



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

— PRESENTS THE —

*7<sup>th</sup> Annual*  
**RESEARCH DAY**

SEPTEMBER 19 - 20TH, 2013

THEME

**ADVANCING THE POPULATION'S HEALTH:  
SHIFTING THE CURVE**

VENUE:

COB SCHOOL OF NURSING AUDITORIUM,  
GROSVENOR CLOSE  
NASSAU 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 1948 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:

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

# *Advancing the Population's Health: Shifting the Curve*

THURSDAY 19TH SEPTEMBER 2013  
OFFICIAL OPENING SESSION: 6:00PM\* – 9:00PM

CEREMONY: (30MIN)

WELCOME

REMARKS: RBC Sponsor

REMARKS: Minister of Education

REMARKS: Minister of Health

REMARKS: Director

RESEARCH REPORT: Chairman Research Committee

## THE RBC KEYNOTE LECTURE

### 1. CURBING THE NON-COMMUNICABLE DISEASE EPIDEMIC IN THE CARIBBEAN

Prof. Trevor Hassell, President of The Healthy Caribbean Coalition, Special Envoy for NCDs, Barbados

2. To what extent does the implementation of a comprehensive management training module for Acute Cardiogenic Pulmonary Oedema impact the knowledge and management practices of physicians in the Emergency Department of the Princess Margaret Hospital?

Dr. Christa Wells. Supervisors: Dr. Michelle A Sweeting & Dr. Morton Anthony Frankson

3. Anti-hyperglycemic Medication Adherence in Type 2 Diabetics in New Providence. M Millar, D Archer, A Bain, T Hanna, D Robinson, C Hanna-Mahase, M Frankson, S Pinder-Butler

4. Sickle cell disease epidemiology in the neonatal population born to mothers with positive prenatal sickle cell disease screening test at the Princess Margaret Hospital Dr. Deshawn Ferguson-Saunders. Supervisors: Dr. Corrine SinQueen, Dr. Lesley King, & Dr. Morton Anthony Frankson

### KEYNOTE LECTURE

### 5. DIAGNOSING AND TREATING COMMUNITIES: PLANNING THE NATIONS' HEALTH OUTCOMES

Prof. Rainford Wilkes Professor of Epidemiology and the Director of the Epidemiology Research Unit Tropical Medicine Research Institute, UWI

\*6:00PM – 6:30PM: DRINKS AND HOR D'OEUVRES

FRIDAY 20TH SEPTEMBER 2013

SESSION II

8:30AM -10:30AM

**6. Misalignment of Perceived Weight with Actual Body Mass Index in The Bahamas**

C Chin, N Forbes, M Frankson, S Knowles, T Humes, A Wallace

**7. Parental knowledge, perceptions, and practices toward childhood fever in the Emergency Room Department in The Bahamas**

Dr. Pavia Davis-McKenzie. Supervisors: Dr. Collin Bullard, & Dr. Morton Anthony Frankson

**KEYNOTE LECTURE**

**8. SAVING THE NEXT GENERATION: CURBING THE CHILDHOOD OBESITY EPIDEMIC IN THE CARIBBEAN**  
**CHRISTINE** Bocage Senior Public Health Nutritionist at Caribbean Public Health Agency

**9. Infant Feeding Patterns, Childhood BMI and Missing Data; a Mixed Methodological Assessment in the Public Health Clinics in Nassau, The Bahamas**

Dr. Estelle Laville: Supervisors: Dr. Gertrude Holder, Dr. Morton Anthony Frankson, Dr. Ruth Dorsette & Dr. Cherilyn Hanna-Mahase

COFFEE BREAK: 10:30 AM – 11:00AM

FRIDAY 20TH SEPTEMBER 2013

SESSION III

11:00AM -12:30PM

**10. The impact of exercise on cognitive function in the elderly in New Providence, The Bahamas**

Dr. Indira Minus-Grimes Supervisors: Dr. Cherilyn Hanna-Mahase, Dr. Morton Anthony Frankson, Dr. Agreta Eneas-Carey, & Prof. Denise Eldermire-Shearer

**11. Predictors of readmission in Axis I disorder patients to the Sandilands Rehabilitation Centre specific with psychotic and mood disorders**

Dr. Sonali Ferguson-Parker Supervisors: Dr. Timothy Barrett, Dr. Eugenia Combie & Dr. Morton Anthony Frankson

**KEYNOTE LECTURE**

**12. RESOCIALIZATION IN THE BAHAMAS: ONE FAMILY AT A TIME:**

Dr. David Allen Consultant Psychiatrist & Visiting Professor at Yale Divinity School

**13. Attitudes of Public Hospital Authority Physicians in New Providence, Bahamas Towards Persons Living with HIV/AIDS**

Dr. Shakera Carroll Supervisors: Dr. Herbert Orlander, Dr. Francis Williams, Dr. Morton Anthony Frankson, & Dr. Cherilyn Hanna-Mahase

**14. Knowledge, Attitudes and Practices Related to Depression Management Among Physicians Employed at the Public Hospital Authority, Nassau, The Bahamas**

Dr. Sally Taylor Supervisors: Dr. Nelson Clarke, Dr. Morton Anthony Frankson, Dr. Sabriquet Pinder-Butler, & Dr. Cherilyn Hanna-Mahase

**BROWN BAG LUNCH: 12:30PM – 1:30PM**

**FRIDAY 20TH SEPTEMBER 2013**

**SESSION IV**

**1:30PM - 3:30PM**

**15. An Early Pregnancy Loss Study at The Princess Margaret Hospital, Bahamas**

Dr. Andree Gauntlett Supervisors: Dr. Vrunda Sakharkar, & Dr. Morton Anthony Frankson

**16. Knowledge, Attitudes and Beliefs towards Papanicolaou Smear Testing among Women Attending the Outpatient Clinics in Nassau, The Bahamas.**

B Cooper, P Darville, L Farrington, B Gaitor, C Gomez, V Sakharkar, C Hanna-Mahase, M Frankson

**17. The effects of no antenatal care and suboptimal care on maternal and neonatal morbidity and mortality at The Princess Margaret Hospital, Bahamas (NAC SAC study)**

Dr. Andree Gauntlett Supervisors: Dr. Darron Halliday, Dr. Morton Anthony Frankson, & Dr. Dr. Mildred Hall-Watson

**KEY LECTURE**

**18. SUICIDE IN THE BAHAMAS: CURBING A NATIONAL EPIDEMIC**

Dr. David Allen: Consultant Psychiatrist & Visiting Professor at Yale Divinity School

**19. Effect of previous scorpion bite(s) on the action of intrathecal bupivacaine: A case control study**

Mridul M Panditrao, Minnu M Panditrao, V Sunilkumar, Aditi M Panditrao Department of Anaesthesiology and Intensive Care, Padmashree Dr. Vithalrao Vikhe Patil Foundation's Medical College and Hospital, Vilad Ghat, Ahmednagar, Maharashtra, India

**20. Patients' comprehension of their emergency care and discharge instruction communicated to them at the asthma bay of the PMH.**

Dr. Cordelia Nairn. Supervisors Dr. Caroline Burnett-Garraway, Dr. Morton Anthony Frankson

**21. Socioeconomic differences in Mortality among Adults in the Bahamas.**

Ms. Nanika Braithwaite. Epidemiologist, Ministry of Health

**22. A National Investment Reap National Dividends: Bahamian Graduates of the Faculty of Medicine UWI:**

Dr. Corrine Sinqee & Dr. Robin Roberts

**SESSION ENDS 3:30PM**

# Message from



HON. PERRY GOMEZ, MD., MP.  
MINISTER OF HEALTH

I wish to extend greetings and congratulations to the University of the West Indies School of Clinical Medicine and Research, The Bahamas, on the occasion of the Seventh Annual Research Day activities scheduled to be held from the 19th - 20th September, 2013. I also take this opportunity to officially welcome all of the partners, scientists, experts, participants and invited guests to these activities.

This year's theme "Advancing the populations health: Shifting the curve Curve" is expected to address issues that will support and advance our national health priorities. It is commendable that our premier institution, University of the West Indies School of Clinical Medicine and Research, The Bahamas, is conscious of the critical importance of the need for research in our country and the region. The tremendous growth in the post-graduate programmes and the regional recognition for its research initiatives speaks to the dedicated efforts of your team to the promotion of equity and quality assurance in healthcare.

I wish to express my sincere gratitude to the management of the Royal Bank of Canada, for their annual corporate partnership as they continue to support the improvement of health care in the Commonwealth of The Bahamas.

The Government and the Ministry of Health, remain committed in the support of the programmes of the University of the West Indies School of Clinical Medicine and Research, The Bahamas. It is our hope that with the continued support of the established partnerships that together we will provide a rich forum for sharing and learning for the participants and our community.

I wish you every success during your deliberations.

A handwritten signature in black ink, appearing to read "Perry Gomez".

