

## HOSPITALS

**Mr. Chairman,**

The current account estimates for **Head 24 – Hospitals** can be found beginning on **page B-137** of the Estimates Book.

These estimates reflect grants and subsidies provided to the Bermuda Hospitals Board:

(A) To pay the **King Edward VII Memorial Hospital (KEMH)** for one hundred percent of the hospitalization cost for children and the indigent, seventy percent of the cost of patients between the ages of sixty-five and seventy-five years of age, and eighty percent of the cost of care for patients over the age of seventy-five years; and

(B) To fund the net cost of operating the **Mid-Atlantic Wellness Institute (MWI)**.

## 2015/2016 ESTIMATES

The estimates for 2015/2016 are shown on page B-154 and amount to a figure of \$146.835 million, which is the same budget received in the previous fiscal year.

A subsidy of \$109.491 million has been allocated to pay for the billed acute care services of the Young, Aged, Indigent and Geriatric at the **King Edward VII Memorial Hospital**.

**The Mid-Atlantic Wellness Institute** is provided with a grant \$37.344 million.

**Mr. Chairman**, I would like to start by noting that the budget under debate today, as has historically been the case, is simply the MWI grant and the amount budgeted by Government for the hospital subsidy. The latter is the estimated cost of hospital services for the youth, aged and indigent populations. It forms less than half of revenues for the Bermuda Hospitals Board, with the rest coming from private healthcare insurers, FutureCare, GEHI and private individuals.

Mr Chairman, the subsidy listing in the budget represents the amount paid by Government for the aged, youth and indigent in response to the services used by these groups. In and of itself it simply states the estimated amount Government expects to pay Bermuda Hospitals Board for people covered by the subsidy. This number is impacted by increases in hospital fees, changes to eligibility criteria, increases in the number of services accessed by these groups, new fees and services being added, and increases in the numbers of people in these groups.

At this time, we are not changing the criteria for subsidy eligibility, nor the amount covered. No new fees and services have been approved by the Bermuda Health Council other than some technical adjustments for the opening of the New Acute Care Wing, reflecting the new standards of care on the inpatient unit, and the implementation of the East West Ambulance Service.

The Bermuda Hospitals Board, in its entirety, makes up 44% of the healthcare systems costs, according to the latest Bermuda Health Council statistics. While this means the majority of the costs are from outside the Bermuda Hospitals Board, this still represents the largest single portion of the healthcare system.

This is because the Bermuda Hospitals Board provides the largest portion of services – both in breadth and depth – and is the only 24-7 provider of healthcare services in Bermuda. It includes a wide range of acute medical and psychiatric care services, including Emergency, Surgery, inpatient care, pathology and diagnostic imaging; it also provides a large range of non-acute care services including chronic disease management, cancer care, dialysis, physiotherapy, occupational therapy, speech pathology, long term care, wound care, day hospital, substance abuse, learning disability, acute mental health, and vocational rehabilitation services, as well as a number of community services that aim to keep people out of the hospitals, from home care, to community mental health outreach teams and group homes for mental health and learning disability.

Bermuda Hospitals Board's scope and scale often brings more focus to how much it costs the country to run, than any other area of the healthcare system. The hospital subsidy is certainly the largest portion of the health budget for the Ministry of Health, Seniors and Environment.

As we review the Bermuda Hospitals Board budget, and what is being done to improve services and turn their financial situation around, we need to understand the context. There are international costs of drugs, equipment

and supplies that we cannot control in Bermuda, but which make hospitals more expensive to stock and equip, even before you look at staffing.

Where we can make a difference is in how the entire healthcare system interacts and cooperates and how individuals can improve their health and wellbeing. If we can begin to improve this, we will be able to deliver the one thing I believe everyone in our country wants – healthcare services that are accountable, high quality, available and affordable for all who need them, and financially sustainable.

You cannot cure diabetes by treating its symptoms, even though symptoms need urgent treatment as they arise. A foot ulcer can heal, a heart condition can be treated, but unless the individual and his or her health care providers address the underlying condition through improved diet, more exercise and potentially drugs, he or she cannot manage the disease and symptoms will continue to get worse.

So what is the underlying condition that ails the Bermuda health care system – and for this debate, critically, how is Bermuda Hospitals Board going to address them? The answer is in modernizing the system and our hospitals, ensuring maximum efficiency and effectiveness.

The per capita cost of health care in Bermuda is one of the highest in the world. Public health statistics related to life expectancy and the burden of non-communicable chronic diseases demonstrate poor value for this investment. The growing prevalence of non-communicable chronic diseases such as obesity, diabetes, cardiovascular disease, hypertension,

end-stage kidney disease, asthma, cancer and poor mental health urgently demands a more proactive, effective, efficient and integrated model for organizing, managing and funding Bermuda's health and wellness.

Furthermore, Bermuda is facing an ageing demographic, and medical inflation driven by both unit cost and volume of services in excess of growth in the economy.

Bermuda Hospitals Board, as the island's only acute care facility, has responded to the community's medical and psychiatric needs through the provision of services which in the past 40 years have grown well beyond its original mandate.

Demand for services continues to grow but the rapidly rising costs of healthcare, in line with local and global trends, means the ability of the commercial insurers, Government, and private individuals to pay for these services is diminishing. If left unchecked Bermuda Hospitals Board will not be able to meet its medical and financial obligations, which will negatively impact an already poor health position. This is not acceptable for anyone.

In February, 2013 the new Board of the Bermuda Hospitals Board determined that the clinical and financial concerns along with well-publicized legacy issues were impacting public confidence and committed to addressing the issues. Financially, expenses were outpacing revenues and the construction and completion of the new Acute Care Wing placed an additional unsustainable financial burden on the organization. A wide range of cost containment initiatives were implemented, and a detailed

independent review commissioned to fully understand the hospital's clinical and financial position.

Bermuda Hospitals Board, operating within the current Bermuda health system, is challenged with unnecessary duplication of services, old and ineffective processes, and complicated patient journeys which increase patient risk. Patients cannot be discharged easily from acute care beds as the community does not have sufficient beds, duplicate tests are carried out and there is no consistency in care—all leading to delay, and adverse health outcomes.

To become a high performing, high quality hospital within the Bermuda health care system requires an integrated and patient-focused health care approach. This needs teamwork by the full range of medical professionals across the system. Such teams would work with shared information and engaged patients, abetted by electronic health records and chronic disease registries, to move the locus of care from hospital to home and community, at lower cost and with improved outcomes.

As a reminder, much of our legislation and structures were established almost 50 years ago, when our population was just over 50,000 people, 23% lower than today, and when chronic diseases such as diabetes, kidney disease, and hypertension were much less common. It was a time when there was relatively little competition in the healthcare market, there was no, Mammography, CT or MRI equipment, and very little access to specialty services on-island. At this time very few controls and safeguards existed in the system as there was much less to regulate, lower incidence

of chronic disease to manage, and with fewer providers available it was easier to coordinate a patient's care journey.

Unfortunately, regulation, accountability, safeguards, controls and care plans have not evolved as the system changed to manage chronic disease. There are not adequate checks and balances in the system to ensure consistently high quality and to ensure clinically proven best practices are being followed, whether inside or outside the hospital. This is not just about accessing diagnostic tests. It includes more basic things like whether all community doctors are following the diabetes and hypertension guidelines with their patients. Are there adequate safeguards to ensure a doctor refers someone for the most clinically appropriate test for their symptoms, at the right time? Are payers, including insurers, protecting clinical best practice and patients by paying providers based on volume – how many tests they do – rather than if they are improving patient outcomes?

This outdated structure and legislation is the reason our hospitals and all other healthcare providers have grown so haphazardly – responding to needs with more services, but without any guiding structures in place. It is how the private and public sector service has grown without any review of what the island actually needs, and without thought as to how healthy competition that encourages quality and improves efficiency becomes a business-driven push to increase volume and improve revenues rather than meet local clinical needs.

All of this unplanned growth leaves patients exposed. Tests and procedures always come with risks – whether it is radiation exposure, or reactions to contrasts or anaesthesia, or surgical wound infections or complications. When they are clinically necessary, the risks are worth it. But if it is duplicative or unnecessary, then the risks most certainly are not. Certainly the increase in costs, a burden that is borne by us all, is hurting us too much.

Bermuda needs a system wide solution. And this will be the focus of the Bermuda Health Plan, which is currently being finalized, and which will address the system as a whole.

For the purposes of this debate, however, we must be limited to the issues related to the hospital subsidy for the Bermuda Hospitals Board. As the major provider of tests, services and procedures Bermuda Hospitals Board has a big role to play within the plan and it highlights the complexity of managing the system issues too.

The Bermuda Hospitals Board situation is exacerbated by its size, its legislated mandate of running a 24-7 service, unlimited access, and because – when needed by the people on island - it provides more specialized services because they are needed even if they do not always make a profit. A private provider does not have 24-7 overheads, can pick and choose the most lucrative services and tests, and does not have to maintain a wide spread of services. However, everyone in the system will need to become a part of the solution and it will not be easy as the experience of Bermuda Hospitals Board highlights.



The Bermuda Hospitals Board has already voluntarily put in place guidelines around clinically appropriate testing that ensures only clinically appropriate testing takes place.

It has caused a reduction in diagnostic testing that has seriously impacted its revenues. It is the right thing for patients and for the country, but it is causing further strain. Additionally, as the Bermuda Hospitals Board is the only one implementing these quality control measures, it is not yet helping cost control in Bermuda. The business is simply going elsewhere. We have seen this on the MRI side. When Bermuda Hospitals Board reduced its hours, a competing practice simply extended its hours to fill in the gap.

On blood testing side, Bermuda Hospitals Board discontinued three tests for general physician referral, although made them available if directed by a specialist. The tests simply appeared at a competing lab. This highlights the issues facing Bermuda Hospitals Board and Bermuda as a whole. Bermuda Hospitals Board put itself in a more challenged position in order to do the right thing for the system and patients. But there was no benefit to the system. The money that would have helped control costs for everyday Bermudians struggling with rising healthcare premiums, simply went into private hands.

Quite simply – squeezing Bermuda Hospitals Board alone does not necessarily save the system money and does not resolve the challenge of controlling rising healthcare premiums which all Bermudians currently face.

## Financial Context

Bermuda Hospitals Board has major financial challenges. Last year the Minister reported on the dire financial situation being faced by Bermuda Hospitals Board. It was, at that time, predicted that Bermuda Hospitals Board would run out of money in the current fiscal year. Action had to be taken.

A number of measures were taken rapidly. A ten per cent reduction in operating expenses was successfully implemented in the last fiscal year, and a fifteen per cent cut was put in place for this fiscal year. The Bermuda Hospitals Board is well on its way to achieving this.

All items of discretionary expenditure have been reviewed and spending which is not necessary, or does not have a benefit which contributes to better patient outcomes, has been eliminated. An ongoing review of vendor contracts is producing good results and is expected to help save up to 20% in contract costs. Smarter and more effective procurement practices have been established. Value for Money procedures including enhanced business case justifications combined with post project review procedures have been implemented. Strict rules and approval mechanisms are now in place.

Spending on capital improvements has been curtailed to only the expenditure necessary to protect life and safety within the built environment. All these measures have helped push back the danger by nearly a year and we must pay tribute to the staff and management of our

hospitals of making these cuts without damaging services. But these actions, albeit very welcome, are not a long term solution.

Hospitals around the world are struggling with the same issues as Bermuda Hospitals Board. Patients expect the latest medical advances to be available to them. Ageing populations and increasing costs of community care result in longer waiting times in Emergency. Hospitals have challenges discharging patients back into the community, causing longer than necessary length of stay. Hospitals also have to balance double digit year on year increases in the cost of drugs, treatments, staff and equipment, with reduced budgets. Economic difficulties in the community also result in increases of the under insured and those that are not insured, who still have to be cared for.

Bermuda Hospitals Board is not alone in facing these pressures. What is different is that the Bermuda Hospitals Board delivers Bermuda's only medical and mental health hospital services. It has to provide a wider range of services to the community than most other hospitals as there are no other options, and it is the place of last resort for people who cannot get access to healthcare anywhere else. Worldwide trends are for health organizations to consolidate, build large capacity, become dominant in their market segment and have pricing power and cost advantages due to scale of operations. They know their business and often invest only in those areas which are profitable to them, concentrating on the specialties they are best in, even when the world around them is changing.

Bermuda has no such advantages. The Bermuda Hospitals Board as the Island's only acute care hospital has to operate within a difficult and often fragmented health care system which does nothing to enable it to exploit the advantages and reduce costs that other systems around the world are able to do.

The financial pressures are only increasing. On top of monthly payments of over \$2 million per month for the new acute care wing, Bermuda Hospitals Board has responded to the national financial crisis the Government is dealing with, even though this has significantly reduced its revenues.

The Geriatric Subsidy was withdrawn two years ago. This subsidy paid over \$16m per year for the continuing care services. Instead Government this year agreed to pay \$10m per year for this and the next two years towards this service. This only partially covers the costs of the current service which cares for about 70 residents, with Bermuda Hospitals Board making up the rest from its other revenue streams. The Bermuda Hospitals Board is calculating how many beds the \$10m does pay for, and is seeking ways to save costs within the service as I will speak to shortly.

Finally, Government has instructed Bermuda Hospitals Board to keep the urgent care centre running for the national good, despite this being a loss-making venture. The two hurricanes we experienced this year highlighted the benefits of the facility for the East End, and as part of ebola preparedness this facility could potentially be used if more than one person was infected. However, while these are nationally beneficial, they do not

make up the shortfall in running the facility, for which Bermuda Hospitals Board has to pay. Bermuda Hospitals Board is working to find ways to utilize the facility more effectively, but it is not expected to break even in this or the coming fiscal years. And simply ramping up the number of people accessing the existing service will not help the cost of healthcare services on island. It will simply drive costs up more.

### **Financial Review**

Mr. Chairman, last year my predecessor and colleague gave a very full account of the reasons why our hospitals are under financial pressure. I do not feel it necessary to repeat that explanation but now that we are a year further on I do want to offer some additional comments by way of background.

Mr. Chairman, let me start with the revenue which the Bermuda Hospitals Board earned during the year ended 31<sup>st</sup> March 2014. At a little over \$300 million, including Government grants and subsidies, total revenue decreased by around 8% from that reported for the fiscal year 2012-2013.

Inpatient fees held steady for the year, but outpatient fees fell by around 10% largely as a result of measures taken by the Bermuda Hospitals Board to manage utilization of diagnostic testing and laboratory services.

This trend continued into the fiscal year 2014-15 with revenue falling 5% under budget for the year-to-date. It is a classic example of the Bermuda Hospitals Board doing the right thing for the country as a whole but in turn

suffering a negative impact on its own financial position. It's what I call revenue spin and going forward we need to be careful to avoid this.

The Bermuda Hospitals Board is entitled to be paid fairly for all the services which it properly provides, but it has continued to provide care even when payment has not been possible and this impacts its revenues. In addition, it has incurred costs due to the inability of people to pay for services. Services for inpatients and emergency patients have also been provided without payment, when the Bermuda Hospitals Board believes they are in the best interest of the patient and their care. On many occasions during the last year the Bermuda Hospitals Board has also provided skills and experience, facilities and equipment, to assist with national issues at no charge, and it will continue to fulfill this public commitment. But to do so, the Bermuda Hospitals Board has to carefully manage its resources to ensure that its core mandate of providing acute care services is not endangered. In short, choices have to be made and if the funds are not there, these additional "free of charge" services will no longer be able to be provided.

The issues surrounding chronic disease management, in particular diabetes, continue to put enormous strain on the Bermuda Hospitals Board. Dialysis services are projected to grow, and on the hospital's current best estimates, at a rate of 9% by the end of the current fiscal year and by up to a further 10% in the year 2015.

Mr. Chairman, the Bermuda Hospitals Board has estimated that taking into account the increasing demand for its services from the public that it

needed a minimum of \$114.825m in the fiscal year 2015/16 to pay for the billed services of the Youth, Aged, and Indigent, including a \$10m grant for the Continuing Care Unit. This amounts to an overall increase of 4.9% from the approved 2014/15 subsidy, modest when compared to annual medical inflation rates approaching 10%. The budget proposal before you today provides for no increase over and above the level of the 2014/15 subsidy means that we will have to work extremely hard to reduce utilization at the hospital if the Subsidy is to come in on budget.

So the question must be, how can the Bermuda Hospitals Board continue to provide the level and of service expected of it, whilst delivering on the Government commitments of increasing access and quality, when it has less money to start with?

Before I attempt to answer that question let me make a few comments about how the Bermuda Hospitals Board has sought to manage its costs over the past year.

