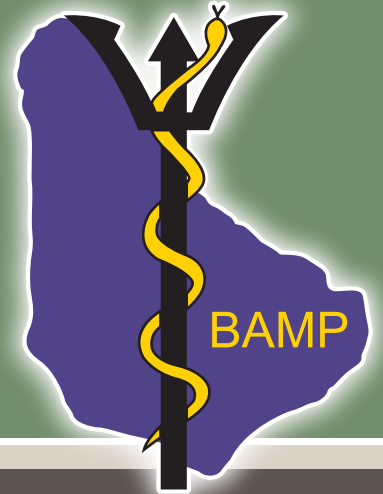


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COVER PHOTO: By The Animal Flower Cave, St Lucy, Barbados.

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IN THE MIDST OF TWO PANDEMICS

Advocacy for improvements in health care has been around for as many decades as we can remember.

The Covid-19 pandemic, declared by the WHO in the early part of 2020, reminds us as being the most impactful, communicable disease during our lifetime, with the last occurrence of such magnitude dating back to the second decade of the 1900s. This disease has made unprecedented inroads into the lives of millions across the globe. One year later, the devastation of this pandemic continues, the adverse public health experience remains one of an uncharted territory.

Coming out of the period of the Covid-19 pandemic, there has been clear evidence and concern expressed particularly by the medical fraternity, and specifically the paediatricians, in relation to the significantly reduced levels of physical activity, with a further progressive increase in the prevalence of childhood obesity.

The Covid-19 pandemic has been an acute on chronic effect, with a concurrent worsening pandemic of noncommunicable diseases (NCDs). Although these conditions have been residual in the population for decades, the weight gain and marked decrease in physical activity have been disconcertingly impactful.

We know that epidemiologically, strong links have been established between obesity and a variety of cancers in the adult population- namely prostate and breast cancers, both of which feature relatively high prevalence in the region's populations.

The statistics and increasing numbers indicate a need for some realistic interventions which can result in a reduction or reversal in relation to adverse effects of the NCDs on the respective populations.

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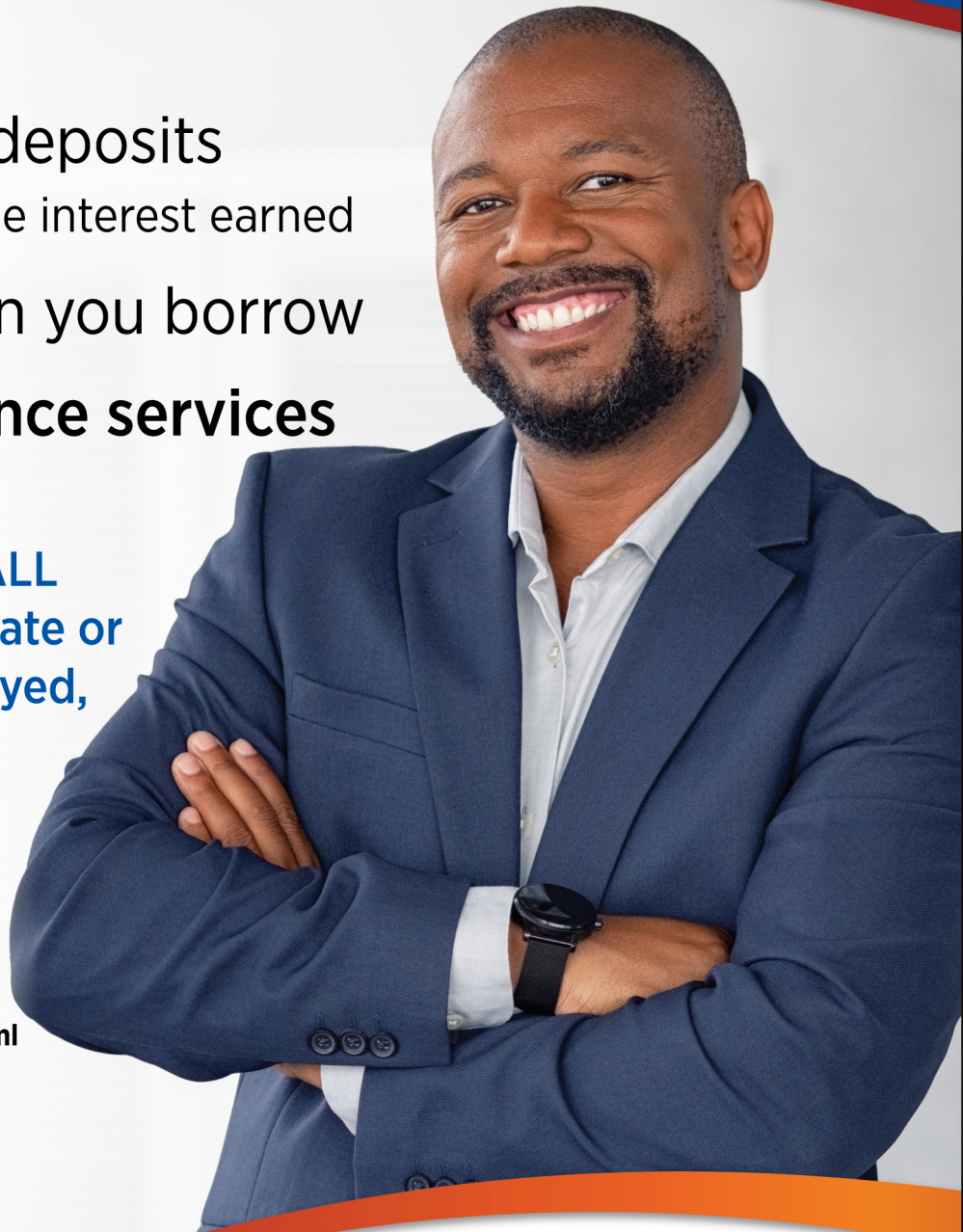
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EDITORIAL... cont'd

The evidence at hand does not indicate up front that the alarming statistics have sufficiently impacted either those affected by the conditions or policymakers, who hold governance and power to enact the necessary policy changes. Rather, a degree of resistance has been encountered.

In a recent virtual forum, hosted on the World Obesity Forum's webinar which focussed on Obesity and Cancer - a Looming Public Health Concern For the Caribbean Region, reference was made to a strong view point, made by a group of paediatricians from a number of territories, in the form of a letter shared across the Caribbean region. It cited the fact that there has been a significant increase in weight amongst the demography of patients seen by this group since the COVID-19 pandemic started. There has also been a renewed call to action too for effective measures to counter the NCDs epidemic, being needed now, more than ever.

There is no doubt that there is a need for a strong lobby supporting the cause to improve parameters of public health. This requires partnerships fostered between a number of entities, including the government, the private sector, civil society as well as between individuals.

Indeed, the observations from many quarters, are poor as a result of impact in making inroads and also lacking the engagement of private sector partnership in the effort.

There has been an indication of a need for particular focus during the Covid-19 pandemic towards the empowerment of children whose physical activity has lessened considerably, and have been being impacted in a negative way, due to mental health and other types of challenges during the lengthy period of the pandemic.

Being one of the countries which is a signatory to the UNICEF Convention on The Rights of the Child, it is clear that the time is long overdue for governments to begin to focus on making strong policies to protect the health of the youth.

Surveys indicate that the tremendous consumption of sugar-sweetened beverages (SSBs) indirectly contributes to the increasing prevalence of NCDs.

On the local front, available evidence reveals that despite the lobby in various sectors, sufficient support is still not available for measures such as increasing taxes on such SSBs. A followup scientific study after an increase in taxes on SSBs revealed that after the introduction of a mere 10% tax in

Barbados, there was a 4.3% reduction in sales of SSBs and a concurrent increase in sales of water of 7.5%.

There has been some degree of protest from many quarters, and an observed lack of engagement and a private sector partnership in the effort. A major challenge remains the need for an uptake by the various stakeholders in an attempt to stem the NCD pandemic.

With the inclusion of a number of vaccines in the market, the Covid-19 pandemic might become a distant thought in a year or two, and later completely fade from our memory within generations to come. If good fortune prevails, it is possible that an epidemic of such magnitude might not be seen for another century.

There can be little doubt that with the inception of what can be termed the "second pandemic", the first being of NCDs, there remains an urgency to implement strong policy regulations, and for this to be followed through with the enactment of legislation if there is really any intention to stem the tide.

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BAMP VIEWPOINT

BAMP STATEMENT ON COVID-19 VACCINATION

The Barbados Association of Medical Practitioners (BAMP) welcomes the National Covid-19 Vaccination Rollout starting with introduction of the AstraZeneca Covishield vaccine, and we would like to thank the Government and people of India for their generous donation in this regard. This vaccine rollout came at a critical time for our nation, which is facing community transmission, challenges in laboratory testing and disease outbreaks in our main hospital and nursing homes.

Vaccines represent one of the greatest public health achievements in human history; they save millions of lives annually and are safe and essential public health tools. Many Barbadians under the age of 50 would never have encountered deadly and/or deforming diseases such as smallpox, measles, mumps, rubella, polio, diphtheria or tetanus due to the success of worldwide immunisation campaigns and excellent uptake of vaccines in Barbados over the years.

Vaccines have the potential, with widespread uptake, to globally suppress the pandemic. The 'speed' with which Covid-19 vaccine development has occurred is due to well-coordinated research that was already in the making. This has led to several vaccines being released in record time, having successfully completed Phase III clinical trials for vaccine safety and efficacy in human candidates. *All of the current vaccines on the market have been shown to be effective in preventing severe disease, hospitalisation and death from Covid-19 and have also shown excellent safety records.*

BAMP appreciates that despite the national 'call to arms' for vaccinations, many individuals have had and continue to express real concerns and questions. Barbadians are faced daily with a deluge of information from various media, most of which favours the worldwide rise of vaccine hesitancy. We therefore encourage all citizens not to rely on hearsay but to take the opportunity to talk to their doctors and seek their opinion on information presented to them. A national effort still requires each individual to make a very personal choice and you can rely on your healthcare professionals to guide you through this process.

The limited availability of vaccines means that allocation must be based on principles of benefit, equal concern, health equity, fairness, transparency and being evidenced-based. We are pleased with the policy decision to offer vaccination to all healthcare workers, which recognises that maintaining essential

healthcare services, in parallel with the Covid-19 response, is vital. BAMP's recommendations included:

- Prioritisation of high-risk, frontline healthcare workers, first responders, persons living in nursing and care homes, elderly (over 70y) as well as all persons with co-morbidities such as obesity, diabetes, asthma, and hypertension, which are associated with severe Covid-19.
- Publication of a vaccine schedule for each category of persons to be vaccinated, in the interest of transparency and equity, as soon as possible.
- Vaccination of all persons over 18 years of age in accordance with the recent interim guidance from the WHO (Feb. 10, 2020) which gives important scientific evidence and rationale for the use of the AstraZeneca vaccine in the over 65s.
- Increasing the vaccine schedule to an 8-12 week dosing interval in accordance with the scientific evidence that highlights increased efficacy (immune response) with the longer time between two doses.
- Commencing genomic surveillance to allow for detection of new Covid-19 variants that could affect our vaccine response such as the South African variant. This will allow us to tailor our vaccine choices to our national situation.
- Continuing engagement and communication with the general public about Covid-19 vaccines to overcome hesitancy and responding decisively to misinformation.

We applaud the efforts of our public health nurses, who have so far executed their duties efficiently and safely, and our doctors private and public who have undertaken to be a part of this national effort in partnership with the Ministry of Health and Wellness.

The enthusiastic and overwhelming response of residents in specific high risk groups seeking to receive the vaccine has been most encouraging.

On an individual level we must continue, even after vaccination, practicing physical distancing, wearing masks, hand hygiene and cough etiquette. Nationally we must continue to prioritise public health in all dimensions to gain a clear path out of our current lockdown and to create sustainable social and economic recovery.

BAMP Covid-19 TASK FORCE

BAMP STATEMENT FOR WORLD HEALTH DAY 2021

The Covid-19 pandemic has dominated the health sector for more than a year. However, behind the scenes, the pandemic of chronic non-communicable diseases (NCDs) has continued to surge. This dual burden of disease, infectious and chronic, has had significant physical, mental, social and economic impact on the health of our nation.