The Honourable Dr. Michael Perry Gomez, M.P.  
Minister of Health



# Message from



HON. JEROME K. FITZGERALD, M.P.  
MINISTER OF EDUCATION, SCIENCE AND  
TECHNOLOGY



It is a privilege and a pleasure to be involved in the University of the West Indies School Clinical Medicine and Research's 7th Annual Research Day. I applaud the school and the Royal Bank of Canada for staging this event for the past seven years and keeping our citizens informed on relevant health issues. This Research Day programme also highlights the outstanding quality of the medical training programme within The Bahamas, and the professionals affiliated with the institution.

I am delighted to see from your theme, "Advancing the Population's Health: Shifting the Curve", that you remain consistent in your objectives which are: firstly, to improve the health of people by pursuing research which produces valuable knowledge for the prevention and management of diseases and secondly, to enable the government to formulate health policies and programmes based on sound data.

We in the Ministry of Education, Science and Technology are keenly interested in the research emanating from this initiative because it benefits us in our mission to produce healthy students who will one day become healthy adults. We commend the organizers for accentuating local research with insights from medical experts from around the world; this year's keynote speaker being, Dr. Trevor A. Hassell from the University of the West Indies, Barbados.

Thank you again for the knowledge you will impart which draws attention to the need for changing life style behaviours. A past Ministry of Health slogan appropriately captures our collective efforts when it stated, "The health of our nation, is the wealth of our nation."

I extend best wishes to all for another successful and rewarding lecture series. God bless you and the Commonwealth of The Bahamas.

# Message from



**DR. ROBIN ROBERTS**  
**THE DIRECTOR**

A graph plot of research activities over the past 7 years at the UWI School of Clinical Medicine and Research, The Bahamas is impressive: An exponential growth in research proposals submitted and accepted to our Ethics Committee and to the Caribbean Health and Research Council. Finally in 2013, we are noting the translation of presentations to publications, yet another record-breaking initiative.

Our efforts are being recognized too and notably because of the quality, relevance and impact of the research: best paper presentations at the recent CHRC annual conference in Barbados – Dr. Keith Rivers and Dr. Juana Rodgers, a tie for first place. On the international scene, Dr. Indira Minus-Grimes has done us proud, she won the prize for the best paper in the International and General Resident Poster sessions at the prestigious American Geriatrics Society Meeting in Texas.

As our research agenda expands, so too our Research Day: a 2-day event appears to be a permanent fixture as we continue to attract distinguish and renowned regional and international researchers, with a cadre of young postgraduate researchers in our residency programs to showcase. We are pleased indeed to have on the podium Dr. Trevor Hassell, (I could not resist noting that he is revered as one of the best teachers in clinical medicine at UWI in Barbados during my sojourn as a medical student). Dr. Rainford Wilks was recently recognized as one of the region's most distinguished researchers at the 2013 CHRC annual conference. We welcome Ms. Christine Bocage from the Caribbean Public Health Agency on her mission to highlight and curb our obesity epidemic in children in the Caribbean. We are proud indeed to recognize the leading regional and international research by our own eminent Consultant Psychiatrist, Dr. David Allen.

On this our 7th Research Day, Advancing the Population's Health: Shifting the Curve, we continue on our mission: "To facilitate the improvement of health of the people of the Commonwealth of the Bahamas through clinical research that will produce valuable knowledge for the prevention and management of diseases, and formulation of health policies and programs."

I welcome you the research agenda of the University of the West Indies School of Clinical Medicine and Research, The Bahamas.





# Message from



## THE CO-CHAIRS

Doctors-mostly young (if even at heart), and medical students from the University of the West Indies School of Clinical Medicine and Research here in The Bahamas (UWI/SCMR/Bahamas) have again worked extremely hard to rigorously investigate important medical issues and having been successful in doing so, ready themselves to present their findings to you the discerning public. Dr. Raleigh Butler and I join the school's Director, Dr. Robin Roberts in making it known that we are indeed very proud of them and their achievements. They have not accomplished these deeds on their own but have had the prudent support of experienced colleagues both locally and internationally and for that, and more, we the members of the Research Committee of UWI/SCMR/Bahamas are eternally grateful and delighted.

The theme for this 7th Annual Research Conference of UWI/SCMR/Bahamas being held from Thursday evening the 19th of September 2013 to Friday afternoon the 20th of September 2013 is Advancing the Population's Health: Shifting the Curve. Please take note that for the first time, this year our scholars who've successfully completed their training as Emergency Medicine specialists will be presenting their research at the school's annual Research Day. As is the case with the other presenters, their topics are timely and of significant practical importance. So too are, you'll discover, the feature contributions of our guest presenters whom we are thrilled to have joining us to make the event perfect. I know you'll be edified as you attend this year's conference sessions. They will provide you continuing education encounters in Emergency Medicine, Family Medicine, Psychiatry, Paediatrics, Internal Medicine, Public Health Medicine, and last but by no means least, Academic Medicine's national contributions.

Past presenter at other years Research Day are now moving on to noteworthy achievements as they've been making their mark at international, regional and other local meetings and several have scientific manuscripts completed and submitted for peer-reviewed publication. Divine hands have again led us this far. Remembering this is so very important as through the avenue of research we clarify mysteries emanating from those very sacred instruments. It is in this spirit that our Research Committee, fully committed to ethically upholding our school's Director's hands, continues to press on in as agile a manner as these times demand in contributing locally to the swell of evidence-based medicine for the benefit of our patients and communities.

Thank you for being in attendance and do enjoy every moment of these two days.

Prepared by: Drs. Morton Anthony C. Frankson & Raleigh Butler

# Message from



MR. NATHANIEL BENEBY  
SPONSOR  
PRESIDENT AND COUNTRY HEAD  
RBC ROYAL BANK, BAHAMAS

RBC Royal Bank of Canada is pleased to sponsor the Seventh Annual Research Day held by the University of the West Indies Clinical Programme, The Bahamas. For over a century RBC and our employees have been an integral part of The Bahamas helping causes, supporting needs, and giving back to the communities we serve.

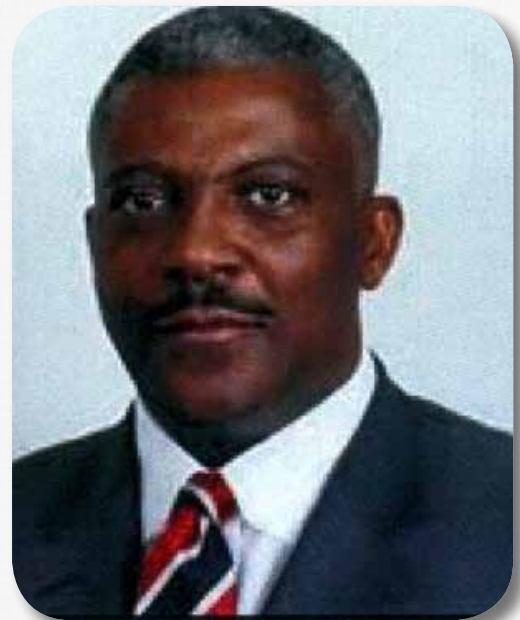
Supporting research and educational initiatives that will improve the health of Bahamians is a core area of focus for our community involvement programmes. Our goal is to provide sponsorships and donations that will have a lasting social impact.

The medical research conducted through this programme will benefit a wide spectrum of persons in The Bahamas and wider Caribbean. The key accomplishments of the Research Unit since its formation are impressive. These accomplishments, along with the University of the West Indies' excellent track record in training Bahamian medical professionals have made this an ideal partnership for success.

We look forward to working with you now and in the future.

A handwritten signature in black ink, appearing to read 'Nathaniel Beneby'.

Nathaniel Beneby,  
President and Country Head  
RBC Royal Bank, Bahamas



# Biography of

KEYNOTE SPEAKER.  
**TREVOR A. HASSELL**  
GCM, MBBS, FRCP, FACC.

Professor Hassell is Adjunct Professor of Medicine, University of the West Indies, Barbados, and Honorary Consultant Physician and Cardiologist, Queen Elizabeth Hospital, Barbados. He is Chairman of the National Commission for Chronic Non Communicable Diseases, Barbados Special Envoy for NCDs, President of the Healthy Caribbean Coalition - a civil society network for combating chronic diseases, and Chairman of the Advisory Committee of the Chronic Disease Research Centre, University of the West Indies.

Professor Hassell has held the positions of Vice President of the World Heart Federation, President of the InterAmerican Heart Foundation, and President, Caribbean Cardiac Society.

He has been involved over the past several years in community detection and control of hypertension, and rheumatic fever prophylaxis programmes. He has developed national programmes for the provision of comprehensive cardiovascular care, including the development of community based primary prevention cardiovascular, healthy lifestyle and wellness programmes.

Professor Hassell has played a leading role locally, regionally and internationally in efforts aimed at slowing the pandemic of chronic non communicable diseases. He has received many awards including appointment to the Order of Barbados in the Grade of the Gold Crown of Merit in recognition of his outstanding contribution to the medical profession.



# Biography of

KEYNOTE SPEAKER.

**DR. RAINFORD WILKS** MBBS (UWI); DM (UWI); MSC (LOND), MRCP (UK), FRCP EDIN



Rainford Wilks is founding Professor of Epidemiology and the Director of the Epidemiology Research Unit (ERU) at the Tropical Medicine Research Institute (TMRI), The University of the West Indies (UWI), Mona, since 1999. He has been a Consultant Physician (Internal Medicine) since 1986 and has been on the staff of the University Hospital of the West Indies (UHWI) in this capacity since 1990. Both his clinical and research interests are primarily in cardiovascular diseases and their risk factors. He has authored/co-authored more than 200 publications in the scientific literature.