The Bermuda Hospitals Board fully recognizes that like any large well run organization it needs to be efficient in the delivery of its services. In the current financial year, the Bermuda Hospitals Board has implemented a 15% reduction in administrative and overhead costs, this is on top of the 10% achieved last fiscal year, and is on track to achieve this by the end of the year. Employee costs however remain above budget, despite a number of measures being put in place such as hiring freezes, implementation of adjustments to physician compensation packages, and better management of sickness and absence levels. The increase in employee costs is due to service demand which impacts employment

numbers and extensive use of overtime, locums, and interims and is being addressed as part of a larger plan to address financial sustainability.

Mr. Chairman, with regard to the next year one of the biggest challenges that the Bermuda Hospitals Board faces is in regard to its liquidity and working capital needs. Put simply, it is not generating enough cash to pay for all the demands that are being placed on it and at some time it will run out of cash resources. Until the changes which are being planned start to deliver cashable savings, the Bermuda Hospitals Board will have to find ways to finance its operations.

During the autumn of last year a comprehensive refreshed view of the financial position was completed to confirm the trajectory of the Bermuda Hospitals Board cash flow, and identify the potential size and timing of any funding requirements. A refreshed forecast was built from the bottom up and incorporated the additional incremental costs now being incurred since the New Acute Care Wing became operational. It's important to note that any forecasting has a certain amount of judgment involved in and must be updated from time to time to take account of the impact of changing assumptions and actions implemented. Last year, the Bermuda Hospitals Board forecast was going to run out of money at the end of 2014. This clearly was not an acceptable position so it worked hard to manage its cash and prolong, as far as possible, the time when it would become cash delinquent. It has taken all the steps it can, and while it has been able to postpone this day, at some point in the near future cash will be exhausted.



In the coming year there are some uncertainties which will have to be managed. The coming on stream of the New Acute Care Wing is a very welcome event for the country as a whole but as we all know the facility will have to be paid for. The additional costs per annum of the New Acute care Wing to the Bermuda Hospitals Board will be in the order of \$40 million. This amount is too great to be absorbed by the Bermuda Hospitals Board and it's unfair for the public to expect to benefit from the new facilities without any additional charges. The Bermuda Hospitals Board, the Bermuda Health Council and my Ministry are carefully examining the options with a view to bringing forward proposals shortly.

Finally Mr. Chairman, I am very conscious of some of the revisions my Ministry is making, for example to the Standard Hospital Benefit and Fee Regulations. While positive for the country as a whole, these changes have the potential to inflict negative consequences on the Bermuda Hospitals Board. My officials will keep this situation carefully under review and work closely with the Bermuda Hospitals Board to ensure that any adverse effects are mitigated.

One final word on this subject. The Bermuda Hospitals Board makes a very important contribution to the life of our community, and while it receives Government Grants and Subsidies, it contributes as much and even more back to the Bermuda economy through the employment of local workers, purchase of supplies, goods and services, payment of Government taxes and fees for permits, and licenses.

**Bad Debt at the Bermuda Hospitals Board**

A topical issue in this fiscal year was the issue of people not paying their hospital bills, and ending up in prison for bad debts.

Not surprisingly the amount owed to Bermuda Hospitals Board by uninsured private patients on unpaid hospitals bills is increasing. It was over \$8 million in December 2014, a rise from \$6 million the previous year. This is a reflection of difficult financial times.

First and foremost, it must be stressed that people must seek ways to be covered for healthcare services, no matter what their situation. Whether it is through a private insurer or through Government schemes such as HIP and FutureCare, or whether someone applies for Financial Assistance, or seeks indigent status. Even if you are healthy, you do not know what is round the corner, whether an unexpected illness or accident. There are options for people who are out of work, retired, or who find themselves in severe financial distress. So individuals should check out what their options are before something happens and they find themselves in debt.

For those who do find themselves without insurance or coverage by Government subsidy, and with hospitals bills they cannot pay, the first call should be to the Bermuda Hospitals Board Credit Department.

The Bermuda Hospitals Board Cash Collections and Credit Control Procedures are a well-established and normal process that reflects the

legislation under which the Bermuda Hospitals Board operates, namely the Hospitals Act 1970.

Bermuda Hospitals Board has every sympathy with people who are struggling to pay their bills and is very mindful of the difficult economic climate. If an uninsured patient is unable to pay for services provided payment options are discussed with them, including referral to government agencies, including Financial Assistance. Payment plans can and do accommodate these challenges, and can be changed should circumstances improve or deteriorate. This is why there is sometimes a lengthy process before any individual account is passed to a credit collection agency. An individual is given every opportunity to establish a payment plan that reflects his or her circumstances and we cannot stress enough the importance of people remaining in communication with the credit department, especially if circumstances change, to minimize the need for an outside agency to assist. Bermuda Hospitals Board only passes accounts to a credit agency when all other avenues have been exhausted.

No individual is ever denied care by the Bermuda Hospitals Board due to their inability to pay.

### *Collection Process*

Mr Chairman,

Given the prominence of this issue, my Honorable Colleagues might find it helpful to know the process that is followed. On admission, patients are asked the name of their insurer or other method of payment. If patients are covered by insurance then the bills are sent to their insurer (government or commercial). The Bermuda Hospitals Board has an Insurance Liaison Administrator who monitors commercial and government accounts to facilitate timely receipt of all insurance payments. If, and only if, an insurance company rejects coverage, the account is forwarded to the patient, who is notified his or her insurance carrier will not pay and that he or she is expected to settle the bill. This process is no different to going to your local dentist, etc.

If patients are uninsured and cannot pay for their care, they are referred to the Bermuda Hospitals Board Outpatient Credit Clerk in Admissions to be interviewed. The Credit and Collection Clerk will inform the patient of their obligation and discuss how best to arrange payment. The possible options are:

- Agreeing on a Special Payment Arrangement which is normally agreed over a 12 month period. Depending on the specific nature of the case BHB may assent to a longer period.
- Temporary indigent status, explained later
- Referral to the Department of Financial Assistance for a long term assistance.

For inpatients, each day the Inpatient Clerk reviews the Admissions Separation Form from the previous day/night. These admissions are also checked to confirm the nature of their insurance coverage, demographics, and payment method. Uninsured patients are visited by the Clerk who will then inform the patient of their obligation to the BHB, discuss and outline the various payment arrangements.

The Bermuda Hospitals Board adopts a lenient approach in that patients deemed responsible for their bills are not required to provide any security to support their debt with the exception of a Special Payment Arrangement, where patients may, if they wish, provide a guarantor. Bermuda Hospitals Board will work with patients as much as possible to help them resolve their indebtedness in an amicable and sensitive manner, even though this increases the possibility of defaults and decreases the possibility of collection of the full debt.

There are sometimes patients unable to pay their bills who Bermuda Hospitals Board is not able, despite strenuous efforts, to contact so they can be assessed for indigence. Also on occasions patients default on their agreed Special Payment Arrangement, and this often happens more than once. Bermuda Hospitals Board has no option in such circumstances but to refer these patients, once all attempts at resolution have been exhausted, to outside collection agencies and to absorb the resultant losses if the monies cannot be collected.

In the year ended March 2014, the Bermuda Hospitals Board wrote off over \$1 million of bad debt related to patients' inability to pay.

### *Bill Process*

Patients are mailed detailed bills approximately 4 days after discharge and each account is monitored on a daily, weekly or monthly basis by a collection clerk. There are three Bermuda Hospitals Board Credit and Collection clerks who monitor and follow-up outstanding patient responsible billings using an Automated Collection & Tracking System (ACTS). Patient's accounts are sorted alphabetically and each collector monitors accounts based on predetermined criteria such as partial payments, detail bill sent, returned mail, or no patient contact.

Patient accounts with small or insignificant balances are reviewed and a recommendation for write-off made to the Chief Financial Officer.

Patient accounts with credit balances are verified, re-checked and a refund issued to the patient.

Patients who are not paying their accounts as previously agreed are contacted to ascertain why payments are not being made. Based on the result, demand letters are sent by BHB or the patients are referred to be assessed for temporary indigent status. Some patients are invited in to setup Special Payment Arrangements (SPA) with the BHB. These SPAs

are monitored by the Collection Clerks for compliance. In addition on occasion, and with the permission of the CFO, discounts have been provided to patients as an incentive to pay. BHB is also considering a contribution towards the insurance premium of those in financial difficulty with repayment made to BHB from any subsequent insurance payment. Finance Department continually seeks innovative ways of incentivizing patient payment and will continue to do so.

### *Credit collection services*

When patients default of their payments to the BHB, and only after every attempt has been made to reach a satisfactory solution, the accounts are handed over to one of the local collection agencies used by The Bermuda Hospitals Board:

- Christopher Swan & Co
- The Bermuda Credit Association; and
- Bermuda Debt Collection Agency.

On a monthly basis, the Credit and Collection Clerks transfer aged accounts or accounts to one of the above local collection agencies. A Bad Debt Transfer List is produced and totals are compiled on a monthly Collection Agency Summary showing amounts transferred by clerks to each agency. This is reviewed and signed off on by the Revenue Cycle Manager and the Assistant Controller. Once an outstanding balance has been transferred to the local collection agency, the Bermuda Hospitals Board ceases to play any active part in the collection of the debt. The Bermuda Hospitals Board does not and will not refer a debt to the courts.

Such action is only taken by the credit collection agency after the debt has been handed over from the Bermuda Hospitals Board.

The Bermuda Hospitals Board also uses a North American (Florida) based collector, Sunbelt Medical Billings. Sunbelt is responsible for collecting debt from international patients, who are primarily from the USA. SB is engaged at the time the patient is discharged and is paid a fee for billing and collection from the Bermuda Hospitals Board not the patient.

The Bermuda Hospitals Board Insurance Liaison Administrator monitors all commercial insurance and government accounts on a daily and weekly basis ensuring that weekly payments are received. The Insurance Liaison Administrator obtains information on rejected insurer's claims and ensures prompt resolution with insurers, and also meets with larger commercial insurers periodically to discuss and resolve any issues related to outstanding accounts. She promptly notifies her Manager/Assistant Manager of any difficult issues relating to the collection of commercial insurance balances. Commercial insurers generally pay the Bermuda Hospitals Board promptly.

### *Collection Agency fees*

Collection fees range between 25% and 33% of the actual collections plus any miscellaneous disbursements (e.g. court fees). As is normal practice in the collection industry, if the collection is successful, the fees are added to the outstanding balance and recovered from the patients.



*In summary:*

Problems only occur when people refuse to pay any of their bill, refuse to work with the Credit Department on finding a way to address their debt, or who simply refuse to contact the Credit Department to address their situation. Eventually, the Bermuda Hospitals Board has no choice but to refer the debt to an agency if an individual refuses to work out a solution.

People who end up in court, will simply be told by the courts to do exactly what they could have done right at the beginning – find some way, however small, to repay their debt. People who end up in prison do so because they do not follow the court's ruling. There is a long journey before this happens, and many opportunities to prevent it from happening.

**Modernization Project**

Mr Chairman,

In last year's budget debate, the Minister spoke about financial sustainability work groups being established at the Bermuda Hospitals Board in order to address the financial challenges our hospitals were facing.

The Minister announced the Bermuda Hospitals Board had entered into a contract with PriceWaterhouseCoopers as it needed analytical and research support for its staff and management in order to establish a way forward. This work was undertaken and resulted in the establishment of a Modernization Project, with the goal of reshaping the Bermuda Hospitals Board.

over the next 28 to 24 months by maximizing efficiencies, focusing on the most effective and evidence-backed processes, and taking out all possible unnecessary costs.

The Bermuda Hospitals Board is looking now at the needs of modern day Bermuda and the proven ways other progressive countries have used to improve quality and efficiency. The Bermuda Hospitals Board has to save costs in order to keep its doors open, and it remains committed to helping the country control costs and improve on the very poor healthcare outcomes for our communities. The term 'Modernization' encompasses a wide range of activities – from how surgeries are scheduled and staffing models, to updating legislation and payment models. What is consistent is that all actions must result in changes that meet Bermuda's needs as well as meeting international leading practices in quality, healthcare service delivery and efficiency.

Modernization is not just about restructuring or cutting costs. It is truly looking at how we can best improve the healthcare outcomes for the country while delivering a service that is affordable for residents, and financially sustainable for the Bermuda Hospitals Board

As part of this Project, 80 potential opportunities to modernize have been identified. By setting up a project structure, Bermuda Hospitals Board is able to bring more staff into the process, focus resources, review existing and new opportunities, set deadlines and ensure accountability for achieving goals.

A Project Office has been established. Headed up by a Modernization Advisor, who is on a temporary contract, the office comprises of Bermuda Hospitals Board staff from a number of disciplines, from front line care to Human Resources and communications. It is expected that some additional external support will be needed to help with analytical and project management skills that do not currently exist within the Bermuda Hospitals Board. However, Bermuda Hospitals Board staff will be very much involved. This will be through members of the project team, through taskforces being set up to look at different areas, and through a more extensive outreach and communications effort that is necessary to involve staff in the process. In total, the cost of all external support for the Modernization Project has been \$1.3 million to date.

To ensure the highest levels of Governance and Accountability, the Modernization Project reports to a the hospital's Executive Team, and to a Modernization Committee which is a subcommittee of the full Board and reports monthly to the full Board on progress.

The most important point to make is that this is not a purely financial project. There are vital clinical deliverables to ensure safety, quality and satisfaction should also be improved. In healthcare, efficiency does not just mean low cost. It means patients move through their care experience without duplication, without clinically unnecessary consultations or tests, and without unnecessary delays. It means people's care journey is properly coordinated between hospital departments, and between different providers. It results in faster admissions from Emergency to an inpatient

bed, or surgery, and getting safely discharged and home without delay. Critically, a more efficient service reduces the potential for errors.

There are, however, definite financial imperatives. If no further action is taken, the Bermuda Hospitals Board will be in debt in the order of \$235 million by 2018. If that happens, the range and quality of services will be impacted, and the Bermuda Hospitals Board will not be able to honor its contractual commitments including the New Acute Care Wing which is subject to a Government guarantee.

The current list of 80 cost containment, cost restructuring and strategic transformation opportunities that the Modernization Project is seeking to execute have the potential to save over \$66 million across clinical and non-clinical areas spanning short, medium and long term implementation timeframes. It is not an exhaustive list, and it is expected other opportunities will be discovered as the Project gears up.

The opportunities will take time to implement, but if achieved, will return the Bermuda Hospitals Board to a cash positive position by 2018 with a debt position of around \$70m. Given the time it will take to implement and benefit from the savings, during the period of implementation the Bermuda Hospitals Board will require a financing facility of between \$120 million - \$150 million.

Change Management Principles have been agreed by the Board that ensure accountability, respect, and communication are prioritized throughout the process. This is not an exercise in cutting jobs, and

everything will be done to preserve positions. There are ways to reduce a workforce without wholesale job losses – including natural turnover, retirements, non-renewal of contracts and redeployment to other needed positions. Indeed, in a healthcare environment, indiscriminate redundancies based on cost alone can result in unsafe and unsustainable services. Chasing short term savings in this way does not build a long term, sustainable, high quality service. And that is the goal of the Bermuda Hospitals Board. This is not to say that some individuals will not be impacted, however, and the Bermuda Hospitals Board will do all it can for those who cannot find redeployment opportunities, to support them through the transition.

Mr Chairman,

In support of the Modernization Project, the Cabinet approved the following in this fiscal year:

- Maintaining at a minimum the current level of Government grants and subsidies to Bermuda Hospitals Board for the next three fiscal years
- Approval for a grant of \$10m for the provision of Continuing Care Services for the next three years
- Approval for the Bermuda Hospitals Board to raise external financing and provision of a govt guarantee
- Approval for the Minister to put in place collaborative measures necessary to assist in the implementation of the BHB Modernization Plan

## **Senior Management Restructure**

Mr Chairman,

I would like to now announce the first actions of the Modernization Project that will help position the Bermuda Hospitals Board to manage this major change project in a more streamlined way.

One of the Modernization Project's first actions was to restructure and reduce the Senior Management Team. Effective change starts at the top, and from 1 January this year, the top team was reduced from 13 to seven members. The goal of this restructure was to build a more focused team, with a strong clinical drive. The previous structure had been established some years ago at a time when Bermuda Hospitals Board was focused on growth and expansion, and building a new acute care wing. The focus now is different, and so are the skills needed at the very top table - the Bermuda Hospitals Board has to be nimble, informed, focused and effective.

Clinical representation was strengthened by adding the Chief of Psychiatry to the team – a position that had never been included before.

This not only gives mental health, learning disability and substance abuse services a stronger voice, but is also supports the legislation more appropriately. There are four legislated positions in The Bermuda Hospitals Board Act, the Chief Executive Officer, the Chief of Staff, the Chief of Psychiatry and the Chief Financial Officer. All four members are on the newly named Executive Team, with the addition of the Chief of Nursing, and the two Chief Operating Officers from the King Edward VII Memorial Hospital and Mid-Atlantic Wellness Institute. It should be noted that over the next two years, the two Chief Operating Officer positions will

be merged and from 2017, there will be one position overseeing all campuses and reducing the Executive Team further to six.

