

Cardiology in Barbados - 40 years

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Charles Duncan O'Neal lecture, delivered by:

Prof. Trevor A. Hassell on the 9th November 2006.

Many thanks Professor Fraser for your very kind and generous remarks.

Minister of Health, Senior members of staff of the Ministry of Health, Chairman and Members of the Board, Chief Executive Officer and Fellow Executive Directors, distinguished guests, colleagues, friends, fellow employees, students, ladies and gentlemen, firstly, let me say what a honour it is for me to have been invited to give the 4th CDO lecture, as I join a list of previous lecturers which includes Sir George Alleyne, Chancellor of the University of the West Indies, Sir Carlisle Burton, one of the most outstanding public servants in post independent Barbados, and Emeritus Professor Errol "Mickey" Walrond, the leading contributor to medical education in post independent Barbados.

I am further honoured to have been given the opportunity to deliver this lecture on the 70th Anniversary of the death of Charles Duncan O'Neal, for O'Neal was a medical doctor with whom I, and I suspect many of you in the audience can identify, for he is credited with being the first politician in Barbados to agitate for improved conditions for women in the workplace; was good at creating, developing and managing organisations as evidenced by his having formed the democratic league, the working mens association, and launched a cooperative venture. Dr. O'Neal understood the importance of workplace health, he championed for the rights of women, and dedicated most of his working life to the poor, and as Sir Keith Hunte once summed up "O'Neal's political creed was based on the simple, plain, direct principles laid down by Christ which emphasised the honouring of social obligations among members of the human society, while recognizing that everyone was equal". I submit that this way of life is one that all of us would do well to emulate.

I further treasure this unique opportunity this evening since by happy coincidence this lecture occurs at a time when we celebrate 40 years of Barbados as an independent country, 42 years of the opening of the QEH, 39 years of the establishment of the UWI teaching programme here at the QEH, and 41 years of my employment at the QEH, during which time it could be said that I have been involved in several aspects of the development of cardiology in the country. This evening therefore provides an appropriate forum for me, firstly, to "tell the story" and, share with you the historical development of the first 40 years of cardiology in Barbados post independence, secondly it allows an analysis of the current status of cardiology, and thirdly permits

me to share some thoughts with you on the future development of cardiology in Barbados. For as Prof. Walrond, Matron Ena Walters and Hospital Director James Williams editorialized in a commemorative booklet published on the occasion of the 15th Anniversary of the opening of the Queen Elizabeth Hospital, "important institutions such as the QEH need to present themselves to the public for scrutiny, so that the public can judge for itself the contribution which the institution makes to the community, and as they continue occasions such as anniversaries permit the staff to acknowledge achievements of the past and be conscious of aspirations for the future". End quote. It is in this context that I shall now report to you, charged with the responsibility to present 40 years of cardiology for public scrutiny.

Barbados attained independence on the 30th November 1966. At that time the QEH had been operational for 2 years, having been opened by Prince Philip, Duke of Edinburgh on the 14th November 1964. At and shortly after the time of opening the hospital consisted of some 6 clinical departments -- the medical staff complement of the Department of Medicine was 1 Consultant, and 2 Registrars, that of the Department of Surgery of 1 Consultant Surgeon and 4 Visiting Surgeons, and the Department of Ophthalmology consisted of 1 Consultant Ophthalmologist and 2 Visiting Part Time Ophthalmologists. Incidentally, in 1964, there was a recognized serious shortage of nurses with a total nursing staff of 227 of which 105, or nearly 50%, were student nurses.