He is an avid sports fan, with particular interest in cricket, track & field athletics and basketball. He enjoys readings and discussions about life and society.

He has served on the Boards of several organizations in the health, sport and business sectors.

He is married to Bridgett (nee Small), Divisional Director, Financial Regulations Division, Ministry of Finance & Planning and they are the parents of 3 adult sons.

# Biography of

KEYNOTE SPEAKER.  
MS. CHRISTINE BOCAGE



Ms. Christine Bocage is a Public Health Nutritionist, registered with the Council of Professions Related to Medicine in Trinidad and Tobago. She is an experienced public health professional with over 24 years of experience in Food and Nutrition Programme Planning, Implementation and Evaluation. Her professional experience also includes promotion of optimal young child nutrition and household food and nutrition security; health promotion in schools, worksites and communities; training of teachers, health professionals and other healthcare workers; and the conduct of quantitative and qualitative research focusing on health, nutrition, physical activity, food security and food safety.

She obtained her BSc. Degree in Agriculture in 1982 and a MSc. Degree in Nutrition in 1987 at the University of the West Indies (UWI) St. Augustine, Trinidad; and Mona, Jamaica, respectively. She is also certified in Managing and Facilitating Online Instruction (with UWI Open Campus); Human Resource Management; Business Management; Food and Nutrition Planning; and Programme and Project Cycle Management. She is a certified Trainer in Food Safety for Nutritionists and other Health Professionals and is the Training Director on Breastfeeding Counselling in Trinidad and Tobago. Currently, she is pursuing her Doctor of Philosophy Degree at the UWI, St. Augustine.

Ms. Bocage was employed with the CFNI/PAHO/WHO for the past 16 years and is currently employed as a Public Health Nutritionist with the Caribbean Public Health Agency (CARPHA). She serves on a few CARICOM Regional Technical Committees and on several National Cabinet-Appointed Committees such as the Partners Forum Committee on NCDs; and the Food Advisory Committee which deals with the development and review of Standards and Regulations for Food.

# Biography of

KEYNOTE SPEAKER.  
DR. DAVID F. ALLEN M.D., M.P.H

Dr. David Allen was trained in medicine at Saint Andrew's University, in Scotland, UK and in Psychiatry and Public Health at Harvard University, in Boston, U.S.A. He is certified by the American Board of Psychiatry and Neurology, with added qualification in addiction. Dr. Allen has taught at Harvard, Yale and most recently held a clinical professorship in Psychiatry at Georgetown Medical School, in Washington, U.S.A. He was voted as one of the most outstanding psychiatrists in America, 2002-2003 and 2011-2012. In May 2008, Dr. Allen was made a Distinguished Life Fellow of the American Psychiatric Association for his innovative scientific research.

In 1987, Dr. Allen was given the RB Bennett Commonwealth prize, by the Royal Society of Arts in London, for his international contribution in the field of cocaine addiction research and treatment. In 1996, his work on cocaine was featured on Frontline of the PBS Channel in the USA. He has pioneered the development of treatment approaches to cocaine addiction in the Bahamas, and Washington D.C. He established the drug treatment for men and women at the Gospel Rescue Mission, on 815 5th ST NW Washington DC and is now the emeritus director of treatment at Gospel Rescue Ministries.

Dr. Allen has consulted and conducted motivational and educational seminars at numerous organizations including the Young Presidents Organization of Washington D.C., The Atlantis hotel, Paradise Island, the Chautauqua Institution in New York, etc. He is the author of numerous books, namely, Mental Health Evaluation, Ethical Issues In Mental Retardation, The Caring Physician, The Cocaine Crisis, Cocaine: The Broken Promise, In Search of the Heart, Shattering The Gods Within, Contemplation: Intimacy in a Distant World, and most recently, Shame: The Human Nemesis. Dr. Allen has also published a children's book "Pudgy: A Bahamian Parable". Additionally, he has published numerous scientific papers on his research field, The Addictions and Psychological development.

In 2009, Dr. Allen started an experimental research project dealing with the massive fragmentation of family and community from the drug and violent crime epidemic in the Bahamas. The project, involving children, teenagers, and their parents, is called 'The Family: People Helping People'. It provides a means of socialization, making it possible to teach communication skills, anger management, revenge elimination, drug prevention, spirituality, virtues (e.g. respect and gratitude) etc. The scientific research by the Meridius Research organization in California USA has validated the quantitative scientific evidence of the effectiveness of this program.

Dr. Allen has a regular radio program on FM 97.5 Sunday evenings at 7:00pm entitled Coming Home To Our Heart. He is also the host of a television program on JCN Channel 14 Wednesday evenings at 9:00pm entitled People Helping People. Dr. Allen is the Director of the Renaissance Institute in Nassau, and his team of psychotherapists and psychoanalysts cater to an international clientele and specialize in marital therapy, depression, grief and loss, addictions and crisis management.



## THURSDAY SEPTEMBER 19TH, 2013

### **1. CURBING THE NON-COMMUNICABLE DISEASE EPIDEMIC IN THE CARIBBEAN.**

**Trevor Hassell, GCM, MBBS, FRCP, FACC. President of The Healthy Caribbean Coalition & Special Envoy and Chairman NCD Commission, Barbados.**

The epidemic of chronic non-communicable diseases (NCDs) in the Caribbean is one in which a group of diseases, namely, cardiovascular diseases (heart disease and stroke), diabetes, cancers and chronic lung disease account for 65% of the burden of disease in the Region. This group of diseases is influenced by lifestyle, medical care delivery, environment and heredity. They occur as a consequence of unhealthy diet, exposure to tobacco smoke, abuse of alcohol and inadequate physical activity, resulting in, and associated with, physiological derangements of elevated blood pressure, obesity, high blood sugar and abnormal serum lipids.

Several declarations, statements and strategic plans have been produced, both regionally and internationally, aimed at informing of the significant health and developmental impact of NCDs and charting a way forward for tackling them globally, regionally and nationally. In the Caribbean these efforts reached their zenith in 2007 when Heads of Government of CARICOM held a Summit in Port of Spain on NCDs at the conclusion of which the “Declaration of Port of Spain: Uniting the Stop the Epidemic of NCDs” was issued as a series of recommendations aimed at reducing the burden of NCDs by comprehensive and integrated preventive and control strategies through multi-sectoral, collaborative approaches in the region. This seminal event was followed by and in many respects was the catalyst for several global and regional consultations and conferences, including the United Nations High Level Meeting on NCDs, 2011 and the subsequent Political Declaration that show agreement on a way forward in responding to the epidemic of NCDs

A review of the strategic plans and declarations arising out meetings and consultations held globally and regionally, reveals that several agreed essential approaches are recommended in response to the epidemic of NCDs. These include the need to effectively address the lifestyle risk factors that contribute to the NCDs particularly by taking such actions as population salt reduction to lower blood pressure; enactment of legislation to forbid smoking in public places, ban advertising and promotion of tobacco products, prohibition of the sale of cigarettes to minors, and increased taxes and duties on tobacco products; policies for responsible drinking of alcohol, and dietary improvement with reduction of intake of saturated fats and zero consumption of trans-fats. A further recommendation is the adoption of a “health in all policies” and a “whole of society” approach, recognising that many of the required corrective measures are outside the realm and purview of health. A “whole of society” strategy would see the active engagement and participation of all sectors of the society in the process, including civil society and the private sector. Common to the several consultations, declarations and strategic plans is the recognition of the need for universal access to health care, improved management of NCDs and the reorientation of health services with application of the chronic care model. Finally, there is recognition of the causative role of certain factors, including lack of education, poor socio-economic conditions, lack of empowerment, vulnerable people, the so-called “causes of the causes” that need to be addressed in the response to the NCDs.

The NCDs present a major health and development burden for the Caribbean and as expressed by a Leader of the Caribbean some years ago “unless they are effectively tackled all the gains made since independence in many Caribbean countries will be reversed”.

### **2. TO WHAT EXTENT DOES THE IMPLEMENTATION OF A COMPREHENSIVE MANAGEMENT TRAINING MODULE FOR ACUTE CARDIOGENIC PULMONARY OEDEMA IMPACT THE KNOWLEDGE AND MANAGEMENT PRACTICES OF PHYSICIANS IN THE EMERGENCY DEPARTMENT OF THE PRINCESS MARGARET HOSPITAL?**

**Dr. Christa Wells, Dr. Michelle A Sweeting & Dr. Morton Anthony Frankson**

**Background:** Acute Cardiogenic Pulmonary Oedema (ACPO) is a frequent presentation in the Emergency Department (ED) that is often considered a management challenge, due to lack of standard management protocols (1-8). The benefits of certain pharmacotherapy such as nitrates however is evident, and lack of awareness of the benefits of these drugs by emergency physicians may be a major contributing element in the management challenges of ACPO (4-8).

