UNIVERSITY OF THE WEST INDIES SCHOOL
OF CLINICAL MEDICINE AND RESEARCH, THE BAHAMAS

9TH ANNUAL RESEARCH DAY

THEME:
MATERNAL AND CHILD HEALTH

SEPTEMBER 24TH-25TH 2015

COB School of Nursing Auditorium
Grosvenor Close
Nassau, The Bahamas

The University of The West Indies

The University of the West Indies is the region's flagship institution of higher learning, serving sixteen countries of the English-speaking Caribbean. There are three main campuses situated on the islands of Jamaica, Trinidad and Barbados respectively, and a fourth campus, the Open/Virtual Campus servicing the 13 non-campus based countries.

From its humble beginnings in l948 with one medical faculty and 33 students enrolled, UWI has grown to include seven faculties, 4 campuses and 12 centres spread throughout the Caribbean. Student enrolment currently averages over 46,000 students.

UWI offers over 800 programmes of study. Each year the University produces approximately 5,800 graduates at undergraduate, graduate and diploma levels.

UWI's network of over 75,000 graduates continues to be at the forefront of Caribbean and global thought, imagination and action.

UWI consistently provides the Caribbean region with its leaders in government, business, education, law, engineering, medicine and other key sectors.

UWI is internationally known for its academic and research excellence with a showcase of over 75 Rhode scholars. Within the region, UWI stands proudly as an icon of Caribbean integration and culture. It maintains a UWI Centre in Nassau through which Bahamian students may seek admission to any of the campuses and access programmes of the new Open Campus. The Bahamas has been the site of programmes of the UWI since 1964 and currently has four distinct programmes:

- UWI Open Campus, The Bahamas formerly the School of Continuing Studies (SCS);
- Centre for Hotel and Tourism Management (CHTM);
- School of Clinical Medicine and Research, The Bahamas (SCMR);
- Law Programme in association with College of The Bahamas

THE UNIVERSITY OF THE WEST INDIES SCHOOL OF CLINICAL MEDICINE AND RESEARCH, THE BAHAMAS

9th Annual Research Day
Maternal & Child Health

THURSDAY, SEPTEMBER 24th, 2015

COB SCHOOL OF NURSING AUDITORIUM,
Grosvenor Close
6:30 pm – 9:00 pm

6:00pm – 6:30pm
REFRESHMENTS

Official Opening Ceremony and Session: 6:30pm – 9:00pm

Welcome
Remarks: Our RBC Sponsor
Remarks: Minister of Education
Remarks: Minister of Health
Remarks: Director
Research Report: Chairman Research Committee

SESSION I: OPENING

THE ROYAL BANK OF CANADA LECTURE

Sepsis in Children: A Global Issue needs a Global Solution
Dr. Niranjan Kissoon, Prof Pediatrics, Emergency Medicine & Critical Care
BC Children's Hospital and Sunny Hill Health Centre, Vancouver, Canada

Social Determinants of Maternal & Child Health in the Americas:
Data, Policy Implications & Opportunities
Dr. Gerry Eijkemans, PAHO/WHO Representative,
The Bahamas and Turks & Caicos Islands

Socio-Demographic Factors Impacting Infant Mortality in the Bahamas
Ms. Nanika Brathwaite, Epidemiologist, Ministry of Health

The Fetal and Maternal Effects of Obesity
Dr. Jimmy Espinoza
Associate Professor in the Department of Obstetrics and Gynecology
Baylor College of Medicine, Houston, Texas

FRIDAY, SEPTEMBER 25TH, 2015—8:30 AM – 3:30 PM

SESSIONS II, III & 1V

Dr. Nicole Adderley:

- **The prevalence and associate risk factors for iron-deficiency anaemia and associated risk factors in 12 month old infants attending the public clinics in New Providence**

Dr. Jimmy Espinoza:

- **Fetal signaling in the etiology of preeclampsia, gestational diabetes and preterm labor**

Mrs. Gina Dean:

- **Advancing the Perinatal information System in the Bahamas**

Dr. Vrunda Sakharkar:

- **The Challenge of Antenatal Care in the Bahamas**

SESSION III: 11:00AM – 12:30PM

Dr. Deneil Williamson:

- **Descriptive Epidemiology of Select Pediatric Cancers among Persons 19 Years Old and Younger during January 2000 to December 2012 and Survival Outcomes in the Princess Margaret Hospital (PMH), The Bahamas**

Dr. Niranjan Kissoon

- **Failure to immunize is a National and Global tragedy.**

Dr. Michelle Sweeting:

- **Exploring perceptions and impact of violence as experienced by the emergency department staff of the Princess Margaret Hospital in The Bahamas**

Dr. Alexya Dorsett-Williams:

- **Knowledge, attitudes, practices, intentions and prevalence of obesity in health care workers of the public community clinics on New Providence, the Bahamas**

Dr. Phyllis Darville:

- **Alcohol use disorder and its relationship with comorbidities depression and smoking among patients presenting to public clinical settings in the Bahamas**

RBC

12:30PM -1:30PM BROWN BAG LUNCH

SESSION IV: 1:30PM – 3:30PM

Dr. Sharmaine Butler:

- **Cardiovascular risk factors knowledge, attitudes and behavioural patterns among adults attending outpatient clinics at the Public Hospitals Authority – Princess Margaret Hospital, New Providence, Bahamas**

Dr. Raquel Davis-Hall:

- **The Emergency Department virtual ward boarded patients preference for boarding, length of stay and medical essentials**

Dr. Percival McNeil:

- **UPDATE: Mother to child HIV prevention (PMTCT in The Bahamas)**

Dr. Maxine Gonzales-Cameron

- **An assessment of burnt out in physician employed with the public hospital authority in Nassau, Bahamas**

Dr. Inga Pratt:

- **Effect of a Brief Educational Intervention concerning the Human Papillomavirus on the Knowledge and Attitudes of Antenatal Patients in New Providence, The Bahamas**

Dr. Darron Halliday:

- **Impact of gynaecological board rounds on patient care**

Dr. Robin Roberts:

- **Male Circumcision in The Bahamas: Attitudes and Practice among Health Care Providers**

RBC

Message

Hon. Perry Gomez, MD., MP.
Minister of Health

I congratulate UWI School of Clinical Medicine and Research, The Bahamas for this timely symposium highlighting the issues of maternal and child health in our archipelago.

The Research Day symposium speaks of the basic issues affecting health care outcomes in the country: not that we have one of the best neonatal health care services in the region, or a near 100% immunization rates, but the fact that pregnant mothers are not attending antenatal clinics – which are available and accessible at no costs to the mothers. Obesity, hypertension and diabetes remain major risk factors impeding better outcomes in maternal and child health care. The realities are that changing life style behaviors remain one of the major issues in improving our national health profiles. I make special note that the symposium attest also to the fact that we can rise to the occasion. Our success in the prevention of maternal to child HIV prevention has been a transformational event in both regional and global HIV care. Yes, we can overcome significant socioeconomic determinants with the implementation of appropriate governmental policies, resources and commitment.

The evidence is overwhelming that access and equity in health care is a major impediment to improving our health profiles in the Bahamas. We believe that the introduction of Universal Health Care in 2016, with Primary Care initially, will make major strides to improving our national health profiles. Our initial investment of $60 million to institutional strengthening is a direct indication of the government's commitment to ensure the success of the universal access and availability of health care services across the archipelago and to impact directly the unacceptable trends of our Infant and Maternal Mortality Rates over the past recent years.

The symposium's agenda with its cadre of international invited researchers is impressive; one and a half days immersed totally in applied medical scholarship. The school is truly distinguishing itself as a leading center in health research in the Commonwealth of the Bahamas.

I applaud your efforts.

Message

Hon. Jerome Fitzgerald, M.P.
Minister of Education, Science and Technology

For the past nine years, The University of the West Indies' School of Clinical Medicine and Research has celebrated its Annual Research Day. Once again, I am delighted to convey my congratulations to you on this occasion. For almost a decade, your seat of learning has been a trailblazer in the medical field and has educated scores of Bahamians on relevant health issues. I commend your institution for providing the public with information to empower individuals and to promote healthier lifestyles.