Of the other positions, three will remain, but no longer be a part of the senior team. And three positions are being disestablished. The Chief Information Officer has already decided to leave. The Chief of Human Resources and the Vice President of Nursing, a position that had been on secondment for some years, will be disestablished by the end of this fiscal year.

On behalf of Government and the country, I would like to thank those who are leaving. I know that the Bermuda Hospitals Board is sad to lose people who have brought such value to the organization. But it is also important that the Bermuda Hospitals Board change to meet today's challenges, and right that that change starts at the top.

## **Payroll and Pension Changes**

The second step taken by the Bermuda Hospitals Board as part of its Modernization Plan was to Finally, move in line with legislated payroll tax contributions and for non-unionized workers, who mainly comprise senior management and physicians, it has also moved in line with legislated pension contributions.

All staff are impacted by the payroll change. Currently the Bermuda Hospitals Board had paid in excess of legislated requirements so that staff only paid 4.75%, instead of the legislated maximum of 5.25%. This was a benefit the Bermuda Hospitals Board was pleased to share with staff when

it had funds to support it. It no longer does, however, and from 1 April 2015, staff contributions for payroll tax will rise by 0.5%. This move alone will save the Bermuda Hospitals Board \$750,000. We must recognize that staff are being impacted by these changes. While the saving will help save jobs, it doesn't mean people won't feel the effects in other ways.

With regards to pension contributions, senior management and physicians now pay 5% each towards their pensions, when previously the Bermuda Hospitals Board had paid 6%, with 4% from those employees. For most Bermuda Hospitals Board employees the 6% benefit has continued for the time being. But for the senior management and physicians, it will change April 1, 2015. In addition, for the relatively small group who earn over \$200,000, pension contributions will not be paid at all over that amount, in line with legislation.

### **Upcoming Modernization Projects**

Other projects that are being worked on include a more efficient surgical scheduling process that could help the Bermuda Hospitals Board reduce the number of Operating Rooms it needs to maintain without impacting the number of surgeries. Work is also underway to changing staff scheduling on the wards to more effectively use staff to reduce the need for overtime and casual workers.

These are very difficult and challenging times for the Bermuda Hospitals Board and the decisions they are making are right but not easy. The staff is doing what is needed to keep services viable and preserve jobs.



Although all the ground work and preparation, and first actions of the Modernization Project took place in this fiscal year, the implementation of the Modernization Project is going to be a major deliverable for the next fiscal year. Government is committed to supporting the Bermuda Hospitals Board in its endeavor and ensuring that this work dovetails into the Bermuda Health Plan, Bermuda's economic strategies so that we can begin to give the people living in Bermuda the best service, the best outcomes and the best value.

### Accreditation 2015

Mr Chairman, the Modernization Project is not the only major deliverable for this coming fiscal year. The on-site survey with Accreditation Canada takes place next fiscal year in May 2015. This survey tests the Bermuda Hospitals Board practices against hundreds of patient safety standards. Surveyors come into every back office and support department and front line operation, talking to staff and patients, and pulling patient records to measure what happened against what should be happening.

Working to meet these standards is the goal, every day. However, the survey is a time to take a snapshot of where the hospitals stand. It takes time and resources to prepare, they measure everything from work-life balance to whether the right medication checks take place at the bedside; from surgical safety checks before each operation to educating long term care residents; from how well the Bermuda Hospitals Board reflects and listens to community needs to whether it has appropriate ethical frameworks in place for clinical and administrative decision making. No

other organization on island goes through such a comprehensive test of patient safety standards.

Interestingly, the Bermuda Hospitals Board benefits from being tested against the same standards as the hospitals in Canada. There are international standards that are different and recognize that other countries may have different legislation and structures. The Bermuda Hospitals Board operations are tested against the same standards as the Canadian hospitals, a benefit from its long standing relationship with Accreditation Canada.

The timing could not better. The survey was delayed from last year because of moving services to the new acute care wing, as well as the work that was going on in preparation for Modernization.

As Modernization begins to take effect, undertaking this focus on patient safety standards ensures that the Bermuda Hospitals Board keeps the focus of clinical quality in the fore every day, even as financial challenges are managed. The survey should also provide confidence and reassurance to the public that the Bermuda Hospitals Board is conducting its affairs to the highest international standards.

In the last survey, the Bermuda Hospitals Board achieved the highest level of accreditation. The standards are always being updated and improved and added to, so the bar every time is naturally set higher. We look forward to seeing the continued drive to improve reflected in a successful survey in May.

## **FACILITIES AND PROPERTIES**

### **The Big Move**

Mr Chairman,

While the Bermuda Hospitals Board's focus is very much on Modernization and Accreditation in the fiscal year ahead, the fiscal year under review has been all about the completion of construction and move to the new acute care wing.

This project has taken thousands of local and international individuals working on the construction site and on the administrative side of the project, hundreds of Bermuda Hospitals Board staff, two successive governments, two BHB CEOs, three BHB Chairmen, four premiers, at least seven Ministers of Health and multiple Government departments and Permanent Secretaries to complete. It started back in 2008, and before the Americas Cup, if ever there has been a project that has brought all Bermudians together it has been this one. Certainly, it will benefit our community for decades.

It has a cost associated with it, which the Bermuda Hospitals Board will have to address in the coming fiscal year, but for the current fiscal year it was very much about the successful planning and implementation of moving acute care services to the new facility. The equipment had to be checked and tested, staff had to be trained and well-rehearsed in working in their new areas and new process had to be introduced to reflect the new ways of working.

It took years to plan the move, almost as long as the construction period. It was work that took an immense amount of time and effort from staff across the organization. It was not simply about physically moving patients. It was about ensuring new connections and processes were in place that supported the new layout, design and journeys. For example, the Laboratory did not move, so the distance between getting a blood sample between the inpatient units and the lab changed, and so did the process. It was no longer a manual delivery, but using a state-of-the-art pneumatic tube.

Patients are no longer in public rooms, but private rooms – so much more can be done at a private bedside with physiotherapy, occupational therapy and family consultations – but it also takes more time for nurse rounding.

There are fewer acute care beds, because they are now reserved only for the truly acutely ill. People who have alternative level care needs – who require less intensive medical, rehab or therapeutic care, or who are waiting for a discharge to a nursing home – are now in the old Gordon Ward, with an overflow in the old Curtis Ward.

Fewer acute care beds means that there needs to be an efficient discharge process – either to home or to an alternative level care ward – so that the truly sick people have space. So talking about discharge with patients has become more important so that patient expectations are set. You can't come into the new acute care wing to stay – it is for the very sick people who truly need acute hospital care.

Even the way Environmental Services staff organize to clean hospital rooms changed. There was more space to clean and the pressure was on to find more efficient and effective ways of doing it to reduce the need for staff increases. Additionally, with slightly fewer bays in Emergency, the need for a faster admission to a ward from Emergency was needed – rooms on the units had to be cleaned in preparation faster after a discharge, and an improved admissions process was needed.

A new housekeeping response team format was established, so now when a room needs cleaning after a discharge, this team is on call 24-7. In between times they are cleaning the non-urgent areas of the hospital, so they are able to move quickly when the call comes in. Additionally, a hospitalist is now stationed in Emergency specifically to admit patients.

There were inevitable minor teething issues as everyone settled in – signage was a major issue to begin with – namely there were just not enough of them to help orient people so temporary signs were erected immediately and long term replacements are on order. But there were no safety issues and from the moment the Emergency Department opened at 12:01 in the morning of Sunday 14 September, to the transfer of inpatients later that day, to the opening of the outpatient departments on Monday morning, it all went smoothly. Patients who were moved were very positive about the experience and could feel how well everything was planned.

The new acute care wing was officially handed over on 12 June 2014. A key handover ceremony marked the day. This is also the day that payments started. Up until this point the acute care wing was not an

immediate financial obligation. But in June the one off \$40m downpayment was made by Bermuda Hospitals Board, and the monthly payments started.

As the handover date was about 10 weeks later than originally planned, Bermuda Hospitals Board's payments reduced by about \$5m. The payments started later and, as the end date does not change, this is a concrete if small saving to the project. In traditional projects, an over-run would have resulted in contractual claims for extensions of time and increased costs, so the benefit of this kind of public private partnership was helpful.

The Bermuda Hospitals Charitable Trust handed over \$20m of its donated funds to date later in June, and fundraising is still continuing to try and reach the original \$40m target.

Staff, dignitaries and members of the public all had a chance to tour the new facility over the summer. Over 700 people attended the free public tours. This in itself was a huge undertaking as the tours were carried out by Bermuda Hospitals Board staff who gave up a whole weekend to walk people around.

The public tours took place as training and staff orientations were carried out, so it all took meticulous planning.

The ribbon cutting, officially opening the facility, took place on 10 September and on 14 September 2014, BHB commenced services from

the Acute Care Wing after a safe, smooth and therefore successful transition process.

At the broadly widely publicized time of 12:01 a.m., service commencement in the Acute Care Wing Emergency Department was marked by a gathering of staff members and well-wishers in the Emergency waiting area, including the Board Chairman, Senior Management Team members and the Permanent Secretary for Health. After marking the historic moment after midnight, everyone scattered from the new ED wait area to respect the privacy of the potential first patients. The first patient was received just before 2:00 a.m. Debriefing sessions were held daily after the move with relevant operational leads at 8 a.m. the week to capture and quickly address teething problems.

### **Outpatient Pharmacy**

One of the planned changes following the move was to outsource the provision of outpatient pharmacy services, so that Bermuda Hospitals Board could focus its resources on the inpatient pharmacy services more effectively. In the fiscal year under review, it was announced that People's Pharmacy was the successful bidder for the outpatient pharmacy contract at King Edward VII Memorial Hospital ]. The contract allows People's Pharmacy to operate a retail pharmacy in the new Acute Care Wing of KEMH for outpatients and the community.

At the moment, a small outpatient pharmacy is run by BHB in the existing KEMH building. Bermuda Hospitals Board announced last year that it would be seeking an external partner for outpatient pharmacy services.

This would allow Bermuda Hospitals Board to increase pharmacy support for inpatient and other KEMH services, without increasing BHB's costs, as the existing outpatient pharmacists would simply be redeployed to support inpatient services. It has also been agreed that safeguards will be taken to protect patient confidentiality.

When the Request for Proposal was originally released, 14 packs were picked up although only two subsequent bids were received. A Committee including Physician, Procurement, Pharmacy, Finance and Quality & Risk representatives reviewed the bids. The bids were received and reviewed using a blind protocol so that committee members would not know which companies had responded. The committee followed Bermuda Hospitals Board governance and conflict of interest policies to ensure that team members who may have a conflict of interest were excluded from the decision making process. Although both bids were strong, People's Pharmacy was the unanimous winner.

Bermuda Hospitals Board and People's Pharmacy have been working together to ensure similar pharmacy costs are maintained for subsidy patients. In addition, customers will benefit from People's extensive experience as a retail pharmacy and from a wider array of store merchandise conveniently located in the new Acute Care Wing.

Bermuda Hospitals Board and People's Pharmacy are currently negotiating the final details of the agreement. Until the operation is open, outpatient pharmacy services continue in the current location of the existing KEMH. Consistent with all major contracts, BHB's Finance Department will provide



oversight and report on-going performance to the Board's Finance Committee.

### **Utilities Interface Project**

Required work to connect the existing KEMH General Wing and Acute Care Wing started in this year. At the time of the move, the utilities connections did not need to be complete, but the plan was for the two to connect to maximize the efficiencies gained from using the new technology of the Central Utilities Plan in the new wing. The Board approved \$3.9m in funding for the project. The Return On Investment on the project through discontinued KEMH utilization services will be \$1.4m per annum.

### **Long Term Planning for the KEMH and MWI Estate**

Mr Chairman,

No sooner was the acute care wing move complete than work had to begin on planning how best to utilize the existing King Edward facility – which is now called the General Wing. Long term planning for the use of the Bermuda Hospitals Board estate is essential, especially given the challenging financial issues Bermuda Hospitals Board is facing.

Work had already begun to see the cost benefits of moving Continuing Care Services into the vacated fourth floor space in the old King Edward building. A business case was being worked on over the summer to see if it was viable, as it would help consolidate services into one building and potentially enable the Bermuda Hospitals Board to demolish the existing

area housing the Continuing Care Unit which costs about \$2m per year to maintain and keep safe. Before the business case had been approved, however, Hurricane Gonzalo hit and ripped the roof off the CCU building. The financial case became more compelling given the costs of repairing this damage and the Board approved the move and demolition of both the CCU building and the Queen Elizabeth Nursing Residence, which was vacated some years ago due to safety issues. For clarity, it is just the unit areas of the CCU building that will be demolished. The areas housing the chapel, Heddington Gym, Day Hospital and edema Clinic will remain.

Demolition of CCU and QENR is expected to cost in the order of \$2 million.

It clearly does not have the immediate funds for major investments in capital, but the facilities have to be maintained and kept safe, and the usage of existing facilities must be maximized to ensure optimal efficiency in the running of our hospitals.

There is an immediate need to make ready certain areas vacated by services moving into the Acute care Wing. As previously noted, long term care residents from the Continuing Care Unit are being transferred over and preparations, including maintenance, have to be undertaken and paid for.

There is also the ongoing need for maintenance and upkeep of all areas, which must be budgeted for and which will be challenging for the Bermuda Hospitals Board with its lack of available finance.

However, there is vital longer term planning that is required so that the Bermuda Hospitals Board can plan its capital investment finances accordingly. In the current year, \$50,000 was approved in order to commence all preliminary research, and develop a Strategic Outline Case for the long-term Bermuda Hospitals Board Estate Master Plan (EMP), from FY2020 onwards. This will align with the new Acute Care Wing contract term, which expires on 31 March 2044. The Strategic Outline Case will provide a framework for BHB senior management and Board member discussion regarding the need to develop an EMP for BHB's estate, particularly addressing the future service requirements at the King Edward and Mid-Atlantic Wellness sites. This is a one-off capital cost for professional fees to assist with the development of the Strategic Outline Case and it was provided for by an underspent budget within the development office, and is covered under the existing contract with Stantec, the technical advisor for the Acute Care Wing.

## Hurricanes

Mr Chairman,

Bermuda experienced two hurricanes in October, both of which tested both the old and new facilities, as well as the bravery of Bermuda Hospitals Board staff.

Hurricane Fay took most of the island by surprise and Bermuda Hospitals Board was not any different. The storm did not significantly damage Bermuda Hospitals Board properties, but did cause some minor disruption as the storm hit during the morning shift handover on Sunday morning.

However, determined staff mostly turned up for work and services were not impacted.

Hurricane Gonzalo was much larger in size and strength, but thankfully there was ample warning for the Bermuda Hospitals Board staff to prepare and its hurricane preparedness planning paid off. The Hospital Incident Command Center was set up to oversee operations during the storm. Two shifts of core and critical staff were in locked down from Thursday at 7pm until it was safe to release them, so that the shifts could rotate and care could continue to be provided to inpatient and long term care residents. Nearly all departments have to be represented in these shifts, from dietary staff to nurses, housekeepers to physicians, and administrative staff to EMTs. Provision was made for vulnerable people, including almost 20 pregnant mothers who either had high risk pregnancies or were very near term.

The Bermuda Hospitals Board survived the hurricane with minimal interruptions to clinical services, but there was substantial damage to the Continuing Care Unit Upper, Montrose Building, Agape House Building, 5<sup>th</sup> Floor Administration and MWI Campus. Heroic acts by employees ensured that a stroke victim was transported across the 'closed' Causeway and almost 40 patients were moved from CCU Upper during the height of the storm out of a building that was losing its roof to the safety of the old Emergency Department. Committed employees left their homes and loved ones and chose to man the hospital before, during and after Hurricane Gonzalo.

It was never clearer that the hospital is more than building structures. The hospitals are the people who provide the services daily from the various structures known as MWI, KEMH, UCC, Craig Appin and Mills Reach Properties. These individuals need to be commended for the loyalty, commitment and self-sacrifice made during and throughout the hurricane period.

However, the repair work to the facilities is still ongoing. KEMH fourth floor roof took on water, resulting in the evacuation of a large part of the fifth floor administrative staff, the Employee Health Services Department in Montrose had to move to the old Oncology department in the General Wing, the Continuing Care Upper/Alzheimer & Related Disorder's Unit temporarily has relocated to the old Emergency department, and Turning Point has moved to other areas of MWI. Although insurance does cover much of the work, it has still been very disruptive and staff have worked hard and in difficult circumstances to keep services going.