The risk factors and drivers of the NCD pandemic have all increased as a result of Covid-19. Restrictions of movement and weeks of economic and social lockdowns led to decreased activity and limited access to nutritious foods which, in turn, contributed to weight gain and obesity in both adults and children. Reduced availability of many medications, stretching of human and physical healthcare resources, reduced access to regular healthcare appointments, delayed surgeries and diagnostic testing and reduced routine health surveillance for early disease detection, may have all contributed to increases in NCDs and their secondary outcomes: stroke, heart attack, renal and eye disease, diabetic foot complications and more.

As the Covid-19 pandemic evolved, multiple factors including social isolation, health-related anxiety, loss of income and increased domestic abuse all contributed to population increases in mental illness, a key determinant of health outcomes and family wellness.

Our fight against Covid-19 as a developing nation, revealed the fragile nature of our healthcare systems. There is an urgent need for greater investment in health by the private sector as government cannot carry the burden alone. We need immediate strengthening of health information systems, increased capacity for remote screening and monitoring of our patients, improved health surveillance among vulnerable groups and social, work and school environments conducive to promoting and improving health.

As a nation we must aim for the "low hanging fruit" and eliminate active promotion of fast foods and sugar-sweetened beverages, particularly in their marketing to children and youth. We must ensure access to fresh fruits and vegetables even for the poorest among us and find ways to reduce their cost by encouraging greater development of large and small scale farming and kitchen gardening. We must adopt front of package labelling in order to allow people to make informed

nutritional choices, develop educational curricula on the benefits of healthy eating, and adopt a school nutrition policy now.

We must advocate for daily, safe exercise in outdoor green spaces and provide adequate time for this to occur. Children, adolescents and the elderly in particular must be exposed to regular outdoor exercise and sunlight to strengthen their immunity. We must continue the fight against use of nicotine, frequent use of alcohol and recreational drug use. We must be unrelenting in the promotion of vaccination, not only against Covid-19 but also for maintenance of schedules for vaccine-preventable diseases. We must call for greater resources and investment in mental health and partner with NGOs promoting spiritual wellness and self-care. At all times our policies must be guided by research and we must invest in local research accordingly.

On this World Health Day we believe that the life of every Barbadian is important. Each of us can be equally affected and impacted not only by Covid-19 but also by NCDs. It is not only an individual's responsibility to prevent and manage NCDs but there also must be governmental and non-governmental responsibility to actively provide the social, physical, economic and nutritional environments conducive to good health.

SPECIAL ARTICLE

CHILDHOOD OBESITY: ARE WISE CHOICES BEING MADE FOR OUR CHILDREN?



Professor M Anne St John
GCM MB BS (UWI) FRCPC FAAP

World Obesity Day was recently observed on March 1st 2021.

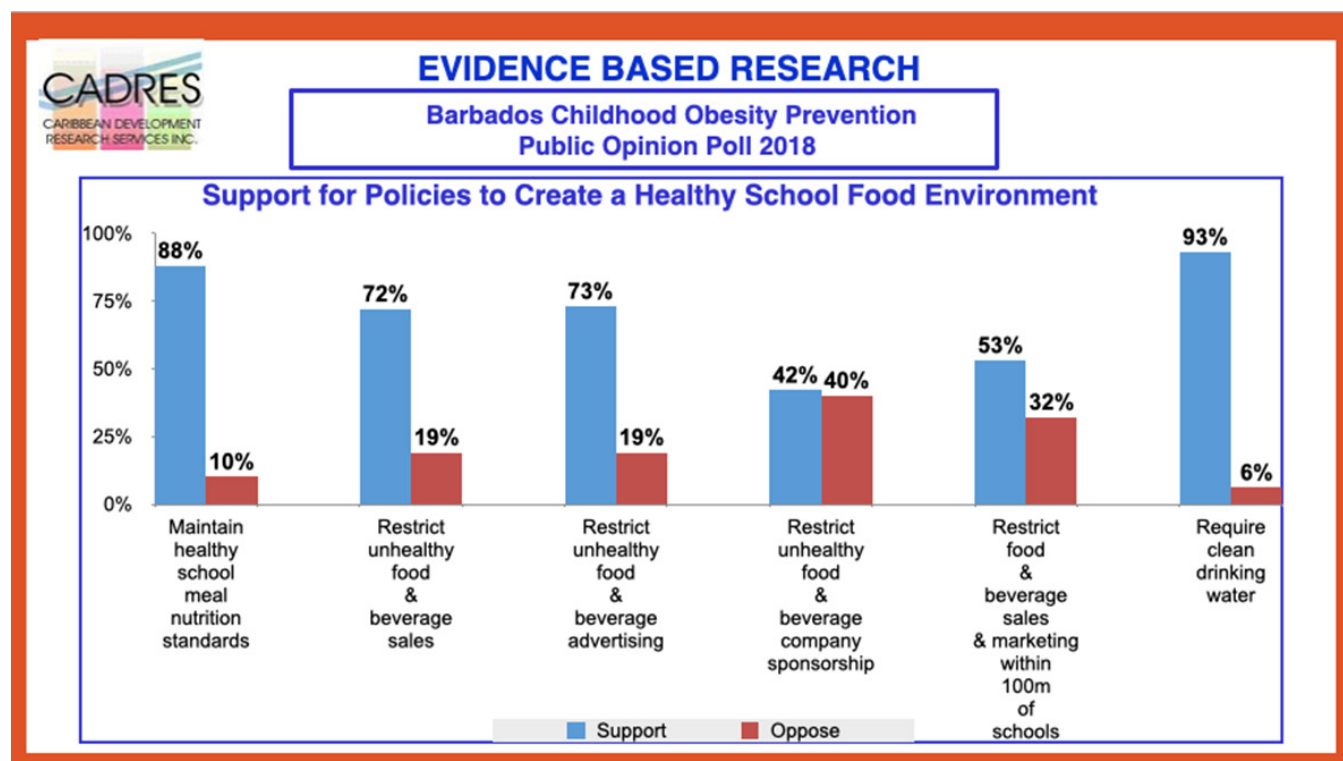
Local research reveals that 8 out of 10 deaths in Barbados are caused by non-communicable diseases (NCDs).² One in 5 adult Barbadians has diabetes,^{3,4} 66% of adults is overweight, and 33% is obese. The prevalence of obesity is almost twice as high in women (43%) as in men (23%).⁵ One in 3 children in Barbados is overweight or obese.^{6,7}

A Heart and Stroke Foundation (HSFB) commissioned scientific poll in 2018 by CADRES⁸, revealed a number of

pertinent facts which were pertinent then, and are even more applicable following the onset of the Covid-19 pandemic which started some 15 months ago, thereafter reaching the shores of the Caribbean territories approximately a year ago. The findings of the CADRES survey pertain even more than ever 2 years afterwards. The relevance of the data from that time, still pertains today, in a worsening obesogenic environment.

The findings revealed that in general, participants who were polled through scientific selection were very concerned about obesity and childhood obesity (Fig 1). There was a strong level of support for policies that will create a healthier environment in the nation's schools, including restricting the sale of unhealthy foods and beverages, and marketing and advertising these unhealthy products in the schools. Close to 100% of interviewees polled indicated that their support was strong for a national policy to ensure a healthy school environment, and almost all of the total surveyed opined that government action is important to reduce the epidemic of obesity and NCDs in children.

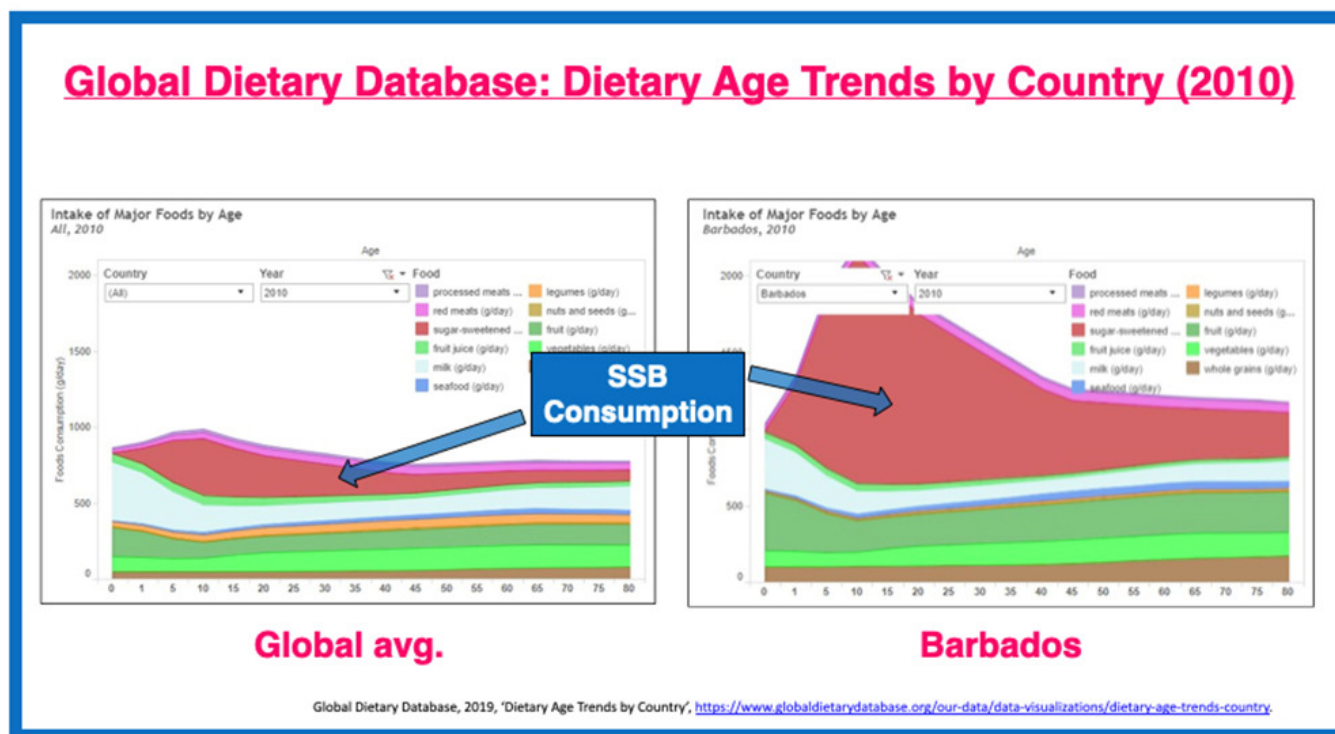
Fig 1.



Looking at a 2010 Global dietary database showing comparative trends in dietary selection by age, comparing Barbados with other countries, revealed that in Barbados by

comparison, the overall consumption of sugary drinks was more than double the global average (Fig 2).

Fig 2.



Excess sugar consumption is a major contributor to obesity and its related diseases, increasing risk of type 2 diabetes, hypertension, liver and kidney damage, heart disease, and some cancers.

Besides these facts, sugary drinks often have no nutritional value and are particularly harmful to the body in liquid form. Liquid sugars used to sweeten beverages are absorbed more quickly by the liver and processed in a way that increases fat and glycogen deposits, which can lead to fatty liver disease and increase risk for developing diabetes and other NCDs.⁹⁻¹⁴

During the past year, the region had been impacted by the Covid-19 pandemic in a significant way, which has undoubtedly exerted devastating effects on economies, health outcomes and impacted other aspects of life.

It has also been shown that individuals with NCDs are at a higher risk for severe Covid-19, and the occurrence of the

pandemic has placed tremendous strain on food security.¹⁵

Unhealthy diets, influenced by high density and lower costing processed foods, high intake of sugars, fats and salt, continue to be observed to be largely contributing to what could be termed the regional silent obesity and NCD epidemics. The Covid-19 pandemic has added to the vulnerability of persons living with NCDs.¹⁸

One significant question is- are wise and healthy choices being made for our children? It is a fact that children need adequate nutrition to maintain adequate growth, cognition skills and to thrive.

