.

While the outcomes of sepsis in high-income countries (HIC) have been marginally improving, the morbidity and mortality of sepsis remains high in low- and middle-income countries. The 2017 resolution on sepsis by the World Health Organization (WHO) outlined key aims to reduce the burden of sepsis. Yet, over five years later, only a small number of countries have launched systematic quality improvement (QI) programs to raise sepsis awareness, enhance recognition, promote timely and effective treatment, and provide long-term support after sepsis. We need the following:

- a vital platform for experts to share insights, formulate strategies, and propose solutions to these pressing threats including strengthening medical countermeasures for diagnosing and managing sepsis in health emergencies, public awareness and training of health professional and education of the public.
- more research into the epidemiology, prevention, and treatment of sepsis in the Caribbean
- the need for robust policies, public awareness campaigns and more stringent regulations to combat AMR
- a model for our approach to commitment to tackling these complex health challenges including common datasets

These goals can only be achieved by A Caribbean Sepsis Alliance with commitments from regional government to regional action plans.

LIGHTNING TALKS - ABSTRACTS

LT1: AN INTERNAL MEDICINE LEARNING COLLABORATIVE FACILITATING A VIRTUAL CONTINUING MEDICAL EDUCATION PROGRAM IN GUYANA AND THE WIDER CARIBBEAN DURING THE COVID-19 PANDEMIC

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Objectives: To collaborate and share medical knowledge between US and Caribbean physicians during the COVID-19 pandemic via a free online continuing medical education (CME) series.

Method: This was a multi-institution collaborative effort between the US institutions and Caribbean partners. The lecture series ran from July 2021 to October 2022. The monthly lectures were held on the fourth Thursday between 7 and 8 p.m. Eastern Standard Time (EST) using the Zoom meeting platform.

Results: Analysis of program data from July 2021 through October 2022 (excluding December 2021) found 1,105 unique individuals engaged in the 15 continuing education sessions. The series had a cumulative total of 2,411 participants, with a mean session participation of 161 and a

range of 94 to 299 participants per lecture. An outcome survey assessing the reasons for attendance identified that the most significant factors in their participation in the series were: a) the quality of educational content (83.21%), b) the ease of access and Zoom platform (81.76%), and c) the lectures being offered at no cost (61.31%), and 80.84% gained new medical knowledge leading to practice changes.

Conclusion: The Internal Medicine Learning Collaborative (IMLC) model can be easily replicated; it overcomes barriers such as travel and quarantine restrictions and is cost-effective to initiate and maintain. It allows physicians with access to resources and specialty training to share medical knowledge with colleagues in the developing world where such access may be limited, thus promoting health care and continuing education activity in their respective regions using freely available technologies.

LT2: OVERCOMING BARRIERS TO HEALTH TOURISM DEVELOPMENT IN GUYANA: A COMPREHENSIVE STUDY

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Keywords: Health tourism, medical tourism, Guyana, barriers, infrastructure, legal framework, healthcare system,

strategies, collaboration, policy reforms, human resources.

Background Information: Health tourism, often referred to as medical tourism, presents a promising avenue for economic growth and healthcare advancement in Guyana, a nation endowed with abundant natural resources. However, the development of health tourism is contingent upon navigating a complex landscape of barriers, encompassing infrastructure limitations, legal and governmental variables, and healthcare system-related elements. This comprehensive study aims to explore and analyze these barriers and propose strategies to facilitate the growth of health tourism in Guyana.

Objectives: To identify the primary obstacles hindering the development of health tourism in Guyana. To recommend strategies for overcoming these barriers and fostering the growth of health tourism.

Results: Infrastructure Elements: Inadequate healthcare infrastructure, transportation, and accessibility pose significant challenges. The government and private sector initiatives, such as the development of specialty hospitals and modern healthcare facilities, show promise in addressing these infrastructure limitations.

Legal and Governmental Variables (Inter-sectoral): Guyana's political stability, regulatory framework, and economic climate significantly impact health tourism. Collaborative efforts, policy reforms, and streamlined regulations are crucial to

attracting internal and external investments.