In 1965, six members of the medical graduating class of the then University College of the West Indies took the unprecedented step of not requesting or seeking internship at the University Hospital of the West Indies but opted instead to intern at the brand new QEH. At and around this time, reports of the Chief Medical Officer indicate that cerebrovascular and cardiovascular diseases were ranked as the number one Cause of Death in Barbados. In 1972 health expenditure on the QEH was Bds\$8.2 million (compared with about 135 million dollars for 2005 - 2006), 72 doctors were employed at the QEH (compared with present medical staff of 227). In 1966 there were no subspecialties in either the Department of Medicine or Surgery or in any other clinical department of the hospital. Adult patients who needed to be admitted to hospital were often admitted to the Department of Medicine, as it were, "by default". That is if the patient did not need to have surgery "then admit to medicine". The new hospital however, with increased staff and the addition of several young physicians, created the environment for the development of new, and for that time, innovative approaches to the delivery of medical care, and many of these developments occurred within the Department of Medicine. Perhaps most important of these was the formation and development of sub-specialties, among the first of which was cardiology. The Cardiac Unit became a reality as a specialty unit of the Department of Medicine in 1970 staffed by one doctor at Registrar level and one orderly, and it would be from this Unit that all significant developments in cardiology at the QEH would take place for the next 22 years. The Medical Intensive Care Unit was opened on 3rd February 1971, with emphasis on care of patients with acute cardiac illnesses, though it catered to all patients with acute severe medical conditions. In those very early days many new initiatives were taken, for example before the intensive care unit was opened, peritoneal dialysis was introduced and performed in the open wards, (in fact the first peritoneal dialysis was performed on a patient in bed 21 on ward C10). In the Cardiac Unit new initiatives were also being taken, one such example was the performing of electrocardiograms by a locally trained male orderly who carried out these tests unaccompanied, on female patients at a time when male nurses were not permitted to provide general nursing care to female patients.

In 1971 the Cardiovascular Clinic was started as the first sub-specialty clinic in the

Department of Medicine. The initial emphasis of the clinic was to address the most common cardiac problem of the time namely rheumatic heart disease, including the provision of a secondary rheumatic fever prophylaxis programme. The success of this programme was recorded in articles published in British Medical Journals in 1972, 1973 and 1974, authors of Hassell, Stuart, and Renwick, in which we demonstrated a 97% adherence to secondary prophylaxis over 3 years by patients attending the clinic. The clinic has continued uninterrupted for the past 35 years. Patients with coronary artery disease and its sequelae, and congenital heart disease, are now the most common seen at the clinic, new cases of rheumatic heart disease being an infrequent occurrence, nevertheless; the clinic continues to provide much opportunity for teaching of clinical cardiology to undergraduate and postgraduate students.

A few years after the QEH became operational, the UWI started its teaching programme, the Eastern Caribbean Medical Scheme, here in Barbados, June 1967, and not surprisingly this had a very positive impact on the development of cardiology at the QEH. Consultant medical staff of the hospital, were offered appointments as Associate Lecturers of the University, and were encouraged and facilitated to not simply provide service but also be involved in academic medicine both in research and teaching. The Cardiac Unit became a resource and centre for research and teaching of cardiology. Thus in the field of research, in a review carried out by Hassell and Forde of electrocardiograms performed in the unit and at the QEH it was determined that 24 patients were admitted with acute myocardial infarction during the year 1971. In the early seventies, the first study of its kind carried out in Barbados on prevalence of hypertension, previous awareness, and adherence to control, and associated risk factors, among 4300 Barbadians, age 18 years and older, was conducted and data subsequently presented at regional medical conferences in 1974 and 1975, and though this research has not been published as widely, and in as much detail, as it ought to have been, nevertheless, the study showed that hypertension was a major problem (22% prevalence), that many Barbadians were not previously aware of the fact that they suffered from the condition (45%), and adherence to treatment was poor (13%). Additionally, unpublished was the fact that this study demonstrated a significant relationship between increasing age and prevalence of hypertension for both sexes. Over the ensuing years many papers have been presented by several members of staff of the hospital based on work carried out in the unit on topics such as effects of leptospirosis on the heart, cardiomyopathies, use and role of echocardiography, the Brugada Syndrome, to name but a few.....

The Cardiac Unit has also been a focus for teaching of cardiology over the past many years where the very well received weekly cardiac conferences are conducted, and teaching is provided in the non invasive and invasive cardiac disciplines. A testimony to the impact and contribution of this unit and its programmes to the teaching and training in cardiology is the fact that several cardiologists both here at the QEH and practicing abroad graduated or passed through the Unit on their way overseas to receive more specialized training in cardiology.