A ground-breaking campaign aimed at tackling the troubling issues of childhood obesity and regional epidemic of NCDs was launched in March 2021 by the Healthy Caribbean Coalition (HCC), in partnership with the Pan American Health Organisation (PAHO), the Organisation of Eastern Caribbean

SPECIAL ARTICLE... *cont'd*

States (OECS) Commission and UNICEF.¹⁶ It has also been shared by the HCC that the intention is for the campaign to be rolled out across social media, digital media, and radio platforms in Caribbean Community (CARICOM) Member States.

The campaign urges Caribbean policymakers to use Covid-19 as an opportunity to prioritise action on NCDs, emphasising childhood obesity.

Dr Aloys Kamuragiye¹⁷, the UNICEF Representative for the Eastern Caribbean Area, has stated:

"We need action on the pandemic and NCDs. We owe it to our children to give them the very best start in life – and that includes a healthy diet that helps them flourish intellectually and physically to achieve their best potential."

Amidst this all, the global pandemic which preceded the Covid-19, continues to have an even greater impact on populations worldwide.

There have been increasing numbers of reports in the press and across social media bringing to the fore a recent activity fuelled through the HCC, citing an open letter which was written by a group of Caribbean Paediatricians from territories across the region to the people of the Caribbean, who are deeply concerned about the health and wellness of our region's children and young people, and the increase in obesity.¹⁸ The letter was supported by the HCC.

Since the onset of the Covid-19 pandemic, the lives of our youth have been in a relative state of upheaval. There have been changes in the way that they receive their education, learn, socialise, play, eat, move and sleep.

These changes are having a substantial impact on their physical and mental health. The prediction is that a regional childhood obesity and mental health emergency is about to happen.

Amongst the observations, it has been noted that many children are consuming excessive empty calories while attending online school from home. Furthermore, there are patterns of irregular time scheduled for eating, increased snacking and oftentimes unrestricted access to foods, with consumption of excessive portions. Another observation has been consumption of foods high in salt, sugar, and fat.

In addition, the shift to online schooling coupled with pandemic-related restrictions has resulted in the reduction or elimination of physical education, extracurricular activities, reduced recreational playtime and significant periods in screen time.¹

Observations have also revealed that children and young people are eating more and moving less. There was a high likelihood of an escalation of the childhood overweight and obesity crisis - now a reality one year later.

Following the onset of the Covid-19 pandemic, increasing numbers of children and young people have been presenting with overweight and obesity and diagnoses of type 2 diabetes, hypertension, musculoskeletal issues, and other endocrine conditions have been reported. Additionally, Covid-19 control measures and related economic and food security challenges, including interruptions in national school meal programmes, have contributed to concerns being expressed by health care professionals, and also in childhood undernutrition across the region.

In parallel with the influence of the negative effect of the pandemic on diet and physical inactivity amongst the target group, there has been a reported significant increase in mental health conditions.

Anxiety, depression, tic disorders, disrupted sleeping and disordering of eating have been reported among children and young people. It is a silent mental health crisis, which ought not to be left ignored or un-addressed.

Children and young people are trying to cope and navigate this new reality and they need support, within their respective communities, to create safe spaces to listen to their concerns and not disregard them. The Covid-19 epidemic has highlighted and brought to the fore the need for more structured, school-based and community-based mental health services at a regional level.

Quoting from the letter which was recently signed by a group of paediatricians who work throughout the region¹⁹ as a call to action:

"For the past year we have been living in the shadow of the pandemic, doing our collective best to manage the sustained economic, social and mental stresses. The toll of this crisis on our most vulnerable – our children and young people – is yet to be fully understood.

SPECIAL ARTICLE... cont'd

We cannot afford to wait until 'things get back to normal' and assume that our children and young people will emerge as 'resilient' creatures or that the damage caused to them during the pandemic can be undone. We must come together now to address this regional childhood obesity, undernutrition and mental health emergency.

If we allow levels of malnutrition to continue to rise unchecked, we are assigning an entire generation to a life living with NCDs and other health complications. If we do not address their mental health, we run the very real risk of developing lasting scars that could impact their growth, future productivity and quality of life.

There is just need to put measures in place to counter this crisis and a whole of society approach will be critical – everyone has to act now.”

There has been a call for Governments to set as a priority, strong policies to protect the health of children and young people including: front of package nutrition warning labelling that will help consumers make informed decisions about their foods, and banning the marketing and sale of unhealthy products in and around schools while simultaneously ensuring that children have ongoing access to fruits and vegetables.¹⁹

Access to these foods should be equitable and sustainable; the most vulnerable, specifically those suffering from malnutrition, should have ensured access.

A call has also been made on governments to invest in school-based interventions which focus on ensuring that physical activity opportunities, good nutrition, specifically provision of uninterrupted nutritious school meals, and mental health support are cornerstones within a school environment.

There also needs to be a greater investment in mental health services and support for young people. Parenting programmes need to be developed or expanded to ensure that children from vulnerable families get the appropriate support and protection which they so require.²⁰

The appeal requests support from the private sector for partnerships related to establishing healthy environments for our children and youth. This includes halting targeted marketing of unhealthy products on digital platforms, especially now when children are spending inordinate amounts of times on screens.

Civil Society is a critical actor and should continue to advocate for protective nutrition policies such as front of package nutrition warning labelling, banning the sale and marketing of unhealthy foods and beverages in schools, and community-based interventions (including school-based interventions) that will support safe physical activity opportunities, increased access and consumption of local fruits and vegetables. All efforts need to be made to destigmatise and prioritise mental health.

The voices of youth advocates can be powerful. They are repeatedly being heard to be lobbying for healthy environments and for the creation of spaces to discuss their views about normalising their present circumstance, to demand their rights for healthy environments and safe spaces.

It is abundantly clear that the stable world of parents and guardians has also been de-stabilised.²¹ There is a need for a concerted effort to protect our children, whose health and wellness ought to be paramount at a national level. Making healthy and wise choices, eating together, being active and creating memories together, and education about mental health and wellness, with the creation of open and supportive spaces for discussions on these issues, are essential factors for stability.

Paediatricians in particular, in conjunction with health care providers working with children and the youth, are urged to continue to educate their patients, parents and their children about the importance of healthy, balanced eating and physical activity. It is not only weight but a strong focus on healthy lifestyles is a vital factor.

Monitoring for depression and symptoms of anxiety and other mental health concerns should be factored in and measured, allowing children and adolescents an opportunity to express their innermost feelings, if they are having difficult times coping.

When next we see a child or young person, we need to ask them how they're doing and really listen to them. We need to ask them how we can help them be the healthiest version of themselves. Their viewpoints can play a role in determining how we can create and ensure that sustainable change is implemented to mitigate this crisis. We know what we need to do, and just need to work together and act now to protect our future.

SPECIAL ARTICLE... *cont'd*

In its most recent COP Campaign, the “Are We Drinking Ourselves Sick?” campaign aims to inform Barbadians about the health harms of consuming excess sugar, particularly via sugary drinks. These include carbonated and non-carbonated soft drinks, fruit drinks, energy and sports drinks.

The campaign also firmly highlights the public support of and need for government policy to help reduce sugary drinks

consumption and thereby play a role in reducing obesity, diabetes, and other NCDs in Barbados. The campaign tagline is “Are We Drinking Ourselves Sick?,”²² with a call to action to implement measures to reduce sugary drinks consumption for a healthy Barbados.



The writer is of the view that now more than ever, we need to act urgently. We have to move quickly to put people before profits and implement strong nutrition policies and mental health support systems to support our children and young people. As a society, it is our responsibility.

References

1. World Health Organization (WHO). Non-communicable Diseases Country Profile. 2018. https://www.who.int/nmh/countries/brb_en.pdf?ua=1
2. Springer, R.A, Elliott, S.J. “There’s Not Really Much Consideration Given to the Effect of the Climate on NCDs”—Exploration of Knowledge and Attitudes of Health Professionals on a Climate Change-NCD Connection in Barbados. *Int. J. Environ. Res. Public Health* 2020, 17, 198. <https://doi.org/10.3390/ijerph17010198>
3. Hassan, S., Ojo, T., Galusha, D., Martinez-Brockman, J. L.,

SPECIAL ARTICLE... cont'd

- Adams, O. P., Maharaj, R., Nazario, C., Nunez, M., & Nunez-Smith, M. (2018). Obesity and weight misperception among adults in the Eastern Caribbean Health Outcomes Research Network (ECHORN) Cohort Study. *Obesity science & practice*, 4(4), 367–378. <https://doi.org/10.1002/osp4.280>
4. Adams, O.P., Carter, A.O. Are primary care practitioners in Barbados following diabetes guidelines? - a chart audit with comparison between public and private care sectors. *BMC Res Notes* 4, 199 (2011). <https://doi.org/10.1186/1756-0500-4-199>
 5. Adams OP, Lynch-Prescod JT, Carter AO. Obesity in primary care in Barbados: prevalence and perceptions. *Ethn Dis*. 2006 Spring;16(2):384-90. PMID: 17682239.
 6. Kirin Rambaran, Surujpal Teelucksingh, Sesh Gowrie Sankar, Michael Boyne, Godfrey Xuereb, Ambra Giorgetti & Michael B. Zimmermann (2021) High prevalence of childhood overweight and obesity in ten Caribbean countries: 2018 cross-sectional data and a narrative review of trends in Trinidad and Tobago, *Child and Adolescent Obesity*, 4:1, 23-36, DOI: 10.1080/2574254X.2020.1847632
 - 7.. St John MA, Hall R, Knight JaDon, Hinds M, Fernandez M, Gaskin, P. Chronic Non-Communicable Diseases in a Group of Primary School Children in Barbados. *W I. Med J*. 61 (Suppl 2): 2012
 8. CADRES Barbados Childhood Obesity Prevention Public opinion poll, 2018.
 9. Malik VS, Popkin BM, Bray GA, Després JP, Hu FB. Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. *Circulation*. 2010 Mar 23;121(11):1356-64. doi: 10.1161/CIRCULATIONAHA.109.876185. PMID: 20308626; PMCID: PMC2862465.
 10. Rippe JM, Angelopoulos TJ. Relationship between Added Sugars Consumption and Chronic Disease Risk Factors: Current Understanding. *Nutrients*. 2016 Nov 4;8(11):697. doi: 10.3390/nu8110697. PMID: 27827899; PMCID: PMC5133084.
 11. Malik VS, Hu FB. Fructose and Cardiometabolic Health: What the Evidence From Sugar-Sweetened Beverages Tells

Us. *Journal of the American College of Cardiology* 2015; 66: 1615-24.

12. Sundborn G, Thornley S, Merriman TR, et al. Are Liquid Sugars Different from Solid Sugar in Their Ability to Cause Metabolic Syndrome? *Obesity* 2019; 27: 879-87.

The remainder of references (13-22) can be made available on request through an email communication with the BAMP secretariat.

Professor Anne St. John, is a consultant paediatrician and Medical Director, Youth Programmes, Heart and Stroke Foundation of Barbados, and a member of the Childhood Obesity Prevention Coalition in Barbados.

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COMMENTARY

COVID-19: PUBLIC HEALTH VERSUS INDIVIDUAL HEALTH?



Dr. C. V. Alert
MB BS, DM
Family physician

Just over one year ago, in March 2020, the WHO declared the new SARS CoV-2 outbreak as a “Global Pandemic”, as this new strain of corona virus swept across the world. We in the Caribbean at the time generally considered ‘infectious diseases’ as just being on the edges of our health maps; instead the Chronic Non-Communicable Diseases (NCDs) dominated our health profiles, whether morbidity or mortality were being considered. Back in 2007, CARICOM Heads of Government and Ministers of Health, united to “Stop the Epidemic of Chronic Diseases”. There seemed to be recognition of the serious impact which these NCDs were having on both the health of their voters, and on the increasing quantity of finances that had to be devoted to health.

The unwelcome introduction of Covid-19 to Caribbean shores caused our health policy makers, previously anonymous when faced with the NCD epidemic, to suddenly face the persons who were paying their salaries. Our policy makers introduced a variety of measures to “flatten the infectious disease curve” until a vaccine(s) could be developed and administered. Some non-pharmacological interventions (NPIs) introduced included face coverings, hand-washing, physical distancing, screening, travel restrictions, quarantine, contract tracing, and lockdowns. These were employed in an effort to prevent transmissions of the virus.