Health System-Related Elements (Intra-sectoral): Challenges in recruiting and retaining skilled healthcare professionals, language barriers, and human resource management are recognized obstacles. Addressing these issues requires investments in education, training, and attractive incentives for healthcare workers.

Conclusion: This study highlights the multifaceted barriers to health tourism development in Guyana and underscores the importance of collaboration among stakeholders, policy reforms, infrastructure development, and investment in human resources. Overcoming these barriers will not only enhance the nation's healthcare system but also position Guyana as a desirable destination for health tourists.

LT3: EVALUATION OF RISKY SEXUAL BEHAVIOR AND ASSOCIATED FACTORS AMONG UNIVERSITY STUDENTS IN GUYANA: A CROSS-SECTIONAL STUDY

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Keywords: University students, risky sexual behaviors, associated factors,

prevalence, Guyana, public health, cross-sectional study, targeted interventions, safer sexual practices.

Background Information: Risky sexual behaviors in young adults can have significant health implications, and understanding their prevalence and related factors is crucial for public health interventions. This cross-sectional study aimed to evaluate the prevalence of risky sexual behaviors and associated factors among university students in Guyana.

Objectives: The overall aim of the study is to assess the prevalence of sexual risk behavior, and its associated factors and explore some safe sex behaviors adopted by university students in both the private and public sectors in Guyana. To achieve this aim, the study has three main objectives as follows:

1. To evaluate the prevalence of risky sexual behaviors in university students.
2. To assess the expected risky sexual behavior and associated factors in university students.
3. To explore safe and secure preventative sexual measures adopted by university students.

Methods: The present cross-sectional study used an online survey among 340 university students at 12 tertiary institutions in Guyana. The survey included questions related to demographic information, Risky Sexual Behaviors (RSB), Adverse Childhood Experiences-International Questionnaire (ACE), and measures related to safe sexual behavior.

Results: A total of 340 students with a response rate of 88.31% participated in the study. 67.9% reported having had sexual intercourse. Risky sexual behaviors were prevalent, with males exhibiting higher tendencies. The common RSB included unprotected sex, regretful encounters, pornography, and masturbation addiction, influenced by factors like marijuana and alcohol use, sex toy engagement, age, gender, and adverse childhood experiences. A negative correlation was found between RSB and concerns about STIs, pregnancy, and encounters with unknown partners. Regarding safe sex practices, males demonstrated a higher degree of proactivity than females.

Conclusion: Understanding gender-specific patterns in safe sex practices is crucial for developing targeted strategies to bridge existing gaps and promote a culture of informed and responsible sexual behaviors among university students.

LT4: EVOLUTION OF LAPAROSCOPIC SURGERIES AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION, A 5-YEAR REVIEW.

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Objectives: The purpose of this review is to assess and showcase how laparoscopic surgeries have evolved over the past 5 years at the Georgetown Public Hospital Corporation (GPHC). The secondary

objective is to highlight the various types of laparoscopic surgeries performed at GPHC and how the numbers have varied through the years.

Methods: This analysis was done by conducting a retrospective collection of data of all patients aged > 12 years of age who underwent laparoscopic surgeries at the Georgetown Public Hospital Corporation from January 2018 to December 2023.

Results: Laparoscopic surgeries have continued to evolve at GPHC. A total of 22 bariatric surgeries were completed as well as 41 laparoscopic hernia repairs. A total of 364 laparoscopic cholecystectomies were done accounting for 57.6% of all laparoscopic surgeries completed. Before 2018, there were minimal cases done at GPHC by local faculty compared to the total of 689 cases completed over the last 5 years documenting a shift in the level of care.

Conclusion: Laparoscopic surgeries at GPHC have seen a continued upward trend since its re-initiation in 2018 with the addition of bariatric surgeries, and advanced colon and biliary surgeries. The most common laparoscopic case was cholecystectomy. With continued training of residents competent in laparoscopic procedures, there is expected to be an upward trend in the number and complexity of cases being done at this institution.

LT5: ANTIBIOTIC RESISTANCE OF FECAL ESCHERICHIA COLI. IN

PATIENTS UNDERGOING PROSTATE BIOPSIES AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION, GUYANA.