The provision of cardiology services expanded exponentially at the QEH when the Cardiac Unit became a full fledged non invasive Cardiac Unit in 1976, the first in the English Speaking Caribbean. A review of the level of service provided by the unit indicates that, over the past 16 years some 127,000 electrocardiograms (8,000 annually), 25,000 echocardiograms (1,545 annually), 6,300 Holter monitors, 3,600 Treadmills and other non invasive studies, have been performed by the unit. During the mid seventies and eighties cardiac invasive services were also developed and provided by the unit led by Dr. Ishmael. In 1986 pacemaker implantation was started

in a unique programme, known as Heartbeat International. In this programme indigent patients of the QEH became some of the first in the world to benefit from a collaborative programme that involved the Cardiac Unit, Rotary Club of Barbados, Rotary International, and the pacemaker industry, in the provision and implantation of pacemakers free of cost at the QEH. Since 1990 some 205 indigent Barbadians have had pacemakers implanted, and this programme continues to flourish and grow from strength to strength under the leadership of Dr. Jeff Massay.

During the first 20-year period post independence, developments in the sub-specialty of cardiology in the Department of Medicine identified large numbers of patients as candidates for cardiac surgery and the seed was sown by Mr. Cyril Nelson, Lecturer of the University, of the need for cardiac surgery to be performed at the hospital, and some patients were operated on by him. However, most patients who needed to have cardiac surgery were either transferred to the UWI, or in a subsequently established programme, to Northshore Hospital, USA, in a programme that was championed by Dr. Ishmael and has up to the present time resulted in 181 patients, both from Barbados and other Caribbean countries, receiving much needed cardiac surgery. During those first 20 years, local cardiologists and their counterparts at UWI, using the UWIDITE facility located at Cave Hill, discussed patients referred to the University Hospital, Mona, prior to transferring them for cardiac surgery. Many Barbadians benefited from this early example of Caribbean Cooperation in Health out of which was born the Caribbean Cardiac Society.

In December 1993 a new department was created at the QEH, the Department of Invasive Cardiology and Cardiac Surgery aimed at fast tracking the upgrade of invasive cardiac services and establishing an open heart surgical programme. And on the 24th May 1994, with considerable assistance from Northshore Hospital in the USA, Open Heart Surgery started in earnest, at the QEH, some 20 years after the idea was first mooted by Mr. Nelson. The Open Heart Surgical programme continues up to the present time under the leadership of a single cardiac surgeon Mr. Tony Harris with cardiac surgical anesthesia provided by cardiac anaesthetist Dr. Mike Fakoory. The programme is one of the success stories of the QEH in the delivery of health care in post independent Barbados despite many challenges and certain inherent weaknesses in its framework and clinical strategy for delivery of cardiac care. Since the programme started 12 years ago, 595 patients have received Open Heart Surgery, with a 4% mortality rate, and about 1300 persons have had cardiac catheterization and/or angiography. In 1998 the Department of Invasive Cardiology and Cardiac Surgery, was renamed the Department of Cardiovascular Services with the transfer and incorporation of the Cardiac Unit into the newly named department.

At and around the time of the expansion of cardiac services at the QEH, it became evident that there was need to seek to partner with, and involve, the lay public and other health care workers in the development of cardiovascular services. The Heart Foundation (now the Heart and Stroke Foundation) was established in 1985, as a registered charity, by the leadership of the Cardiac Unit of the Department of Medicine, and that of the Lions Club of Barbados, South. This organisation, an offspring of the QEH, has had many successes, these include,

- a) the setting up of the first heart disease prevention and rehabilitation programme of its kind in the English speaking Caribbean,
- b) designation by the American Heart Association as the sole centre for the development, promotion, conduct and certification of AHA emergency cardiac care programmes at all levels throughout the

Caribbean,
c) the long-term lease of a sizeable piece of land from the Ministry of Health and the erection of a purpose built headquarters and rehabilitation building,
d) long-term and multi-faceted public education and advocacy initiatives around heart healthy lifestyles,
e) the commissioning of a study, by Professor Walrond on the feasibility of performing open heart surgery at the QEH, and most recently
f) the award of a contract by the MOH/QEH to the foundation to provide cardiac rehabilitation services to all indigent persons attending the QEH who are in need of the service. It is therefore now possible for all indigent patients who have had a heart attack, heart surgery, or a significant cardiac event to receive cardiac rehabilitation at the Rehabilitation Centre of the Heart and Stroke Foundation, thus reducing the likelihood of death from a further cardiac event by 20%.