## **SERVICE IMPROVEMENTS**

### **Seeking ways to improve communication with physicians**

Mr Chairman,

During this fiscal year, Bermuda Hospitals Board began a project to find ways of improving communication between the hospital and community physicians. This is clinical information, such as test results and discharge sheets so is highly confidential to the individual patient. This is an area that

highlights how legacy ways of working overtime cause inefficiencies, and potential risks.

At the moment there are multiple methods of communication. Much communication is still on paper – either hard copies posted to the physician mail boxes, hard copy delivery when lab test samples are collected, hard copies provided to patients to take to their physicians, fax communication, or emails to physicians' offices – not all of whom have secure email.

Different methods are used for different document types. Emergency Department discharge-sheet summaries are faxed from the Medhost Emergency Department system. Other results such as lab, pathology, radiology, cardiology, bone densitometry, and mammography, as well as physician discharge summaries, and physician letters are generally communicated on paper, and some by fax. Death notifications are generally sent via email.

With such complexity it is difficult to establish whether documentation has been sent and arrived. Bermuda Hospitals Board has contingencies in place for faxed communication to check that a communication has been successfully sent, but there are occasions where the error or problem is on the physician office side where Bermuda Hospitals Board cannot check equipment is functioning, nor that communications are sent to confidential areas where they are picked up and actioned appropriately. There is the real possibility for the communication not to happen at all or for it to be duplicated. The former constitutes a clinical risk. The latter creates

inefficiency for both the sender and the recipient, and potentially to clinical risk if a critical document is 'lost' in amongst a large number of duplicates

While it is hoped the eventual solution is the establishment of an Electronic Health Record for Bermuda, this is some years off, at best. This raises the question of how best to send confidential medical information so that it is properly safeguarded to protect confidentiality, as well as being reliable and no-duplicative.

This situation is not one party's fault, but just the accumulation of processes using old technologies. Additionally, the information provided so far represents Bermuda Hospitals Board communication. It is not known how other healthcare providers communicate with physicians. There are no national or agreed standards for healthcare communication, for example, how it should be sent, nor that a test result will be communicated within a set amount of days of the test being carried out.

Within the hospitals, the process is decentralized without any one person or department having overall responsibility for monitoring the process and ensuring problems are rectified.

The Project to improve communications is fully supported by the Board and will require close collaboration with physician offices. The disparity between the technological state of different physician offices and the cost of upgrading technologies, make a single solution difficult to enforce. However, in the coming fiscal year it will

be a focus of the Board to find better solutions. Improved and more consistent communication between physician offices and the hospitals can only improve coordination and patient care.

### **East and West Ambulance Services**

Mr Chairman,

The Government was very pleased to announce in the Throne Speech that there would, for the first time, be permanently deployed ambulances in the East and West of Bermuda, in order to improve the speed with which people on either end of the island can be reached and brought to hospital in an Emergency situation. This is a joint initiative by the Bermuda Hospitals Board and the Bermuda Fire & Rescue Service. However, the financial impact has more implications for the hospitals that will impact ambulance fees in the coming fiscal year.

First responders have always been available at either end of the island, with Bermuda Fire & Rescue staff trained as EMTs able to respond from their locations in the east and west fire stations. However, while this has meant first responders could get on the scene quickly and provide on-site care, the Bermuda Fire & Rescue Service vehicles are not able to pick up individuals and take them to hospital. This means that the delay was not in getting EMTs to patients, but in getting patients to the Emergency Department as they would have to wait for a centrally released ambulance from King Edward to pick them up and transport them.



The Bermuda Hospitals Board and Bermuda Fire & Rescue Service have worked together in order to find an affordable solution to improving the service. As we look to developments such as the America's Cup, where there will be an increase of people in Dockyard and the West, this has become an even more important service development.

The agreement is that the Bermuda Hospitals Board will permanently deploy EMTs and an ambulance to the Port Royal Fire Station, while the Bermuda Fire & Rescue Service will be responsible for an ambulance and trained EMT personnel at the Clear Water Fire Stations. These ambulances will assume first responder responsibilities for their respective zones.

It is recognized that during the day, the majority of calls come from the Central Parishes, due to people working centrally. However, in the evening people return home and the Central calls reduce. To reflect this, between 8am to 4pm Bermuda Hospitals Board will deploy one EMT team to cover the West zones and two EMT teams will be based at King Edward. From 4pm to 8am Bermuda Hospitals Board will deploy one EMT team each in the West and King Edward. The Bermuda Fire & Rescue Service will man the East zone ambulance 24 hours per day with one EMT team deployed from existing manpower resources.

A survey of the size of the local ambulance fleet indicates there are 15 vehicles, including seven ambulances owned and operated by the Bermuda Hospitals Board and Bermuda Fire & Rescue Service. In the present economic climate there is no need to purchase additional vehicles to start the project, however high utilization will accelerate replacement

schedule. The Bermuda Hospitals Board took possession of two brand new ambulances in December 2014 as part of its replacement plans for its existing fleet of four older vehicles. The Bermuda Fire & Rescue Services has one ambulance however this is a purpose built rescue ambulance for the fire service and is oversized for fitting in many neighborhood roads in Bermuda.

The Bermuda Hospitals Board will incur more costs in association with this project, relating to overtime to staff the expanded service, increases in fleet fuel, fleet replacement costs, overheads and increased responsibility for the Chief of the service. In total, the estimated costs per annum are just over \$450,000.

It has been agreed that the BHB will retain medical transport fees, which will enable the Government to pro-rate the frictional costs for implementing the service across all emergency transport services.

In December, cabinet approved that the island-wide service would be introduced on 2 January, and that the fees for ambulance transportation services will increase by \$135.00 each effective 1 April, 2015. This will prorate the cost across all emergency medical transport users.

The service did begin as approved, with the first few weeks used as pilot in order to sort out any potential kinks before going fully live.

## **Maternity Labour & Delivery ORs**

Mr Chairman,

The long-awaited conversion of two rooms in the Maternity Ward to accommodate surgical interventions is nearing completion. One room will function solely as a state-of-the-art Operating Room for both planned and emergency C-sections, with the second room retained for routine deliveries but fully equipped as a back-up Operating Room. Both rooms are located next to the birthing rooms making it easier and safer for women who require emergency interventions to be tended to without delay.

These rooms have been designed to replicate the new Acute Care Wing Operating Rooms as much as possible, so that staff members using them in emergency situations are familiar with the layout and equipment. Some additional features include dimmable lighting for the comfort of the mother, and two designated areas for the infant cots. Having the rooms adjacent to SCBU means newborns in distress can be treated quickly in a specialist environment only minutes away.

When the new Operating Rooms opened in the Acute Care Wing in September all surgeries moved there. However, one Operating Room was left fully functional on the second floor of the General Wing specifically to accommodate emergency C-sections until the new rooms in Maternity were completed. This was done to avoid transporting laboring mothers the longer distance to the Acute Care Wing.

When the new Operating Room and back up room in Maternity open, the Operating on the second floor will close and be decommissioned. But the relationship between Maternity, Operating Room staff and other clinicians

will continue and develop through a surgical training programme and on-call cover.

The project has cost in total, \$2 million, but the investment has resulted in a great improvement for mothers. Mothers will now be able to access all the services they need in one area. Even prior to the new Operating Rooms opening the new Acute Care Wing, mothers had to be transported from Maternity on the first floor to an operating room on the second floor. In an Emergency situation, mothers were having to be transported through public areas of the hospital, which was detrimental to privacy and dignity. The operating rooms here on the floor will alleviate the stress mothers and often fathers can have when problems arise in the birthing rooms. It will also better allow us to provide the best possible care for our patients.

### **New Sewage Plant for MWI**

As part of last year's budget it was announced that a \$1 million grant would be paid to the Mid-Atlantic Wellness Institute for upgrade, specifically for its sewage plant. The aging sewage plant currently servicing the Mid-Atlantic Wellness Institute was constructed in the early 1970's, and was no longer fit for purpose. It has caused numerous complaints about a sewage smell in the local area.

Bermuda Hospitals Board undertook a robust tendering process for the project and was very pleased to announce in November that the contract for the new sewage treatment plant at the Mid-Atlantic Wellness Institute had been awarded to Bermudian Company BESCO.

Four locally established companies were invited to bid on the project, and

after an in-depth technical, bid analysis and company review BESCO were successful with the award.

The new unit, a submerged, high performance, aerated, filter sewage treatment plant, has a filtered vent to eliminate any minor odour emissions. The new plant will utilise a proven technology in Bermuda and will produce a clean effluent which poses no threat to the environment. It will be able to treat 12,000 gallons of sewage a day, doubling the capacity of the current plant which was installed in 1972.

The new plant will come with a Department of the Environment-approved bore hole as well as a FOG unit which will remove fats, oils and grease from the system.

The new plant will cost just over \$700,000. The balance of the funds provided by the Ministry is being used on much needed life and safety systems upgrades.

### **New cardiologist, Dr Joe Yammine**

Mr Chairman,

Bermuda Hospitals Board was very pleased this year to announce the appointment of Dr Joseph Yammine as a Consultant Cardiologist. Dr Yammine joined the Bermuda Hospitals Board in August and reports to Dr Sam Mir, Director of Cardiology.

Dr Yammine provides outpatient consultations to people with heart disease, and delivers specialized cardiac care for hospitalized and emergency patients. He works alongside Dr Mir to continue to improve hospital standards, treatments and diagnostics for people with heart disease, Bermuda's number one killer of men and women.

The rates of heart disease in Bermuda are high and there is a critical need for a strong hospital cardiology service, in order to care for those impacted. Dr. Yammine has trained at some of the world's top hospitals and brings a unique skill set to the Cardiology department at KEMH. His presence here will be a major asset to the cardiology department, KEMH, and cardiac patients on the island.

Before joining BHB, Dr. Yammine was a member of the Brigham and Women Cardiovascular Associates at Care New England in Rhode island. He was a full time faculty member with the rank of assistant professor of Medicine at the Warren Alpert medical school of Brown University, and a member of the Cardiovascular Research Center (CVRC) of Brown University. Dr Yammine was also a previous director of the Echocardiography Laboratory at Memorial Hospital of Rhode Island until 2011, and immediate past director of the electrocardiography laboratory at the same institution.

Dr. Yammine finished medical school at the Lebanese University in Beirut - Lebanon, where he graduated as a first laureate. He then moved to the USA for postdoctoral training in Internal Medicine, Cardiology and Electrophysiology at the State University of New York, Brown University,

and the Brigham and Women's Hospital. He is Board certified in Cardiovascular Medicine, Clinical Cardiac Electrophysiology, Echocardiography and Cardiac Computer Tomography.

Dr Yammine is involved in multiple basic science and clinical research projects. A regular reviewer for "Lung" journal (an Elsevier publication), Dr Yammine is a fellow of the American College of Cardiology and a member of the Heart Rhythm Society. He has won multiple recognitions and teaching awards, including Alpha Omega Alpha award. Dr. Yammine has been in academic clinical practice since 2007.

Even though there are four or more local cardiologists BHB provides 100 percent of the Bermuda's urgent or acute cardiology care with Dr. Mir and Dr. Yammine.

### **New oncologist, Dr Sein Aung**

Mr Chairman,

Bermuda Hospitals Board struggled this year following the unexpected departure of its Director of Oncology, Dr Paul Coty. Although planning was well underway to replace Dr Coty at the end of his contract in September, his early departure over the summer meant the service had to be sustained through a number of locum physicians supported by the very capable nurses and administrators of the Oncology Department. While the Bermuda Hospitals Board was very grateful to the interim oncologists who assisted to keep cancer services on island running, it is far from ideal for cancer patients who have every right to expect a full time, consistent

specialist to oversee their care. Bermuda Hospitals Board was therefore very pleased to welcome its new Director of Oncology, Dr Sein Aung, MD, FCAP, in October on a three year contract.

The Bermuda Hospitals Board worked hard to recruit a full time, on-island oncologist as it is a difficult position to fill. There is high demand globally for oncologists, and Bermuda's unique situation means Bermuda needs a skilled all-round oncologist, rather than a specialist in one kind of cancer. This enables the on-island oncologist to care for a wider range of cancers, and refer overseas for those who need specialist consultations.

Dr Aung's responsibilities include consulting with cancer patients in Bermuda and managing their care, working with healthcare partners here and overseas, and developing cancer services on-island. He reports to the Chief of Medicine, Dr Keith Chiappa.

Dr Aung has been a Faculty Physician/ Oncologist/Hematologist at the Weinberg Cancer Institute at the Franklin Square Hospital Center since 2000. He served as Chief of Hematology from 2002 to 2010 and as the Director of Oncology and Hematology Education from 2010. He is a clinical Assistant Professor of Medicine in the University of Maryland, School of Medicine. Dr Aung is board certified in Internal Medicine, Medical Oncology and Hematology by the American Board of Internal Medicine. He is a Fellow of the American College of Physicians. He has been chosen as the recipient of the Distinguished Attending of the year award by the Internal Medicine Residents three times and named as one of the Baltimore Top Doctors by his peers in the November 2013 issue of Baltimore magazine.



Dr Aung graduated from the Institute of Medicine Mandalay, Burma (Myanmar) in 1982. He initially worked as a primary care physician in Burma, before he went to the United Kingdom and received postgraduate training in General/Geriatric Medicine from 1992 to 1995. After working as a Senior House Officer, Dr. Aung moved to the United States and completed his Internal Medicine Residency at the Franklin Square Hospital Center, Baltimore, Maryland. Following residency, Dr. Aung continued at the Washington Hospital Center, Washington, DC for fellowship training in Medical Oncology and Hematology.

The Bermuda Hospitals Board is grateful to Dr Jean Walters, Dr Tutu Aung-Hillman, and its overseas physicians and providers for ensuring that people in Bermuda had access to the care they needed over the summer.

### **New Geriatrician, Dr Myint**

Mr Chairman,

As Bermuda's population is aging, caring for senior populations becomes an increasing challenge and requires specialist physicians. Bermuda Hospitals Board was pleased announce the appointment of a Consultant Geriatrician, Dr Htay H. Myint, MD, who joined Bermuda Hospitals Board in December. She is working closely with the Bermuda Hospitals Board Chief of Geriatrics, Dr David Harries.

Dr. Myint has worked in both the UK and US, and is board certified in Internal Medicine by the American Board of Internal Medicine. She is a Fellow of the American College of Physicians. Dr. Myint was recognized as

one of the America's Top Physicians by Consumer Research Council of America.

The senior population in Bermuda is growing and this is reflected in the age of patients coming into the hospital's acute care, alternate level care, mental health and long term care wards. Having highly experienced and skilled geriatricians is critically important in ensuring the hospital can care for this population appropriately.

Dr Myint graduated from of the Institute of Medicine in Burma (Myanmar) and started work as general practitioner. After moving to the United Kingdom, Dr Myint worked as a Senior House Officer in Geriatric/General Medicine and as a Staff Grade Physician in Geriatrics. In 1992, she obtained the Diploma in Geriatric Medicine (DGM) from the Royal College of Physicians in London. In 1996 Dr. Myint completed her Internal Medicine Residency in Baltimore, Maryland, USA and worked as a primary care internist and a hospitalist in Baltimore. In 2005, she obtained a mini-fellowship in Geriatric Medicine from the Johns Hopkins University School of Medicine in Baltimore, Maryland. She went on to become a Clinical Research Physician at Parexel Early Phase Unit and then as a Complex Care Physician for Healthspring-Cigna Company looking after mostly the geriatric population.

## **Improved Clinical Care 24/7**

Mr Chairman,

Bermuda Hospitals Board this year invested in increasing the number of hospitalists to eight in order to ensure there is 24/7 on-site coverage for patients. The hospitalists have raised the standard and consistency of clinical care on the inpatient wards since they were introduced some seven years ago. During that time mortality rates have dropped, and length of stay has reduced.

An individual's doctor or GP can still visit a patient. Community doctors are welcome to visit their patients, review medical records and speak to the hospitalist team about care, and the hospitalist team makes every effort to contact a GP to let them know if a patient has been admitted.

A Hospitalist is, however, effectively in charge of the care provided to all medical inpatients in the hospital. Previously, however, there were five Hospitalists who could be only on-site during the week days; night time care would be covered by House Officers, who are trained medical officers who have not finished their specialist Internist Board certification. These physicians were able to contact a Hospitalist on call, but the specialist was not necessarily on-site.

With the additional Hospitalists, the total number of house officers will be gradually reduced through natural turnover making this a cost-neutral investment. It is, however, a clinical best practice to have around the clock Hospitalist cover.

Additionally, a Hospitalist is being dedicated to the Emergency Department to help speed up admissions from Emergency to an inpatient ward. This was a recent change, but the goal is to ensure patients are not left waiting to be admitted because there is no available Hospitalist.