'Maternal and Child Health', the theme for this year, brings to the forefront the significance of healthy mothers and children and the need for greater attention to be given to ensure that all children born in The Bahamas are born with optimal health to healthy mothers. The role of mothers in the health and well-being of their children must continuously be emphasized and mothers must also come to understand the role that healthcare and nutrition play when it comes to brain development. There is no question that there is a correlation between education and health and nutrition. Children with restricted development of these skills during early life are at risk for poor school achievement, early school drop-out, low-skilled employment, and poor care of their own children.

Healthcare is among one of the topics of global concern. As we embark on the Sustainable Development Goals (SGDs); the third SDG focuses on good health and wellbeing to 'Ensure healthy lives and promote well-being for all, at all ages'. Your theme is in keeping with the SGD as you target maternal and child healthcare; the foundation of healthy lifestyles. I implore you to ensure that as a country the health and well-being of mothers and children remains a priority.

I wish you a successful Research Day as you continue to chart new courses in health care in our country. May we continue to highlight the fact that prevention is better than cure and to encourage our citizens to be proactive about their health; as we all work together to build a 'Stronger Bahamas' through the promotion of healthy lifestyles underscoring the importance of Maternal and Child Health.

Message

Nathaniel Beneby Jr.
Managing Director, RBC Royal Bank, The Bahamas, Cayman and Turks & Caicos

Greetings! On behalf of the leaders and staff of RBC Royal Bank, it is with great pleasure that I congratulate your team for hosting the 9th annual Research Day of The University of the West Indies Bahamas, (School of Clinical Medicine and Research).
Your theme, Maternal and Child Health, is an important and relevant one. We commend you for this focus, as caring for our mothers- to- be, equates to caring for generations to come. Powerful indeed.

This is a wonderful event for both The Bahamas and the University, because it demonstrates a commitment to invest in a medical research programme that benefits healthcare development and delivery throughout the region.

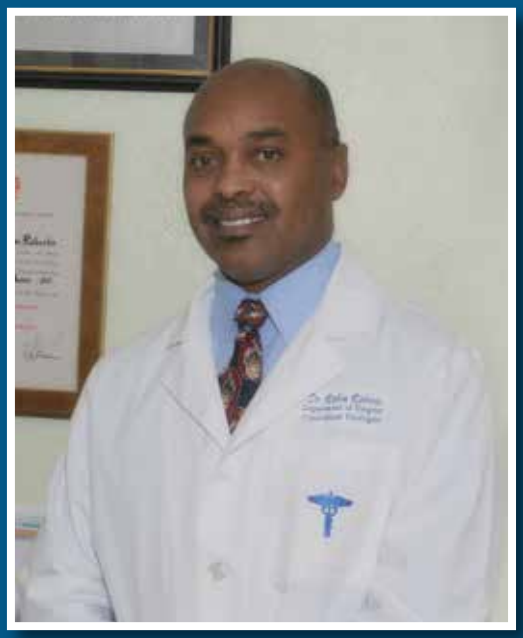
RBC Royal Bank of Canada has provided UWI with banking services since the inception of the Bahamas Programme in 1997, and we were the inaugural sponsor of the very first Research Day. RBC Royal Bank certainly sees this continued partnership as another opportunity to invest in our community in a tangible way - by supporting an important initiative that will contribute to the well-being of the Bahamian people.

We have always been strongly supportive of educational and healthcare initiatives, and we are intentional regarding investing strategically in sponsorships that will produce a lasting social impact.

The University of the West Indies continues to provide top quality education services in the Bahamas for undergraduate and postgraduate medical students. This university has had a strong medical faculty for over half a century, and now has thousands of alumni around the world in key positions in the medical field including many in the Bahamas such as Dr. Robin Roberts and many others.

We are confident that this partnership between RBC and UWI will continue to make a significant contribution to this country's education and medical sectors. UWI has a philosophy of engaging with the communities and regions in which it operates to ensure that its research, teaching and consulting activities are relevant to the development objectives of the host country. RBC Royal Bank is fully in synch with that philosophy.

Thank you for extending this opportunity to once again partner with the University of the West Indies in your ninth research day. We wish you good success as you continue to excel for the betterment of this nation.



Message

Dr. Robin Roberts
The Director Of UWI,
SCMR Bahamas

On behalf of the University of the West Indies School of Clinical Medicine and Research, The Bahamas, I welcome you to our 9th Annual Research Day Symposium with a focus on Maternal and Child Health.

The mission of the University of the West Indies is: To advance education and create knowledge through excellence in teaching, research, innovation, public service, intellectual leadership and outreach in order to support the inclusive (social, economic, political, cultural, environmental) development of the Caribbean region and beyond. This year's list of podium presentations is a testament to our commitment to better health care in the Bahamas.

Our current national health profile attest to the unacceptable infant and maternal rates in The Bahamas. This year's symposium seeks to highlight the issues and determinants and to address the solutions. We welcome our international speakers who are world renowned and highly published in the field of Maternal and Child Health:

- Dr. Niranjan Kissoon, who is on a global mission to ignite the world on the impact of sepsis on World Sepsis day, September 13th. The data is alarming: "Severe infections leading to sepsis account for about 70% of infant and childhood deaths worldwide. I support the World Sepsis Day as a step to elevate public awareness, influence policy and generate action to fight this widespread scourge. Our future depends on the welfare of our children."

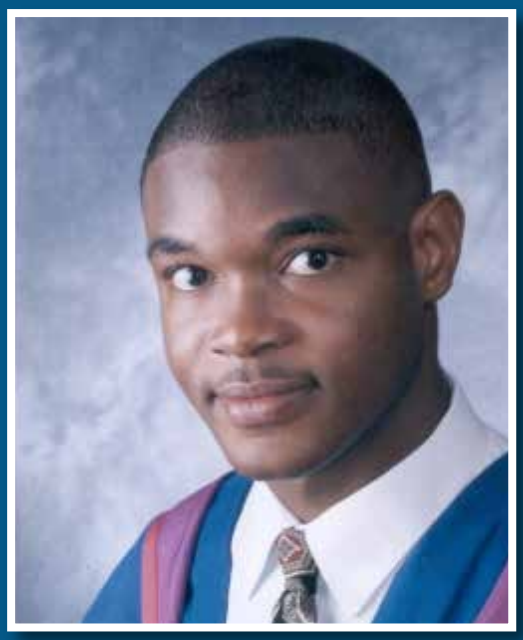
- Dr. Jimmy Espinoza, who shares with us his cutting edge research on fetal medicine and signaling in the pathogenesis of preeclampsia, gestational diabetes and preterm parturition.

- Dr. Gerry Eijkman, our PAHO regional representative, who as always continues to emphasize the underlying issues in maternal and child health and our need to address them within the public health rubric.

On his official retirement from the Government service after over forty years of public service as one of our most venerable pediatricians, it is incumbent of me to recognize Dr. Percy McNeil and his contributions to health care in the country. It is only fitting to have him present his landmark research on preventing maternal to child transmission of HIV infections.

As always, the university is proud of the research initiatives of our faculty and students. As we strive to transcribe our research initiatives to the print media, I have every reason to believe that our contributions to advancing health care in the region can have the global impact as that of the prevention of maternal to child of HIV transmission.

I congratulate all our presenters and thank our primary sponsor, the Royal Bank of Canada who makes it possible that our research day programme in every way reflects our commitments to be true to our mission and goal: to improve the health of the people of the Commonwealth of the Bahamas through clinical research and to create a research unit in the Faculty of Medicine UWI, as the focal point of clinical research in the Bahamas.



Message

Dr. Darron Halliday
Research Committee Chairperson

The Research Committee of the School of Clinical Medicine and Research/Bahamas (University of the West Indies) is truly delighted to present its 9th annual conference. Our team has assembled an exciting cadre of speakers.

In addition to the expert faculty, eager residents and local researchers have accepted our invitation to present their work. We wish to encourage the residents and graduates to continue their research activities for many years after their formal training. There are many funding opportunities available if the right questions are asked!

This year's emphasis is on maternal and child health. Part of The United Nations Millennium Development Goals is focused on the reduction of maternal and neonatal morbidity and mortality. Every life is precious and we should use the gift of research to answer the difficult questions and to chart a new course towards a brighter future. In this era of technology, international collaborative research would strengthen all local efforts and help us come to a solution in a timely manner.

The keynote speakers addressing issues such as neonatal sepsis, determinants of infant mortality, social determinants of maternal and child health, and fetal and maternal effect of obesity would broaden our understanding of the scope of the problem and the way forward.