The contribution and role of the Heart and Stroke Foundation has been recognized internationally in that its Founder President, is President of the InterAmerican Heart Foundation, and is also a member of the Board of the World Heart Federation, which is a non-governmental organisation based in Geneva, committed to helping the global population achieve a longer and better life through prevention and control of heart disease and stroke. This organisation has membership that includes 189 societies of cardiology and heart foundations from 100 countries.

And so that brings us to the present, 2006, 40 years post independence. Disease of the heart and blood vessels remain a significant cause of morbidity and mortality in Barbados, with little evidence that efforts over the past 40 years have made a meaningful impact on overall morbidity and mortality, though it is recognized that many individuals have been assisted as a result of the efforts outlined earlier.

Non invasive and invasive cardiac services, continue to be provided at the QEH though in less than optimal circumstances due to, inadequate equipment, unsatisfactory work environment and conditions, and an insufficient number of trained paramedical, technical and nursing staff. The open heart surgical programme remains one of the highest profiled services of the hospital. It however has not developed to its fullest potential in part due to inadequate facilities for the management of post cardiac surgical patients, and insufficient numbers of medical, nursing and technical staff. The management of cardiac patients in the Accident and Emergency Department, in the Medical Care Intensive Unit, and on the general wards is less than ideal due to insufficient intensive care unit beds, outdated and inappropriate clinical patient pathways, policies and strategies, and sub-optimally functioning equipment for which there is an absence of an effective preventative maintenance programme at the QEH. Outpatient management of cardiac patients occurs in a physical setting that was considered unfit for the purpose more than 15 years ago. Despite these several deficiencies, which were all noted in 1998 in the Report of the Advisory Commission of Inquiry into the QEH, much excellent work has been and is being carried out in the several cardiological disciplines at the QEH.

A review of the programmes of health promotion, primary prevention, early detection, rehabilitation and health maintenance, conducted by the Heart and Stroke Foundation indicates that these efforts are constrained by lack of core finance of the Heart and Stroke Foundation, inadequate volunteer base, insufficiently strong link

between the foundation and the QEH, and lack of sufficient expertise in the field of behaviour modification, advocacy, and public education. Perhaps the time has come for the Government of Barbados to provide the foundation with a subvention to support core financing, and for its part, the foundation probably needs to establish Memoranda of Understanding with organisations such as the CDRC, possibly PAHO, and others, aimed at delivering more effective programmes. The challenges of influencing and changing lifestyles nationally is increasingly recognized to be a major task requiring involvement of the government and all sections of society, often beyond the scope of direct influence of the Heart and Stroke Foundation. Perhaps there is need for the chronic non-communicable diseases, of which heart disease and stroke are the most common, to be made an issue of national concern for the Social Partners. And let me pause here to offer my personal congratulations to the Minister (of Health) and the Government (of Barbados) on the recent announcement of the establishment of a Chronic Non Communicable Diseases Commission.

Finally, a review of the present status of cardiology would be incomplete without documenting the role that the Chronic Disease Research Centre has played in the last two decades, in conducting and publishing studies on risk factors, (particularly hypertension), associated with coronary artery disease.

It is against this background of the significant achievements of the past 40 years and recognition of the limitations and challenges of the present situation that a decision was taken by the Ministry of Health 5 years ago to seek funding aimed at significantly improving the provision of cardiological services. To this end some nearly Bds\$ 6.0 million was recently transferred to the QEH by way of support from the European Union, to finance the significant upgrade of the delivery of cardiovascular services at the QEH. This initiative will over the next several months see the aggregation of many of the cardiological services in the Lions Eye Care Centre, with all non invasive and invasive cardiac services, cardiac surgery and post surgical cardiac care, and cardiac intensive care provided in that location, which will also be outfitted with medical and other support offices and a conference room.

The development of cardiovascular services is at an exceedingly exciting juncture, the way forward will be thrilling for many, and even as I speak to you this evening that way forward is being determined, for as an initiative of the European Union funded programme, referred to earlier, the Minister of Health has established a Cardiovascular Disease Task Force, which has been mandated to “prepare an evidenced based strategy for tackling cardiovascular disease and the development of cardiovascular services in Barbados”. This task force is due to hand in its report on or before the 31st January 2007, and I invite anyone who wishes more information about the task force or would like to contribute to it in anyway to please contact the EU Programme Manager whose office is located in the Project Development and Implementation Unit, M of H. Incidentally, National hero Dr. O’Neal would be delighted were he alive today to hear that a guiding principle of the Task Force is that it should be “pro poor and gender sensitive” for I remind you that Dr. O’Neal “dedicated most of his working life to the poor”, and is credited with being the first politician in Barbados to “agitate for improved working conditions for women in the workplace”.