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Background Information: Prostate biopsy is an essential diagnostic procedure in urologic practice. The trans-rectal route, which is the most utilized technique, carries the inherent risk of infection and sepsis. Recent literature suggests that there is an increasing incidence of infective complications related to bacterial resistance to the commonly used antibiotics.

Objectives: To establish the resistance pattern of *Escherichia coli* in the fecal carriage of patients undergoing TRUS guided prostate biopsy, and to identify risk factors for harboring drug-resistant *Escherichia coli*.

Methods: From November 2019 to August 2023, all patients undergoing trans-rectal ultrasound guided prostate biopsy at the Georgetown Public Hospital Corporation had rectal swabs taken prior to the procedure. Additionally, demographic information was prospectively collected including, recent hospitalization and antibiotic use, prior biopsy, diabetes mellitus and indwelling urinary catheters. Antibiotic sensitivity of *E. coli* isolates was established using the Kirby-Bauer method and the Vitek-2 automated system. Patients

were contacted via telephone for 4 weeks post biopsy and infective complications recorded.

Results: During the study period, rectal swabs were obtained from 98 patients, and *Escherichia coli* was cultured in 86 cases. Susceptibility testing reported 32 (32.6%) of isolates were resistant to ciprofloxacin with 13% (13.3%) of these being multi-drug resistant. Resistance to other antibiotics commonly used in urology was also identified: gentamicin 9.9%, cefuroxime 11.1%, and trimethoprim/sulfamethoxazole 37.9%. Factors associated with increased antibiotic resistance included diabetes mellitus, higher PSA levels and larger prostate volumes. There were two cases of post-biopsy fever and no case of sepsis occurred.

Conclusion: There is a high prevalence of ciprofloxacin resistant *Escherichia coli* in the fecal carriage of patients undergoing TRUS guided prostate biopsy. Despite this, the high resistance rates did not translate into infective complications. Nonetheless, antibiotic stewardship and vigilance are required.

Relevance: This study has identified a considerably high level of bacterial resistance, and concerningly, multi-drug resistance. While this did not translate into clinical complications in this cohort, it is an opportunity for review of the current practices and highlights the need for greater stewardship at the institution.

LT6: PRESCRIBING PLANETARY HEALTH: HEALTHCARE WORKERS AT THE FOREFRONT OF CLIMATE ACTION

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Introduction: Climate change has significant and wide-ranging effects on health, affecting populations across the globe. Some of these impact weather, air quality, infectious diseases, health infrastructure, food security, mental health among others. Healthcare workers have an essential role in the fight against climate change and in mitigating its effects. The long-standing recognition of their expertise, credibility and commitment has the potential to make them powerful advocates for helping protect public health, promoting sustainability and contributing to a healthier, more resilient world.

Rationale: The perception of healthcare workers significantly impacts whether the public listens to their advice on matters like climate change. The current standing of healthcare workers is evolving as we move out of the pandemic, where their trust and credibility, communication skills, visibility and engagement, consistency and integrity, advocacy and leadership were questioned and tested to varying degrees.

Objectives and Methodology: Our study used a psychometric Likert survey to determine current public perception of the various healthcare workers, the public's general perception of climate change and its impact on health, and whether there is

an appetite for healthcare worker intervention.

Results: Our survey shows that doctors, nurses and pharmacists are among the most respected professions in the country. Almost everyone surveyed has heard of climate change, has acknowledged that the pattern of weather is changing and would like to know more. While only 60% of participants believed that they could have an impact on the evolution of climate change, 95.6% would like health care professionals to share more on the subject.

Conclusion: By building trust, improving communication skills, engaging with the community, maintaining integrity and collaborating with other influencers, healthcare professionals can effectively advocate for climate action and influence people's behaviour.

POSTER PRESENTATIONS

P1: GUYANA'S APPROACH TO EVIDENCE-BASED PUBLIC HEALTH PRACTICES AT THE MINISTRY OF HEALTH

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Keywords: evidence-based public health, Ministry of Health, Guyana, cross-sectional study, data collection, access to research, training programs, collaboration, capacity building.