Current scientific evidence does not show strong statistical support for the effectiveness of some of these individual measures to prevent the spread of Covid-19, nonetheless, public health officials have been urged to take action even when evidence is uncertain (or not of the highest quality), particularly when the harms and costs of such action are likely limited, and the consequences of non-action may be so severe. After all, when there was so much uncertainty,

appearing to do something was better than doing nothing. But, the widespread implementation of these NPIs may fail to recognise the uniqueness of individuals and the importance of personalised care.

While guidelines for the appropriate management of the NCDs stress the importance of exercise, covid-19 guidelines stress the importance of ‘staying in your yard’. Guidelines that suggested that diets should include a variety of fresh fruits and vegetables, i.e. perishable goods, were replaced by suggestions of stockpiling food in your homes, and restrict grocery/market visits to the barest minimum. Guidelines that stress the importance of ensuring regular scheduled visits to your health care provider were abruptly terminated as clinic appointments were postponed and/or cancelled, and replaced by ‘try to stockpile enough medications for a long haul’ (? how long) as your best shot of at least maintaining health. [This completely ignores the observation that, even before Covid-19, erratic drug supplies, especially those drugs on National Formularies to treat the NCDs, was more the rule than the exception, and likely to be further disrupted as some patients attempted to stockpile drugs.] Some surgical procedures were post poned indefinitely.

Other NPIs included the restriction of visits to the sick in hospitals, to elderly relatives living alone or in nursing homes, and inhibited much needed comfort and support for those with physical or mental illnesses. In other words, holding paramount the safety, health, and welfare of the public can run counter to health-care professionals (and importantly family members and helpful neighbours) showing compassion and sensitivity to understand and care for the needs of the individual person. Physical distancing and social distances are not synonymous terms, but Covid-19 protocols discouraged social intercourse. Although containment efforts are clearly necessary, the mental health effects of isolation and reduced social support must be considered as well.

While Covid-19 has been causing tremendous physical and psychological stress on the ‘front-line health care workers’, it is likely to be even more stressful on the sick and elderly cut off from their friends and family, and forced to stay in isolation. Our young children, deprived of the interactions that traditionally occur in a school setting, are suddenly faced

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with new challenges, both in terms of their academic and their social development. Persons with physical or mental illnesses are, by virtue of Covid-19 policies, cut off from (or have limited access to) the physical and psychological support that many rely on for daily survival and functioning. For anyone faced with grief and loss from being separated from loved ones, losing people to the virus, high levels of uncertainty about jobs and finances, balancing work and care-giving, this pandemic has created a perfect storm for psychological distress. It is clear that some policies that support public health can and sometimes do conflict with the health priorities of individual patients.

Even our medical students, our doctors of the future, are being trained within an environment of restricted patient contact. Previously, it was preached that the more contact medical students had with patients the more rewarding, in terms of development of clinical skills and expertise, the experience would be. What would the doctor of the future look like?

Distress may disproportionately affect individuals with previous mental health problems, but there are also alarming signs of depression even among those who have not been given a mental health diagnosis previously. Even in the best of times, those who need mental health care do not always seek it due to financial obstacles, difficulty finding care, and stigma. During a pandemic, accessing mental-health care may be even more difficult. Our health decision makers must invest in public health campaigns that normalise distress, de-stigmatise mental health concerns, promote self-care, communicate effective prevention and treatment strategies, and help people access mental health services. Public health campaigns aimed at educating the public about the signs and symptoms of distress should also raise awareness of the different ways distress may manifest in children and young adults depending on age and developmental stage.

It is noteworthy, here in Barbados that our mental health professionals have been quick to publicly point out the negative effects that Covid-19 and its associated management protocols are having on our population. Against this background, the reports of an increased frequency of mental health problems, and deteriorating health in our patients with NCDs, are not unexpected. This of course puts increased strain on a health care service that was struggling to cope long before Covid-19 came to town.

Similarly, some senior hospital officials have publicly reported on an increased number of 'very sick NCD patients', without Covid-19, that are presenting to the hospital, suggesting that the interruptions in regular care is having negative consequences. Before Covid-19, we had an average of over 40 deaths per month (based on the average monthly death rates reported by the National Chronic Disease Registry for heart attacks and strokes). By comparison, Covid-19 claimed 7 lives in the 1st nine months here. In 2021, the virus seems to have turned its attention to patients with NCDs.

During the past 20 years, the concept of "person-centredness" has become prominent in the delivery of quality health care, not only in family medicine. In many places this is more than just a theoretical concept. Person-centredness recognises the autonomy of the individual disaggregated from the average of the public. Person-centredness includes the importance of the health-care professional developing a clear understanding of and respect for the values of the individual patient.

We have learnt that our health - related policy decision makers regarded the tsunami of NCDs with an approach such as 'if we ignore it, it will just go away' attitude. Our health care decision makers should not be allowed to return to their 'anonymous existence', but must study the lesions we are learning now so that we can "Build Back Better". This is especially important because we will still have large numbers of surviving NCD patients, and more global pandemics, including severe environmental challenges, are predicted in the not too distant future.

In the future, we might not be able to recruit qualified and experienced medical personnel from foreign countries. Friendly countries might not donate thousands of vaccines to us. Our health decision makers must 'step up to the wicket' and introduce strategies that protect both individual and public health.

Dr Alert is an Associate Lecturer in Family Medicine in the Faculty of Medical Sciences, UWI (Cave Hill Campus) and operates a private practice.

COMMENTARY... *cont'd*

AIR POLLUTION AND CHILDREN



Dr K Krishnamurthy
 MBBS DM (Pediatrics), FCCM,
 DAA, PGPN

*Consultant Paediatrician and
 Paediatric Critical Care Specialist*

Air pollution has been estimated to contribute to the death of an approximately seven million people worldwide, every year. The death rate of air pollution is 3 times higher than tuberculosis and malaria combined worldwide. Nine out of ten people breathe in very high levels of pollutants on a daily basis.

Children are specifically vulnerable to air pollution. The effects start even while they are in their mother's wombs. It has been estimated that around 287 different air pollutants circulate in the umbilical cord exposing the unborn foetus to the harmful effects of air pollution. After being born, during the growing phase, they spend more time indoors as infants, which increase their susceptibility to indoor air pollutants. As they grow, their exercise and outdoor games pattern make them more vulnerable to outdoor air pollutants. This population is also susceptible to long-term implications of air pollution with different types of injury to the lung thereby reducing their functional capacity and pulmonary reserve, which persists into adulthood. There is growing bank of literature which supports the increasing incidence of childhood asthma with a rise in air pollution.

Another medical condition that is not usually thought to be linked to air pollution is pneumonia. Pneumonia is the major cause of mortality in children under five years of age and studies are emerging currently that 50% of pneumonia deaths can be directly attributable to indoor air pollution.

Types of indoor and outdoor air pollutants

Indoor air pollutants

The main pollutants are the high levels of particulate matter released in the air during cooking in residences. Such

particulate matter is released during frying, char-boiling, roasting and grilling. Another major source of household air pollution is tobacco. With 1.1 billion smokers globally, 7357 chemical compounds are released during smoking. It contributes 7 - 23mg of particulate matter that directly contributes to indoor air pollution. A lesser known means of indoor pollution, stems from using air-conditioning in houses, since it prevents adequate ventilation and hence results in the accumulation of particulate matter, adding to pollutants which have the potential of being inhaled in the home environment. In addition, houses close to the roadside have the potential to be loaded with diesel exhaust particles. The use of perfumes, deodorants and cleaning agents have been proven to also release an estimated 42 types of toxic substances in the air. Paints and varnishes in houses can also emit significant amounts of volatile organic compounds, increasing the burden of household air pollutants.

Outdoor pollutants

Smoke and soot are the major contributors of outdoor pollution. Both of these are emitted from factories, power plants, incinerators and engines. Another identified major contributor is poly-acrylic aromatic hydrocarbons, which are released in air during traffic exhaust. The production of hydro-fluorocarbons from industrial sources is also a potential outdoor pollutant. In addition to the above man-made pollutants, mould and allergens from trees, weeds and grass exacerbated by climate change may also be hazardous to human health.

Effects of air pollution

The effects of air pollution are multifarious. Prenatal exposure to environmental pollution is associated with potentially adverse outcomes of pregnancy. In the paediatric age group, effects range from low birth weight, intrauterine growth retardation and prematurity. Unfortunately, the effects of air pollution are carried over even into adulthood. During childhood, early exposure can cause structural damage, myofibroblast activation and permanent remodelling of lung epithelium, which causes a cascade of inflammation. This

COMMENTARY... cont'd

ultimately results in an increased incidence of asthma and allergic rhinitis in children.

Four million deaths globally are attributable to respiratory infections of various types. Modulation of the cellular and humoral immune responses by exposure to particulate matter and nitrogen dioxide has been shown to potentially increase the susceptibility to respiratory infection and hence result in an increased incidence of respiratory infections.

Air pollution has been implicated in childhood cancers, especially brain tumours, possibly due to exposure to hydrocarbons and parenteral smoking, increased degree of urbanisation, electromagnetic fields and air pollution from traffic. Benzene is one of the traffic related pollutants implicated in leukaemia. Poly-halogenated aromatic hydrocarbons released from environmental contaminants are also known to produce neurobehavioral alterations.

Summary

In summary, air pollution causes increased morbidity in children. Major interventional strategies need to be implemented at various levels to help curb this growing menace of air pollution. Consolidating nationwide data by all countries will help generate regional data regarding air pollution as different regions will have different causes of air pollution and hence will require subsequent diverse strategies to implement changes to reduce this growing menace.

References

1. World Health Organization. Regional Office for Europe & European Centre for Environment and Health. (2005). Effects of air pollution on children's health and development: a review of the evidence. Copenhagen: WHO Regional Office for Europe. <https://apps.who.int/iris/handle/10665/107652>
2. Jillian Mackenzie. Air Pollution – Everything you need to know. Nov 1, 2016; Natural Resources Defense Council (NRDC). <https://www.nrdc.org/stories/air-pollution-everything-you-need-know>
3. Saigopal M. Children more vulnerable to air pollution – Study. Nov 4, 2019; Telengana Today news media. <https://telenganatoday.com/children-more-vulnerable-to-air-pollution-study>
4. Sundeep S. Pollution and allergic airway disease. Current Opinion in Allergy and Clinical Immunology 2001; 1: 35-41
5. Apte K, Sundeep S. Household air pollution and its effects on health Version 1. F1000Research. 2016; 5: F1000 Faculty Rev-2593. doi: 10.12688/f1000research.7552.1

Dr Krishnamurthy is a Paediatric Critical Care Consultant in the Department of Paediatrics at the Queen Elizabeth Hospital in Barbados, and a Senior Associate Lecturer in Child Health, Faculty of Medical Sciences, University of West Indies (Cave Hill Campus). He also operates a private practice.

COMMENTARY... *cont'd*FAMILY PHYSICIANS AND THE OXFORD
ASTRAZENECA VACCINE

Dr. C. V. Alert
MB BS, DM
Family physician

We are now one year into the Covid -19 pandemic, a disease that has killed many, and it is putting serious strain on our health care resources. It has devastated our economies, and it is still unclear if/how/when this will all end, and what will be left when the flames are extinguished.

Caribbean countries are looking forward hopefully to vaccination programs ending this scourge and returning some normalcy to our lives, even while there is great uncertainty as to whether we will get a sufficient number of individuals vaccinated to establish 'herd immunity'. Caribbean countries accepted and received supplies of the Oxford AstraZeneca 'brand', even when there was much skepticism about this vaccine, particularly in European countries.

There has been numerous reports of relatively small number of patients, compared with the millions vaccinated, who have developed fatal blood clots after receiving the vaccine. In the UK, where the Oxford AstraZeneca has been distributed since early December 2020, and up until mid-March 2021, there were 4 deaths from this rare instance of developing blood clots. This was out of the 15.8 M persons who got at least one dose of the Oxford AstraZeneca vaccine. In that same period, 2.5 M persons there caught Covid-19, and 63,082 died. Reported instances small numbers of fatalities associated with this vaccine have also occurred in other European countries, including the Netherlands, Norway and Germany.