We are very grateful to the sponsors, the planning committee and all of you who have made this day possible. Let us continue to move ***forward, onward, upwards TOGETHER!***

Biography of

DR. JIMMY ESPINOZA

Jimmy Espinoza, MD, MSc, Associate Professor in the Department of Obstetrics and Gynecology, is board certified in Obstetrics and Gynecology. Dr. Espinoza serves as an attending physician in the Fetal Intervention group in the Division of Maternal-Fetal Medicine at Baylor College of Medicine, Houston. TX.

Dr. Espinoza earned his medical degree at San Fernando Faculty of Medicine, University of San Marcos in Lima, Peru. He completed his residency in Obstetrics and Gynecology at William Beaumont Hospital, Royal Oak, MI. Dr. Espinoza earned the degree of Master in Science in Reproductive Health at the University of Cardiff, Wales, where he graduate with distinction, followed by a Diploma in Fetal Medicine under the auspices of the Fetal Medicine Foundation in London, UK.

Dr. Espinoza's clinical interests include fetal interventions in the management of twin-to-twin transfusion syndrome, lower fetal urinary tract obstructions, fetal pleural effusions, fetal congenital diaphragmatic hernia, fetal neural tube defects and placental chorioangiomas.

Additional clinical and research interest include the use of imaging modalities in the prenatal diagnosis of congenital heart defect, in particular the use of 3D/4D ultrasonography in the diagnosis of fetal heart defects and fetal neurosonography. A particular focus on Dr. Espinoza's research is the role of fetal signaling in the pathogenesis of preeclampsia, gestational diabetes and preterm parturition.

Biography of

Dr. Niranjan Kissoon

Dr. Kissoon is the Past President of the World Federation of Pediatric Critical and Intensive Care Societies (www.wfpiccs.org); Vice-President, Medical Affairs at BC Children's Hospital and Professor, Pediatric and Surgery (Emergency Medicine) Department of Pediatrics at the University of British Columbia in Vancouver, BC as well as he holds the University of British Columbia BC Children's Hospital (UBC BCCH) Endowed Chair in Acute and Critical Care for Global Child Health.

Dr. Kissoon is the vice chair of the Global Alliance for Sepsis (www.globalsepsisalliance.org) and co-chair of World Sepsis Day (http://www.world-sepsis-day.org/) and the International Pediatric Sepsis Initiative (www.wfpiccs.org/projects/sepsis-initiative).

Dr. Kissoon's international work has included work in China, India, Bangladesh, Brazil and Africa, often in areas of vulnerability and limited resources for the critically ill child. He is fully committed to improving the health care of children nationally and internationally. Part of this commitment has enabled him to assist colleagues worldwide in quality and safety projects and search for new knowledge as well as enabling them to access resources they would not otherwise have.

As a recognized expert in the field of pediatric emergency and critical care, Dr. Kissoon has contributed to over 300 peer reviewed publications and authored over 70 book chapters. He has been a visiting professor at more than 75 institutions worldwide along with being a member of editorial boards for 10 journals.

Dr. Kissoon was awarded a Distinguished Career Award by the American Academy of Pediatrics in 2013 for his contribution to the society and discipline as well as the prestigious Society of Critical Care Medicine's (SCCM) Master of Critical Care Medicine award in 2015 in recognition of his tireless efforts and achievements as a prominent and distinguished leader of national and international stature.

Biography of

Dr. Gerry Eijkemans

PAHO/WHO Representative, The Bahamas & Turks & Caicos Islands

Dr. Eijkemans, a citizen of the Netherlands, obtained her degree of Medical Doctor from the University of Nijmegen, Netherlands, in 1992, and her Master in Public Health from the Johns Hopkins University, Baltimore, United States. Having joined PAHO/WHO in 1993 as an international Consultant, Dr. Eijkemans has worked at the country level in Panama, Peru, Mexico, Suriname and now The Bahamas, and Turks and Caicos as the representative for PAHO/WHO. At the regional level, Dr. Eijkemans has worked in Washington D.C. as a regional adviser, and at the global level in Geneva heading the Global Occupational Health Programme in WHO.

Biography of

Dr. Percival McNeil

Dr. Percival McNeil is a graduate of the University of the West Indies Faculty of Medicine. He completed his Residency training in Pediatrics at the Wayne Sate University's Children Hospital, followed by a Fellowship in Pediatric Intensive Care. He is a Consultant Pediatrician, Past Chairman of the Department of Pediatrics, Past President of the Medical Association of the Bahamas and the current Chairman of the Bahamas Medical Council. Dr. McNeil has been an integral member of the HIV team in the Bahamas since its inception and the emergence of HIV disease in 1984. The Bahamas unfortunately has one of world's highest rates of HIV disease on a per capita basis in the region with a cumulative total of 11,803 reported cases as of December 2009; 35% of which have died due to AIDS. Dr. McNeil along with the HIV service have been the recipients of multiple NIH grants, involved in numerous multicenter trials, publishing and presenting globally and regionally on HIV management and patient care.

On addition to his University's commitment to teaching and managing a full complement of general pediatric clinical practice, Dr. McNeil is recognized as our national Pediatric HIV Consultant, personally managing essentially every child that has ever had HIV in the Bahamas. The contribution of the HIV team to the local, regional and global research and outcomes of maternal to eradicating fetal transmission is legendary. Dr. McNeil is a model physician of national commitment and service.

Sepsis in Children: A Global Issue Needs a Global Response. N. Kissoon

Sepsis is a syndrome in which an infection which results in a disregulated immune response in the body leading to decreased organ perfusion, multi-organ failure and if left untreated, death. However the burden of sepsis is not represented in the Global Burden of Disease and Death Series of the Lancet journal, neither is it accurately represented in WHO and CDC Atlanta websites. The importance of highlighting sepsis is not merely cosmetic. Indeed, many of the interventions needed to treat sepsis must be made generically before firm diagnosis is made. Moreover, many of these interventions are time sensitive and cannot rely on laboratory data. In addition, in severe sepsis, the treatment is time sensitive and similar and includes rapid diagnosis, administration of antimicrobials, fluids, oxygen and close monitoring. Indeed, the Ebola outbreak in West Africa is also due to sepsis. That sepsis is one of the most important diseases in the world is reflected in the global life years lost from severe infections leading to experts to suggest that infectious diseases systematically steal human resources.

A comprehensive plan to address sepsis should include preventing infections such as vaccine related disease, strict hand hygiene and addressing those with nosocomial infections. The comprehensive plan should also include early recognition and aggressive treatment, antimicrobial stewardship, innovations in care and investment in the science of delivery including knowledge translation and advocacy.

There are many barriers to sepsis care in resource limited environments. However, innovative methods in which provision of low course antibiotics and tests to community health workers, day clinics and home treatment have reduced mortality in many parts of the word, including Pakistan, Zambia, Bangladesh, Egypt, Ghana and Vietnam. Sepsis should also be thought of in broader context - it is a social disease as well as a clinical and political disease which is plagued by lack of or inappropriate use of resources. In addition, post discharge mortality after sepsis care in hospital is high and even higher than in-hospital care and should be addressed.

Advocacy is needed for the designation of a World Sepsis Day by the United Nations. This advocacy is being undertaken at the present time. You can be part of this by going to the World Sepsis Day website (http://world-sepsis-day.org), signing up as a supporter and pledging your support for World Sepsis Day. Moreover, you can also help by initiating quality improvement activities in your hospital or region, involving your healthcare authorities, involving sepsis survivors and their relatives, increasing awareness to laypeople, public and the media, and sharing your experience with others by joining the Global Sepsis Alliance Committees. We all have a role to play.

Social Determinants of Maternal & Child Health in the Americas. G. Eijkemans

The Social Determinants of Health (SDH) are defined by the World Health Organization (WHO) as “the conditions, in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.” This means that the conditions and contexts created by political systems and structures - economic activities and policies at the national and individual levels, social and cultural norms, to name a few - all influence and determine the health of people, families, and communities living within those conditions.

At the population level, poverty, social position (influenced by employment, education, gender, nationality and ethnicity), and the social and built environments in which a population lives are globally recognized SDH. It follows that these also influence the maternal and child health (MCH). International studies have identified determinants that explain inequity in infant mortality/ birth outcomes; income inequality, social policies related to maternal health, socioeconomic status (SES), race/ethnicity, and selected intermediary factors (such as psychosocial factors) were specifically identified. These social determinants must be addressed to translate into improved MCH.