### **New Child & Adolescent Services Consultant Psychiatrist**

Mr Chairman,

Our younger population, under the age of 19, can suffer from mental health issues, just like adults. They have a dedicate service in the Child & Adolescent Services team, based at the Mid-Atlantic Wellness Institute.

Child & Adolescent Services were this year very pleased to welcome Dr Peter Yates as Consultant Psychiatrist for children and youth up to 18 who are dealing with mental health issues and require a full range of services in order to support them through recovery.

Dr Yates came to Bermuda Hospitals Board from the UK, where he has trained and worked in child psychiatry for about 20 years, both within the NHS and in private practice. Since 2006, Dr Yates has worked for Child & Adolescent Mental Health Services in London, providing generic child, adolescent and family psychiatric work; for an inpatient unit called Rhodes Farm for children and adolescents with severe and complex eating disorders and psychiatric co-morbidity; and for The Yates Practice as an independent practitioners. He has also previously work for the Great Ormond Street Hospital in the Department of Psychological Medicine, and for ten years from 1997-2007 was an Honorary Research Fellot at the Imperial College School of Medicine at St Mary's Hospital, London.

As Consultant Psychiatrist in the Bermuda Hospitals Board's Child & Adolescent Services team, Dr Yates has clinical responsibility for users of the department's services, including inpatient and community based care. His duties include assessment of patients, formulation of management plans, attendance of clinical ward rounds and weekly outpatient clinics. He also provides medical leadership to the Learning Disabilities Programme.

### **New procedure helps patient breathe**

Mr Chairman,

A new procedure, performed for the first time here in Bermuda, may allow a young, male CCU patient, paralyzed from the neck down following an accident some years ago, to breathe on his own. The patient has been relying on a ventilator because he does not have control over his breathing.

The procedure involves diaphragmatic pacing, a technique that inserts a device attaching electrodes internally to the patient's diaphragm. These electrodes are then brought out through the skin and attached to a pacemaker, which automatically does the work of contracting the diaphragm.

It is hoped the patient will be able to make do without his ventilator completely. The plan is for him to eventually be discharged and cared for at home.

It took a great deal of team work to arrange for the surgical procedure to be performed here in Bermuda. The expert in this technology, Professor of Surgery, Raymond Onders, is based in Cleveland, Ohio. He travels

worldwide helping insert these devices and because it was more cost effective and easier for the patient for him to come here, the patient did not have to travel to Cleveland. The surgical team organized Dr. Onders' travel to the island, made certain all was in order with immigration and arranged for the device to be cleared through customs.

In an article about the procedure, Dr. Onders, who supervised local surgeons, Boris Vestwebber and Hermann Thouet, said, "The team at the hospital was tremendous. The operation could not have been done better anywhere else in the world."

## **SENIOR CARE**

### **Continuing Care Unit Update**

Long term care is an issue that requires a collaborative, community solution. While this is worked on, the hospital service remains a vital part of the existing framework. When the geriatric grant ceased, the Bermuda Hospitals Board continued to provide its service as there were no other community placements for its residents to move to. In order to try to resolve its financial challenges, however, in March 2013 it ceased accepting admissions, except for private and/or paying customers.

Over the last two years, the number of residents in the Continuing Care Unit has reduced from about 100 to 70 today.

There have been no redundancies in the Continuing Care Unit, but staff numbers have gradually reduced through natural turnover and transfers as

the number of patients has gone down. To maximise efficiencies with this smaller number, CCU Upper and the Alzheimer's and Related Disorders Unit combined earlier this year.

As I noted earlier, a Business Case was already being drafted to review whether there were efficiencies to be gained by moving CCU residents to vacated KEMH space following the opening of the new wing, and then demolishing the CCU sections of CCU (but keeping the chapel, Heddington Gym, oedema clinic, etc). Damage by Hurricane Gonzalo forced an answer to the question sooner than expected as CCU Upper/ARDU had to relocate to the old Emergency Department temporarily following extensive roof damage. The Board has approved the motion to demolish CCU and CCU residents will move in the early part of the year.

Consolidating residents in the General Wing will reduce the areas that the Bermuda Hospitals Board has to maintain, helping them save funds. The slightly younger building is also in a better state than the older Continuing Care Unit section. The Bermuda Hospitals Board is cognizant that this is not a purpose-built residential area, but sees this as a medium term temporary move as the Ministry develops a community-wide plan for long term and senior care.

## **NICHE**

As Bermuda's senior population grows, it is not just the long term care services that are affected. The age of the people in the acute and alternative care level wards also changes.

Seniors can present with illnesses very differently to younger people. They often do not present with symptoms of pain, even for conditions such as urinary tract infections. However, it is possible that there are behavioural changes or disorientation. This means nursing staff need to be more attentive to patients in this age group and look for different symptoms compared to younger patients.

The Bermuda Hospitals Board decided to introduce NICHE standards to educate staff on the needs of this age group and improve the standards of clinical care a couple of years ago. NICHE stands for Nurses Improving Care for Healthsystem Elders. In this fiscal year, three staff members attended international conference for improving geriatric nursing competence – all three had completed the geriatric resource nurse certification and are helping drive the initiative at the Bermuda Hospitals Board.

Education for staff members has been ongoing and a staff and visitor education campaign was undertaken, with informational posters being put up on wards earlier this year.

## **QUALITY**

### **Enterovirus D68 Planning**

While the ebola virus took up a lot of public attention in this year, within the hospitals response to a respiratory infection that was spreading through America and Canada that endangered the very young was a major concern.



Enterovirus D68 (called for short EV-D68) is one of more than 100 non-polio enteroviruses. This virus was first identified in California in 1962. EV-D68 can cause mild to severe respiratory illness. Mild symptoms may include fever, runny nose, sneezing, cough, and body and muscle aches. Severe symptoms may include wheezing and difficulty breathing. EV-D68 likely spreads from person to person when an infected person coughs, sneezes, or touches a surface that is then touched by others.

In general, a mix of enteroviruses circulates every year, and different types of enteroviruses can be common in different years. Small numbers of EV-D68 have been reported regularly to Center for Disease Control since 1987. However, this year the number of people reported with confirmed EV-D68 infection is much greater than that reported in previous years.

In general, infants, children, and teenagers are most likely to get infected with enteroviruses and become ill. That's because they do not yet have immunity from previous exposures to these viruses. It is believed that this is also true for EV-D68. Adults can get infected with enteroviruses, but they are more likely to have no symptoms or mild symptoms.

Children with asthma may have a higher risk for severe respiratory illness caused by EV-D68 infection. There is no specific treatment for people with respiratory illness caused by EV-D68. Some people with severe respiratory illness may need to be hospitalized. There are no antiviral medications currently available for people who become infected with EV-D68

To respond to the Enterovirus D68 threat in the hospital, the maternal child team and the Chief of Pediatrics established the following protocols:

- Emergency and ICU staff were made aware of the outbreak occurring in the US including sequelae of polio-like paralysis possibly linked to EVD68
- Suspect cases would be placed on contact and droplet precautions
- If there were a large cluster of cases children with like symptoms will have to be cohorted
- Testing protocols have been developed in conjunction with the Bermuda Hospitals Board lab and Department of Health: specimens (nasopharyngeal and throat swabs) will be sent to CARPHA for testing. Turnaround time will be approximately 5 days.
- All children in hospital with symptoms consistent with EVD68 will be tested
- In the Special Care Baby Unit or SCBU the screening of visitors (including parents) for respiratory symptoms was initiated using a questionnaire based on the one used at Brigham and Women's Hospital
- Visitors with respiratory symptoms are not permitted to visit babies
- Sibling visiting to SCBU is being permitted if sibling is well and does not have respiratory symptoms
- If EVD68 is identified in the community sibling visiting to SCBU will be stopped as per Brigham and Women's protocol
- Updated signage has been requested from Communications to be posted at entrance to all Maternal Child areas asking ill persons not to visit
- If EVD68 is identified in the community Bermuda Hospitals Board would propose to screen and limit visitors to Gosling

## **Ebola Preparedness Planning**

The nation-wide ebola preparedness planning was overseen by the Chief Medical Officer in the Ministry, and the hospital has been a key player in the process. While community planning is essential in order to manage any potential community outbreak, a likely scenario for an ebola case in Bermuda was someone presenting to the Emergency Department. Certainly care for an infected individual would have to be managed by the Bermuda Hospitals Board and required investment in new equipment to safeguard staff.

An Ebola subcommittee was formed as a *subcommittee* of the Disaster Committee which is co-chaired by the hospital's infectious disease specialist and the Chair of the Disaster Management Committee, who is also the Deputy Chief of Emergency. This committee met weekly until October, when meetings became bi-weekly.

The work of the Committee has overseen a number of new processes at the hospital.

All admissions to Emergency are now questioned about their travel in the last three weeks as part of the screening, and protocols are in place for where to put someone with suspected ebola in negative pressure rooms in emergency and in the hospital while safeguarding other patients and visitors, and staff. For one or two cases, the Intensive Care Unit would be used. If there were more cases, the urgent care centre is also an option.

Protecting healthcare workers who are caring for ebola patients is vital. Personal Protective Equipment (called PPE for short) has been purchased that meets international standards. Staff training is underway. The education component regarding the PPE is critical as it is the experience of other countries that healthcare workers are most likely to get infected not as they care for patients, as they are fully protected, but as they take the protective equipment off. Therefore there is an observer who watches staff taking off equipment to ensure there are no accidental infections. It is costly in terms of human and financial resources, but these are unavoidable costs

Bermuda Hospitals Board ambulances are all now stocked with PPE and various departments have developed department protocols and action cards. The Facilities Department has identified volunteers to manage waste transport and disposal, and Bermuda Hospitals Board can confirm that its new macerators can safely process ebola infected waste.

Ebola Testing protocols have been worked out in collaboration with Lab and Dept of Health and a flow sheet has been developed for other lab testing.

As an added precaution, early on Employee Health Screening was established for healthcare workers who have travelled to affected/high-risk areas before they were allowed return to work. The Bermuda Hospitals Board also implemented Ebola virus precautions for blood donations to help ensure there is no threat of transmission of the virus through its blood supply. There are no reports that the virus has ever been transmitted this

way, and expert opinion is that it would be highly unlikely. However, the Blood Donor Clinic advised local donors not to donate if within the past 28 days they had visited a country with a known ebola outbreak, if they had been in contact with any individual who had been in these areas or if they had been told by public health authorities they may have been an exposed to a patient with ebola.

To date, Bermuda has been spared having to deal with an ebola patient. While we hope that this will remain the case, Bermuda is prepared for the eventuality and will do all it can to care for the individual while protecting its healthcare staff and the wider community.

### **Encouraging patients to be more involved in their care**

Mr Chairman,

Bermuda Hospitals Board turned the spotlight on ethics in November as it focused on the healthcare professionals' duty to ensure patients are fully informed about their conditions and potential treatment options. Lobby displays and interviews were used to educate the public about their rights and responsibilities, and the Bermuda Hospitals Board put on seminars, continuing education sessions and grand rounds for medical staff and community partners.

The educational week was organized by the Bermuda Hospitals Board's Ethics Committee. Patients and their families were encouraged to become involved in their care and to ask questions if they were not certain about something. Patients have a right to autonomy in making decisions about

their care and treatment. Informed consent is a priority for the Bermuda Hospitals Board. It is the process of ensuring patients and service users have adequate information about the benefits and risks of treatment options so they can make decisions that are consistent with their values and beliefs. Informed consent represents an ongoing agreement to receive treatment and/or undergo procedures after the potential risks, benefits and alternative treatments, as well as the patient's diagnosis and prognosis, have been fully explained.

The Bermuda Hospitals Board's Ethics Committee comprises about 20 members, including clinical, administrative and community representatives. It offers consultations to patients, families and healthcare professionals when dealing with ethical issues around medical care. Members of the public can contact the Ethics Committee for a consultation by calling 291-HOPE (4673). This committee reports to the Board through the Chief of Staff.

BHB's Ethics Committee promotes awareness of ethical concerns at both hospitals, endorses medical ethics education, provides an ethics consultation service and produces guidelines on prominent issues that can help healthcare professionals consider all aspects of controversial decisions. The Committee also reviews medical research proposals on request, and reviews hospital policies to ensure they are ethically sound.

## **Turning Point – CARF accreditation**

Mr Chairman,

While Accreditation Canada undertakes a general hospital wide survey, testing patient safety standards, a number of departments within the Bermuda Hospitals Board seek specialist accreditation with service specific accreditors. At Turning Point, specialist accreditation is sought through CARF.

Founded in 1966 as the Commission on Accreditation of Rehabilitation Facilities, CARF International is an independent, nonprofit accreditor of health and human services. The CARF International group of companies currently accredits more than 50,000 programs and services at 23,000 locations. More than 8 million individuals of all ages are served annually by 6,700 CARF-accredited service providers. CARF accreditation extends to countries in North and South America, Europe, Asia, and Africa.

In this fiscal year, Turning Point gained accreditation with CARF for three years for: Detoxification: Alcohol and Other Drugs/Addictions (Adults), Intensive Outpatient Treatment: Alcohol and Other Drugs/Addictions (Addictions Pharmacotherapy) and Outpatient Treatment: Alcohol and Other Drugs/Addictions (Adults).

The accreditation extends through to April 2017, when the survey will take place again. This achievement is an indication of the organisation's dedication and commitment to improving the quality of the lives of the

persons served. Services, personnel and documentation clearly indicate an established pattern of practice excellence.

### **Mental health awareness week**

Mr Chairman,

Bermuda Hospitals Board undertook an educational promotion about living with schizophrenia this year.

Global research indicates that about 0.7% to 1% of any population suffers from this condition, which translates to 450 to 600 people in Bermuda. Schizophrenia is a chronic brain disorder. When active, symptoms can include delusions, hallucinations, trouble with thinking and concentration and lack of motivation. It is a potentially debilitating condition if it is not treated. The World Health Organisation states it is a leading cause of disability globally.

More than any other mental illness, schizophrenia is something many fear and, by association, people with this condition not only have their individual illness to manage, but have to struggle against the stigma of those around them. It is the stigma and fear around schizophrenia and the dysfunction that is a consequence of active symptoms that can often prevent an individual from accessing the care they need. It sounds a bleak picture, but a diagnosis of schizophrenia should not condemn an individual. There is hope. There are treatments that will help people can live quality, fulfilling lives.

People with schizophrenia often require treatment at the Mid-Atlantic



Wellness Institute, which provides inpatient, outpatient and community outreach services for people with mental health issues.

While there is no current cure for schizophrenia, there are treatments available that can help to decrease symptoms and improve the individual's quality of life. For many individuals, long-term use of medications will be an important component of their treatment plan. However, other options may include vocational rehabilitation, individual therapy, peer support or community programs. There is help available in Bermuda for individuals who are living with schizophrenia. Individuals are encouraged to learn about their illness and the various treatment options so that they can be an active partner in their recovery. The recovery journey will be unique to each individual. There are private practitioners available in the community as well as a full support service at the Mid-Atlantic Wellness Institute. They encourage you to call, walk in or schedule an appointment if you need assistance.

A number of activities were undertaken, including educational presentations for local physicians and BHB staff, numerous media interviews with staff and people with schizophrenia, a Book Club in partnership with the Bermuda National Library reading the book 'Psychiatric Tales', and a free showing of the movie 'The Soloist' about a cello prodigy who suffers from schizophrenia.

## **Mindframe and Mini-Mindframe Exhibitions Use Art for Therapy and Community Education**

TheMindFrame PhotoVoice Exhibition is a major annual event for artists and photographers who use services at the Mid Atlantic Wellness Institute. The goal of the project is to provide a therapeutic and creative voice for people who are often stigmatized and marginalized, and to give the community a chance to view these people in a new light, hopefully gaining insights and understanding from the art and photography.

The first few MindFrame's focused on adult mental health programmes, and then it began to incorporate Learning Disability clients.

For the first time this year, however, the PhotoVoice Project included Continuing Care Unit residents. Many residents are seniors who require skilled nursing care, and there are some younger, disabled residents. Ten CCU residents joined in the PhotoVoice Project with the oldest participant being Mrs Louise Franks, who was 100 years old. All residents were taught how to use a digital camera, and participated in numerous field trips.

There is a busy activities programme at CCU, but this is the first time residents had been involved in a project like this. There was a positive reaction from residents as they learnt how to use digital cameras, then went out on field trips to put their skills into action. CCU staff hoped the work would highlight to people at the exhibition that our seniors have a rich perspective and unique creative visions to share. The goal was that people could enjoy their submissions but also re-think the potential of their own older family members.

Wheelchair art was also included in this exhibition. The Wheelchair Art Project was undertaken in celebration of World Alzheimer's Month. It was sponsored and supported by **The Alzheimer's Family Support Group Bermuda**. The project gave residents in wheelchairs a fun activity in which to get creative.