A possible mechanism by which the vaccine may cause blood clots has not been established to date. It has been noted that Corona virus disease is associated with abnormal clotting. To antivaxxers in particular, this is irrefutable evidence of the

ongoing dangers of vaccination. And thus, this makes the job of family physicians promoting vaccination even more difficult.

If communication and cooperation are necessary factors for survival in a disaster, then effective public health messaging and mitigation efforts are required to optimise acceptance of Covid-19 vaccination and minimise subsequent mortality. Unfortunately, mistrust in orthodox health care is a substantial barrier to Covid -19 vaccine acceptance, and without widespread uptake of vaccinations, herd immunity will not be realised. Family Medicine practitioners have an important role to play in such situations.

If the numbers of persons who voluntarily refuse to take the vaccine (due to ethical reasons), remain substantial, then reaching might have a large number of potentially susceptible persons to infect. Of course, that is their "life or death" decision. We know by now that Covid -19, when left unchecked, gives rise to a number of mutations. These mutations have scientific names, namely VOC 2020/01, 501Y. V2 with 'geographic' names, like the Brazilian variant, the South African variant, the UK variant, the California variant, and others. These various mutations may have different degrees of infectivity and transmission.

But if the virus is allowed to 'stick around and mutate', it may evolve into a form that the vaccines available now do not protect against. In some states in the USA, we are seeing a sudden surge in the number of cases of serious disease in younger unvaccinated people, who previously seemed relatively immune to Covid-19. This has raised the possibility that we are now seeing "Covid-21", a mutation of Covid-19. It is unclear, at this point, how effective our current vaccines would be against these current or subsequent variants. This may mean that some of us who have gotten our two doses of Astra Zeneca vaccine may still be affected by a mutation of Covid-19 in the future.

Fact no.1: at the time of writing (4/5/2021) Covid-19 (and its variants) have affected over 123 M persons globally, and has killed almost 2.9 M of them, about 2.35 % of those known to be affected. Many hospitals across the Caribbean

COMMENTARY... *cont'd*

are overwhelmed by patients suffering from Covid-19. The disease is especially severe, and in many cases fatal, in those affected by the non-communicable diseases, the same group of individuals who faced the risk of dying here prematurely even before Covid-19. It seems unfortunate that Covid-19 is just speeding up the rate of deaths in this population. All of the various brands of anti-Covid-19 vaccines all seem to share the property of reducing an individual's chances of developing a severe disease, and needing hospitalisations, "a not so good situation" when the public hospital facility is already over capacity. If Covid variants reduce the effectiveness of vaccines, our patients with NCDs will continue to be at risk.

Fact no.2: Although we are yet to learn, through the ongoing surveillance, about the full spectrum of side effects that may develop after receiving the Oxford AstraZeneca vaccines. The medical professionals still believe that they will have a better chance of treating any side effects that may develop rather than 'raising the dead'. The latter scenario being a case which cannot "Build Back Better"

Fact no. 3: There is no guarantee that any of the other vaccines will be available to Caribbean people anytime soon. The efficacy of the Oxford AstraZeneca vaccine is 76% ¹ after the first dose against symptomatic infection; it increases after the second dose 8-12 weeks later. This is lower than the 90 % ² reported after receiving two doses of either the Pfizer BioNtech or Moderna vaccines, but there are significant financial, logistic and probably geopolitical reasons why those vaccines may not be available to 'third world' countries like ours anytime soon.

Fact no.4: Vaccinating frontline health care workers is essential to protect their health and safety as well as to mitigate the pandemic's impact on the health care system. But our success in vaccinating staff also lends credibility to vaccines.

To communicate the risk-benefit of Covid-19 vaccines, it is essential to have input from the mass media, public health services, policymakers, and "trusted messengers" (individuals with a prior history of service and goodwill in the communities). Family physicians fall into this group, and we must be prepared to spread the word within our communities. Consequently, vaccination concerns in community must be addressed with cultural sensitivity, as opposed to simply deeming reluctant individuals as solely uninformed, foolishly

recalcitrant, or merely antivaxxers. Family physicians need to engage in meaningful conversations with patients, communities, and colleagues.

Not only are family physicians experienced at resolving patients uncertainty about vaccines, but they are also well positioned to mitigate mistrust about vaccines among patients. Thus a population vaccination program, in addition to current preventative protocols – Wash your hands, Wear your mask, Watch your (social) distance – is a necessity to keep people alive. This will definitely help, to reduce the number of infections in the community enabling the re-opening of our countries and our economies. "United we stand, or divided we fall" being a norm for the healthcare workers in the current situation, comes to mind.

References

1. Covid-19 vaccine: AstraZeneca Final Results. NEJM Journal Watch, March 25th 2021.
2. Covid-19 Vaccines: Real world effectiveness. NEJM Journal Watch, March 29th 2021.

Dr Alert is an Associate Lecturer in Family Medicine in the Faculty of Medical Sciences, UWI (Cave Hill Campus) and operates a private practice.



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HIM: A NECESSARY TOOL TO THE BARBADIAN HEALTH CARE TRANSFORMATION PROCESS



Jamane Sargeant
BA (UWI) RPT (AMT)

In a recent article in the Journal of the Barbados Association of Medical Practitioners (BAMP),¹ Dr. Colin Alert tried to ascertain the purpose of the Continuing Medical Education (CME) credits, when it is not reflected in the public health sphere of Barbados. Alert highlighted the comparison between the two annual ophthalmology conferences and eye care among the non-ophthalmologist community. He concluded that because of the lack of data, one cannot determine if the quality of eye care has improved among the non-ophthalmology fraternity.² To further reiterate his point, he highlighted a 2019 Business Insider article, which showed Barbados was rated as the fifth unhealthiest country in the world.³ This is against the backdrop that CME was introduced in 2012.⁴

While one could agree with the general premise of the article, there is a key issue that should not and cannot be ignored; the urgent need for quality health information. While Dr. Alert presented facts on the current situation surrounding the CME debacle, he had no substantial data to make a concrete conclusion on whether CME influenced Barbadian public health and to what extent. For this to occur, the Health Information Management (HIM) profession must be heavily incorporated in the Barbadian healthcare sector.

The HIM profession, while an important asset to the healthcare sector, is yet to be recognised in Barbados as a profession. This profession provides the building blocks of quality data upon which sound policy is built. Should Barbados continue to negate the profession's inclusion, data risks such as privacy breaches and incoherent data collection will become problematic and could lead to wastage of resources in the area of failed technology and policy implementation.

Health Information Management "is the process of acquiring, analysing and protecting both traditional and digital health

information management."⁵ The profession garners education and skills from multiple disciplinary fields such as Business Management, Data Science, Information Technology, Health Science, Law and Ethics. The HIM profession has been in existence since 1928. The American College of Surgeons established the Association of Record Librarians of North America (now the American Health Information Management Association-AHIMA) to "elevate the standards of clinical records in hospitals and other medical institutions."⁶ It is on this basis that HIM grew and became a recognised profession internationally. This was seen with the first International Congress on Medical Records (now the International Federation of Health Information Management Associations Congress) held in September of 1952.⁷ To highlight the pivotal point of this historical progress, the healthcare sector came to recognise from an early stage the importance of health information.

Health Information Management has drastically evolved over the years from being paper-based to digitally centred.

As Barbados evolves to be in line with the digital global demand, the country must now seek to invest in honing the skills of these professionals to catapult Barbados into the 21st century and beyond. A key factor in this transformation process is information governance. Information governance is "an essential requirement in any health care organisation"⁸ It is defined as the overarching and coordinating strategy for all organisational information. It establishes the authorities, supports, processes, capabilities, structures and infrastructure to enable information to be a useful asset and reduced liability to an organisation, based on that organisation's specific business requirements and risk tolerance.⁹ It should be noted that a strong information governance programme serves the needs of the consumer, patient and citizen.¹⁰ Healthcare in today's modern world is becoming more complex and the need to retrieve and manage information from multiple sources is paramount in ensuring that health care providers receive adequate data to have an accurate picture of the patient's overall health. Data from multiple health care applications and a variety of health care specialists make data management a difficult undertaking, unless there is adherence to the tenants of information governance.

HIM professionals must lead the efforts to advance information governance (IG) and management practices, and

GUEST ARTICLE... *cont'd*

ensure governance policies and best practices are applied to all types of critical information access across the information lifecycle.¹¹ There is an abundance of work to be done in information governance; however without the supporting workforce, there is a risk to data integrity and usability issues could arise. For effective information governance to occur, there must be ten organisational competencies which need adherence. These are: strategic alignment, information governance structure, data governance, Enterprise Information Management (EIM), IT governance, analytics, privacy and security safe-guards, regulatory and legal, awareness and adherence, and information governance performance.¹² In all of these competencies, HIM professionals produce the necessary skillset to competently perform such duties. HIM professionals are recognised as well-established resources for clinical record-keeping, with aptitudes that continue to be sharpened, expanded, and called upon to institute and execute IG.¹³

Information governance involves management developing a structure to enforce rules involving technology, training and education. It includes an inventory of the organisation resources and how they are managed, organised and controlled. This brings a level of validity in ensuring when decisions are made, that it is made on sound information. The usage and maintenance of data are critical thus for data to be collected and analysed; it need to be structured in a way that is fit for use. Structured data are crucial for enhanced enterprise planning, forecasting and decision making, quality measurement reports, patient engagement or new enhanced patient care models. This will be able to facilitate the reduction of wastage of resources in an already resource-poor nation.

Another area, which is critical for the HIM involvement in the Barbadian health care, is quality management (QM).

The tenants of QM are seemingly what Dr. Alert was alluding to in his article when he highlighted the impact of the CME. QM is the foundation for prevention, continuous process improvement and outcome driven systems guided by patient needs. So how does HIM aid in the process? The Committee on Professional Development of AHIMA states: "Health Information Management Professionals are responsible for improving the quality of healthcare by ensuring that the best information is available for making any healthcare decision."¹⁴ Monitoring of quality documentation while working collaboratively with other members of the healthcare team is essential to maintain clinical accuracy and completeness of data. These efforts will be the

key to identifying systems and processing problems within the realm of patient safety and quality of care and conduct root cause analysis. Without the implementation of quality data captured and procedures, quality decisions would be non-existent.

Data literacy is also a strong skill set which HIM professionals produce and it is pivotal to achieving high quality, cost efficient health care and requires collaboration amongst all Health Care Professionals. There still seems to be this unproven mindset in Barbados that clinical documentation is siloed from public health research and policy implementation. It should be viewed as part of the public health puzzle. A collaborative effort is needed to improve data literacy and data quality. The accumulation of data from multiple sources such as laboratory information systems, clinical registries and Electronic Health Records (EHRs) should employ effective HIM practices to ensure that the data from these sources can be repurposed many times. Data capture, analysis and output will require critical thinking about health care performance expectations to draw informed conclusions from measured data. The ability to measure the quality of patient care accurately and efficiently is central to enabling clinicians to provide excellent care which includes: improved patient outcomes, reduced infection rates, prevention of serious adverse events, control of near misses and standardised treatments using evidence based medicine.