Globally, significant progress has been made towards improving MCH as defined in the millennium development goals (MDG) MDG 4 and 5, targeted at reducing child mortality and improving maternal health. The under-five mortality rate has declined by 53% from 12.7 million in 1990 to 5.9 million in 2015. The number of maternal deaths also declined from an estimated 523,000 in 1990 to 289,000 in 2013. Despite the improvements, the MDG to reduce by two-thirds the under-five mortality rate and to

reduce by three quarters the maternal mortality ratio, between 1990 and 2015, will not be met. To improve maternal and child health, all social determinants need to be addressed.

Regionally, marked improvements have also been made. The Caribbean region has more than halved the under-five mortality rate Infant Mortality Rates (IMRs) decreased from about 90 to just over 31/1000 live births in a 40-year period in the Region of the Americas. Infant mortality in Barbados dropped by over 93% with universal access to health care and healthy environments being made a priority. In Brazil, by enacting policies that target SDH, such as purchasing power and access to water and sanitation, child stunting and IMR were positively and drastically impacted. The national prevalence of stunting fell by 20%, and all-cause IMR dropped from about 60/1000 live births to just over 20/1000 live births. Cuba's IMR is as low as 5/1000 live births. However, countries with higher GNPs show superior markers of change in MCH than those countries remaining. Paraguay, Guyana, Bolivia, and Haiti, representing the lower GNP, achieved a lower IMR reduction than the Region's average. Haiti specifically has highly inequitable skilled attendants present at birth, and currently has an IMR of 49/1000 live births, which is the highest in the region.

Evidence reveals significant, and often widening, disparities in health within and between more and less privileged people in low- and middle-countries like those in the Americas; significant pro-rich inequities within a country exist in access to health care. However, disease and disability are perceived differently among social groups; service availability may not be the only major barrier for the poor in accessing health care services, as evidenced by other SDH. Disparities are found also by gender and ethnicity, which are particularly relevant to MCH. Thus, mothers may not seek care due to discrimination or social barriers to receiving care based on her being female or being a certain race/ethnicity.

Social inequalities and health inequalities persist in countries of the Americas, perhaps as government health expenditures in developing countries are usually less beneficial for the poor or socially disadvantaged. Therefore, policy advances and funding opportunities must be tackled by looking at SDH, specifically in regards to race/ethnicity and gender. Indeed, the Americas must devote efforts and resources to improve MCH to ensure the best possible health outcomes for their countries.

Going forward, MDG and SDG, as guidelines and targets for SDH, are paramount to reducing gaps and to achieve equity in MCH. Sustainable development goals (SDG) take a more universal approach to enhancing world health, while still providing attainable targets and strategies for progress. Post-2015, MDG 4 and 5 fall to Sustainable Development Goal (SDG) 3: to ensure healthy lives and promote well-being for all at all ages. SDG 3 directly aims to improve health outcomes, including MCH, where by 2030, the global maternal mortality ratio will be reduced to less than 70 per 100,000 live births and preventable deaths of new-borns and under-five children will be non-existent.

To begin the quest to achieve SDGs, considerations should be given to type of intervention, ability to deliver intervention to where it is needed most, and ability to collect data for comparison. Interventions delivered at community level tend to be much more equitable than those delivered in health facilities and emphasize SDH. By delivering services that address SDH such as education, gender, nationality and ethnicity, health outcomes for mothers and children can flourish. Last, once the appropriate strategy for delivering an intervention to reduce IMR and MCH is reached, and the appropriate audience and tactics are decided upon, it is imperative that data is collected either on site or thereafter. By doing so, progress towards SDG and equitable MCH can be tracked and utilized in the best way. MCH and IMR can be rehabilitated with political will, county-wide devotion, and attentiveness to the SDH.

Socio-Demographic Factors Impacting Infant Mortality in The Bahamas. N Brathwaite, C Deleveaux, G Dean

Objective: To explore the influence of various socio-demographic factors on infant mortality in The Bahamas.

Design and Methods: The 2010 Bahamas Census was used as the data source. Females who had a live birth in the past year, with accompanying demographic, social, and fertility characteristics, were examined using bivariate and logistic regression analyses (p-value <=.05).

Results: Overall infant mortality was 2.8% among 5,011 females. Logistic regression revealed for all females: increased parity, (OR 1.64; CI 1.36, 1.96), first child at 30 years or older (OR 1.85; CI 1.16, 2.96), 5 or more persons in household (OR .38; CI .26, .56), being married (OR 1.45; CI 1.01, 2.06), and being Bahamian (OR 2.47; CI 1.5, 4.06). For females under 35 years, final predictors were: increased parity (OR 1.41; CI 1.14, 1.74), being married (OR 1.86; CI 1.22, 2.83), Bahamian (OR 3.58; CI 1.76, 7.31), urban residence (OR .55; CI .34, .91), 5 or more persons in household (OR .54; CI .35, .85). Females over 35 had decreased odds of infant mortality with households of 5 or more persons (OR .36; CI .19, .67) and not being the head of household (OR .46; CI .27, .76).

Conclusions: Older age, smaller households, and rural residence increased risk for infant mortality. Large household size appeared to be a protective factor regardless of age. Timely access to critical care for infants in rural areas is recommended along with wider implementation of paternity leave in the work place to increase maternal support.

The Fetal and Maternal effects of Obesity. J Espinoza

The incidence of obesity and Type 2 diabetes has reached epidemic levels in developed countries worldwide. In the US, 30% of adults above 20 years of age are now considered obese. Equally alarming is the increasing prevalence of metabolic diseases in younger children and adolescents. Infants born to obese, overweight, and diabetic mothers have increased adiposity and are at increased risk of later metabolic disease. Fetal exposure to excess blood lipids could impact metabolism and the development of stem cells, all of which can affect organ development and the response to the postnatal environment. Fetal life is characterized by tissue plasticity and the ability to respond to environmental factors by altering gene expression levels via epigenetic modifications. Excess fetal lipid exposure during the fetal life may regulate genes involved in lipid sensing and metabolism through epigenetic mechanisms. Epigenetic regulation of gene expression is characterized by modifications to DNA and chromatin that alter gene expression independent of gene sequence. Epigenetic modifications can be maintained by different mechanisms, creating stable changes in the expression of metabolic genes and their main transcriptional regulators.

In the 1980s, David Barker proposed that the major causes of cardiovascular and metabolic diseases have their roots in fetal development. This notion is now supported by a solid body of evidence including the observation that an hyperglycemic intrauterine environment is responsible not only for significant short-term morbidity in the fetus, neonate and the mother but also for an increased risk of developing diabetes as well as other chronic diseases at adulthood. The molecular mechanisms involved in fetal programming of adult disease are not clearly understood. Thus, we as health care providers, have the obligation of providing insights into the mechanisms by which obesity can impact the short and long term outcomes in mothers and their infants in order to design prophylactic and/or therapeutic interventions.

The Prevalence And Associated Risk Factors For Iron-Deficiency Anaemia In 12 Month Old Infants Attending The Public Clinics In New Providence. N. Adderley, C. Sinquee, S. Pinder-Butler, M. A. C. Frankson, C. Farquharson

Background: Anaemia affects one quarter of the world's population with approximately half of the cases occurring as a result of iron-deficiency anaemia; a condition associated with short and long-term complications. The paediatric population is at an increased risk of developing iron-deficiency anaemia because of rapid physical growth and limited dietary options to supplement the increased iron requirements. There is an extensive body of research which documents the prevalence and risk factors of this condition. However, there is limited research on the Bahamas, and consequently the prevalence of this condition in New Providence is currently unknown.

Objective: To determine the prevalence and associated socio-economic and demographic risk factors of anaemia and iron deficiency anaemia in 12 month old at risk infants attending public clinics in New Providence.

Design and Methods: We recruited 341 infants and their respective guardians from individuals attending well baby clinics at seven public clinics on the island of New Providence. The study period extended from January to March 2015. These participants were selected by convenience sampling to be enrolled in a cross-sectional study. Information on the demographic and socio-economic

variables was then collected via a questionnaire. Upon completion of the questionnaire by the accompanying guardians, a blood sample was drawn from the infants. The haematological indices were analysed using an Abbot Celldyn 3700 machine. The relationship between anaemia and the socio-demographic variables was assessed via ANOVA, linear and logistic regression. Results: A total of 325 infants and their respective guardians participated in the study. The prevalence of anaemia in 12 month old infants was 19.7%. The prevalence of iron deficiency anaemia in 12 month old infants was 8.3%. The demographic data showed that increased maternal and paternal academic level achievements were positively correlated into increased yearly household income ($p<0.001$, $p= 0.006$). The comparison of anaemic and non-anaemic infants revealed that the anaemic infants were more likely to live in rented apartments. Also, non-anaemic infants were more likely to be given vitamin supplementation ($p = 0.012$). No other associations, socio-demographic or otherwise were found in this study.