**Objective:** This study was conducted to assess the knowledge and management practices of ACPO by ED physicians at Princess Margaret Hospital (PMH), and to determine what impact an interventional training module may subsequently have.

**Methods:** This seven months, two-part study involved pre- and post-intervention phases. The initial three-months involved a pre-intervention assessment of ED physicians' knowledge and management practices of ACPO. Following a one-month period of training modules, the proceeding three-months reassessed physicians' knowledge and ACPO management practices. All ED physicians participated in both study phases, and 83 patients' charts pre-intervention and 110 charts post-intervention were reviewed.

**Results:** Results regarding the three drugs used in the management of ACPO, (nitrates, furosemide, and morphine), revealed a moderately strong positive correlation ( $\phi = 0.302$ ,  $p < 0.001$ ) between the intervention and management improvements in the use of nitrates. Sublingual nitroglycerine was administered 39.8% during the pre-intervention phase and 66.4% ( $p < 0.001$ ) post-intervention. Furosemide was administered in 97.6% of cases pre-intervention and 92.7% post-intervention. The use of morphine pre- and post-intervention was 10.8% and 15.5%, respectively. Intubation rate decreased pre-intervention from 6.0% to 2.7% post-intervention. Admission rate was 41% pre-intervention with a post-intervention rate increase to 44.5%. The 30-day mortality rate post-intervention was 7.3% when compared to 9.6% pre-intervention.

**Conclusion:** The study demonstrated a positive impact of the ACPO training module on the management practices of physicians in the ED of PMH. It also indicated the need for on-going training of ED physicians in the management of this potentially fatal disease.

### **3. ANTI-HYPERGLYCEMIC MEDICATION ADHERENCE IN TYPE 2 DIABETICS IN NEW PROVIDENCE**

**M MILLAR, D ARCHER, A BAIN, T HANNA, D ROBINSON, C HANNA-MAHASE, M FRANKSON, S PINDER-BUTLER**

**Aim:** To assess anti-hyperglycemic medication adherence in Type 2 Diabetics in New Providence, The Bahamas in a conveniently selected period in the year 2012.

**Methods:** This was a Cross-Sectional study using a Modified Morisky's Adherence Predictor questionnaire that determined the extent of adherence in patients with Type II Diabetes in New Providence, The Bahamas. The population sample consisted of Type II diabetics, 18 years and older, currently on oral anti-hyperglycemics. The main outcome measures were adherence to oral anti-hyperglycemic medications and HbA1C.

**Results:** Of the total 120 patients identified 20.5% as excellent, 22.2% as moderate and 57.3% as poor adherence to oral anti-hyperglycemic medications. The mean HbA1C was 8.5%. There was a positive relationship between HbA1C and adherence ( $p=0.04$ ).

**Conclusion:** Overall, study findings indicated poor adherence with oral anti-hyperglycemics in this population of managed diabetics. The results indicate the need for further and more in depth research into this important topic.

### **4. SICKLE CELL DISEASE EPIDEMIOLOGY IN THE NEONATAL POPULATION BORN TO MOTHERS WITH POSITIVE PRENATAL SICKLE CELL HEMOGLOBINOPATHY SCREENING TEST AT THE PRINCESS MARGARET HOSPITAL**

**DR. DASHAWN FERGUSON-SAUNDERS, DR. CORRINE SIN QUEE, DR. LESLEY KING, DR. M. ANTHONY FRANKSON**

**Objective:** To determine the outcome of sickle cell disease testing in The Bahamas through selective screening in a targeted population of at risk neonates born to mothers with positive prenatal sickle cell hemoglobinopathy screening test at the Princess Margaret Hospital, Bahamas.

**Design & Methods/ Study Design:** A descriptive study design was used to determine the incidence of sickle cell disease in the at risk neonates whose mothers sickle cell hemoglobinopathy screen tested positive. These mothers were surveyed using a self-administered questionnaire to assess understanding about sickle cell disease and their sickle cell status.

**Results:** 183 (8.4 %) of mothers sickle cell hemoglobinopathy screening test were positive. Eighty nine (58.9%) of mothers were unaware of their sickle cell status and 72 (50.9%) unaware of the impact it could have on their infant if their results were positive for sickle cell disease. 161 infants were screened, 9 (5.6%) of these infants had hemoglobin FAS, 4 (2.44%) had hemoglobin FAC and 3 (1.80%) had hemoglobin FS.

**Conclusion:** Neonatal hemoglobinopathy screening is needed as a continuum of health care as this can detect the infants with sickle cell disease allowing adequate counseling, education of parents, early identification of illnesses and need for intervention resulting in decreased morbidity and mortality as it relates to sickle cell disease. Maternal screening for the



presence of sickle cell gene is already a routine part of antenatal screening at the Princess Margaret Hospital and allows identification of at risk infants. Prenatal counseling of mothers should be done with regarding the risk to their unborn infants.

## 5. DIAGNOSING AND TREATING COMMUNITIES: PLANNING THE NATION'S HEALTH OUTCOMES

RAINFORD WILKS, TROPICAL MEDICINE RESEARCH INSTITUTE, TMRI, UWI, MONA

The Caribbean has a very high burden of chronic non-communicable diseases (CNCDs) accounting for 60% of mortality and up to 8% of GDP in some countries. This burden has been recognized at the highest level in the region whose leaders have been in the forefront of a global response to this epidemic. Despite this commitment, indications are that the burden of CNCDs continues to rise.

There is evidence that the structures, systems and processes that are required for the effective response to this epidemic are either not in place or not functioning optimally. We argue that the research being done is too “positivist” and takes insufficient account of social, political, economic, cultural, ethnic, and gender factors that have crystallized over time and significantly influence people's behaviour. Similarly, the interventions being proposed, lack genuine community empowerment i.e. a “bottom-up approach”.

We propose that the any effective response to the CNCD epidemic will have to be complex in both data gathering and implementation of solutions and must be underpinned by certain essential components including: political commitment, sustainable resources through public/private partnership, effective dissemination of information using social marketing techniques and effective monitoring and evaluation (M&E) to facilitate learning by doing, continuous revision and improvement. There is at least one example of success which can provide a guide for the Caribbean. The EPODE model to reduce childhood obesity developed in northern France and implemented in 500 communities in 6 countries demonstrates the effectiveness of community development and capacity building based on the pillars

The region's health researchers may well be advised to embrace more community based participatory research (CBPR) as well as complex interventions (CI) if we are to effectively blunt the CNCD epidemic.

FRIDAY SEPTEMBER 20TH, 2013

## 6. MISALIGNMENT OF PERCEIVED WEIGHT WITH ACTUAL BODY MASS INDEX IN THE BAHAMAS

C CHIN, N FORBES, M FRANKSON, S KNOWLES, T HUMES, A WALLACE

Objectives: To assess the correspondence of weight perception versus actual BMI category.

Methodology: A prospective case notes review of adults in an internal medicine practice was done from April 2007 to May 2008. Quantitative analysis used a current version of the Statistical Package for the Social Sciences.

Results: Of 674 patients, 64.5% were female, age was not statistically significantly different from males, overall the mean age was 54.1 (+ 14.7) yrs., 98.4% of 674 reported age. Despite gender ( $p=0.23$ ), 8.7% claimed “obesity”, 45.2% “overweight”, 1.1% “big boned”, 43.3% “normal” and 1.7% “underweight”. Mean BMI was 30.4 (+ 6.8) kg/m<sup>2</sup> and was unrelated to gender or age. 40.6% of the variance in participants actual BMI was explained by self-perceived BMI ( $r_{Sp}=-0.637$ ,  $p<<0.001$ ,  $n=609$ ). Of 53 morbidly obese, 32.2% claimed obesity, 58.5% overweight, 1.9% big boned and 7.5% normal. Of 230 obese, 11.3% claimed obesity, 70.0% overweight, 1.3% big boned and 17.4% normal weight. Of 174 overweight, 2.9% claimed obesity, 41.4% overweight, 1.7% big boned, and 54.0% normal. Of 145 with normal BMI, 11.0% said overweight, 83.5% normal and 5.5% underweight. Of 7 underweight, 14.3% claimed obesity, 71.4% claimed normal weight and 14.3% underweight. Males mean waist circumference was 40.1 (+ 0.4) inches and 37.1 (+ 0.3) inches for females ( $p<<0.001$ ).

Conclusions: Patients predominantly underestimated BMI. A significant number were in fact overweight, obese or morbidly obese.

## **7. PARENTAL KNOWLEDGE, PERCEPTIONS AND PRACTICES TOWARDS CHILDHOOD FEVER IN THE EMERGENCY DEPARTMENT IN THE BAHAMAS**

P M DAVIS-MCKENZIE, D BRENNEN, M A FRANKSON, C BULLARD

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

Objective: To assess the knowledge, attitudes and effects on management practices towards fever of parents attending with their febrile child at the Accident and Emergency Department (A&E), Princess Margaret Hospital (P.M.H.), Nassau, Bahamas.

Methods: An observational cross-sectional research study was conducted with eligible candidates interviewed during randomly selected computer generated ED shifts, from August 2011 to February 2012 using a standardized, validated investigator-administered questionnaire. Data collected were analysed to assess statistical significance and extent of associations.