Background Information: Evidence-based public health practices are vital for improving health outcomes and optimizing resource utilization. Assessing the approach to evidence-based practices within the Ministry of Health (MoH) in Guyana is crucial for enhancing public health initiatives and addressing health challenges specific to the country.

Objective: This study aims to evaluate Guyana's approach to evidence-based public health practices within the MoH and identify areas for improvement.

Methods: A cross-sectional study design was employed. A questionnaire-based survey was administered to professionals working within the MoH to gather information on the integration of evidence-based practices, data collection and

analysis methods, access to research and evidence, training programs, and challenges faced. Descriptive statistics were used to analyze the data.

Results: Preliminary findings indicate that while there is a recognition of evidence-based practices within the MoH, there are challenges related to limited access to research and evidence, inconsistent data collection methods, and the need for enhanced training programs as was indicated by 79% of the respondents. The study also identified a willingness among professionals to strengthen evidence-based practices and highlighted the importance of collaboration and capacity building.

Conclusion: The findings emphasize the importance of prioritizing evidence-based practices within the MoH in Guyana. Enhancing access to research and evidence, standardizing data collection methods, and developing robust training programs can contribute to strengthening evidence-based decision-making and program implementation.

P2: OVERCOMING CHALLENGES BY MULTIDISCIPLINARY TEAM APPROACH TO ACHIEVE THE FIRST PEDIATRIC TRANSPLANT AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION

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This is the case presentation of a 7-year-old female with autosomal recessive

polycystic kidney disease (PCKD) who, despite being only 17 kg, was found after extensive work up to be optimized for renal transplant. Crossmatch with her father, the donor, yielded No DSA for either class. CPRA was 24%, Negative for B and T cells. A multidisciplinary discussion was held via zoom to agree on the plan of management and consensus was reached to proceed with transplant.

Challenges Identified were as follows: Donor had double artery on left kidney and short vein on Right kidney with single artery.

Pediatric Transplants are notorious more so than adult transplants to result in hypophosphatemia post operatively. IV phosphate could not be procured at that time and was not available in the country.

Donor Kidney was too large to be transplanted in extraperitoneal space in Rt Iliac Fossa, absorbable mesh is required to secure kidney to prevent "flip flopping".

This patient will require immunosuppression and if ICU care and prolonged intubation is necessary, admitting to the ICU which is notorious for antibiotic resistant organisms will pose a hazard.

Patient had Right heterotopic intraperitoneal renal transplant with anastomosis to external iliac artery and vein successfully. Despite the daunting nature of a pediatric transplant, careful and meticulous multidisciplinary planning and navigation to overcome challenges can yield tremendous outcomes.

P3: A RAPID REVIEW OF THE PHARMACEUTICAL SUITCASE TRADE IN TRINIDAD AND TOBAGO.

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Purpose: Trinidad and Tobago is located in the Southern Caribbean and is a part of the Caribbean Community (CARICOM). Despite being classified as a Small Island Developing State by the United Nations it has a high Human Development Index and a Gross Domestic Expenditure spent on health of 7.31%. Although there is a developed formal public and private healthcare system that is available, it was realized in the post pandemic era that informal, unregulated suitcase trade in medication had become established that provided access to unproven remedies for COVID-19. This informal trade highlighted a multidimensional threat to the healthcare system that required a similarly robust response.

Focus: The focal question of this paper was to determine the potential impact of the illicit trade of pharmaceuticals in Trinidad and Tobago and to explore the aspects of multisectoral regulation that would be necessary to curb the problem.

Content: A rapid review of the literature was performed between June and October of 2023. The population was the public of Trinidad and Tobago; the exposure was the impact of illicit pharmaceuticals, and the outcome was any published data that

publicly available. The resources included PubMed, EBSCO and local news sources. Items were included if they were published within the previous five years, in English and included keywords "Suitcase Trade", "Illicit Pharmaceuticals", and "Pharmaceutical Regulation". The reviewers included a senior lecturer at the school of pharmacy, three health systems professionals, one senior attorney at law and one senior economist. Disagreements on content were resolved by engaging an expert external health system professional. Appraisal content extracted key themes associated with the impact of the Suitcase Trade of Pharmaceuticals.