The Mid-Atlantic Wellness Institute's (MWI) Child and Adolescent Services Department also has a thriving art therapy programme. The Department held a 'Mini Mindframe' even in May in celebration of National Children's Mental Health Awareness Day. The event included an art exhibition and open mic event for young service users and their families along with a silent auction, with part proceeds going towards art and photography supplies. The open mic performances included singing, poetry, and dance.

Art from the CAS programme was included in the main MindFrame exhibition.

Mental health challenges impact people at any age, but when individuals are young it can be particularly hard. Helping them become resilient enables them to prepare and make the most of their lives ahead, and Child and Adolescent Services have found that an individual's creative talents can become sources of resilience as they build hope in their recovery journey, as well as helping them express their thoughts and feelings.

The department offers a wide range of inpatient and outpatient services to young people who are dealing with mental health challenges. In 2012-13, there were 356 outpatients and 16 admissions to the inpatient ward, with average stays required of about 10 days. Services users range from the

ages of 4 to 18 years old, and can be dealing with a wide range of challenges, from ADHD, Depression, ASD and even Mood disorders. Alongside inpatient and outpatient consultancy service, CAS also offers summer camps, education classes for young people who cannot attend school, and creative therapies including art and cooking.

### **Mental Health Treatment Court**

The Mid-Atlantic Wellness Institute was very pleased to support the consultative process for the Mental Health Treatment Court and support it during the one year pilot programme. MWI's Forensic psychiatrist, Dr Peter Westerlund, completes psychiatric assessments for service users to determine eligibility for the Mental Health Treatment Court Programme. For those accepted for the programme, Dr Westerlund provides consultant coverage throughout the duration. This includes diagnostic assessments, medication management and feedback to the Courts upon request. About 20 service users have been a part of this programme. There has been a positive outcome from this initiative already, with lower relapse rates and positive engagement.

### **Laboratory Waiting Time Reduced**

Mr Chairman,

Laboratory Services reported in June, 2013 that it had restructured the laboratory wait room process in order to reduce waiting times for patients. Lab testing services were previously offered on a first come first serve

basis with patients presenting at 6:30am for a 7am first call and the morning rush often resulted in long disorganized waiting lines.

Laboratory services introduced two phlebotomy lines - one dedicated to walk-in clients and the second dedicated to appointments and taking walk-ins during appointment gaps. A numbered card system was introduced to enable patients to self-organize upon arrival. Reception calls patients in number order except for appointments that are brought forward, if necessary, to ensure their scheduled time is kept. Upon completion of registration patients are moved directly into the phlebotomy seat to improve throughput and convey forward progress to customer.

The incorporation of appointments allowed the reception and accessioning team to reduce the wait time for the first patient at 7am from 15-20 minutes to 6-8 minutes, and shorten the turnover cycle between patients. There is an improved patient flow as a result of introducing the dual schedule and walk-in lines. Weekly patient throughput increased by 20 in the hour from 7am and by 50 patients in the hour from 9am. The department averages approximately 20 appointments versus approximately 75 (or more) walk-ins per day.

### **Blood Donor Corporate Drive**

Mr Chairman,

Bermuda Hospitals Board announce in June that The Bank of N.T. Butterfield & Son Limited ("Butterfield") had won the first-ever Corporate Blood Drive. Launched earlier this year in partnership with the Ministry of

Health, Seniors and the Environment, the blood drive was designed to increase the Bermuda Blood Donor Centre's current donor base.

Local businesses and international companies were invited to participate in the first phase, which began in February and ended on 14 June. During that time period, Butterfield achieved the highest percentage of donations and the most points and was presented with an engraved trophy and certificate.

This friendly competition will now be run annually to identify and commend companies and organizations for promoting and supporting blood donation among their staff, family members and friends. Going forward, each year in June, the corporation with the highest percentage of donations from the preceding year will be acknowledged.

The Blood Donor Centre belongs to each of us and it is vitally important that we all take responsibility to ensure our community has a sufficient blood supply. I hope the house will join with me to applaud every company and organization on our Island that participated in this initiative, which has helped us expand our current donor base in order to maintain sustainability and reduce the pressure on those who do donate.

I would encourage all corporations and organizations to participate in the second 2014/2015 Corporate Blood Drive. There remains a constant need for new donors in order to meet the needs of our patients.

Most healthy people between 18 and 70 who weigh a minimum of 110lbs can donate blood. Healthy blood is vital to us all. The average adult contains 10 to 12 pints of blood, which contains many substances including red blood cells, white blood cells, platelets and plasma. When you donate

blood, one pint is taken which is then separated into different components. To ensure a donor is healthy enough to give blood, donors are asked to fill out a questionnaire and their blood pressure and haemoglobin is checked. The entire process, including pre-testing, donating and time for refreshments afterwards takes about half an hour.

## UTILIZATION MANAGEMENT

Mr Chairman,

Utilisation Management at the Bermuda Hospitals Board is a hospital-wide effort to provide quality healthcare that is also affordable for patients. It evaluates the medical necessity, appropriateness and efficiency of the care the hospital provides. The Bermuda Hospitals Board has set up a specific Committee to deal with this complex issue. The Utilization Management Committee's remit is ensuring patients receive safe, quality, cost-effective healthcare services in the most appropriate treatment setting and in a timely manner.

This is not a new initiative but reinforces what should always be the practice. This means the right care at the right time in the right setting. Unnecessary or ineffective treatment and tests can be costly and potentially harmful to patients. By providing care supported by scientific evidence, healthcare can become safer, more effective and more affordable. As this is not solely a hospital issue, the wider healthcare community must join in these efforts to realise any benefit. As noted before, otherwise the good work undertaken in the hospital that protects patients and saves costs is un-done on the outside – practices don't

change, the beneficiary of the work and revenue simply moves from the hospital to private providers. While there is concern over the introduction of precertification, we simply have to see the community providers step up to the plate and also do the right thing with regards to utilization management. If they will not do this voluntarily, as the hospital is doing, then we need to look at alternatives.

Hospital physicians are focusing on appropriate testing and clinical best practices, which will help make services efficient and safe, as well as reduce infection rates and patient falls. It will ensure the appropriate use of the emergency department, hospital beds, treatments and diagnostic services.

A simple example is using ultrasound for assessing gallbladder disease, which often provides more information than a more costly CT scan, and without exposing patients to radiation. Utilization Management aims to ensure doctors talk to each other and discuss appropriate tests and treatments.

If a patient receives care both in Bermuda and abroad, his or her doctors should have access to information without repeating unnecessary tests. An exciting new service at Bermuda Hospitals Board is called the 'See My Radiology' system, a secure internet, cloud-based system for sharing radiology images between hospitals and doctors around the world. This cost-effective initiative prevents the unnecessary repetition of tests, while saving time.

In the emergency setting, patients will continue to receive the care they need without delay. Utilization Management should improve efficiency and



not hinder appropriate care. A patient's well-being and immediate healthcare concerns will always be the priority.

Utilization Management begins with frontline staff. It is important for us to share ideas on how to reduce wasteful practices, become more efficient, and improve the quality of the healthcare provided.

The most appropriate patient care can yield the best outcome and still cost less in the overall continuum of care.

### **Avoiding unnecessary blood tests**

Mr Chairman,

Following discussion with physicians and specialists, to further assist in eradicating unnecessary testing, the Bermuda Hospitals Board discontinued three tests for Reverse T3, 1,25 hydroxy Vitamin D and ionized Calcium. This means that a community physician can no longer refer someone for these tests, although they are still available if clinically required if a specialist approves it. A test such as Reverse T3, for example, would have to be approved by the Endocrinologist.

### **PEOPLE**

Mr Chairman,

Despite financial challenges, Bermuda Hospitals Board is still seeking to invest in its workforce and provide opportunities for tomorrow's healthcare leaders.

Forty five students were accepted as part of the summer programme this year.

- 10 Students for Nursing
- 8 Students for Allied Health
- 5 Students each for the Laboratory and Chief of Staff
- 3 Students each for Pharmacy and CAS
- 2 students each for Rehabilitation and Communications
- 1 Student each for Human Resources, DI, Critical Care, IT, Tumour Registry, Turning Point and Accounting

Mr Chairman,

Bermuda Hospitals Board awarded \$30,000 in scholarships for this fiscal year to three students studying in fields that are projected to be in demand by the hospitals. These include Nursing and Radiology. In addition, GlaxoSmithKline, a Bermuda-based subsidiary of GlaxoSmithKline plc, has once again awarded \$30,000 to support a Bermudian student studying Physiotherapy. The scholarship winners have all demonstrated a strong commitment to service in the community and the hospitals, as well as maintaining a solid academic performance.

The scholarship winners were:

- Zaire Burgess-Robinson, Bachelor of Science in Nursing Degree at Southern Adventist University, Collegedale, Tennessee, USA - awarded \$10,000 over two years
- Gerteikquia Hatherley, Bachelor of Science in Nursing Degree at Oakwood University, Huntsville, Alabama, USA- awarded \$10,000 over two

years

- Kimberly Simons, Associate of Science in Radiologic Technology at Keiser University, Daytona Beach, Florida, USA - awarded \$10,000 for one year
- Stephen Lightbourne, Bachelor of Science degree in Physiotherapy at St. George's University, London, United Kingdom- awarded \$15,000 over two years from GlaxoSmithKline

## **DONOR PARTNERS**

### **Hospitals Auxiliary of Bermuda**

Mr Chairman,

Bermuda Hospitals Board remains indebted to its long term fundraising partner, the Hospitals Auxiliary of Bermuda. This year, the HAB donated funds to purchase two new ambulances and a van for the Mid-Atlantic Wellness Institute today, at a cost of over \$300,000. This is just a part of an allocation of over \$600,000 that the HAB have agreed to pay the Bermuda Hospitals Board this year for the vehicles and much-needed equipment for the Emergency Department and Operating Rooms.

The HAB raises funds for the Bermuda Hospitals Board through their three business enterprises, The Barn, The Pink Cafe and the Gift Shop. They also receive donations and annual membership dues from their members. HAB volunteers work throughout many areas in the hospital, including Information Desk, CCU, Hospitality Cart, Lending Library, assisting patients with their menu selections on the Wards, Fracture Clinic, Pharmacy, Chapel Services as well as assisting overseas patients and their families.

In addition to their adult volunteers, there are also 105 junior members of the Auxiliary, known as Candy Strippers. These students enter the program at age 14 and commit to a minimum of two years with the majority remaining in the program for 4 years. These students are trained in all areas that the adults train in as additional areas in the hospital such as such as Dialysis, Lab, Gosling, Maternity, Environmental Services, Surgical Admin, Laundry, ICU and Sterile Processing. The students work every school holiday and give the adults a much welcome relief. On average 36,500 hours of service are donated to the hospital every year by HAB adult and junior members.

Equipment being funded by the HAB:

- Two ambulances for use by BHB Emergency Medical Technicians (EMTs)
- One van for transporting Mid-Atlantic Wellness Institute service users
- A Glidescope and 2 Sonosite Ultrasound Devices for the Emergency Department
- A Sterrad Sterilizer and Endoscopy Reprocessing Unit for the Operating Rooms

Bermuda Hospitals Board ambulance fleet is aging and increasingly impacted by maintenance issues. The Bermuda Hospitals Board was very grateful for the assistance of the St John's Ambulance who helped when its vehicles were out of service. The purchase of the new vehicles will enable the Bermuda Hospitals Board to rely on its own fleet, especially as it begins work with the Bermuda Fire & Rescue Service to expand the service across

the island. MWI service users will benefit greatly from accessing a new van to help transport them as needed, and in both Emergency and Surgery, people will benefit daily from the equipment HAB funds have donated.

### **Bermuda Hospitals Charitable Trust**

Mr Chairman,

Work has continued apace at the Bermuda Hospitals Charitable Trust this year in an effort to reach its \$40m target. The Trust has already handed over \$20m to the Bermuda Hospitals Board. It was decided to extend the fundraising for the capital campaign, as donations continued to come in and there was great support for the Legacy Walkway initiative, which enabled families, individuals and groups to purchase a brick with their name on for \$1,000. The bricks can be seen near the new Acute Care Wing entrance.

### **New Learning Disability Group Home from Project 100**

Bermuda Hospitals Board is once more very grateful to Project 100 who has provided another group home for Learning Disability service users. Six females have moved to the new home at Turtle Bay enabling the Learning Disability Service to facilitate the most appropriate placements for individuals.

## **Donated device will benefit patients**

Mr Chairman,

An Alternative and Augmentative Communication (ACC) device was donated to the Speech and Language Pathology department this year by Susan Oatley, in honour of her husband Brian, who passed away in December from Lou Gehrig's disease (ALS). The ACC permits patients who are no longer able to speak as the result of illness or injury to communicate using a voice-activated keyboard. In addition, the device, which provides access to the internet, email and entertainment, generates written or oral communication by following eye movements, in the event keyboarding is no longer an option.

Unfortunately Brian did not survive long enough to use the device, which was purchased in the USA and brought back to the island. His widow made a decision to donate the Dynavox Eyemax to the hospital in hopes it would benefit others.

“We are grateful for this generous donation in honour of Brian Oatley, says Damany Phifer, Speech Language Pathologist. “The device will benefit patients recovering from a stroke, brain injury or neurological disease who are dealing with severe communication impairments. We thank Susan for this gift, which will give patients facing speech challenges a voice to express themselves more effectively.”

## **Other Donors and Volunteers**

We should also recognize the work of other partners who work to support Bermuda Hospitals Board services. Friends of Agape continue to fundraise

for hospice care at Agape House, and discussed earlier in 2014 the potential to fundraise for a much-needed new hospice facility.

The Kiwanis' Club have also continued to raise funds for paediatrics, and make a special donation this year for children's equipment in the Emergency Department in the new acute care wing.

Finally, pastoral services are provided by local ministers who come to the hospital to see patients and also provide services in the Bermuda Hospitals Board Chapel.

Mr. Chairman, as I wrap up my budget brief, I would like to formally thank the Board, management and staff of the Bermuda Hospitals Board in their ongoing commitment to not only high clinical standards, but also the drive to greater transparency and accountability that has been undertaken this year.

Special recognitions goes to the Chairman, Mr. Jonathan Brewin, for his leadership, the deputy Chair, Mrs Lucille Parker, and other Board members Mr Thad Hollis, Ms Kathryn Gibbons, Dr Colin Couper, Miss Cratonia Smith, Dr Andrew West, Dr Alicia Stovell-Washington, Mr Peter Everson, ex-officio voting member from the Bermuda Hospitals Charitable Trust, Mr Ralph Richardson and ex-officio non-voting members, Dr. Michael Weitekamp, Chief of Staff, Dr. Cheryl Peek-Ball, Chief Medical Officer and Permanent Secretary for Health, Mr. Kevin Monkman.



## MINISTRY OF HEALTH, SENIORS AND ENVIRONMENT

2015-2016 BUDGET BRIEF

### HEAD 22

#### DEPARTMENT OF HEALTH

**Mr. Chairman,**

The Department of Health mandate is to protect and promote the health of the island's residents and to assure conditions where people can be healthy and thrive. Each day two hundred and sixty two (262) Department of Health employees (**see page B-128**) work hard to address the many threats to health and wellness for our population.

An ageing population, the burden of chronic diseases, the economic recession, substance abuse, violence and injury, social tensions and other stressors are presenting formidable challenges to the health of our Island. Bermuda cannot afford to take the physical, psychological or social health and well-being of our population for granted.

**Mr. Chairman,**

The Department of Health's vision for Bermuda is *"Healthy People in Healthy Communities"*. As simple as the vision sounds, the population of our island home will be challenged to improve our health outcomes. Implementation of the *Well Bermuda Strategy* is a major priority for the Department to achieve our vision. *Well Bermuda's* projects and action



plans are intended to result in healthier individuals, healthier families and a healthier environment. I would like to take this opportunity to thank all the *Well Bermuda* partners and encourage you to increase collaboration in 2015/16.

This year the public will see a relaunch of Well Bermuda - THE national health promotion strategy. Look out for the campaign ONE VOICE FOR A WELL BERMUDA.

**Mr. Chairman,**

The Department's mission "*To promote and protect the physical, psychological and social well being of the community to enable the island's residents to realise their optimum quality of life,*" reveals to everyone that the Department of Health is questing for more than just the absence from physical infirmity amongst Bermuda's residents. Optimal physical, mental AND social wellness for Bermudians is what is sought.

Socio-economic, cultural and environmental factors deeply affect lives. The Department seeks to influence the social determinants of health to have the most impact

**Mr. Chairman,**

Chronic disease epidemics, such as diabetes, have their origins at young ages and take decades to become established. In other words the risk

factors of today (especially in our children) are the diseases of tomorrow. Chronic disease epidemics require long term systematic approaches to bring them under control.