Results: Here, 326 caregivers were surveyed. The correct definition of fever 38.0oC/100.4oF was noted in 40.2% of caregivers. Here, 54.9% reported that the median temperature at which harmful effects were perceived at was 104.0oF and the minimum temperature at which antipyretics would be administered was 98.6oF. Seizures, infections and brain damage were the most frequent concerns of caregivers. The most frequent dosing intervals for antipyretics were four hourly for both acetaminophen and ibuprofen. Median temperature with which a caregiver would call the doctor was 100.4oF and 102.0oF was the median temperature indicated by caregivers regarding when a child would be taken to the ED.

Conclusion: There continues to be misconceptions towards fever in a child in caregivers attending the ED, which have some influence on practices for fever management, irrespective of educational level.

## **8. CHILDHOOD OBESITY: CURRENT SITUATION IN THE CARIBBEAN**

CHRISTINE BOCAGE PUBLIC HEALTH NUTRITIONIST CARIBBEAN PUBLIC HEALTH AGENCY (CARPHA)

Obesity is generally defined as an excessively high amount of body fat in relation to lean body mass. There has been a doubling of overweight and obesity in children under five years: preschoolers; and in adolescents ranging from 25% -30% (with obesity accounting for as much as 14%). Data from the Caribbean also show positive correlations of various modifiable risk factors to childhood obesity: increased sedentary living; reduced physical activity; increased consumption of sodas/carbonated beverages; reduction in fruits, vegetables and legumes intake. The low rates of exclusive breastfeeding in the region is also a critical factor in the development of childhood obesity. The resultant co-morbidities associated with childhood obesity: diabetes, hypertension and cardiovascular diseases are increasing in adolescents in alarming proportions.

There are several gaps in research in the Caribbean and stakeholders are urged to take them on board so policy development and decision-making can be more scientifically supported. Childhood obesity is an epidemic in the Caribbean but it can be curtailed with committed governments, relevant research, public policies and actions, among other things. The need to work with multi-sectoral partners and the continued support and co-operation of sectors: for example the involvement of school health services in obesity prevention efforts, are critical. The Settings Approach is key to prevention: it is embedded in our health promotion strategies and designed as key to behaviour change. However, to get behaviour change we need to attempt to move away from changing behaviours in settings to changing settings to support behaviour change”.

## **9. INFANT FEEDING PATTERNS, BMI AND MISSING DATA: A MIXED METHODOLOGICAL ASSESSMENT IN THE PUBLIC HEALTH CLINICS IN NASSAU, BAHAMAS**

DR. ESTELLE ARMOUR-LAVILLE, DR. M. ANTHONY FRANKSON, DR. GERTRUDE HOLDER, DR. CHERILYN HANNA-MAHASE, MR. WILLIAM FIELDING, DR. NICOLETTE BETHEL, DR. RUTH DORSETT.

Objective: To assess possible associations between infant feeding patterns and BMI while also exploring factors related to relevant documentation deficits in participants’ routine health-check records.

Method: A mixed-methods study on childhood BMI, infant feeding and missing medical data in New Providence, The Bahamas, at one urban and three suburban public clinics. A review was done of 396 charts on infant feeding at two, four, six and 12 months, and growth parameters at four years of age. Qualitative review involved key-informant semi-structured interviews, a focus group discussion, and direct observation to explore issues surrounding high levels of missing data found in the quantitative study.

Results: Children of four years of age had a mean BMI of 15.90 (+ 2.85) kg/m<sup>2</sup> with overweight and obesity accounting for 22.0%. At four months, 60.3% were fed at least some breast milk. Those who were fed only formula at four months had a BMI 1.308 (+0.531) kg/m<sup>2</sup> lower than those fed only breast milk (p = 0.014). No definite increased risk of Childhood Obesity for those fed only breast milk for four months over those fed only formula was observed [OR 1.539 (95% CI: 0.650, 3.603)]. Missing data on infant feeding increased from 15.2% at two-months to 31.0% at one-year. Nurses felt that limited clinic space created concern for privacy and confidentiality and affected the quality of information collected in interviews. The form completion process was described as tedious, ambiguous, repetitive and time consuming and contributed to missing data.

Conclusion: Initiatives to improve conditions surrounding documentation would result in more complete data for future research studies on child health.

#### **10. THE IMPACT OF EXERCISE ON COGNITIVE FUNCTION IN THE ELDERLY IN NEW PROVIDENCE, BAHAMAS**

DR. INDIRA MINUS-GRIMES, DR. CHERILYN HANNA-MAHASE, PROF. DENISE ELDERMIRE-SHEARER, DR. MORTON A. FRANKSON

Purpose: This study aimed to demonstrate the impact of regular physical activity on cognition and functional capacity in the study population.

Methods: Forty-seven participants were randomly assigned to exercise group (EG) and no exercise group (NEG): EG (n=28) and NEG (n=19). Volunteers were assessed on physical, cognitive function, and functional ability parameters before the program started as well as at four, eight and twelve week intervals. Missing data for the 9 NEG participants lost to follow-up was treated by imputing and applying the last measured scores for all subsequent intervals. Results: Among the 77 persons recruited for this study the mean MMSE score was 24.52 (SD ±5.09). Across the time intervals the mean (±1 SE) MMSE scores in the EG varied from 26.04 at week one to 26.43 at week twelve. For the NEG, mean MMSE scores showed a decrease from 22.84 to 22.74 by week twelve. Variance around the median of 8.0 decreased consistently within the EG from baseline to 12 weeks, p=0.060 compared to the NEG which maintained a median of 7.0 over time but the dispersion of IADL scores within the NEG remained wide throughout the study time, p=0.593. Pearson's correlation for the EG of IADL to MMSE at baseline was r=0.450, p=0.014 and after 12 weeks of exercise r=0.456, p=0.013 and for the NEG the relationship of IADL to MMSE at baseline was reflected r=0.520, p=0.016 but by twelve weeks as r=0.357, p=0.134.

Conclusions: In this study of participants who only had mild cognitive impairment aerobic type exercise (walking) resulted in positive influences on cognitive function and functional capacity over time. Improvements in cognition maintained a strong positive relationship with functional capacity in the EG versus the NEG over time.

#### **11. FACTORS ASSOCIATED WITH READMISSION OF PATIENTS WITH MOOD AND PSYCHOTIC DISORDERS TO THE SANDILANDS REHABILITATION CENTRE, BAHAMAS**

DR. SONALI FERGUSON-PARKER

Background: Relapses and frequent readmissions of mentally ill patients to hospital present a challenge for mental health services, and affect the utilization of mental health services.

Aim: is to describe the sociodemographic and clinical factors associated with patients with psychotic and mood disorders admitted to the Sandilands Rehabilitation Centre in the Bahamas, over a 24-month period.

Methodology: This was a retrospective case note study. A data collection instrument was designed based on significant factors shown to be associated with acute psychiatric readmissions gathered from literature reviews, and an audit was conducted on the files of all eligible acute adult psychiatric admissions over this period. Data was analyzed using the Statistical Package for Social Sciences.

Results: A total of 411 files met the criteria for inclusion, 58.6% (239) males and 41.8% (172) females. The average number of readmissions at the time of the study was 4 times and the average length of stay in hospital per admission was 22.67 days. Four or more readmission occurred in persons diagnosed with schizophrenia, schizoaffective disorder, and polysubstance misuse. Longer-than-average duration of stay in hospital per admission was associated with diagnoses of schizophrenia, schizophreniform disorder or schizoaffective disorder, being financially supported by government and significantly being supported by family. Spearman's correlation revealed a statistical association between length of stay on first admission and

number of subsequent admissions. Correlation analysis showed a decreased rate of readmission was related to use of long acting depot and second generation antipsychotics. Linear regression revealed that the variables statistically significantly related to average length of stay per readmission were unemployment, being financially self-supported and diagnoses of depressive disorder and brief psychotic disorder.

Conclusion: These sociodemographic and clinical factors found to be associated with readmission must be identified and addressed with the implementation of appropriate and effective psychotherapeutic programmes to prevent readmissions to hospital.

## **12. RESOCIALIZATION IN THE BAHAMAS: ONE FAMILY AT A TIME; - THE FAMILY: PEOPLE HELPING PEOPLE** **DR. DAVID ALLEN CONSULTANT PSYCHIATRIST & VISITING PROFESSOR AT YALE DIVINITY SCHOOL**

Lasting ramifications of the drug epidemic of the 1980s, paired with the recent socioeconomic downturn, have led to a powerful social fragmentation of Bahamian society. This social fragmentation or de-socialization has caused an erosion of sociocultural values producing increased (a) murder rates and violent crimes (b) suicides and suicidal attempts (c) domestic violence (d) widespread anger and revenge (e) loss of respect for property (g) poor work ethic (h) fragmentation of family and community and (i) burgeoning youth gang formation.

In response to this, Dr. David Allen of the Allen Institute for Treatment and Research started “The Family: People Helping People”, a community outreach programme to promote re-socialization by developing positive attitudes such as self-esteem, gratitude, forgiveness and contentment while decreasing negative emotions such as anger, depression, revenge, shame, suicidal behavior and abusive relationships.