Lastly, the most important aspect of them all is privacy and security of health information. "The confidentiality of medical records has long been a fundamental role of the Health Information Management Professional throughout this 80-year history. Privacy and security is a major bedrock of the HIM profession. It entails many aspects of privacy and security, not merely applying encrypted data and ignoring phishing emails. To garner some level of understanding of what is involved in the privacy and security of health information, this author will highlight some of the tasks that are required as a CHPS (Certified Healthcare Privacy and Security). It should be noted that the following tasks were taken from AHIMA (American Health Information Management Association) certification exam. They are only meant to provide a generalised overview of the tasks involved and only some are listed. They are:

- Serve as a resource (provide guidance) to your organisation regarding privacy and security laws, regulations, and standards of accreditation agencies to help interpret and apply the standards

GUEST ARTICLE... cont'd

- Demonstrate privacy and security compliance with documentation, production and retention as required by State and Federal law as well as accrediting agencies
- Evaluate and monitor facility security plans to safeguard unauthorised physical access to information and prevent theft or tampering
- Develop, deliver, evaluate and document training and awareness on information privacy and security to provide an informed workforce
- Establish a preventative program to detect, prevent and mitigate privacy/security breaches
- Verify that requesters of protected information are authorised and permitted to receive the protected information (subpoena, court orders, and search warrants)
- Participate in the development and verify maintenance of the inventory of software, hardware and all information assets to protect information assets and to facilitate risk analysis
- Participate in business continuity planning for planned downtime and contingency planning for emergencies and disaster recovery
- Implement a systematic process to evaluate risk to and criticalities of information systems which contain Protected Health Information (PHI)
- Establish reasonable safeguards to reduce incidental disclosures and prevent privacy breaches

As one can appreciate, the development and maintenance of policies with regards to health information is no easy feat and can lead to serious risk if not dealt with immediately. However, because of the lack of policies surrounding health information in Barbados, it is difficult to engage relevant stakeholders about the inevitable pitfalls if warning is not heeded. One needs to remember that a delicate balance must be weighed between the need for information and misuse of the consumer's trust and HIM professionals can take charge in ensuring that balance.

As it stands internationally, the health information management profession has expanded into privacy and

security, quality management, information governance, data literacy, data standardisation, data analysis and so much more. The profession has escaped from the confines of the medical room and into many areas, both directly and indirectly to impact healthcare and will continue to do so. It is time that Barbados recognises the evolution of the profession and seeks to incorporate it into its healthcare system. If this fails to happen, sooner rather than later Dr. Alert could be joined by many others, who will be wondering: how do we achieve quality public healthcare?

References

1. Alert, Dr. Colin V. "Compulsory CME in Barbados-Who Benefits." Barbados Association of Medical Practitioners. No. 201, 2020, pp. 6-7.
2. American Health Information Management Association. "Certified in Healthcare Privacy and Security (CHPS)." AHIMA, www.ahima.org/certification-careers/certification-exams/chps/.
3. American Health Information Management Association. "Health Information 101." AHIMA, www.ahima.org/certification-careers/certifications-overview/career-tools/career-pages/health-information-101/.
4. American Health Information Management Association. "Our History." AHIMA, www.ahima.org/who-we-are/about-us/history/.
5. Association of Records Managers and Administrators. "Information Governance ." ARMA, www.arma.org/page/Information_Governance#.
6. Fenton SH, Low S, Abrams KJ, Butler-Henderson K. Health Information Management: Changing with Time. Yearb Med Inform. 2017 Aug;26(1):72-77. doi: 10.15265/IY-2017-021. Epub 2017 Sep 11. PMID: 29063538; PMCID: PMC6239228.
7. International Federation of Health Information Management Association. Advancing Health Information Governance: A Global Imperative. [Whitepaper] IFHIMA, October 2017. <https://ifhimasitemedia.s3.us-east-2.amazonaws.com/wp-content/uploads/2017/11/20033802/ifhima-ig-whitepaper-final.pdf>

8. Rinehart-Thompson, L. A., Hjort, B. M., & Cassidy, B. S. (2009). Redefining the health information management privacy and security role. *Perspectives in health information management*, 6(Summer), 1d.
9. Watson, Phyllis J. IFMRO to IFHRO to IFHIMA: An Historical Overview. Health Information Management Association of Australia Ltd Sydney, 2019.
10. Zeng, X., Reynolds, R., & Sharp, M. (2009). Redefining the roles of health information management professionals in health information technology. *Perspectives in health information management*, 6(Summer), 1f.
11. International Federation of Health Information Management Association. Advancing Health Information Governance: A Global Imperative. [Whitepaper] IFHIMA, October 2017
12. Zeng, X., Reynolds, R., & Sharp, M. (2009). Redefining the roles of health information management professionals in health information technology. *Perspectives in health information management*, 6(Summer), 1f.
13. Rinehart-Thompson, L. A., Hjort, B. M., & Cassidy, B. S. (2009). Redefining the health information management privacy and security role. *Perspectives in health information management*, 6 (Summer), 1d
14. American Health Information Management Association. "Certified in Healthcare Privacy and Security (CHPS)." AHIMA, www.ahima.org/certification-careers/certification-exams/chps/.

Jamane Sargeant is a Medical Records Clerk (1) and the Public Relations Officer, Association of Health Information Management (BHIMA).

OCCULAR ISSUES IN DIABETES



Mr. Sherwin Benskin
BSc (Hons) , MBBS (UWI),
MRCOphthalmology
Consultant Ophthalmologist

Individuals who have been diagnosed with diabetes mellitus are plagued with a myriad of systemic problems. The ocular tissues are not spared from the negative effects of hyperglycemia. The eye is the site of numerous pathologies, including diabetic retinopathy - the best known condition associated with diabetes.

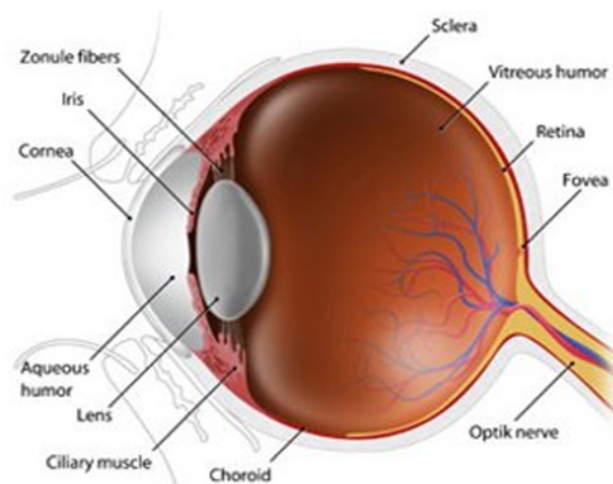


Fig 1. The normal eye anatomy.

Similar to the rest of the body, diabetes affects all areas of the eye - from the cornea anteriorly to the optic nerve posteriorly. We can therefore list some of the effects of diabetes on the eye as follows from posterior to anterior :

1. Anterior ischemic optic neuropathy
2. Diabetic papillopathy
3. Diabetic retinopathy
4. Retinal vein occlusion
5. Retinal artery occlusion
6. Ocular movement disorders
7. Cataract
8. Glaucoma
9. Neovascular glaucoma

Anterior Ischaemic Optic Neuropathy (AION)

AION is an acute vascular occlusion of the optic nerve leading to ischaemic dysfunction. Patients report acute vision loss and typically have a relative afferent pupillary defect. Diabetes is a major risk factor as small blood vessels are usually dysfunctional in this condition. Nocturnal hypotension plays a major role in the pathogenesis. Up to 25% of patients with this condition have a history of diabetes.^{1,2}

Diabetic Papillopathy

This is a condition used to describe unilateral or bilateral optic disc edema in patients with diabetes. The visual loss is less severe than AION and optic disc swelling usually resolves within 2-10 months with varying residual effects but usually vision is spared.

Diabetic Retinopathy

This is a combination of findings of the retina that are characteristic of diabetes in the eye. Typical findings are:

1. Micro-aneurysms - these appear as small red dots in the superficial retinal layer and are small dilatations of small retinal vessels
2. Hemorrhages (dot and blot) - these appear as micro-aneurysms rupture in deeper retinal layers
3. Hemorrhages (flamed shaped) - splinter like bleeds in superficial retinal layers

4. exudates - these result from leakage of serum proteins from damaged blood vessels
5. Cotton-wool spots (soft exudates) - a misnomer, these are areas of retinal ischemia which give a white appearance on fundoscopy
6. Venous loops and beading - these indicate increasing ischemia
7. Neo-vascularization (new blood vessels) - indicates an advanced stage of retinopathy which requires treatment
8. Maculopathy - this is oedema within the macula area and is responsible for most sight lost in diabetics

Diabetic retinopathy can be classified into stages of non-proliferative diabetic retinopathy (NPDR) and then proliferative diabetic retinopathy (PDR) as shown in figure 2. Increasing severity of disease is represented by increased findings in the retina as shown.

Classification and management according to stage is shown in Table 1.

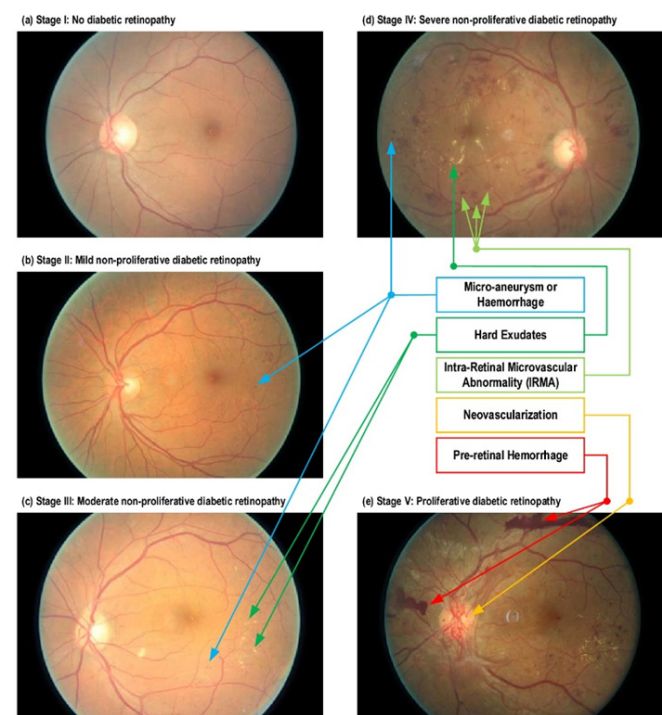


Fig 2. Retinal photographs showing classification of diabetic retinopathy. ³

CME... cont'd

Retinopathy stage	Findings on ophthalmoscopy	Management and review/referral timeframe
No apparent retinopathy	No abnormalities	In line with AOA, AAO, and JDC, OA recommends annual review
Minimal NPDR	Microaneurysms (MA) only	Review 6-12 months taking into consideration proximity of MA to fovea
Mild to moderate NPDR	More than just MA but less than severe NPDR. This may include: • dot haemorrhages • blot haemorrhages • cotton wool spots • intraretinal microvascular anomalies (eg venous beading)	Refer or closely monitor Depending on level of DR present, 3-6 monthly or annually
Severe NPDR	Any of the following: • more than 20 intraretinal haemorrhages in each of 4 quadrants • definite venous beading in 2+ quadrants • prominent IRMA in 1+ quadrant AND no signs of proliferative retinopathy	Ophthalmology referral
PDR	One of the following (or unexplained fall in VA) • neovascularisation • vitreous/pre-retinal haemorrhage	Urgent ophthalmology referral (days – week)

Table 1. International classification of diabetic retinopathy and recommended management follow-up period.⁴

Diabetic Macular Edema (DME)

This is the major cause of decreased visual acuity in diabetics. Since the advent of Ocular Coherence Tomography (OCT), the old classification of DME has been replaced by OCT

classification highlighted in Table 2 with its respective management plan. The mainstay of treatment to date is intra-vitreal injections of Anti-VEG-F drugs like Avastin.

Macular Oedema		
Absent	No retinal thickening or hard exudates (Hex) in posterior pole	Follow up or need to refer should be based on the level of NPDR or DR
Present	Mild – some retinal thickening or Hex in posterior pole but distant from macula Moderate – retinal thickening or Hex approaching the centre of the macula but not involving the centre Severe – retinal thickening or Hex involving the fovea	Ophthalmology referral and management (within 4 weeks for Hex within 1DD of fovea)

Table 2. Classification of diabetic macula oedema based on Ocular Coherence Tomography.

Retinal Vein Occlusion (RVO)

RVO can take several forms, namely: branch retinal vein occlusion (BRVO), hemi-retinal vein occlusion (HRVO) and central retinal vein occlusion (CRVO). Typically, CRVO has several risk factors including hyperglycemia, which is present in 10% of patients over 50 years old.^{5,6} The etiology is believed to follow Virchow's triad for clot formation. Of note, the central retinal artery and vein share a common adventitial sheath, arterio-venous crossing at around the lamina cribrosa area leads to compression of the vein by the artery and arteriosclerotic changes in the artery, as well as the vein, contribute to the stickiness of the blood.