Given their long duration, there are multiple opportunities for prevention. Common preventable risk factors underlie most chronic diseases. The most significant risk factors include raised blood pressure, tobacco use, raised total cholesterol, and unhealthy diet. Harmful alcohol consumption, physical inactivity, obesity and raised blood sugar are additional behavioural and biological risk factors.

**Mr. Chairman,**

Human behaviour is at the root of most premature deaths and illness. The bad news is that Bermuda, is not achieving satisfactory health outcomes for the population. When a population slides towards a tipping point of chronic sickness it is a health catastrophe. A recent report in the British Medical Journal flagged poverty and income inequality, declining educational achievement, an unhealthy food culture, high risk behaviours involving drug use, reckless driving and violence as root causes for these trends.

A surge in chronic diseases such as diabetes is not a health problem that can be solved directly by legislation, but rather should make us question our way of life. The Department of Health must therefore focus on building capacity for citizens to make healthy choices and to adopt healthy

lifestyles. Health is the choice that we want the entire community to make its priority, and to approach decision-making through the lens of health.

When making decisions, it cannot be acceptable to think of the impact on population health as a second or third tier consideration. This approach is embodied in the mindset of *Health in all Policies* (in other words the health impact must be assessed in policy making across the board – in all Ministries) and this concept is one that the Department continues to advocate for. Policies can be designed to make it easier for citizens to choose health options. Policies that do the reverse can be rejected and not implemented.

**Mr. Chairman,**

The current account estimates for the Department of Health begin on page **B-125** of the estimates book.

A total of twenty seven million and sixty six thousand dollars (\$27, 066,000) have been allocated for the Department of Health. Because furlough day is accounted for in column (4) (2014/15 Original), the bottom line of column (7) reports a \$30,000 decrease on the previous year, which shows that the budget is nominally unchanged from the savings made by furlough. Another way to view the numbers is to consider a scenario as if there had not been a furlough day in 2014/15 and make a year to year comparison.

In this comparison the budget has been reduced \$936,000 or 3.3% from 2014/15.

**Mr. Chairman,**

Unfortunately the savings that could not be realised when the furlough was stopped had to be found through freezing selected posts, because it is the fact that most programmes only have marginal operating budgets above salaries.

In short there was no fat to cut in the Department – only posts. The Department took the difficult decision to freeze 14 posts in order to make its cash limits. In the last fortnight a comprehensive freeze on hiring has come to pass for the Public Service making the staffing of the Department in the next financial year a serious concern.

**Mr. Chairman,**

The performance measures for the Department of Health begin on page **B-129**. These measures, developed by the Programme Managers, may be used to help determine the effectiveness and impact of the programme activities.

Revenues for the Department are projected to reach three million, four hundred and thirty one thousand dollars (\$3,431,000) for 2015/2016. These estimates can be found on page **B-127**.

These revenues come from the sale of medications, vaccines and biologicals, fees for clinical services, patient fees from the two long term care facilities, as well as fees for licences and permits issued by the Environmental Health Section of the Department.

**Mr. Chairman,**

The Health Promotion Office develops policies, products and programmes that promote health and wellness in the community, in collaboration with health partners. The Health Promotion Office facilitates the advancement of the goals of the *Well Bermuda, Health Promotion Strategy* along with our *Well Bermuda* partners, including the Bermuda Hospitals Board, the Bermuda Diabetes Association, the Bermuda Heart Foundation, The Family Center, and the Bermuda Police Service. The Health Promotion Office develops policies that will promote health and wellness in the community, in collaboration with health partners

The Health Promotion Office Coordinates and facilitates health promotion activities of Department of Health programmes. It has recently produced and distributed *the* 2015 Health Promotion Calendar. The Calendar highlights health and related observances that are recognized through activities and are most relevant to Bermuda's population from the perspective of prevention and promotion. The Calendar this year highlights application of the *Eat well Plate* and features locally grown fruits that can be part of a healthy diet.

**Mr. Chairman,**

The *STEPS to a Well Bermuda* survey launched in November 2013 was completed in December 2014. We want to thank all the members of the public who participated in this extremely important health survey. The analysis of the data and report of findings will be published later in 2015. It is our intent to put a hyper-focus on chronic disease prevention and management in the years ahead using the data that is gleaned from the STEPS survey, as we will have a much clearer picture of the chronic disease risk factors relevant to our population.

**Mr. Chairman,**

Last year saw the 4th year for Celebrating Wellness, promoting the importance of physical activity and healthy eating in Victoria Park; nearly 1,000 persons were in attendance.

The Celebrating Wellness Zumba Party was the finale of Zumba in the Park and was a partnership with the Bermuda Broadcasting Company, corporation of Hamilton, Fusion Fitness and The Athletic Club. This was also evidence of the importance of a public private partnership working together to promote the importance of moving more. Even though we are struggling with chronic disease as a community, the high awareness of the need for an active and healthy lifestyle is encouraging.

Research is showing that investing in workplace wellness programmes reaps positive impacts on workers' health. Workplace wellness efforts help

employers contain health care costs; as the SAGE Commission reminded us, the cost of sick leave is significant.

**Mr. Chairman,**

The Department of Health knows that prevention makes good business sense, and led by example in 2014 as 135 staff signed up for and participated in the *Shaping Up for Me* 100 day health challenge, organized by the Health Promotion Office.

The winning team was selected based on decrease in fat percentage, decrease in waist circumference and participation in challenge activities. Overall, both teams decreased their fat percentage by 10.1%; average waist circumference decreased by 10.2% (3.9 inches) and overall inches decreased by 115.1 inches. It is hoped that lessons learned by the Department of Health may be transferrable to other government departments that might want to initiate their own 100 day challenges in subsequent years, and that the health of the Public Service overall will be improved.

**Mr. Chairman,**

The Health Promotion Office has partnered with the Community Voices monthly radio programme to highlight the partnerships of the Well Bermuda Strategy National Health Promotion Strategy. The Health Promotion Office continues to use the web and social media to bring awareness of the programs and initiatives of the Department.

Please “LIKE” the Department of Health on Facebook page – in exchange you will enjoy topical health matters that are updated and streamed daily; including Department of Health services and initiatives, health and fitness tips, healthy eating, local and global health news and inspirational health stories and quotes.

**Mr. Chairman,**

The Health Promotion programme employs two FTEs and is listed as **cost centre 32240 on page B-126** and the 2015-16 budget estimate is \$329,000. Performance measures are on **page B-135**.

In March 2015 the Health Promotion Office and Nutrition Services are partnering with Lindos, The Market Place, Miles, Pizza House Butterfield and Vallis and The Supermart to highlight *Nutrition Month* and the Bermuda *Eat Well Plate* theme “*EAT MORE VEGETABLES*”.

**Mr. Chairman,**

Nutrition Services is a core public health service which provides consultative and promotional services to the population to foster optimal nutrition practices.

The total compliance with the Nutrition Policy for schools is 88%. The compliance level of all schools exclusive of preschools is 93%. Delivery of nutrition education resource materials was provided to parents, students, teachers and foodservice personnel to assist with compliance of the



Nutrition Policy (61 schools inclusive of preschools) both government and private received information.

Inspections of (18) rest homes has seen a Medical Nutrition Therapy (MNT) diet compliance for nursing homes and rest homes at 85%. Visits with inmates for medical nutrition therapy diets and menu revision has seen 100% in (MNT) compliance within the (3) prison facilities.

Nutrition Services provided anticipatory guidance to high risk community groups (prenatal infants, children, seniors). Consultation services are extended to those who are under insured or not insured to give access to services. Last year 141 persons were seen for initial appointments. The largest percentage of clients seen came from adults (63%) and school students (34%). The highest percentage of the conditions seen for these two groups was overweight. There were 403 follow up appointments - 66% followed up were adults and 29% were school students.

**Mr. Chairman,**

In an effort to combat the trends of obesity and promote good health; Nutrition Services continues the promotion of the New Dietary Guidelines for Bermudians inclusive of partnering with Well Bermuda partners to focus on the prevention of non communicable diseases.

The number of Well Bermuda Partners adopting and utilizing the *Eat Well Plate* and *Dietary Guidelines* has gone from 20% to approximately 33%. The ultimate goal is to have. within the next (2) years, 100% of Well

Bermuda partners in compliance with adopting and utilizing these tools to encourage a collaborative effort of a consistent nutrition message within the community. Currently the web site [www.eatwell.gov.bm](http://www.eatwell.gov.bm) provides accessible website information for the public with supportive dietary guideline information.

Health promotion activities continue with approximately 400 per year inclusive of monthly radio talks, school or general talks, health screenings, leaflet development, committee representation, inspections etc. Nutrition Services continues to strive for new, innovative and cost effective ways to educate the public by partnering with community agencies, committees and staff to obtain the common goal of optimal nutrition.

The Nutrition programme employs two FTEs and is listed as **cost centre 32110** and has an annual budget of \$189,000 (**page B-125**). This small but busy programme (see p **B-131** for performance measures) is critical for addressing obesity, chronic disease and collaboration and partnership on food security strategies for Bermuda.

**Mr. Chairman,**

The Healthy Schools partnership between the Ministry of Education and the Department of Health continues to go from strength to strength and is vital in ensuring that the link between education and health is maintained. Healthy Schools lies at the middle of this partnership, providing support to schools with focus on holistic health and the whole child.

Healthy Schools is a part of Well Bermuda, and thus engenders partnership with government departments and community partners that provide activities and services to schools. These partnerships make sense in Bermuda, due to our small size. Resources are shared, thus reducing costs, manpower needs, time, and duplication and gaps in services.

Virtually every school in Bermuda is a Health Promoting School, which means that health is a part of their culture. In some schools health is a larger, more obvious entity, while in others it is happening in the background. Health Promoting Schools consistently demonstrate their understanding of what holistic health looks like through numerous activities and programs that focus on their students' personal and physical health, socio-emotional health, environmental health and healthy connections to the community. In addition, these schools consistently comply with school health policies and health-related Bermuda Laws.

At the heart, is ensuring that schools safeguard and promote the health of everyone in the school population, students and teachers alike. Healthy Schools, aka Comprehensive School Health, **cost centre 32265**, employs seconded coordinator Marie Beach as the only FTE but she establishes relationships and partnerships to achieve results (see p **B-135** for performance measures) and has an annual budget of \$111,000 (**page B-126**). A new student fitness initiative and standard is being collaboratively planned for 2015, which will be piloted in the new school year.

**Mr. Chairman,**

The Community Health Section of the Department of Health can be found on page **B-125** of the budget book. This section provides many personal health services and community-based services. Services include medical, nursing and supportive services, delivered through the clinics, schools and delivered directly in people's homes including: community health nursing, child health; maternal health and family planning and communicable diseases control; Therapy services are delivered in people's homes, through the clinics, schools and at the Child Development Programme Building at Tynes Bay and include occupational therapy, physiotherapy, and speech and language pathology.

**Mr. Chairman,**

The Community Health Nursing programme provides home and community health care services for all mothers and their newborns; guidance, support, and breast feeding support. Health education, nursing care and treatment is provided for clients with chronic non-communicable diseases (diabetes, strokes, heart disease) and those with communicable diseases (TB, HIV and AIDS). District nurses collaborate in the investigation of illness outbreaks and provide recommendations for containment and prevention. Community health nurses provide comprehensive care to clients within their homes, at organized events such as health fairs, in the Department of Health Clinics and at shelters – such as the one established during the passage of hurricane Gonzalo.

Community health nurses have a significant role to play in enhancing quality of life and providing the right care in the right setting especially helping the elderly manage any chronic health problems while remaining cared for in the setting of their own homes.

Providing assistance with the activities of daily living is the remit of the Community Health Workers and these humble services provided to the ageing population along with the aforementioned nursing services will prove to be a crucial piece of the puzzle when meeting the long term care needs of our seniors in Bermuda. There is no more cost effective method.

### **Mr. Chairman**

Health Visitors are qualified registered nurses with advance training in community health. Their focus is prevention, health promotion and education and they work to ensure that expectant and new mothers have the resources to appropriately care for themselves and their children.

Our community has need for this expertise especially since Health Visitors have particular responsibility for supporting the health needs of families. Their current remit is children under five and seniors, both populations with unique, multi-faceted needs. Health Visitors also supervise and guide the important, hands-on work of our Community Health Nurses and Community Health Workers.

In 2015 the Department of Health will be collaborating with Bermuda Education Network (BEN) to provide a springboard for nursing and other

health sector careers. The programme will be aimed at Berkeley and Cedarbridge students.

Community Health Nursing, **cost centre 32060**, employs 22 FTEs including six (6) health visitors, six (6) community health nurses and ten (10) community health workers (**page B-128**). Results are recorded on page **B-130** and the programme has an annual budget of \$1,909,000 (**page B-125**).

Community Health Administration, **cost centre 32010**, employs six (6) FTEs including two (2) stores officers, a community social worker, an Administrative Assistant, the Senior Medical Officer and the Chief Nursing Officer (**page B-128**). Results are recorded on page **B-129** and the programme has an annual budget of \$1,022,000 (**page B-125**).

**Mr. Chairman,**

Child Health is a Clinic and School delivered programme that provides preventive and curative health services including assuring conditions for optimum health for infants, children and adolescents. This is conducted through health and developmental assessments, screenings, referrals, treatment of minor ailments, health education, health promotion and anticipatory guidance. The programme assures conditions for optimum learning of children.

Asthma education, management and monitoring are provided for preschool and school age populations. Travel health provides consultation and

vaccination for travel abroad to high risk areas. The Expanded Programme on Immunization assures universal access to routine childhood immunizations for all infants and children through public and private sector services. An information system provides data on the health of the infant and young child.

**Mr. Chairman,**

For 2014 the child health programme operated with 80% of its established FTEs. The focus has been on staff development and training. Education topics include: vaccines and vaccine safety, physical assessment and outbreak investigation. The annual Expanded Programme on Immunization workshop for public and private sector participants was deemed a success.

Maintaining school health services through preventive health screenings was realized despite human resource constraints. The percentage of Primary One students screened according to the established protocol was 74%. The Asthma School Policy continues to await approval by Department of Education.

There were 1,128 travel clinic consultations and 314 travel follow up visits in 2014. In addition there were 449 adult immunizations, exclusive of seasonal influenza.

The Flu Express is well established, with attendance doubling this year at each of the Flu Express sites held throughout the island. This was successfully held immediately post Hurricanes Fay and Gonzalo. The staff showed resilience in maintaining preventive health services in the aftermath of the storms.

**Mr. Chairman,**

There have been significant challenges with vaccine procurement related to production issues and global market demands. As a result, country estimates for infants and children aged 0 – 24 months appropriately immunized was 81%. Calculations have been further impacted due to major problems with the information system associated with technology, human resource and network issues. National immunization coverage is anticipated to correct itself by the first quarter of 2015. Despite the challenges, there has been an absence of indigenous cases of serious vaccine preventable diseases affecting children in Bermuda during this fiscal reporting period. Bermuda cannot be complacent and the measles outbreaks in Europe and North America illustrate the value of this programme that is facilitated by the Department in partnership with local pediatricians and general practitioners.

Child Health, **cost centre 32030**, includes the Expanded Programme for Immunization and the Travel Clinic and employs 15 FTEs including the school nurses and two medical officers (**page B-128**). Results are



recorded on page **B-129** and the programme has an annual budget of \$1,723,000 (**page B-125**). Vaccine procurement for Bermuda requires a materials budget in excess of \$250,000, and Vaccines are provided at cost to private practitioners to ensure access and uptake at the lowest possible cost.

**Mr. Chairman,**

The Maternal Health & Family Planning Clinic service seeks to achieve a reduction in unplanned pregnancies through the availability of family planning consultation visits, affordable contraception, and emergency contraception. We serve Bermuda in three locations; our main clinic in Hamilton operates from Monday to Friday. and we also have two satellite clinics; St. George Clinic operating on Mondays from 9-11 a.m. and Somerset Clinic operating on Tuesdays from 9-11 a.m.

We aim to reduce unhealthy sexual behaviors and promote healthy choices through public education and health promotion. We provide screening and treatment for sexually transmitted infections for our clients and referral of their partners to the appropriate services.

Maternal Health use current research trends to guide our program. This includes guidelines for the promotion of cervical health and the prevention of other female related cancers. Maternal Health collects and provides data on various aspects of clinic services to agencies within Bermuda and to organizations in the Caribbean.

**Mr. Chairman,**

We aim to promote safe mother-hood and healthy outcomes for newborns through the availability of antenatal care for under insured and uninsured women, collaboration with other members of the Obstetric and health care teams, as well as offering free childbirth education, nutritional advice and support, promotion of breastfeeding, and appropriate immunization for all pregnant women. We recognize that women in Bermuda have a right to choose their birthing experiences and are on an ongoing basis collaboratively working with other members of the health care team to facilitate a safe delivery for both mother and baby when the avenue of Home Birth is chosen.