The programme involves a group process (group therapy), psychodrama, role playing, storytelling, affective learning, psychological photography, centering, silent meditation, social events, community service and spiritual direction. The programme provides healing, support and guidance; group members develop coping and behavioral skills including communication, listening, social awareness and relationship skills.

For the past six years, “The Family” has been meeting and many persons have found it helpful. Testimonial data and interviews presented on Dr. Allen’s television show “People Helping People” (Wednesday evenings 9 pm on Ch. 14 JCN) and other media have demonstrated the benefits of “The Family” for those who attend.

“The Family: People Helping People” offers free professionally-led therapeutic groups that provide support for persons seeking help for a wide range of emotional and social problems. The purpose of The Family is to provide a safe, secure and confidential environment where group members can begin to heal their broken relationships with their family and community. The primary goal is to improve socialization despite high rates of crime, family disintegration, and economic impoverishment in the community. The Family aspires to encourage hope and feelings of benevolence, with the idea that decreased hostility towards others may shift motivation towards self-improvement. It is a unique approach that takes known therapeutic approaches and combines them in new ways to address broader psychological issues that result from the breakdown of family values. The Family programme is a microcosm of Bahamian society, which provides an excellent opportunity to study trends, analyze issues and work towards meaningful solutions. It is the first time that this type of group therapy model has been implemented in the context of the fragmented Bahamian community.

While group therapy has been documented to be effective in addressing singular issues such as trauma, aggression, and delinquency, it has not yet been used as a re-socialization intervention that looks at multiple facets of well-being, including spirituality.

### **Pilot Research Study**

To test the validity of The Family project in practice, a pilot study was initiated in 2012, involving individuals who had been attending The Family. With the help of the Templeton World Charity Foundation and several concerned donors including Ms. Cherry Tabb of the Herzig Eye Institute of Canada and Mr. Frank Crothers of Nassau, the Allen Institute began to collect data on the programme’s effectiveness. In a pilot analysis of The Family model, participant progress was measured using a mixture of eleven different internationally validated instruments developed by the Meridius Research Institute of San Diego, California. Results suggested evidence of re-socialization which indicates the efficacy of The Family model. One of the only studies of its kind, the assessment was complex, costly and required much planning and organization. The

research was conducted by Dr. David Allen, director, Dr. Victoria Allen, Associate Professor, The College of The Bahamas, Dr. Marie Allen Carroll, Psychologist, St. Andrew's School, Dr. Mallery Mayo and Jennifer Discar, Meridius Research Institute, Natalie Ines Hernandez, student at St. Andrew's School, Cori Chea, student at Taylor University and Vernie Rolle, administrator of The Family.

Results of the pilot study indicate significant decreases in depression, anger, thoughts of suicide, shame, loneliness, revenge, abusive relationships and illegal activity. The study also revealed increases in self-esteem, intimacy with others, satisfaction with life, gratitude, hope, trust and improved family relationships. This pilot study demonstrates scientifically that the programme enhances re-socialization and combats the prevailing community fragmentation.

Physicians and scientists have reviewed preliminary findings of the pilot study on "The Family". Professor James F. Jekel, MD, MPH, distinguished Professor of Epidemiology and Public Health, Emeritus, Yale University, validated the research study stating, "The program developers and the evaluators should be congratulated on creating an innovative effort to respond to the growing social problems of the Bahamas in a meaningful and efficient way, and on their insistence on a rigorous evaluation. The data so far suggest that important improvements in attitudes and behaviors have resulted from the program."

Dr. James Manganello, Psychologist and Research scientist, Harvard School of Public Health, wrote, "Results of the pilot study suggest evidence of re-socialization, which indicates efficacy of The Family model."

#### Locations of the Family

"The Family" now meets in the City Central Outreach Centre on Blue Hill Road to accommodate the growing number of participants, approximately 50 persons who meet once a week for about 2 ½ hours. There is no cost to attend and newcomers are often invited by friends who have been helped. "The Family" also meets on Robinson Road, above the G&M Appliance store, just west of the Ridgeland mall. We are in the process of initiating Families in other disenfranchised areas, such as Fox Hill, Nassau Village, Kemp Road and Carmichael. Evidence-based data from The Family will allow us to develop effective programmes in schools, prisons, churches and urban renewal centers to combat the prevailing deterioration of our society.

### 13. ATTITUDES OF PUBLIC HOSPITAL AUTHORITY PHYSICIANS IN NEW PROVIDENCE, BAHAMAS TOWARDS PERSONS LIVING WITH HIV/AIDS

DR. SHAKERA CARROLL SUPERVISORS: DR. HERBERT ORLANDER, DR. FRANCIS WILLIAMS, DR. MORTON ANTHONY FRANKSON, & DR. CHERILYN HANNA-MAHASE DR. S. R. CARROLL

Background: The Joint United Nations Program on HIV/AIDS (UNAIDS) seeks to eliminate stigma and discrimination against persons living with HIV/AIDS (PLHAs) by the year 2015. However, stigma/discrimination remains pervasive and largely unaddressed worldwide. This research paper aims to explore attitudes towards PLHAs by Public Hospitals Authority physicians in the capital island of New Providence, the Commonwealth of The Bahamas, and whether demographic or other variables influenced the likelihood of stigmatization.

Design & Methods: 174 randomly selected physicians from the Princess Margaret Hospital and the Sandilands Rehabilitation Centre participated in the study between February and March 2013. They completed a self-administered questionnaire which included demographic data and questions regarding physicians' knowledge of HIV/AIDS, level of fear of occupational exposure to HIV, statements about HIV, persons with the disease and their medical care, and physicians' observations of discrimination against patients with HIV/AIDS.

Results: A total of 134 physicians completed the survey. The mean physician age was 39.05 years. Overall, the majority of participants were Bahamian (67.9%) and of Christian faith (88.8%) with a nearly equal proportion of males and females and varying levels of educational and professional attainments. Regarding HIV/AIDS knowledge, 53.7% claimed they were very knowledgeable and least 92% of physicians demonstrated "good" HIV/AIDS knowledge. HIV/AIDS-related training was received by 61.2% of physicians, with the majority (59.5%) being trained between one and five years ago. The vast majority of physicians (95.5%) reported being directly involved in the care of PLHAs, with 66.4% of them being very comfortable providing such care, and 59.8% willing to do so for six months or more. Overall, 84.3% were found to be not likely fearful of HIV contagion. However all of the physicians were either possibly likely (53%) or likely (47%) to stigmatize against PLHAs. In this population studied gender and level of fear of contagion were found to be statistically significant predictors of the tendency to stigmatize.

Conclusions: This research showed that PHA physicians could potentially stigmatize against PLHAs, but that this does not appear to affect their ability to provide medical care to such patients. Nevertheless, addressing HIV stigma in this setting will require a multifaceted approach.

#### 14. KNOWLEDGE, ATTITUDES AND PRACTICES RELATED TO DEPRESSION MANAGEMENT AMONG PHYSICIANS EMPLOYED AT THE PUBLIC HOSPITAL AUTHORITY, NASSAU, THE BAHAMAS

DR. SALLY TAYLOR SUPERVISORS: DR. NELSON CLARKE, DR. MORTON ANTHONY FRANKSON, DR. SABRIQUET PINDER-BUTLER, & DR. CHERILYN HANNA-MAHASE

Background: Depression is a very common but debilitating mental health issue that is often under diagnosed, and under treated.

Aim: This study aimed to determine the knowledge, attitudes and practice of physicians employed by the Public Hospitals Authority, Nassau, Bahamas as it relates to depression management.

Methods: A cross-sectional descriptive study was done utilizing a convenience sample at departmental meetings for psychiatry, family medicine, internal medicine, obstetrics and gynaecology, emergency medicine and anaesthesiology. A 33 item questionnaire created by the researcher was utilized, and the data analysed using the Statistical Package for Social Sciences (SPSS).

Results: One hundred and ten physicians participated in the study: 50% male, and 50% female. Overall participants had poor knowledge regarding depression, moderately stigmatizing attitudes, but good management of depression. Psychiatrists had excellent knowledge, good attitudes towards depressed patients and excellent management of depression. Generalists had poor knowledge, good attitudes and good management of depression, while non-generalists had poor knowledge, moderately stigmatizing attitudes and fair management of depression. One third of participants admit to having personal symptoms of depression in the last 10 years. Although overall knowledge may be poor, physicians overall have good management of depression.

#### 15. OBSERVATION OF THE IMMEDIATE EMOTIONAL RESPONSE TO EARLY PREGNANCY LOSS

GAUNTLET A, SAKHARKAR V, FRANKSON A.

Introduction: Early pregnancy loss is unfortunately the most common complication of human gestation, occurring in as many as 75% of all women trying to conceive. As a result it is often underestimated as a source of emotional problems. Coping with pregnancy loss can be extremely challenging. This study has sought to assess socio-demographic and clinical factors that correlate with the range of immediate emotional responses following early pregnancy loss using a novel linear analogue scale.