Conclusion: This current study found that the prevalence of anaemia and iron-deficiency anaemia within this age group was at a relatively high rate that was previously unrecognized. Attendance to the infants' living conditions and vitamin supplementation may further reduce the prevalence of these conditions in New Providence.

Fetal Signaling In The Etiology Of Preeclampsia, Gestational Diabetes And Preterm Labor. J. Espinoza

Successful pregnancies depend on a proper balance between increasing fetal demand for nutrients and a well-measured maternal investment to safeguard her reproductive future. Failure of the well orchestrated maternal–fetal interactions may lead to a conflict of interests between the mother and her fetus and subsequent pregnancy complications. The "fetal–maternal conflict" is a conceptual framework whereby fetal growth and development can happen at the expense of maternal well-being.

A growing body of evidence indicates that fetal signaling may play an important role in the mechanisms of disease in preeclampsia, preterm parturition, fetal growth restriction, and fetal death. For example, evolutionary fetal strategies to deal with chronic uteroplacental ischemia associated with preeclampsia may include growth restriction, preterm parturition to exit an hostile intrauterine environment or fetal signaling to elevate the maternal systemic blood pressure in an attempt to improve blood perfusion to the fetal and placental tissues.

Accumulating evidence indicates that chronic uteroplacental ischemia is associated with angiogenic imbalances characterized by an excess of antiangiogenic factors including the soluble form of vascular endothelial growth factor receptor 1 and soluble endoglin and low circulating maternal concentrations of vascular endothelial growth factors and placental growth factor. Teleologically, it is difficult to believe that reproductive evolution allowed chronic trophoblast ischemia to lead into angiogenic imbalances, endangering the survival of both the mother and the fetus. It is possible that in preeclamptic patients, the fetus may signal the placental release of antiangiogenic factors to increase maternal blood pressure in an attempt to compensate for the chronic uteroplacental ischemia. Two elegant in vitro studies and a recent clinical report published by our group provided evidence in support of this view. These reports suggest that in patients with preeclampsia with ultrasonographic evidence of chronic uteroplacental ischemia, the fetus may use adenosine signaling to increase the maternal blood pressure in an attempt to compensate for limited blood flow to the fetal and placental tissues.

David Haig, in a very insightful article proposed that GDM may also be the result of a fetal–maternal conflict. Dr Haig proposed that a mother and her fetus compete after every meal over the glucose share that each one receives in a way that "the longer the mother takes to reduce her blood sugar, the greater the share taken by her fetus." Thus, the increased insulin resistance in late pregnancy may be caused by fetal signaling using placental allocrine hormones including human placental lactogen and human placental growth hormone among others to guarantee its adequate glucose supply, whereas the increased production of insulin would be a maternal countermeasure.

Human experimentation in the late 1960s provided evidence supporting the notion of the diabetogenic effect of human placental lactogen. Indeed, intravenous infusion of physiologic amounts of human placental lactogen to non-pregnant women is associated with glucose intolerance despite increased insulin responses. It is possible that failure of a well-orchestrated maternal–fetal interaction between fetal signaling increasing the placental production of diabetogenic hormones and maternal countermeasures

may lead to GDM. Thus, glucose intolerance would develop when a woman is unable to increase her insulin production sufficiently to match the increased peripheral insulin resistance.

Fetal signaling may play an important role in preeclampsia and GDM as well as in other pregnancy complications. However, an abnormal maternal response to fetal signaling may also contribute to the development of these complications. Moreover, these abnormal maternal responses may uncover a subjacent predisposition to chronic diseases as demonstrated by the increased risk to develop chronic hypertension or type II diabetes later in life among patients with preeclampsia and GDM, respectively.

Pre-pregnancy health and pregnancy planning in The Bahamas. G.Dean

Introduction & Objective: While there is significant perinatal data available for program planning and evaluation, there is no comprehensive data on the various dimensions of pre-pregnancy health and pregnancy planning. A survey was therefore undertaken in an effort to generate data necessary for the planning and evaluation of components and activities for a pre-pregnancy health initiative.

Method: A cross-sectional survey was conducted among 750 pregnant women residing in The Bahamas (New Providence and the Family Islands). The survey tool was a self-administered questionnaire targeting antenatal clients who visited selected facilities during the months of April 2012 – September 2012.

Results: This study documented the high percentage of women who do not plan their pregnancies. Close to 70% of pregnancies in this survey were unplanned. Among the adolescent population the rate was even higher at 81%. Approximately 66% of the women surveyed said they did not have a routine check-up within the last year and 9% did not have a check-up within the last 5 years. The study also identified other behaviours or conditions associated with poor pregnancy outcomes including: a mean BMI of 29; no routine dental check-up or cleaning among 65% of women; and inconsistent or no condom use among unmarried women.

Conclusions: The majority of women in The Bahamas do not plan their pregnancies. The unplanned pregnancy rate found in this study was 20% higher than the findings in USA based studies, which show that approximately 50% of pregnancies are unplanned. This study highlighted the need for effective programmes to address the areas of pre-pregnancy health and family planning. It also suggests avenues for further research such as intimate partner violence, the male influence and the adolescent risk for unintended or early pregnancy.

The Challenges of Antenatal Care in The Bahamas. V. Sakharkar

Antenatal care is the backbone of maternal health care in any country. The ultimate goal of antenatal care is a healthy mother and a healthy newborn. Antenatal care of the pregnant mother has played a key role in the reduction of maternal mortality worldwide. Ideally, antenatal care should start before conception, involving counseling and preparation of future parents for parenthood, optimization of maternal health. Antenatal care has an overarching goal towards social health also which include a support system, patient education and health awareness. Regular visits after conception should identify warning signs and symptoms of various conditions complicating pregnancy in a timely manner and should prevent catastrophic events leading to maternal morbidity and mortality. A good antenatal care optimizes neonatal outcome, too.

In the Bahamas like many developing countries, antenatal care usually starts after conception. Traditional antenatal care has been designed on a risk based approach. The pregnant mothers are categorized into high risk and low risk group using some set criteria. It requires a fixed schedule of antenatal visits and there is a set list of 'things to do' at each visit. This fixed schedule model was recommended in 1929 by the Ministry of Health in the UK without any rationale and most of the countries are still following it. Traditional antenatal care has been scrutinized in the recent past as many studies have shown that the maternal as well as neonatal outcomes are not related to the number of antenatal visits. The antenatal visits have become more of a ritual than actual care. As more mothers are seen more often, burdening and crowding the antenatal clinic, important clinical findings are being missed.

In the Bahamas we follow the same traditional antenatal care system. The crude birth rate in the Bahamas is 15.9/1000. Almost 70% of the births occur in Princess Margaret Hospital (PMH), Nassau. In 2012, there were 3,274 total deliveries in PMH with 28.2% of them being caesarian sections. Almost all deliveries occur in the hospital. The average number of antenatal visits is seven; however, half of the women start their antenatal visits after 20 weeks of gestation. Our immunization, laboratory tests, iron supplementation, Pap smear, STI screening and HIV surveillance are probably the best in the Caribbean but our maternal mortality ratio (MMR) is not. It is 47/100,000 live births, which is higher than Trinidad and Grenada. In the year 2012, 6% of women did not attend antenatal care. About 60% of those who had five or less antenatal visits either did not know they were pregnant or did not want others to know that they were pregnant. Almost 20% had difficulty in getting a clinic appointment and about 65 percent perceived the health care providers to be unfriendly. Although the incidence of preterm labor and stillbirth was slightly higher in no care group than in any antenatal care group, there was no statistical difference in the rate of cesarean sections, obstetric hemorrhages, hypertensive disorders, and other maternal complications between optimal and suboptimal or no care groups. Neonatal outcomes such as gestational age and birth weight at delivery, respiratory problems, congenital abnormalities etc. were also not different in these groups. These observations were unexpected but not surprising. As mentioned earlier, the effectiveness of a ritualistic traditional approach to antenatal care is questionable.