In any event, as the Task Force continues its deliberations there are some recommendations and developments that will almost certainly be advanced, and considered, in an effort to enhance the tackling of cardiovascular disease and improve cardiovascular services nationally, over the next decade and these are as

follows:

1) Firstly, there is a need to develop sustainable and long-term lifestyle, health promotion efforts nationally. These include: initiatives that significantly limit exposure of Barbadians and others to the effects of cigarette smoke, the provision of opportunities to make improved food choices, and the provision of incentives and opportunities for greater physical activity. The earliest passage of legislation prohibiting smoking in public places and practical enforcement and application of the terms and conditions of the Framework Convention of Tobacco Control, will go a long way to reduce the influence of the single most important contributor to disability and death from heart disease and stroke, namely exposure to cigarette smoke.

2) Secondly, the establishment of a mechanism to allow for significantly enhanced monitoring of cardiovascular disease and associated risk factors through the establishment of a national heart and stroke register, is a fundamental requirement for best practice in provision of cardiovascular services,

3) Thirdly, a significant improvement of the framework for the provision of cardiovascular services at the QEH, including the enhancement of clinical pathways and strategies in the delivery of cardiac care, development of policy manuals, audit, appraisal of staff are essential,

4) Fourthly, the establishment of strong linkages between the QEH and other stakeholders and providers of cardiovascular care and services, whether these be private practitioners, polyclinics, private health care facilities, or non governmental organisations is necessary for the seamless and efficient delivery of cardiovascular services,

5) Fifth, that new ways of funding, by both the public and private sector, of Cardiovascular Services in particular, and of health care in general need to be sought, such as, for example "charitable giving through life insurance". The Department of Cardiovascular Services operating next year from the new Cardiac Centre in the Lions Eye Care building provides an excellent opportunity for testing and piloting some of these new and innovative ways of funding and providing expensive medical care,

6) Sixth, recognizing that health is a critical ingredient for the economic growth of nations, and that the health and wellness of the people of a country should be the concern and responsibility of all the people of that country, and not simply of specific groups such as health care providers and administrators, Chronic Non Communicable Diseases, predominantly diseases of the heart and blood vessels should, in my view be a major topic of conversation and feature prominently in deliberations of the Social Partners, and finally

7) appreciating that the practice of medicine is at once a science and an art, founded on the pillars of research and service, and recognizing therefore that improvements in cardiovascular services cannot be sustained unless all components are fully developed, it is a final recommendation that the School of Clinical Medicine and Research of the University of the West Indies should establish a Professorial Chair in cardiology in an effort to strengthen the academic aspect of cardiological development.

So as I said a few moments ago, much has been achieved in cardiology in Barbados and here at the QEH over the past 40 years and much is planned as we look to the immediate and longer-term future. For my part, I shall look on from the sidelines as the present players and the new players seek to build on what has been achieved in an effort to provide the highest level of cardiovascular services to the people of Barbados and the region. And I wish all well.

Finally, I would like to emphasize the need for teamwork and recognize the vital role that has been played by all members of the health care team and employees of the hospital, not only in cardiology but in all disciplines, for without their contributions few of the significant achievements over the past 40 years would have been possible and none are sustainable without their ongoing contribution as they often go beyond the call of duty. And so in closing, I would like to pay special tribute to those individuals who are not medical doctors but played an outstanding part in providing the shoulders for many of us to stand on over the past 4 decades. These include but are not limited to Mr. Hazel White, Former Orderly and ECG technician, Ms. Terese Gloumeau, former senior cardiac technologist, Sister Grace Christie, Mrs. Lestine Nurse, Senior Cardiac Technologist, Ms. Stephanie Bryan, pump technician and Sister (now DNS) Bernadette Harris, and all those many other members of staff in several departments of the hospital. I commend them all as role models.