Materials and Methods: This was cross sectional analytical study. 130 women presenting with miscarriage and ectopic pregnancies to Princess Margaret Hospital's gynaecology and accident and emergency department between the months of January and May 2012 were included in the study. Their demographic and clinical data were collected. Participants were asked to grade the emotional impact of their loss on a scale of 0-10, examples of life events that have been previously ranked by Holmes & Rahe (1967) were used as prompts to guide women in quantifying their response.

Results: Mean age of the participants was 29.17 ( $\pm$  7.51) years, median parity was 1 and mean gestational age was 9.54 ( $\pm$  4.05) weeks. Regarding marital status, 59.2% (77) were single, 29.2% (38) were married and 11.5% (15) had a common-law relationship.

The majority of the participants were of Christian faith. 47.7% (62) were Baptist, while 31.5% (41) indicated other Protestant Christian Faith, 10% (13) were Catholic, 4.6% (6) were Non-denominational and 6.2% (8) indicated that they had no religion.

The immediate emotional response to an early pregnancy loss was similar irrespective of age, occupation, marital status and parity of the participants. Overall, the mean emotional response score was 6.26 ( $\pm$  2.92) on the novel linear analogue visual scale with Catholics scoring highest 7.35 ( $\pm$  0.62) and non-religious scoring lowest 5.13 ( $\pm$  1.32). One-way ANOVA did not demonstrate these differences to be statistically significant ( $p=0.389$ ). The emotional response score was not statistically

different whether participants practiced their religion or not. ANOVA revealed a mostly linear increase in the emotional response score as the period of gestation increased.

Conclusion: The immediate emotional response to early pregnancy loss had the greatest impact at a later gestational age, instances where the pregnancy was planned or wanted and for those of the Catholic faith. Our study was limited to the immediate emotional response. It will be interesting to assess delayed emotional response using the same linear analogue scale in future studies.

#### **16. KNOWLEDGE, ATTITUDES AND BELIEFS TOWARDS PAPANICOLAOU SMEAR TESTING AMONG WOMEN ATTENDING THE OUTPATIENT CLINICS IN NASSAU, THE BAHAMAS**

**B COOPER, P DARVILLE, L FARRINGTON, B GAITOR, C GOMEZ, V SAKHARKAR, C HANNA-MAHASE, M FRANKSON**

Aim: To assess the knowledge, attitudes and practice towards Papanicolaou smear testing among women attending outpatient clinics in Nassau, The Bahamas

Methods: A cross-sectional, quantitative study was carried out by interviewing women in The Bahamas regarding their knowledge, attitudes and practices concerning Papanicolaou smear testing. A total of 255 women of different socio-demographic backgrounds from 18-65 years of age were interviewed using a self-administered validated questionnaire. Participants were selected via convenience sampling.

Results: The average participant was single (49.4%), Bahamian (92.8%), between the age range 18-29 years (23.2%) and had a college level or higher education (45.6%). On average, participants got 38 % of the knowledge-based questions correct. Performance of a Pap smear was found uncomfortable for 73.5% of the participants and 59.4% thought that cervical cancer was curable. A variable awareness of the persons at risk for cervical cancer was noted. Participants thought the following were persons at risk: married with children (44.8%), virgin (24.2%), having no children (32.8%), multiple sex-partners (63.7%), being a prostitute (75.4%) and being a pastor's wife (32.3%).

In terms of practice, 91.6% of participants had a Pap smear done before; and of this, only 87.1% of them having a recent one within the last five years. Of the participants, 84.6% state that they would have another Pap smear in the future.

Conclusion: The findings of this study highlight some of the gaps that exist in relation to the educational level of women in terms of Pap smear testing and cervical cancer. The challenge for healthcare providers in The Bahamas is to ascertain ways in which this knowledge may be brought across to persons of all educational levels in a form that they will remember and use for their betterment.

#### **17. THE EFFECTS OF NO ANTENATAL CARE & SUBOPTIMAL CARE ON MATERNAL & NEONATAL MORBIDITY & MORTALITY AT THE PRINCESS MARGARET HOSPITAL**

**AM GAUNTLETT, D HALLIDAY, MA FRANKSON, V SAKHARKAR, JF THOMPSON, A GARDINER, A NOTTAGE, J STUBBS, M SMITH, D WAIN, D ROX-BETHEL, M HALL-WATSON**

Objective: 1. To identify socio-economic determinant of antenatal care (ANC) seeking among with women in the Bahamas, Nassau; 2 .To identify maternal risk factors and socio-demographic parameters and complications of pregnancy, labour and postpartum period associated with no antenatal care; and 3. To evaluate the correlation between neonatal morbidity and mortality with the level of antenatal care

Method: From 1st March 2011 to 31st March 2012 three cohorts of PMH's antenatal patients (no-antenatal care, suboptimal antenatal care, and optimal antenatal care) with singleton pregnancies were interviewed postpartum as per the above stated objectives. The questionnaire used was modelled after the Pregnancy Risk Assessment Monitoring System (PRAMS) questionnaire. The questionnaire's pregnancy outcome data was obtained from clinical records. Quantitative data analysis was performed.

Results: For the 221 participants, their mean age was 26.51 (+ 6.66) yrs. old, and 71.0% were high school educated. 62.1% of those getting optimal care (OC), 78.9% of those getting suboptimal care (SC), & 90.9% of who got no antenatal care (NC) were single; 74.7% overall. 43.0% had OC, 32.1% had SC, and 24.9% had NC. 46.3% with OC earned \$15,000-\$25,000 per annum, while 50.7% with SC and 58.2% of those with NC earned < \$15,000 per annum. For those with NC, 32.7% had a baby < 2 yrs. ago ( $p < .001$ ), 14.5% had >5 children ( $p < .001$ ), 1.8% ( $p = .002$ ) claimed to have planned

their pregnancy (while of those getting OC 23.2% did so), 25.5% experienced premature labour ( $p=.029$ ), and 18.2% had a previous STI ( $p=.013$ ). Main reason participants cited for not accessing early ANC were: 19.5%-difficulty getting an appointment, 11.8%-insufficient funds, 30.3%-didn't know they were pregnant, 35.5%-not wanting anyone to know they were pregnant, and 22.5%-couldn't get time off to go to clinic ( $p=.005$ ). Overall, 9 (4.1%) mothers were HIV positive; 4.2% of mothers having OC, 1.4% of those having SC, and of 7.3% those with NC ( $p=.255$ ). Overall, 12 infants (5.4%) were admitted to NICU; for infants of mothers getting OC 1.1% went to NICU, of those with SC it was 9.9%, and of those with NC it was 7.3% ( $p=.036$ ). Overall, 52 mothers had caesarean section (CS); 36.8% of those with OC had CS, 15.5% of those with SC had CS, and 10.9% of those with NC had CS ( $p<.001$ ). Gestational age at delivery was obtained on 204 (92.7% of the) infants, for infants of mothers getting OC it was 38.57 weeks, and it was 38.0 weeks for infants of both mothers getting SC and NC ( $p=.001$ ). Birth weight at delivery was obtained on 213 (96.4% of the) infants, for infants of mothers getting OC it was 3124.6g., and it was 2858.1g for infants of mothers getting SC, and 2892.6g for infants of mothers with NC ( $p=.001$ ). Overall, 80.1% had APGAR scores of 8-9 at both 1 and 5 minutes; for those getting OC this was 81.1%, it was 73.2% for those with SC, and 81.3% for those with NC ( $p=.890$ ).

**Conclusion:** This study provides evidence for changing antenatal care from a traditional risk oriented approach to a focused one as frequent visits are often logistically and financially impossible for women to manage, and are a burden on the health care system.

## **18. THE TASK FORCE REPORT ON SUICIDES IN THE BAHAMAS (2000-2013)**

**BY: KEVA BETHELL, M.P.H & DAVID ALLEN, M.D, M.P.H.**

The occurrence of suicide and suicidal attempts in the Bahamas should be a major public health concern. In the past decade, there has been a fluctuating trend in the number of suicides. However, of much concern to us, is that in 2011, there were six (6) reported suicides, and in 2012, there were eleven (11). This is almost a 50% increase. As far as suicidal attempts, there appears to be an increasing trend. To understand whether this is a developing trend in our country, we need to collect accurate data for the remainder of 2013. It has been hypothesized that the lasting implications of the drug epidemic of the 1980s and its sequelae, along with the recent socioeconomic decline, has led to a serious social fragmentation of the Bahamian society. The breakdown in families, coupled with a modernized Bahamian culture with minimal moral values and a decline in the economy has led to a heightened state of chaos among citizens of the Bahamas, especially in New Providence.

### **Methodology**

A team of Bahamian professionals, which include researchers and psychologists, have sought to analyze the incidence of suicides in the country. To do this, we proposed to carry out two studies, one retrospective in scope, and the other prospective. The retrospective study examined the cases of suicides that have already occurred. Data was collected from the Central Detective Unit (CDU), coroner's court, Sandilands, The Rand Memorial Hospital, Department of Statistics, and Public Hospital Authority. Cases were analyzed for the years 2000-Present. In the prospective study, a sample ( $n=276$ ) of Bahamians was surveyed, in an effort to understand how suicide and mental distress, in the form of depression, are perceived by the Bahamian society. The study's null hypothesis was that in the Bahamas, the rates of suicide among males and females, of all ages, would be the same.