World Health Organizations (WHO) and the United States Agency for International Development (USAID) have suggested a new model called 'Focused Antenatal Care', which shifts the emphasis from more number of visits to less number of visits but more comprehensive visits to overcome the pitfalls of the current system. Although the focused approach seems to be effective in low resource and developing countries, whether it will be effective in The Bahamas is questionable. Prof. Kypros Nicolaides of King's College, London has suggested an individualistic inverse pyramid approach to antenatal care, where more emphasis is given to early detection maternal and fetal conditions using various biomarkers and ultrasound. His approach is probably too ambitious, as it requires substantial investment in laboratories and expertise. Some sort of combination of these two approaches may prove beneficial to us. In any case, it is time for us in The Bahamas to take a serious look at our antenatal care system.

Descriptive Epidemiology of Select Paediatric Cancers among Persons 19 Years Old and Younger from January 1, 2000 to December 31, 2012 and Survival Outcomes at the Princess Margaret Hospital (PMH), Bahamas. D. Williamson & C. Sinquee

Background: Childhood cancer is rare and the incidence and survival rate have been described in the United States of America and the United Kingdom. The determination of the incidence of childhood cancer and survival rate for The Bahamas has not been performed. The most common type of cancer diagnosed in the pediatric population worldwide is leukemia.

Objectives: To ascertain the incidence of select cancers and survival rate in pediatric patients who presented to the PMH, Nassau, Bahamas from 2000 to 2012.

Designs & Methods/Study Design: A descriptive study design was used to determine the incidence and survival rates of cancer in pediatric patients 0-19 years old who received care at the PMH from January 2000 to December 2012. All available medical records (a minimum of 154), pathology reports (approximately 32,000) and imaging reports (5) were reviewed and information entered using a Pro Forma.

Results: A total of 127 pediatric patients were diagnosed with cancer. Overall incidence was 8.3 per 100,000 per year. Overall 5-year survival rate is 42%. Leukemia (32.3%) is the leading type of cancer, acute lymphoblastic leukemia being the most common type. Acute myeloid leukemia had a higher proportionate contribution compared to the USA.

Conclusion: The overall incidence was similar to Trinidad &Tobago, but lower than USA. The survival rate was much lower than USA and UK.

Failure to Immunize: The National Global Tragedy: N. Kissoon

Vaccines have been described as the leading public health intervention of the last century. The work of Jenner in the 1790's lead to the first global vaccination campaign, and in the 1977 eradication of an infectious disease - smallpox. Since then there has been a great deal of optimism regarding the possibility of control of vaccine preventable infectious diseases. Despite the great successes, the present reality is such that in several areas of the world we are failing to achieve immunization rates that are compatible with universal coverage. Currently there are many places in the developing world where coverage is over 80% – 85% for these core vaccines. Yet vaccine preventable deaths, such as deaths from rotavirus, which is the leading cause of gastroenteritis, is very high with the largest burden of deaths in Africa and Asia.

In order to make greater gains, we need to address the reasons for suboptimal vaccination rates including, political and social barriers and parental vaccine hesitancy. These include perceived lack of need, safety of vaccines, lack of trust in health care providers and government, perceived lack of involvement in decision making, the issue of vaccines and perceived link to autism, immune system overload, lack of adequate time and resources and religious objections. There are however models of determinants and methods of addressing vaccine hesitancy including risk communication. There are also models demonstrating the power of advocacy, such as the polio campaigns that occurred with the formation of the National Foundation for Infantile Paralysis in 1938.

There is no doubt that when vaccination rates decline, rates of disease increase. As an example, in the 1980's, states in the former Soviet Union saw vaccine supplies disrupted, collapse of public health systems and socio-economic instability. The result was a decrease in childhood immunization rates which was closely followed by an epidemic in which more than 150,000 cases and more than 4,000 deaths occurred in the newly independent Baltic States. Mass vaccination programs eventually controlled the epidemic. The lesson therefore is that complacency can be fatal. Medical personnel as well as lay individuals have major roles to play in achieving vaccination rates compatible with prevention of vaccine related disease.

Exploring Perceptions And Impact Of Violence As Experienced By The Emergency Department Staff Of The Princess Margaret Hospital In The Bahamas. M. Sweeting, Prof. F. Christie (Supervisor)

Background: Violence of all forms including workplace violence is considered a major public health issue that is just as hazardous as any microbial disease. Healthcare settings are identified as major workplace sites for violence, with a reported occurrence rate three times more than that of general workplace settings. Within healthcare settings, emergency departments (ED) are considered the high-risk areas for violent events. ED violence is not an uncommon phenomenon in The Bahamas, however literature review show no studies addressing ED violence in this local practice region and studies identified were mostly of quantitative domain. Aim: This study was therefore conducted to explore the perceptions and impact of violence experienced by ED staff of the Princess Margaret Hospital in The Commonwealth of The Bahamas.

Design and Methods: A qualitative research design and an interpretative epistemological view point was adopted. Purposive sampling method was utilized and twelve participants were recruited for the study. Data collected from semi-structured interviews were transcribed and thematically analysed to identify common themes.

Results: A part from some unique findings, five major themes were common to all interviews. First was the overwhelming perception of violence being an innate and inevitability ED occurrence. Second, facilitating elements were viewed multifactorial with verbal abuse perceived as the most common form experienced. Third, that the viewed personal and professional deleterious impact of ED violence had the potential to negatively affect patient care. Fourth, that support and coping measures viewed as post-incidences essentials were considered lacking. Finally, that the suggested measures to decrease ED violence which related to areas of patient, staff and ED improvements, was seen as highly unlikely to be effectively implemented.

Conclusion: The study provides a useful insight into the perceptions and impacts of violence experienced by staff in the ED. Although some unique findings were observed from this study, the perceived negative impacts and consequential potential for compromised patient care were in keeping with findings from related studies in the literature review. The results of this

qualitative study is not only intended to achieve a better understanding of this issue but to increase awareness and thereby prompt behavioural changes to aid in the curtailment of this debilitating ED occurrence.

Knowledge, Attitudes, Practices, Intentions and Prevalence of Obesity in Health Care Workers of the Public Community Clinics on New providence, The Bahamas. A. Dorsett-Williams

Background: Overweight and obesity affect millions globally, including The Bahamas. Few local studies exist on the subject in HCWs. This study sought to determine the knowledge of overweight and obesity, attitudes, healthy lifestyle practices and intentions of HCWs toward their BMI. Additionally, to determine the prevalence of overweight and obesity and any associated illnesses of HCWs in the public community clinics on New Providence, The Bahamas.

Design and Methods: Using a cross-sectional study design, 163 HCWs of eight community clinics were surveyed. Each participant completed a questionnaire and had weight, height and abdominal circumference measured. Data was analysed using IBM SPSS, v.22.

Results: Overall median knowledge score percentage was 62.0%. Daily intake of two fruits was 21.0%, three vegetables was 9.3% and seven to eight glasses of water was 29.4%. Participation in moderate or vigorous physical activity was 24.5% or 20.9% respectively. Combined prevalence of overweight and obesity was 81.6%, of which 26.4% were overweight and 55.2% were obese. Males were 23.1% overweight and 69.2% obese; females were 26.7% overweight and 54.0% obese. Misperceived BMI was 55.8% and high risk abdominal circumference was found in 68.5%. HCWs having weight concerns were 85.3%. Mean score percentage for willingness to participate in workplace wellness programmes was 80.5%.

Conclusions: HCWs are knowledgeable about healthy lifestyle practices; however this did not translate into healthy behaviours. Many are concerned about their BMI and are inclined to participate in work wellness programmes. High prevalence of overweight and obesity among HCWs is consistent with the high national prevalence of The Bahamas.

KEYWORDS: overweight, obesity, health care worker, knowledge, attitudes, practices, intentions

ABBREVIATIONS: HCW, health care worker; BMI, body mass index; IBM SPSS, International Business Machines Statistical Package for the Social Sciences.

Alcohol Use Disorder And Its Relation With Comorbidities Depression And Smoking Among Patients Presenting To Public Clinical Settings In The Bahamas. P. Darville

Background: In The Bahamas several medical practitioners have an interest in exploring the prevalence of, and associations among alcohol use disorders, depression and smoking.