Fig 3. Non-ischemic central retinal vein occlusion.

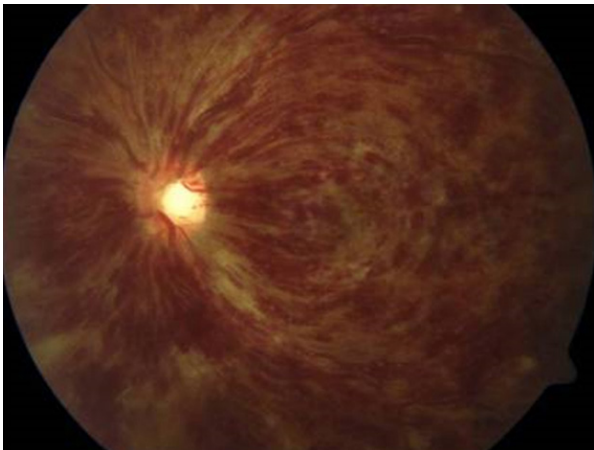


Fig 4. Ischemic central retinal vein occlusion.

There are two types of CRVO: ischemic (Fig 3) and non-ischemic (Fig 4). Typically, non-ischemic CRVO has a better prognosis for visual recovery.

The sequelae of CRVO include: ischemic changes in the retina, which can lead to neovascularization, vitreous hemorrhage,

macular edema and Rubeotic glaucoma. Treatment depends on the complication but include retinal laser for neovascularization and anti-VEG-F injections into the eye for macula edema.

Central Retinal Artery Occlusion (CRAO)

This occurs when the central artery of the retina becomes occluded often with embolus or thrombus. This presents with dramatic acute loss of vision. Diabetic patients are more likely to develop neo-vascular complications, which are treated in a similar manner to CRVO.

Fig 5. Photographs of central retinal artery occlusion.

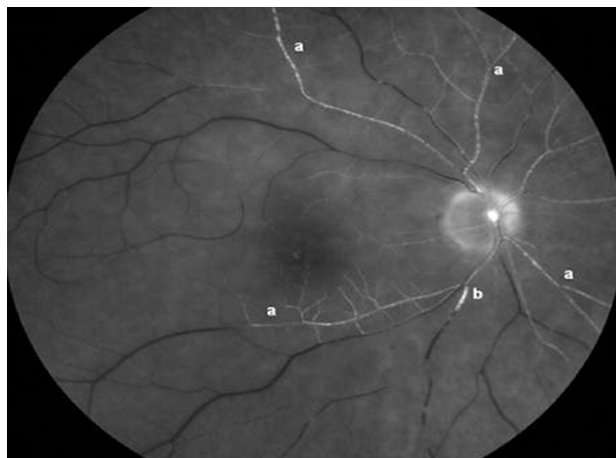


5A. Central retinal artery occlusion. Note the attenuated retinal artery and cherry red spot.



5B. Fluorescein Angiogram of normal retinal perfusion.

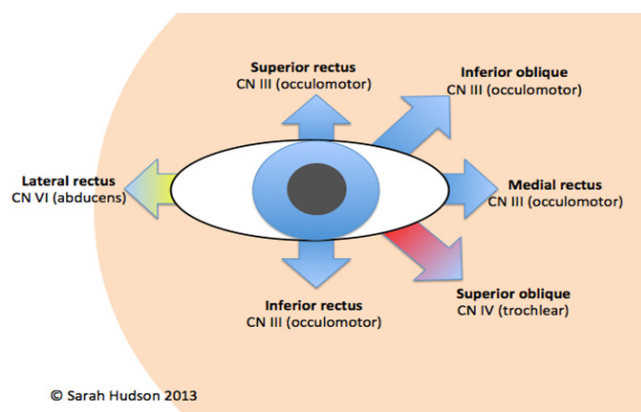
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5C. Fluorescein Angiogram of CRAO. Note blockage of central retinal artery.

Ocular Movement Disorders

Patients with diabetes are well known to develop neuropathies and this pathology also does not spare ocular nerves supplying the muscles. Twenty-five to 30% of patients with movement disorders have diabetes.⁷ Cranial nerves III, IV and VI are mostly affected (6A, 6B). Pupil sparing effects distinguishes this from life threatening causes such as compressive tumours. The condition often presents with diplopia and usually a squint. These movement disorders usually tend to recover spontaneously.⁸



6A. Oculomotor muscles and their actions.



6B. A medial rectus palsy (CN III) with unopposed action of the nerve VI leading to the eye looking outwards.

Cataract

A cataract results in cloudiness of the natural lens of the eye. Numerous studies have documented the association between diabetes and cataract development, including the Beaver Dam Study, the Blue Mountain eye study and the visual impairment project.^{2,3} There is a proven association with diabetes and the specific type of cataract, particularly more with posterior subcapsular cataracts than nuclear cataracts (Fig 7).⁴ The specific pathophysiology entails sorbitol, which formed in the lens by the enzyme aldose reductase in the polyol pathway. The retained sorbitol creates an osmotic gradient that favours water influx into the lens, resulting in lens fiber swelling and opacification.

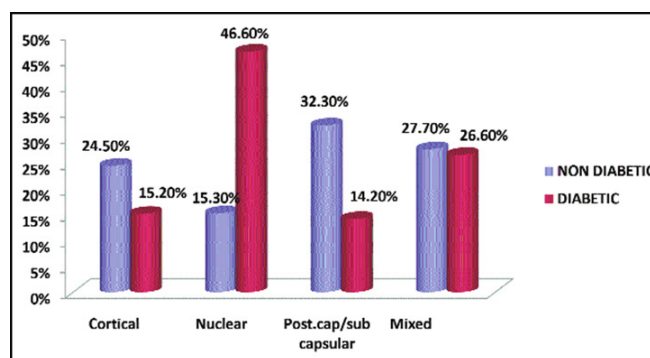


Fig 7. Cataract types found in diabetic patients vs non-diabetic patients

Glaucoma and Diabetes

Glaucoma is a progressive optic neuropathy associated with elevated intra-ocular pressure (IOP). Of note, IOP can however be normal in the variant called normo-tensive glaucoma. The findings in glaucoma are:

1. Elevated IOP
2. Characteristic visual field loss and optic disc cupping

Diabetic patients are at risk for several types of glaucoma, namely primary open angle (POAG), angle closure (ACG) and rubeotic or neovascular glaucoma (NVG).

Primary open angle glaucoma (POAG)

The mechanism of diabetic association with POAG may be three- fold:

1. Microvascular damage causing impaired blood flow to the optic nerve
2. Impaired autoregulation of the posterior ciliary artery worsening optic nerve (ON) damage
3. Other cardiovascular risk factors which affect ON perfusion for example atherosclerosis

Patients with diabetes are at increased risk for glaucoma (5% vs 2% of the general population). This increased risk is 2 to 4 times higher.⁹ It is important to note that the Barbados Eye Study did not show this trend and DM was found to be unrelated to POAG.¹⁰ Diabetes was however associated with a higher IOP.

Angle Closure Glaucoma

This type of glaucoma is associated with narrow angles obstructing outflow of aqueous humor from the eye causing increased IOP. The association with diabetes may be due to systemic autonomic nerve function or increased lens thickness due to sorbitol.

Rubeotic or Neovascular glaucoma (NVG)

Iris neovascularization characterises this type of glaucoma.

The new iris vessels impair aqueous out-flow causing a severe rise in IOP. This by far carries the worse prognosis and is often associated with severe sight loss and/or blindness. Thirty-two to forty-three percent of NVG is caused by proliferative DR^{15,16}. The mechanism of NVG is driven by hypoxia whereby hypoxia stimulates release vascular endothelium growth factor (VEG-F) and subsequently results in new vessel formation. NVG requires IOP lowering drugs, anti-VEG-F treatment and pan-retinal photocoagulation laser treatment to combat neovascularization. The IOP rise is treated surgically by a drainage device implanted into the eye.

Fig 8. Rubeotic glaucoma.

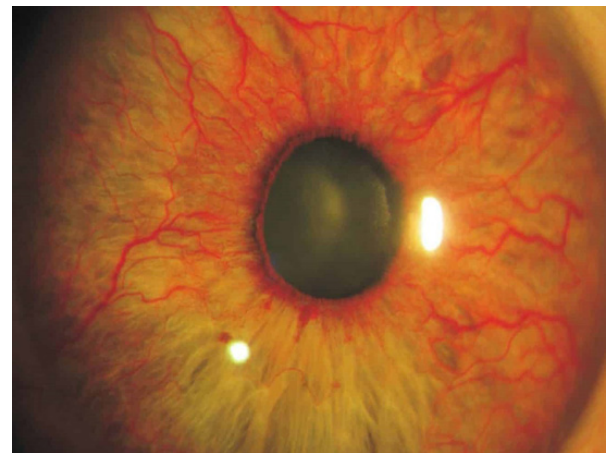


Figure 8A shows neo-vascularization of the iris anteriorly

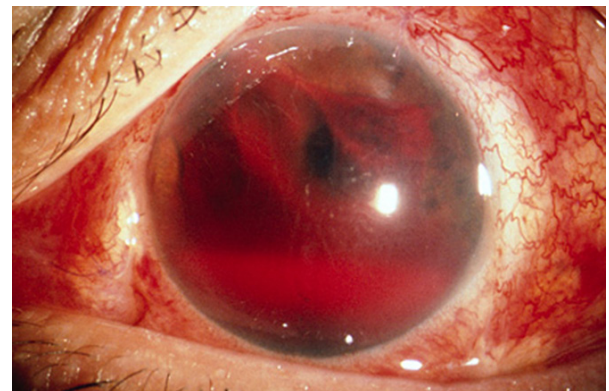


Figure 8B shows a hyphema caused by bleeding of new vessels and corneal edema.

Conclusion:

There are multiple conditions of the eye associated with diabetes. These can lead to irreversible visual impairment. Physicians treating diabetic patients must be aware of this increased susceptibility and make a prompt referral ensuring evaluation and management by an Ophthalmologist.

*CME... cont'd***References**

1. Classification Characteristics of patients with nonarteritic anterior ischemic optic neuropathy eligible for the Ischemic Optic Neuropathy Decompression Trial. Arch Ophthalmol 114:1366–1374, 1996
2. Hayreh SS, et al: Nonarteritic anterior ischemic optic neuropathy: role of nocturnal arterial hypotension. Arch Ophthalmol 115:942–945, 1997
3. Diabetic Retinopathy
<https://www.semanticscholar.org/paper/Diabetic-Retinopathy-Stage-Classification-Using-Wang-u/42f2b0463421c5070e1b6319cc1eeac60e460740/figure/1>. Accessed 5th October 2020.
4. <https://www.luxotticalearning.com.au/pages/diabetes-and-diabetic-eye-disease-2019>. Accessed 5th October 2020.
5. Shahsuvaryan ML, Melkonyan AK: Central retinal vein occlusion risk profile: a case-control study. Eur J Ophthalmol 13:445–452, 2003
6. Sperduto RD, et al: Risk factors for hemiretinal vein occlusion: comparison with risk factors for central and branch retinal vein occlusion: the eye disease case-control study. Ophthalmology
7. Rush JA: Extraocular muscle palsies in diabetes mellitus. Int Ophthalmol Clin 24:155–159, 1984
8. Burde RM: Neuro-ophthalmic associations and complications of diabetes mellitus. Am J Ophthalmol 114:498–501, 1992
9. Katz J, Sommer A: Risk factors for primary open angle glaucoma. Am J Prev Med 4:110–114, 1988
10. Associations With Intraocular Pressure in the Barbados Eye Study. Suh-Yuh Wu, MA; M. Cristina Leske, MD, MPH. Arch Ophthalmol. 1997;115(12):1572–1576. doi:10.1001/archophth.1997.01100160742012.
11. Risk Factors for Open-angle Glaucoma. The Barbados Eye Study. M. Cristina Leske, A. M. S. Connell, MB, ChB, FRCS, FCOphth; Suh-Yuh Wu, MA; Leslie G. Hyman, PhD; Andrew P. Schachat, Arch Ophthalmol. 1995;113(7):918–924. doi:10.1001/archophth.1995.01100070092031.
12. Schertzer RM, Wang D, Bartholomew LR: Diabetes mellitus and glaucoma. Int Ophthalmol Clin 38:69–87, 1998
13. Madson PH: Experiences in surgical treatment of haemorrhagic glaucoma: a follow-up study. Acta Ophthalmol Suppl 120:88–91, 1973

Dr Sherwin Benskin is Head of Department Ophthalmology at the Queen Elizabeth Hospital, a subspecialist in retinal ophthalmology, and he also operates a private practice.