### **Results**

According to data provided by the Quality Control Section of the Central Detective Unit (CDU), there were ninety-six (96) reported suicides in the Bahamas from 2000-Present. However, to date, only fifty-five (55) of these cases have been abstracted. After combining the data for 2000 to 2012, the overall rate of suicide in the Bahamas was 2.1 per 100,000. The suicide rates differed among males and females of various ages, in the ratio of 6:1. In terms of the method used to commit suicide, the majority of the victims (55%) hung themselves. Other methods used included gunshot wound (13%), fall (6%), overdose (6%), the use of sharp instruments (6%), burning (3%) and asphyxiation (1%).

### **Conclusion**

Suicide is a social scourge. Because of the stigma of suicide in the Bahamas, we do not communicate openly about suicide. This must be changed, because in order to prevent suicides, people need to know that help is available. Suicide is an important public health problem that is usually left shrouded in secrecy. As a result, there is a limited amount of information available to those working to prevent suicide.



**19. EFFECT OF PREVIOUS SCORPION BITE(S) ON THE ACTION OF INTRATHECAL BUPIVACAINE: A CASE CONTROL STUDY**  
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**Background:** During the routine practice in the institution, it was observed that there were persistent incidents of inadequate/failed spinal anaesthesia in patients with a history of single or multiple scorpion bite/s. To test any possible correlation between scorpion bite and the altered response to spinal anaesthesia, a case control study was conducted involving patients with a history of scorpion bite/s and without such a history.

**Methods:** Randomly selected 70 (n=70) patients of either sex and age range of 18-80 years, were divided into two equal groups, giving past history of one or multiple scorpion bites and giving no such a history. The anaesthetic management was identical inclusive of subarachnoid block with 3.5 ml. 0.5% bupivacaine heavy. The onsets of sensory, motor and peaks of sensory and motor blocks were observed with the pin-prick method and Bromage scale. After waiting for 20 min, if the block was inadequate, then balanced general anaesthesia was administered. The analysis of the data and application of various statistical tests was carried out using Chi-square test, percentages, independent sample t-test and paired t-test.

**Results:** Demographically both groups were comparable. In scorpion bite group, the time of onsets of both sensory and motor blocks and time for the peak of sensory and motor blocks were significantly prolonged, 4 patients had failed/inadequate sensory block and 5 patients had failed/ inadequate motor block while all the patients in non-bite group had adequate intra-operative block.

**Conclusion:** We conclude that there appears to be a direct correlation between the histories of old, single or multiple scorpion bites and development of resistance to effect of local anaesthetics administered intra-theccally.

**20. ASTHMATICS' COMPREHENSION OF THE EMERGENCY CARE AND THE DISCHARGE INSTRUCTIONS COMMUNICATED TO THEM AT THE ASTHMA BAY OF THE PRINCESS MARGARET HOSPITAL**  
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**Objective:** In order to comply with advice given by physicians in the emergency department, patients must be able to understand the instructions. This study aims to determine the extent to which patients seen in the Asthma Bay at the Accident and Emergency Department, Princess Margaret Hospital, Nassau, The Bahamas, comprehend the emergency care that they received in regards to diagnosis, treatment, disposition and discharge instructions.

**Methods:** Data were collected from 277 patients registered to the Asthma Bay on randomly chosen shifts over a six-month period. Interviews were conducted immediately post discharge and again seven to fourteen days later. Participants rated their subjective understanding of diagnosis, emergency department (ED) care, post-ED care, and return instructions. The concordance between the patients' recall and the six (6) domains of their (a) diagnosis, (b) investigations, (c) medications received in the ED, (d) prescription, (e) discharge instructions and (f) follow-up care, and the information obtained from chart review were also assessed.

**Results:** More than 90% of participants stated that they understood their diagnosis, ED care, post-ED care, and return instructions at discharge and two weeks later. 50.2% of participants had complete concordance in all six domains initially versus 48.2% at the two week follow-up, 24.4% versus 15.9% in five domains, 10.5% versus 21.7% in four domains, 10.1% versus 6.5% in three domains, 2.5% versus 6.5% in two domains and 0.4% versus 1.1% in one domain. No participant was deficient in all six domains.

**Conclusion:** While the majority of patients appear to understand their emergency care and discharge instructions, a significant percentage still have some comprehension deficiencies. More patient education about their illness and physician continuing medical education seminars on communication skills are recommended.

## 21. SOCIOECONOMIC DIFFERENCES IN MORTALITY AMONG ADULTS IN THE BAHAMAS

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**Objective:** To examine differences in mortality rates by socioeconomic status (SES) among adults in The Bahamas.

**Design and Methods:** A subsample of adults 25 to 59 was extracted from registered deaths databases for the years 2000 to 2009. Occupation as coded in the dataset was used to determine socioeconomic status. The outcome variable was crude rates per 10,000 persons for each occupational class, derived from the 2000 census. Descriptive statistics, the absolute range, relative range, the population attributable risk, and the effect index were all used to examine differences for all causes and selected causes of mortality.

**Results:** The median number of deaths for this period was 486. Mortality rates showed a gradual increase as SES decreased (13.1 of the highest class, 52.0 of the lowest). High (4.0 or greater) relative ranges and/or PARs (60% or greater) existed for all cause mortality, all cause mortality for males, females heart diseases, male cancer, all external causes, male external causes, and all stroke. The highest discrepancy of mortality by SES was for HIV disease, with relative ranges of around 10, and PARs of approximately 80%. The effect index for HIV ranged from 1.6 for all persons (CI 1.2, 2.0) to 1.8 (CI 1.1, 2.6) for males.

**Conclusions:** While the overall results were expected, the social class discrepancy for AIDS mortality was surprising. This may be real, or due to recording differences on death certificates. The next step is to examine why the poor tend to die at a higher rate, so specific interventions can be established to reduce disparities.

## 22. A NATIONAL INVESTMENT REAP NATIONAL DIVIDENDS: BAHAMIAN GRADUATES OF THE FACULTY OF MEDICINE UWI

DR. CORRINE SINQUEE & DR. ROBIN ROBERTS

**Introduction:** The economic cost of the five-year UWI-based undergraduate medical degree program is estimated at an average of \$30,000 per student per year in 2013. The Governments of the region provide subsidies for their respective medical students ranging from 80 to 100% of the economic cost. We seek to determine the national returns to the Government of the Bahamas on this investment in human capital: Are the Bahamian nationals graduating from the UWI faculty of Medical Sciences returning home and providing medical services to the country, and is this service provision being undertaken in the public sectors of our health care delivery systems?

**Method:** A retrospective analysis was performed of all the following databases for the entire period since the University's humble beginnings in 1948 to July 2013. (i) human resource files of the PMH, (ii) Registration files of the Bahamas Medical Council (iii) Faculty of Medicine UWI student database. For verification, Physicians were contacted directly in person via telephone or email as required, especially for those physicians practicing outside the country.

**Results:** A total of 359 Bahamians graduated as medical doctors. Three periods of exponential growth were identified: 1957-1980, 1981-2000 and 2001-2013 with 40, 114 and 204 graduates respectively. The demographics of gender reflect a major female shift: from 15% to 43% to 69% currently. Of 324 Bahamian physicians identified and accounted for in the study, 284 (87%) were employed by the Ministry of Health for at least 1 year beyond internship. 19 doctors have migrated with only 6 not providing service at all in the Bahamas after internship. 221 of 339 (62%) identified, embarked on postgraduate training after internship, with 138 being credentialed with diplomas or specialist degrees. 14 have gone on to subspecialty training with 3 still in training. 63 physicians are still in specialty training; and only 17 (<8%) did not complete training that was started. For persons currently in training, 47 of the 62 are enrolled in local training programs. The remaining 15 physicians are seeking training in the USA, South Africa, United Kingdom and Jamaica. The local DM training program was started in 2002, with only 1 candidate graduating with a diploma in child health prior to this time.

**Conclusion:** The national investment in physician capital development has yielded healthy returns. Over the 65 years existence of the UWI producing Bahamian physicians, near 90% have given service to the Bahamian public, with over 50% remaining employed directly in the public sector over the span of their medical careers; this reflects for both specialist and non-specialist trained physicians. The "brain drain" of medical professionals noted in the Caribbean and other Developing countries did not occur in the Bahamas.



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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 Bahamian nationals. As of June 2012, there have been 247 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, 5 have graduated with a Doctors of Medicine (OM) in Internal Medicine, 4 in Psychiatry, 5 with a OM in Obstetrics and Gynecology, 1 in General Surgery, 3 OM in Family Medicine and 17 with both the Masters Degree and Diploma in Family Medicine.

As September 2012 academic year, there were 56 undergraduate and 60 post graduate 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 Gynecology, Psychiatry and Accident and Emergency. The academic faculty is comprised of 6 full time lecturers, 17 Clinical tutors and 23 Honorary Associated lecturers. Dr. Robin Roberts was appointed as the Director of the 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 augers well for patient care to inculcate the university's mission of patient care, teaching and research.