Aim: This study's overall objective is determining the prevalence of alcohol use disorder, and exploring its relations with depression and tobacco use among persons presenting to public clinical settings in The Bahamas

Design and Materials: A convenience sample of 485 persons (ages 18 and above) from the Family Medicine Clinic, Orthopaedic clinic, Ambulatory Care at the Accident and Emergency Department, Radiology Department and Outpatient laboratory were interviewed. AUDIT (Alcohol Use Disorder Identification Test) and PHQ9 questionnaire, sociodemographic information and questions on smoking and binge drinking were asked. Scores were tallied for each area. Descriptive and Inferential statistical analyses including ANOVA and logistic regression were performed to determine possible differences and associations.

Results: 7.1% (34) of participants screened positive for hazardous drinking (AUDIT score >8). 6% of the males (8) and 2.1% (7) of the females screened positive for alcohol dependence, and 20.3% were binge drinkers. 10.1% of the persons studied were current smokers. Statistically significant relationships were found between smoking and AUDIT scores. 15.8% (75) screened positive for mild depression, 4.2%, for moderate, 1.1% for moderately severe and 1.1% for severe. A significant association was

seen between bidi smoking and PHQ9 scores ($p < 0.001$). A linear trend was seen in the relationship between AUDIT scores and PHQ9 scores; a statistically significant difference ($r = 0.176$, $p < 0.001$).

Conclusion: Alcohol use disorder (and binge drinking) is (are) modestly prevalent in The Bahamas and is associated with smoking and higher PHQ9 scores. A statistically significant but quite weak relationship was seen between AUDIT scores and PHQ9 scores for depression ($r = 0.176$, $p < 0.001$).

Cardiovascular Risk Factors Knowledge, Attitudes And Behavioral Patterns Among Adults Attending Outpatient Clinics At The Public Hospitals Authority – Princess Margaret Hospital, New Providence, Bahamas. S. Mckell Butler

Background: Concerns exists about patients' awareness of cardiovascular disease, the leading cause of death in The Bahamas. This knowledge, attitudes and behavioral deficit may well have a far reaching impact extending beyond the increased health burden and include economic and social deprivation.

Objective: To ascertain ambulatory patients' knowledge, attitudes and behavioural patterns, which are fundamental determinants toward reducing cardiovascular disease.
Methods: This cross-sectional study involved a convenience sample of adults attending outpatient clinics at the Princess Margaret Hospital, Nassau, Bahamas during March and April 2014. The data collection instrument was a self-administered questionnaire. Descriptive and inferential analysis was done using the Statistical Package for the Social Sciences (IBM SPSS, v. 22).

Results: 560 persons participated, their median age was 41-50 years, and 72.4% were female. Participants' median educational level was high school graduates. Health wise, 43.6% had hypertension, 31.7% hypercholesterolemia, and 22.2% diabetes mellitus. Overweight and obesity predominated as their mean BMI was 31.5 (± 7.93) kg/m2. At 58.1%, participants' level of physical inactivity was high. The mean proportion with correct knowledge of CVD risk factors was 53.5 (± 18.10)%. Participants recognized 48.5% of the major causes, 52.7% of stroke and heart attack symptoms, and 59.9% of behaviours associated with prevention. Regarding behavioral patterns, 27% of males and 19.1% of females met the recommended exercise goals. Of the 58.3% of subjects who drank alcohol, males indulged more frequently. Smoking practice was minimal (9.7%). A prior history of heart attack (5.4%) and stroke (8.2%) was present with significant co-morbidities. Patients exhibited an overall positive attitude regarding cardiovascular health promotion.

Conclusions: Regarding cardiovascular risk factors, Bahamian residents have significantly suboptimal knowledge and behavioral patterns but positive attitudes.

Keywords: CVD, CNCDs, CVD risk factors, healthy lifestyles, BMI

Abbreviations: CVD, cardiovascular disease; CNCD, chronic non-communicable diseases; BMI, body mass index

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The Emergency Department Virtual Ward Boarded Patients' Preference For Boarding, Length Of Stay And Medical Essentials. R. Davis-Hall

Introduction. The virtual ward concept originated in England in 2004 but has been redefined out of necessity to address specified needs of the Emergency Department (ED) Princess Margaret Hospital Nassau, Bahamas. Boarded inpatients are housed there when the hospital is full to capacity.

Aim and Objectives. The aim of this study was to evaluate preference for boarding, length of stay and assessment of medical essentials of boarded inpatients (medical admissions) of the virtual ED ward. The objectives were to determine the socio-demographic variables of these patients, preference for boarding and gender specific boarding assignments, length of stay (LOS) in the ED virtual ward, perception of privacy in the virtual ward, privacy for physical examinations, medical information and commencement of medications.

Methodology. This was a cross-sectional study conducted in two phases. The first phase began on October 1st, 2011 to March 30th, 2012 and the second was during January 1st to March 31st 2013 at the Princess Margaret Hospital. A questionnaire was

administered to patients via the research team. The data was analysed using the Statistical Package for the Social Sciences (IBM SPSS) for statistical analysis.

Results: A total of 350 patients participated, 47% (164) males and 53% (186) females. There were 94.3% (330) Bahamians and 5.7% (20) Non-Bahamians. Boarding location preference was 86% (301) for the inpatient ward. Gender specific preferences for wards were that 96.3% (180) of women preferred female wards and 78% (128) of men preferred male wards. Length of stay variable had a median time >48 hours (p = 0.016, K-W ANOVA). Privacy while boarding was given a fair rating by 36% (128) participants (p= 0.025, Spearman's R = -0.120). Privacy for physical examinations was rated poor by 38% (133) of patients. Privacy for dissemination of medical information was rated poor by 43% (151) of participants. Medications ordered by admitting team were started within ½-1hour for 30% (105) patients after ordered by admission team.

Conclusion: Boarded virtual ward ED patients preferred inpatient wards, males and females preferred gender specific wards, privacy while boarding was fair, privacy for physical and medical examinations were considered poor. Commencement of medications was given in a timely manner. Current recommendations, advise that ED boarding is not the ideal, however this is not the reality in the Princess Margaret Hospital. Hence further alternate locations for inpatient boarding, which is the preference, should be identified. All patients should have a right to privacy, which should be standardized, preserved and maintained at its optimum, from door to discharge. Finally, commencement of medication of any boarded patients should be initiated in a timely manner.

An Assessment of Burnout in Physicians employed with the Public Hospital Authority in Nassau, Bahamas. M Wallace-Bain, M Gonzales-Cameron, R Roberts-Carter, S Zonicle-Newton, S Pinder-Butler, MAC Frankson

Objectives: To identify factors associated with the Burnout Syndrome in light of the prevalence of that syndrome in physicians working in the Public Hospital Authority (PHA), Nassau, Bahamas

Design and Methods: A cross-sectional study was done utilizing a self-administered survey comprising of demographics, general health, work environment, and Maslach Burnout Inventory items to assess burnout among salaried Physicians working in 9 departments of PHA. The Statistical Package for Social Sciences was used for data analysis.

Results: 153 physicians participated. Their mean age was 35.84 (± 7.09) years old; median 34.00 (IQR: 31.00, 40.00) years old. 64.7% (99) were females while 35.3 % (54) were males. No association was found between these, other socio-demographic variables measured and burnout status. Physicians in the department of Internal Medicine represented 22.2% (34), Family Medicine 20.3% (31), Emergency Medicine 19.6% (30), Pediatrics 13.7% (21), and physicians in other departments 22.3% (34). 54.2% of physicians employed under the Public Hospital Authority collectively exhibited a moderate level of burnout. Separately, poor balance of family, 15 work environment potential stressors and 4 potential stress relievers were found to be each weakly or very weakly related to burnout status. Postgraduate programme year, irregular sleep pattern and lack of appreciation were moderately strong positively related. Logistic regression analysis showed the key predictors of burnout status to be lack of appreciation (OR=1.69, p=.002) and number of years worked post-internship (OR=.94, p=.039).

Conclusion: Physicians sensing of appreciation and number of years worked post internship were clear predictors of burnout.

Effect Of A Brief Educational Intervention Concerning The Human Papillomavirus On The Knowledge And Attitudes Of Antenatal Patients In New Providence, The Bahamas. I. Pratt, J. Thompson, R. Butler, A. Franson, C. Rattry

Introduction. Human Papillomavirus (HPV) is the most common sexually transmitted disease. If left untreated, it can affect the cervix causing cancer. Cervical cancer (CC) is among the top five cancers that affect women globally. One of the main barriers to effectively treating HPV infections appears to be a lack of knowledge in the general population about HPV and the need for regular Pap screens or the availability of the HPV vaccines.