CASE REPORT

TO BLEED OR NOT TO BLEED”: AN UNUSUAL CAUSE OF BLEEDING



Dr Anja Greaves
MBBS

A 4-year-old female SG with a history of bilateral coloboma and congenital nystagmus began to experience lethargy, fever and decreased appetite.

Her mother was concerned that she was not improving despite paracetamol administration around the clock for the initial two days, therefore she sought medical attention from a general practitioner. On examination, the child was noted to be febrile, tachycardic and clinically dehydrated. She was referred to the Accident and Emergency Department (ED) at the Queen Elizabeth Hospital (QEH), where upon triage, she was febrile and tachycardic with postural hypotension.

An IV access was placed, and blood was taken for FBC, ESR, U&E, LFTs and viral studies, and a COVID-19 PCR was done. She then received a fluid bolus at 10ml/kg IV. She was subsequently referred to and evaluated by the paediatric team. Her examination was significant for persistent tachycardia, nystagmus, bilateral coloboma and 2 small fluctuant swellings (one to the arm and the other to the right temporal region measuring 0.5x 0.5cm). She was assessed as having an acute febrile viral illness, with differentials of COVID-19, dengue, and an incidental MRSA folliculitis. A plan was made for admission to the paediatric ward following a negative COVID-19 swab result.

Her initial laboratory investigations were significant for a bi-cytopenia (platelet count $123 \times 10^3/\mu\text{L}$ and WBC $2.7 \times 10^3/\mu\text{L}$), ESR, U&Es and LFTs were normal.

Approximately 5 hours following the initial paediatric assessment, she had a large vomit which contained a blood clot, and she also had a foul smelling, tarry stool. She was

reviewed by the paediatric team while still in Accident and Emergency. Her blood pressure was in the normal range, but she was noted to have a reflex tachycardia. A repeat FBC showed a fall in her Hb (10.4 to 9.7 g/dl) and in the platelet count (123 to $101 \times 10^3/\mu\text{L}$). Coagulation profile results were unavailable at that time.

With a diagnosis of upper GI bleed, (UGIB) a nasogastric tube (NGT) was passed, she was kept NPO and commenced on pantoprazole. It was thought that the UGIB was likely due to thrombocytopenia with dysfunctional platelets.

She was admitted 12 hours later after a negative COVID-19 result, to the Paediatric Intensive Care Unit (PICU).

The NGT continued to drain frank blood and a further repeat of the FBC done on admission to PICU showed a further decline in her haemoglobin to 9.2 (9.7) g/dL and platelets to $80 \times 10^3/\mu\text{L}$.

A central access and an arterial line were inserted. A subsequent FBC revealed worsening of the bi-cytopenia with an Hb of 6.6 (9.2) g/dl and platelets of $62 \times 10^3/\mu\text{L}$. She was transfused PRBCs at 15ml/kg.

By this time, dengue titres were also available: NS1 positive, IgM positive and IgG negative, confirming a diagnosis of acute dengue fever.

Overnight, she continued to have frank blood draining from her NGT and 2 further large bloody vomits. A paediatric haematology consult was made and platelets were released for transfusion. Serial FBCs showed the platelet count reaching a nadir of $57 \times 10^3/\mu\text{L}$ and the Hb improving to 12.8 g/dl post transfusion; however, it fell by 2g/dL by morning. Coagulation studies at that time were normal.

The case was discussed with a gastroenterologist, and an urgent endoscopy was planned with elective intubation to secure the patient's airway in preparation for the procedure. Findings at endoscopy revealed fresh blood in the oesophagus and clots in the cardia. A visible blood vessel protruding from the mucosa of the cardia with active oozing, was observed after washing and suctioning. There was no ulcer identified.

CASE REPORT... *cont'd*

Two clips were applied to the vessel and it was injected with 2ml of Epinephrine (1:10 000). and haemostasis was achieved. A diagnosis of Dieulafoy Lesion was made based on the findings.

SG had an uneventful recovery period. She was extubated 1 hour post-procedure and discharged 7 days later, on omeprazole, with no re-bleeding, with a one month paediatric outpatient clinic. appointment.

Her final diagnosis was acute Dengue fever with a GI bleed related to an unmasked Dieulafoy Lesion in the stomach.

Discussion

A Dieulafoy Lesion is a small gastrointestinal mucosal erosion due to an abnormally large calibre and persistent submucosal arteriole.¹

It is a rare medical condition which was first accurately described in 1898 by French pathologist Paul Georges Dieulafoy.² At that time, he had performed the autopsies of 10 otherwise healthy males in their 50s, who had died of following massive asymptomatic upper GI bleeds. He coined the term "exulceratio simplex", as at the time he believed that the lesions were a part of peptic ulcer disease.³

It is proposed that Dieulafoy lesions arise from the left gastric artery and therefore these lesions are more commonly seen along the lesser curvature of the stomach. The arterioles have larger than average diameters that can be as much as 10 times larger, with measurements of up to 1-3mm. Failure of the arteriole to taper, results in it running just below the gastric mucosa. Pressure necrosis then occurs causing the arteriole to be exposed. This pressure necrosis is thought to occur due to significant pulsations of the artery resulting in thinning of the mucosa.⁴ Mucosal defects are ~3-5mm and there are no notable histological changes observed. An additional proposed theory is that there is pre-existing thrombosis within the arteriole caused by gastric "wear and tear" which results in pressure necrosis against the vessel wall.^{2,3}

No familial pattern, nor environmental triggers have been identified in determining those at risk. Therefore the foregone conclusion is that of a congenital anomaly.²

Dieulafoy Lesions are rare in the paediatric population. A Pubmed search yielded 23 results, all case reports documented in English about paediatric patients who were diagnosed with

Dieulafoy Lesions. Identification and management of this rare condition is therefore based on extrapolation of data from the adult population. Despite it being more common in adults, it only accounts for 1-2% of all upper GI bleeds in that population.³ There is a 2:1 male to female preponderance with the age of onset being in the 5th decade. These lesions can occur at any area in the GI tract or bronchus, however the most common area is ~6cm from the gastroesophageal junction, accounting for 80-95% of cases.³

The typical clinical presentation is usually that of an otherwise well child with painless upper GI bleed, manifesting either as haematemesis or melena stools. On even rarer occasions, children may present with haemoptysis due to bronchial lesions.⁴ Additionally, children may have syndromic features on examination, as there has been a report of Dieulafoy Lesion in PHACEs syndrome.⁴ On occasion, children may be admitted for an unrelated reason, and then subsequently develop symptoms of UGIB.⁵

The current gold standard for diagnosis is upper GI endoscopy.^{4,6} Performance of this investigation follows the initial stabilisation. The diagnosis is then made based on the operator's ability to identify 1 of 3 diagnostic features.

1. A small (<3mm) mucosal defect with active bleeding/squirting.
2. Blood vessel identifiable within a small mucosal defect or normal mucosa.
3. Fresh blood clot adherent to a defect of normal mucosa.

Despite the dual benefit of being diagnostic and therapeutic, initial endoscopy confirms the diagnosis in only 70% of cases.³⁻⁶ Failure to make a diagnosis during endoscopy can occur due to the location of the lesion, massive hemorrhage, subtlety of the lesion, or a paroxysmal pattern of bleeding.⁴ This consequently warrants further investigations, provided that the patient is haemodynamically stable. Angiography can be undertaken and is sufficient for localisation of the lesion if the blood flow is at least 0.5ml/min.⁷ In more advanced centres, Technitium-99m labelled RBCs scanning can also be performed. For lesions in the small intestine and beyond, capsule endoscopy can be performed.⁴

When the diagnosis is made, definitive management should be undertaken as a matter of urgency.⁶ Endoscopy allows for

CASE REPORT... cont'd

not just diagnosis, but various haemostatic procedures have also been described.

These can be divided into mechanical or chemical. Mechanical methods include haemostatic clips, band ligation and microcoils. The method selected is largely operator dependent. Chemical methods are used in conjunction with mechanical as dual therapy has been shown to reduce the risk of a re-bleed by up to 90%.³ Chemical methods can be further broken down into epinephrine injection, sclerotherapy and thermal intervention. Some agents utilised for sclerotherapy are dextrose, alcohol and hypertonic saline. Epinephrine promotes haemostasis by vasospasm, while sclerotherapy promotes vascular inflammation and thrombosis from local irritation. Thermal options include electrocoagulation, argon plasma coagulation and heat probe coagulation. Thermal ablation therapy stem bleeding by destroying and devitalising the tissue.⁸

In the event of failure of these less invasive options, surgical management is the next option. Laparoscopic surgery can be performed in a stable patient; however laparotomy with segmental resection and primary anastomosis is performed in patients with catastrophic bleeding particularly if the lesion cannot be localised.^{3,4}

Despite the rarity of this condition, with the advent of endoscopy, the mortality rate has decreased from 80% to ~8.6%⁶ and longterm control of bleeding is achieved in up to 95% of cases.⁴

References

1. Kieswetter L, Walters TD, Lara-Corrales I, Carcao MD, Ngan B, Pope E. Dieulafoy lesions and PHACE syndrome. *Pediatric dermatology*. 2019;36(6):902-5.
2. Senger J-L, Kanthan R. The Evolution of Dieulafoy's Lesion Since 1897: Then and Now—A Journey through the Lens of a Pediatric Lesion with Literature Review. *Gastroenterology Research and Practice*. 2012;2012:432517.
3. Khan R, Mahmad A, Gobrial M, Onwochei F, Shah K. The Diagnostic Dilemma of Dieulafoy's Lesion. *Gastroenterology Research*. 2015;8:201-6.
4. N.Z M, Govender TR, Harrison D, Theron A. Paediatric Dieulafoy lesions: An emerging, under-reported cause of upper gastrointestinal bleeding. *Journal of Pediatric Surgery Case Reports*. 2019;43.
5. Chandane PG, Javia M. Enteric Fever Presenting as Hemorrhagic Shock due to Bleeding from Dieulafoy's Lesion. *Indian journal of pediatrics*. 2016;83(10):1200-2.
6. Joarder AI, Faruque MS, Nur EEM, Jahan I, Siddiqui O, Imdad S, et al. Dieulafoy's lesion: an overview. *Mymensingh medical journal : MMJ*. 2014;23(1):186-94.
7. Wells ML, Hansel SL, Bruining DH, Fletcher JG, Froemming AT, Barlow JM, et al. CT for Evaluation of Acute Gastrointestinal Bleeding. *Radiographics : a review publication of the Radiological Society of North America, Inc*. 2018;38(4):1089-107.
8. El Salvador Atlas of Gastrointestinal Video Endoscopy El Salvador Atlas of Gastrointestinal Video Endoscopy 2021.

Dr Anja Greaves is a 4th year DM resident in paediatrics at the Queen Elizabeth Hospital in Barbados.

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INSTRUCTIONS TO AUTHORS

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References should be indicated in the text with an Arabic numeral in superscript and not bracketed e.g.¹ or ^{6,7}, numbered in order of appearance and listed at the end, using the style of "Uniform Requirements" in the New England Journal of Medicine and as referenced here: (New Engl J Med 1997; 336: 309-15).

They should give the names of up to four authors. If more than four, they should give the first three followed by et al. The title should be followed by the journal title (abbreviated as in Index Medicus), year of publication, volume number, first and last pages. References to books should give the names of authors (&/or editors), title, place of publication and publisher, and year of publication.

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2. Hewitt P. Trust, assurance and safety – the regulation of health professionals in the 21st century. London: Stationery Office, 2007. www.officialdocuments.gov.uk/document/cm70/7013/7013.pdf.

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