Significance: The resources screened yielded an average of 50 papers, when overlapping hits and less relevant documents were removed, a total of 10 academic papers, 2 legal papers, 5 economic papers and 10 news media items were considered relevant. There was overwhelming evidence of the Suitcase Trade being an unspoken component of the local pharmaceutical industry which agreed with the International Monetary Fund's recognition of a practice that exists on the edges of a formal trade. There was little that was officially known about the volume of trade, but it was recognized as opportunistic to the loopholes of regulation that provided an unfair economic advantage. There was a recognized threat to the health status of populations but no published evidence of this was readily available. The root cause of the problem was that the practice presented itself as a disruptive innovation that bridged the gap in availability, often with a significant price differential. The legislative landscape was

found to be unformidable with an even greater enforcement challenge. This, therefore, indicates that addressing this problem requires solutions that include health, legal, trade, security and information technology.

P4: AN ILLUSTRATION OF THE POTENTIAL IMPACT OF CLIMATE CHANGE ON SURGICAL ILLNESS: PEDIATRIC ACUTE APPENDICITIS AND DENGUE FEVER

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Background Information: Climate change is a significant global issue that has extensive effects on both the environment and human health. Climate change can negatively affect surgical care in several ways, from increased surgical burden, decreased or delayed surgical care delivery and worsened surgical outcomes. Among the many different causes that would account for these negative consequences (storm related trauma, surgical infections, loss of infrastructure etc), vector borne illnesses and their implications on the physiological state of surgical patients may be overlooked. A warming planet and increase in rainfall create a nidus for mosquito reproduction and vector borne diseases such as Dengue fever. Dengue fever and its resulting viremia may cause surgical illness as well as trigger an inflammatory response leading to severe complications in surgical conditions.

Rationale: Guyana, the Caribbean and Latin America are suffering a surge in dengue cases of epidemic proportion. We have encountered challenges in the diagnosis and in the evolution of acute appendicitis patients during this time.

Objectives and Methodology: Our paper is an audit of paediatric patients with acute appendicitis, and concomitant Dengue fever with the aim of identifying their patterns of presentation and clinical evolution.

Results: The study demonstrated atypical presentation in 92% of patients, a heavy reliance on imaging for diagnosis (83%) as well as worsened pathologic and physiologic states. 92% of patients had a ruptured appendix, with 1 in 6 patients requiring admission to the critical care unit for management of multiorgan dysfunction.

Conclusion: The study illustrates how climate change and its consequences can influence surgical burden and disease severity necessitating a modified approach to diagnosis and management, to avoid surgical pitfalls and complications.

P5: HEMODIALYSIS VS PERITONEAL DIALYSIS: A QUALITY-OF-LIFE ASSESSMENT

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Introduction: Patients on dialysis have deficits in their quality of life (QoL) as compared to the healthy population. These

deficits have adverse health outcomes for the patient. Deficits in QoL may vary according to the dialysis modality chosen.

Objectives:

1. To determine if a statistically significant relationship exists between demographic factors and QoL in patients receiving dialysis in Region 4, from 2014 to 2022.
2. To determine whether QoL varies significantly with duration of dialysis among these patients.
3. To compare QoL between patients receiving hemodialysis (HD) verses peritoneal dialysis (PD)

Methods: A cross-sectional, quantitative study was conducted among five dialysis centres in Region 4. Primary data was collected using the KDQoL-36 questionnaire. Data collected was then analysed using Statistical Package for Social Services (SPSS) software.

Results: A total of 100 patients were sampled. The mean age of the sample was 52 years. The mean value for number of years on dialysis was 2.38 years. Sixty-five percent (65%) of the population were in the low-income bracket. There was no statistical significance between gender and QoL. However, HD had a better physical composite QOL score when compared with PD patients. There was not a significant relationship between income and QoL. On assessment of age and each QoL domain, there was no significant relationship. In terms of duration of dialysis and QoL, a significant relation exists between years on dialysis and symptoms/problems list only. With respect to both HD patients and PD

patients, when the QoL scores for each QoL domain were checked against the mean of this sample, it showed that most patients had an average QoL.