Objectives. This study sought to determine the level of awareness about HPV and the effect of HPV-related educational intervention in antenatal patients in New Providence.

Method. A Solomon's four group experimental design was used to assess the effect of HPV-related educational intervention. Patients were randomly assigned to one of four arms of the study. During the study's pretest phase groups A and B were asked to complete self-administered questionnaires.

Results/Conclusions. The role of HPV as an onco-virus is a cause of significant public health concern. Knowledge of HPV varied from 14-32% in the control group and improved to 52-72% after intervention. Attitudes toward HPV were impacted by the study. After intervention, the percentage of patients who would get the vaccine improved from 52% to 62%. The results from this study were statistically significant at showing an improvement in the scores on questionnaires about HPV after education.

Impact Of Gynecological Tumor Board Rounds On Patient Care. D. Halliday, K. Warfa, Jill Nation, P. Chu, G. Nelson, S. Glaze, J. Mateshaytis, M. Duggan, P. Ghatage

Objectives: The objective of this study was to determine the impact of a weekly tumor board rounds on the management of patients with gynecologic tumors.
Methods: A retrospective chart review of cases discussed at the tumor board rounds at the Tom Baker Cancer Center was done. Data regarding patients' demographics, tumor type, stage of disease and pathology was collected. We sort to determine if there were any discrepancies between the pre and post tumor board diagnoses. A major discrepancy was defined as changes that affect patient care while a minor discrepancy was defined as changes that did not affect patient care.

Results: Over a three year period between January 2010 and December 2013, 1604 tumorboard chart reviews were done. The mean age was 57.6 $\pm$ 14.1 years. Endometrial conditions were the most frequent accounting for 43% of the discrepancies, followed by ovarian (25%) and cervical abnormalities (23%). Overall, 13.2 % (212) were found to have discrepancies, 3.4% (54) major and 9.9(158%) minor. When a major discrepancy was noted, 18(33.3%) required no additional treatment, 17(31.5%) required chemotherapy, 4 (7.4%) required a change in the chemotherapy regime, 10(18.5%) required additional surgery and 5 (9.3%) required radiation/chemoradiation.

Conclusion: This project shows that tumor board reviews are an important quality control measure in the management of gynecologic oncology tumors and affect patients' management. When a discrepancy is one of four patients will have a change in management.

Male Circumcision in the Bahamas: Attitudes and Practice among Health Care Providers
R. Roberts, C. George, D. Brennen, L. Deveaux, S. Read

Several large randomized controlled trials in African countries with high prevalence of HIV have shown significant efficacy of male circumcision (MC) in reduction of HIV acquisition in heterosexual men by between 38% and 66% over 24 month. There is also evidence that MC may reduce the risk of transmission of HPV between men and women.

We have conducted a study on MC in the Bahamas, examining attitudes and practices among health care providers, men and women in the general public, both adults and youth, as well as other targeted groups such as men who have sex with men.

By gathering information on attitudes and approaches towards MC among men, women and healthcare practitioners in the Bahamas, this study can provide information for policy development at the institutional level as well as for educational campaigns which could have a perceptible impact on the future attitudes and practices regarding MC. Here we present findings on attitudes and practices of physicians and nurses, as they relate to MC in the Bahamas.

Methods: We conducted a cross-sectional study among physician and nurses. The questionnaire was completed between 2014-

2015. It was developed and piloted among health care providers. For the physicians an on-line version was available. Medical students assisted in approaching physicians by phone or office visits. For the nurses, administration of the questionnaire was carried out with the assistance of the research nurse, from the Department of Nursing at Princess Margaret Hospital. The Department of Public Health assisted in the distribution of the questionnaires to their nurses. The completed questionnaires were entered in SPSS database, in separate databases.

Data Analysis was done in SPSS. We conducted frequency analysis to describe the participants and their attitudes for this study.

Results:
202 physicians and 92 nurses completed the questionnaire. Of the physicians, 52% were males, 56% were between 30 and 49 years of age and 64% had been in practice more than 10 years. 39% had performed MC and 73% had assisted. When asked if they would recommend MC, 60% said 'yes' with 26% uncommitted. Only 9 % said 'no' and 4% said 'strongly no'. 25% said they would be willing to provide MC services but one of the major deterrents was cost. 70% thought that the best time to do MC was in infancy. 70% thought there were advantages to MC including improved hygiene and prevention of STI's. Only 44% indicated that HIV prevention was an important reason.

Of the 92 nurses, 50% were from Princess Margaret Hospital and 48% were from Public Health Clinics. 95% were female. 44% had been in practice for more than 10 years and 30% had assisted in MC. When asked if they would recommend MC, 4% said 'no', 80% said 'yes' or 'strongly yes' and 12% were undecided. As with physicians 69% thought the best time for MC was in infancy. 59% thought there was an advantage to MC with 86% indicating that it improved hygiene, 54% thought it reduced STIs and 31% thought it reduced the risk of acquiring HIV.

Conclusion:
Of 294 health care providers surveyed, most indicated that they would recommend MC and that the best time to do this is in infancy. Also, most thought that there was an advantage to MC, with hygiene being the most significant followed by reduction in STIs. Less than half appeared to be aware that MC reduces the risk of HIV acquisition. One of the major deterrents to MC is cost. Further analyses with provide more detailed information.

The University of The West Indies

The UWI School of Clinical Medicine and Research, The Bahamas The program to teach undergraduate medical students in the Bahamas was established in 1997; at that time, it represented the first major expansion of the Faculty of Medicine UWI since the Eric Williams Complex in 1979. As in their two prior clinical teaching programs in Barbados and Trinidad, the Bahamian initiative was established in a Government owned public health facility, the Princess Margaret Hospital (PMH). This 450 bed facility is the Bahamas Government's flagship institution delivering the full spectrum of health care services: primary, secondary and tertiary.

The Bahamian medical initiative was launched as a clinical training program under the auspices of the St. Augustine campus, Trinidad. In 2007, on its 10 anniversary, the program was advanced to The School of Clinical Medicine and Research, The Bahamas (SCMR). In its first graduating year in 1999, 20% of the 14 medical graduates were Bahamian. By 2009, it had been transformed to a predominantly Bahamian-based program: of the 21 graduating students, 85% were Bahaman nationals. As of June 2015, there have been 337 medical students graduating successfully with their medical degrees, Bachelor of Medicine, Bachelor of Surgery (MB,BS) of which 77% are Bahamian nationals. In our postgraduate programs, have graduated with a Doctors of Medicine (DM) in Internal Medicine, 4 in Psychiatry, 5 with a DM in Obstetrics and Gynecology, 1 in General Surgery, 3 DM in Family Medicine and 17 with both the Masters Degree and Diploma in Family Medicine.

As of June 2015, there have been 301 medical students graduating successfully with their medical degrees, Bachelor of Medicine, Bachelor of Surgery (MB BS) of which 90% are Bahamian nationals. In our postgraduate programs, 6 have graduated with a Doctors of Medicine (DM) in Internal Medicine, 6 in Psychiatry, 10 with a DM in Obstetrics and Gynaecology, 1 in General Surgery, 2 in Peadiatrics, 5 in Emergency Medicine and 17 with a DM in Family Medicine, with both the Masters Degree and Diploma in Family Medicine.

As of the September 2015 academic year, there are 74 undergraduate and 82 postgraduate students registered. The undergraduate students enter the SCMR program for the final two years of their medical curriculum. The current postgraduate programs are offered in 7 medical specialty areas: family Medicine, Internal medicine, General Surgery, Pediatrics, Obstetrics and Gynaecology, Psychiatry and Emergency Medicine. the academic faculty is comprised of 6 fulltime Lecturers, 21 Clinical Tutors and 51 Honorary Associate Lecturers. Dr. Robin Roberts was appointed was appointed as the Director of SCMR in November 2009.

The motive for establishing a clinical training program in the Bahamas was prefaced in the strategic plan of the PMH's Office of CME, to transform the PMH from a service based facility to an academic one. The rationale: medical and surgical care delivered in an academic institution provides a higher quality of care and better patient outcomes than a nonteaching one. With the increasing numbers of returning Bahamian physicians - specialty trained, certified and practicing at the PMH, it augurs well for patient care to inculcate the university's mission of patient care, teaching and research.

9th Annual Research Day

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