Conclusion: This study showed a statistically significant difference for the physical composite score where hemodialysis patients had a better score. Also, a negative relationship exists between duration of dialysis and symptom/problem list. However, there was no statistical difference between demographic characteristics and dialysis modalities, nor between QoL scores and dialysis modalities.

P6: KNOWLEDGE AND PERCEPTIONS OF HPV AND HPV VACCINATION AMONG WOMEN OF CHILD-BEARING AGE AT WEST DEMERARA REGIONAL HOSPITAL OBSTETRICS HIGH RISK ANTENATAL CLINIC AND OUTPATIENT GYNECOLOGY CLINIC

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Introduction: Human Papillomavirus (HPV) is the most common sexual transmitted infection worldwide. Persistent infection of certain HPV subtypes results in cancer in both men and women. HPV vaccines can prevent malignancies in at least six organs. However, vaccination uptake remains low globally. As a result,

this research embarked on exploring the knowledge and perception towards HPV and HPV vaccination.

Objectives: To describe the current knowledge of HPV, HPV screening and vaccination among women of child-bearing age at WDRH Obstetrics High Risk Antenatal Clinic and Outpatient Gynecology clinic from July 1st to 31st, 2023. To determine the sociodemographic factors associated with HPV vaccination among women of child-bearing age at WDRH Obstetrics High Risk Antenatal Clinic and Outpatient Gynecology clinic for the period July 1st to 31st, 2023. To determine the prevalence of HPV vaccination among women of child-bearing age at WDRH Obstetrics High Risk Antenatal Clinic and Outpatient Gynecology clinic as of July 1st to 31st, 2023.

Methods: A quantitative, cross-sectional study was conducted. Data collected was analysed using Statistical Package for Social Services (SPSS) software.

Results: Twenty-one percent (21%) of participants were vaccinated or initiated vaccination against HPV. Level of education and employment status were statistically associated with HPV vaccination. Twenty-five percent (25%) of participants answered more than fifty-three (53 %) of questions about HPV and HPV vaccination correctly. Ethnicity was the only demographic characteristic associated with knowledge of HPV and HPV vaccination. Half of the participants stated that HPV vaccination was safe to use.

Conclusion: The overall knowledge about HPV and HPV vaccination was low among

women at West Demerara Regional Hospital Obstetric clinic and Gynecology clinic. Ethnicity is a determinant for knowledge about HPV and HPV vaccination. Vaccine uptake is low among women of child-bearing age at the WDRH Antenatal clinic and Gynecology Outpatient Clinic.

P7: EXPLORING THE KNOWLEDGE, ATTITUDES, AND BEHAVIORS OF INDIVIDUALS WITH NON-COMMUNICABLE DISEASES TOWARDS MAINTAINING A PLANT-BASED DIET

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Background: There is a large population of citizens with non-communicable diseases (NCDs) with unhealthy eating habits contributing to high mortality and morbidity rates. Growing evidence suggests plant-based diets may offer an alternative approach to conventional treatments.

Design and Methods: A Concurrent Mixed Methodology study with participants ≥ 18 years, diagnosed with one or more NCDs. Data was collected using 1) A structured Knowledge, Attitudes and Behaviors (KAB) survey of 257 participants through convenience sampling. 2) Semi structured interviews conducted via Zoom

using snowball and purposive sampling. Quantitative data were analyzed using tests of difference and analysis of variance and qualitative data underwent thematic analysis.

Results: Knowledge of plant-based diet was highest for males, persons with primary school education, and income less than \$5000 per month. For attitudes, this was highest for young persons (18-35), women, those without formal education and \$5000-10,000 of household income. Moreover, behaviors related to plant-based diet were highest for persons aged 26-35, followed by 36-45 age groups. Age and education were associated only with knowledge with a correlation of 0.125, and -0.206 respectively. Qualitative data revealed perception, behaviors and cultural influences on diet. Barriers included economic factors and lack of education.

Conclusions: Findings suggest the need to increase knowledge sensitization on plant-based diets between diverse social groups, demonstrating the potential for increased health benefits of plant-based diet with increased education.