Maternal Health, **cost centre 32040**, employs 5 FTEs including nurses a receptionist and a medical officer (**page B-128**). Results are recorded on page **B-129** and the programme has an annual budget of \$502,000 (**page B-125**).

**Mr. Chairman**

The Occupational Therapy and Physiotherapy Services Programmes aim to provide quality rehabilitation service interventions to clients in the community setting.

Therapy primarily focuses on the rehabilitation and/or habilitation of people with physical or functional impairment of movement that negatively impacts

their ability to lead a normal healthy lifestyle. Occupational Therapy and Physiotherapy services are provided to maximize the functional potential of individuals with delays in normal motor development or with physical movement challenges. It is intended to achieve functional independence for self-efficacy of activities for daily living inclusive of families and caregivers. The programme also promotes health and wellness for individuals and the general public to take ownership for their own health and well-being for active community living. Lastly the programme works to prevent and limit the development of physical deformities through adaptive equipment prescription and anticipatory guidance.

This summer, the Aquatic Therapy programme for pediatric clients with special needs was again a highlight. Aquatic therapy achieves functional goals with the advantage that water reduces the effect of gravity and allows children to move more freely and strengthen muscles in a way they are not able to on land. Plus, most children find the pool to be fun, making the potential for progress even greater. Aquatic exercises benefit client posture and alignment, balance, gait and breathing.

**Mr. Chairman,**

Therapy's senior's team conducts home safety assessments for all seniors who are referred, with the intention of minimizing the risk of falls at home. The team also collaborated in interdisciplinary rest home inspections to assure that all licenced facilities are in compliance with rest home standards.

Physiotherapy Services, **cost centre 32080**, employs nine (9) physiotherapists, a secretary and a coordinator as FTEs (**page B-128**). Results are recorded on page **B-130** and the programme has an annual budget of \$1,066,000 (**page B-125**).

Occupational Therapy Services, **cost centre 32120**, employs 9 occupational therapists as FTEs (**page B-128**). Results are recorded on page **B-132** and the programme has an annual budget of \$944,000 (**page B-125**).

**Mr. Chairman,**

Speech and Language Therapy Services aim to reduce the number of clients with speech / language or feeding/ swallowing challenges in the community. Speech, language, and hearing disorders are common disabilities. However, unlike many other disabilities, these disorders often are reversible and even preventable with early intervention. In young children, early treatment can help prevent them from falling behind academically, socially, and in other key areas at a critical time in their development.

All parents can familiarize themselves with the signs of these disorders and seek an assessment from a certified Speech-Language Pathologist if they have any questions. Parent Training has been provided to increase speech and language facilitation in the home. Best practices facilitate improved collaboration with parents, caregivers and educators regarding intervention goals.

Occupational Therapists and Physiotherapists, working with Speech Language Pathologists, stress the importance of the parents playing, moving and interacting verbally and directly with their children. The service delivery model in use, promotes collaboration and communication with families and teachers, as well as Department of Health and Department of Education staff. Joint therapy sessions are provided in many cases.

**Mr. Chairman,**

Speech and Language Screenings are provided for Primary 1 students to facilitate early identification of potential clients, and to ensure consistency of service throughout the school year.

These services have proven to be one of the best health promotion activities performed by the school-based team. It provides an opportunity for the parents of the children to talk directly with a Pathologist about any concern that they might have regarding their child's communication skills.

In turn, the Speech-Language Pathologist is prepared to provide some preliminary information about a communication issue, as well as some suggestions for parents to try at home while waiting for services to begin. Having completed the screenings prior to school entry, it is possible to initiate services earlier in the school year, and for these services to be more consistent throughout the year.

**Mr. Chairman,**

Last year, early intervention Speech-Language Pathologists at the Child Development Programme collaborated to deliver a variety of training workshops. One group of parents whose children were receiving speech therapy participated in a Workshop entitled “*Clearly Speaking – How to Help Your Child be Better Understood*”. Another training workshop was provided for staff at Lefroy Care Community and Sylvia Richardson Care Community regarding the causes of communication, swallowing and feeding problems as well as ways to support and maintain these skills in adults and seniors in these facilities.

Speech and Language Services, **cost centre 32100**, employs 15 speech language pathologists as FTEs (**page B-128**). Results are recorded on page **B-131** and the programme has an annual budget of \$1,561,000 (**page B-125**).

In 2014 the Speech and Language Programme won the Bermudian Magazine’s Best of Bermuda Award for Best Government Service and they deserve praise and recognition for that achievement.

**Mr. Chairman,**

The Department of Health’s long-term-care facilities such as the Lefroy House Care Community and the Sylvia Richardson Care Facility, provide skilled residential care for seniors as well as daycare and essential respite care for families whose senior members reside at home.

Both facilities provide comprehensive medical, nursing, environmental and recreation services to the eligible elders of Bermuda. The Eden model of care practiced by the Department of Health is a non-medicalized model – that aims to offer the elder quality of life and choice in a home like setting e.g. wear one's own clothes, choice of time to wake and go to sleep, choice of activities and open visiting times.

Very simply put, relationships are more important than the tasks. Elders are regarded as individuals who deserve to have meaningful lives that are free from loneliness, helplessness and boredom. It is home for the resident elders and not an institution.

The Department of Health has a capacity to care for 41 elders at Sylvia Richardson and 36 elders at Lefroy Care Community. Accommodations at each site including some respite accommodations and day care.

Nursing assessments, personal care, housekeeping and laundry services are provided 24 hours per day, seven days per week. Services of nursing, environmental, recreation and other supporting health care workers are coordinated through the joint efforts of nursing, environmental and recreation programs and led administratively by an administrator.

The Care Community also provides medical and pharmacy services through a private physician and pharmacist consultant. Each Care Community is supported by the Department of Health with rehabilitation (physiotherapy, occupational therapy, speech therapy), nutritional and

dental services. The care and services are designed and delivered to reflect purposeful life to the elders their families and the caregivers

**Mr. Chairman,**

Hurricane Gonzalo tore the roof off the Annex Building on the low lying southern side of the Lefroy campus. Luckily the staff had already evacuated the residents and bunkered down in a more sheltered part of the building. We are fortunate that staff and elders escaped a long night of ferocious winds unscathed. We are also fortunate to have such dedicated staff at both facilities who forsake their own families and homes to stay with and watch over our elders.

This is the pinnacle of dedication and service and I would like to recognize the sacrifice of the DoH staff. At the height of a ferocious hurricane, when self-preservation is the norm, they are looking after our seniors, our mothers and fathers and putting themselves and their families second.

Since Gonzalo the Estates Department has been facilitating repairs at Lefroy House that, although not completed, are fully planned and are financed through insurance. The staff have shown their incredible adaptability by converting the dining room into a dormitory, and have had to compensate for the lack of accommodation through natural attrition.

**Mr. Chairman,**

It is evident from the damaged sustained from Fabian in 2003 and Gonzalo in 2014 that the Lefroy House is situated in a location not suited for safely



accommodating our vulnerable elders during a storm. The Department is actively exploring other options that will properly reduce the risk to the elders in our care from future natural disasters and give them the protection they deserve.

**Mr. Chairman,**

Long Term Care is very expensive because of the convergence of medical, social and care needs required to service elders. There is very limited home care service on the continuum of care for elders. Therefore, informal care is underutilized, limiting options and choices for care to facility-based care or independent living.

LTC facilities must be operating 24/7. This is at least 3 times more intensive than running a 9 to 5 business in payroll alone. There are three shifts to cover the day and it must also operate on weekends, public holidays and throughout hurricanes. These hours are manned by Department of Health staff that are unionized employees. The business units must be managed within the collective bargaining agreements with established benefits for sick leave, and vacation which often increase the need for overtime coverage.

The operation of a residential care facility requires managers, nursing, catering, housekeeping, and facilities management teams; meaning that it is a complex and diverse operation in a health care setting that must be sanitary and safe and provide quality care. Compared to a school building that is used for 35 weeks of the year for 8 hours a day which is 1,400

hours, Long Term Care facilities operate for 52 weeks for 24 hours a day which is 8,736 hours a year. In other words a Long Term Care Facility's building is used 625% more intensively than a school.

**Mr. Chairman,**

Lefroy Care Community, **cost centre 32000**, employs 58 FTEs (**page B-128**). Results are recorded on page **B-129** and the programme has an annual budget of \$4,856,000 (**page B-125**).

Sylvia Richardson Care Facility, **cost centre 32015**, employs 48 FTEs (**page B-128**), which is less than Lefroy as fewer domestic staff are employed. Results are recorded on page **B-129** and the programme has an annual budget of \$5,387,000 (**page B-125**).

**Mr. Chairman,**

To do the math, divide the annual budget of either facility by 12, and you will calculate that the monthly operating budget which is approximately \$400,000 – each. (Some additional maintenance budget is actually not included in this amount (it is in the Public Works maintenance budget)).

If each facility accommodates approximately 40 residents it is apparent that the cost of caring for elders is in the region of \$10,000 per resident per month. Not many, if any, of the elders that we care for can afford \$10,000 per month and as a consequence the fees are heavily subsidized. These

high running costs may not be financially sustainable and other options will be explored.

**Mr. Chairman,**

If elders live in precarious care situations, families (the informal caregivers) may lack support and may not be able to cope. As a result, their elder deteriorates more quickly, and the demand for placement in care homes increases. In short, the lack of quality community based care is the gap that causes the elder to require a higher cost of care sooner than if he/she had the benefit of community based care support and services.

Increased, and better coordinated community care services, as mentioned in my prior remarks on Community Health Nursing is one option to empower families and caregivers of elders to assist them in the enjoyment of a vibrant and meaningful life.

If additional resources and support could be dedicated to caring for elders at home it can preserve the quality of life, the family unit and community. Otherwise, elders choose the services they can afford as opposed to the services they actually require.

The lack of in-home care can reinforce elders defaulting to the security of a centre-based setting for their care and services albeit at higher-cost to the public purse. Low availability of LTC “beds” creates a scarcity mentality

among elders and their families who are anxious to secure a bed and “get in”. Better adherence to the mantra “the right care in the right setting” is needed as we go forward.

**Mr. Chairman,**

The Oral Health section provides dental health services for school aged children, special patients, prisoners and seniors. The Oral Health Section delivers both clinical services and school-based prevention services. Oral health prevention maintains and monitors the fluoride programme and a Screen and Seal programme for 6,000 school aged children. Screenings, which are conducted at schools, have been greatly accelerated by the Section’s use of digital pen technology.

Decayed, Missing and Filled Teeth (DMFT index) results show that Bermuda successfully maintains levels of decay that are below the targets set by the World Health Organisation. The World Health Organisation goal is DMFT of less than one. Bermuda’s DFMT is 0.66.

**Mr. Chairman,**

Preventive programmes are better value for money for all age groups and early prevention and intervention with children and adolescents has the greatest effect. The Oral Health Section provided Fluoride Supplementation in all nurseries, preschools and primary schools as well as individual supplements for those choosing to take supplements at home. Participation in this programme was greater than the target of 85%.

The bulk of the current clientele are uninsured children, working poor, seniors, and special patients. Among very young children, in particular, a costly problem is Early Childhood Caries (Decay), which is caused by frequent exposure to natural or refined sugars such as sleeping with a bottle of beverage or juice. The Oral Health Section adjusted the Screen & Seal Programme to identify these and other dental decay problems. This effort includes a cost saving collaboration with private dentists to provide screening and treatment prior to entering primary school.

Prevention for patients with chronic diseases is critical, as poor oral health can affect a number of conditions including causing higher risks of premature birth, exacerbation of diabetes and increased risk of heart disease have been clearly linked to poor oral health. Along with these increased risks come higher health care costs.

**Mr. Chairman,**

Prior to 2007-2008 the only seniors seen by the Oral Health section were those at Lefroy and Sylvia Richardson. The Bermuda Hospital Board has many seniors as in-patients requests appointments, which unfortunately often cannot be accommodated. Seniors were added to the population to be served, but the staff to care for them and meet the service demand has not been maintained and is now frozen.

There has been a continuous backlog of unmet service which spills over into the care of all other groups. Special patients are seriously

underserved and children must wait much longer for appointments. It will be necessary to change services provided to seniors so that they do not excessively displace children or displace special patients entirely.

In the performance measures for 2014 the number of seniors treated increased while all other groups decreased. It must be noted that while seniors had more appointments the impact is mostly caused by the length of the appointments required to treat seniors with medical issues and time consuming tertiary dental care problems.

No eligibility requirements were previously in place other than being over the age of 65 years. It is apparent that primary prevention will be displaced which will increase the risk of oral health issues in the younger population. It is essential that the issue of eligibility is examined as we face the next financial year with reduced staff.

**Mr. Chairman,**

The Oral Health Section, **cost centres 32150, 32155 & 32160**, employs 17 FTEs which includes four dental officers, a senior dental officer, two hygienists, an administrative assistant and eight dental assistants (**page B-128**).

One of the frozen posts was lost last week and several more posts are under threat because temporary staff have been employed at Oral Health for some months. It is challenging to compete against the salaries that are

paid in the private sector, and as a consequence dental officers are primarily recruited from abroad.

Careful planning and delivery of public health oral health services is needed going forward as the limitation in human resources will make it impossible to operate the programme in the same manner as before. The Oral Health Section's performance measures are recorded on page **B-132 & B-133** and the Section has an annual budget of \$1,568,000 (**page B-126**).

**Mr. Chairman,**

Information on the Environmental Health Section can be found on page **B-126** and incorporates **cost centres 32170, 32171, 32172, 32173, 32175, 32180, 32190 and 32270.**

This Section of the Department of Health works to assure food and water safety, sanitation, occupational health and safety and environmental health protection. It provides a wide range of services designed to protect the public against environmental health hazards and potential threats.

These services are delivered through eight sub-programmes: Institutional hygiene and safety; public health nuisances and pollution; food and beverage safety; water and sanitary engineering; environmental health administration; housing conditions control; vector control and port health; and occupational safety and health.

**Mr. Chairman,**

Vector Control continues to shine as a responsive and free service that aims to keep our island mosquito and rat free, thereby protecting health and allowing us to enjoy our time outdoors.

Bermuda has had four imported cases of the mosquito-borne disease Chikungunya that has spread throughout the Caribbean region. Bermuda must remain on its guard because of the presence of the mosquito vector for Chikungunya, *Aedes albopictus*, is well established in Bermuda. The scale of the Chikungunya outbreak in the Caribbean shows that it is not a disease to be taken lightly, as the joint pain can persist chronically in some sufferers. Also some countries were so afflicted, for example Jamaica, that school districts were known to be closed because there were so many cases and large parts of the population were bedridden.

**Mr. Chairman,**

Preventing diseases of international public health significance from entering Bermuda is the goal of inspecting vessels, commodities and port facilities and ensuring the maintenance of safe and sanitary conditions. Port Health is a developing area for public health officials worldwide, and Bermuda is no exception.

The focus for 2014 was collaboration with the Department of Airport Operation to assure airport capacity for the oversight of the health of travelers, and the hygienic condition of airplanes, airports and commodities.



Port Health workshops that were conducted in January 2014 with airport stakeholders served as good preparation for the summer's Ebola outbreak in West Africa, though at the time it could not be foreseen that a Public Health Event of International Concern was brewing that would fast forward the Department's need to provide a port health presence at the airport, performing traveler screening and risk assessments.

The Department has an ongoing International obligation to strengthen its port health presence under the International Health Regulations which require core competencies and capacities at ports of entry. The Department will do its best to meet our obligations at a time of shrinking human resources.

Vector Control and Port Health, **cost centre 32190**, employs 20 FTEs (**page B-128**). Results are recorded on **page B-134** and the programme has an annual budget of \$1,435,000 (**page B-126**).

**Mr. Chairman,**

The Occupational Safety and Health Office aims to reduce the risk of injury and illness arising from workplace activities. The Occupational Safety and Health programme remained active in training and certifying workers in asbestos abatement procedures and in issuing abatement permits. Workplace accidents were investigated and various work-sites inspected. The office also worked on radiation safety improvements. Because of budget freezes, the office now only employs one occupational safety and health officer and an administrative support person.

Occupational Safety and Health, **cost centre 32270**, employs 2 FTEs (**page B-128**). Results are recorded on page **B-152** and the programme has an annual budget of \$238,000 (**page B-126**).

### **Mr. Chairman**

Environmental Health Officers work diligently to ensure the maintenance of hygienic and safe conditions of healthcare and related premises by monitoring the operation of pharmacies, hairdressers, barbers, cosmetologists, piercers, tattooists, nursing homes, day care centres and by inspecting spas and schools.

These officers ensure the provision and maintenance of uncrowded, safe and sanitary housing conditions by monitoring and licensing rooming houses and responding to general housing fitness complaints, providing advice, and seeking compliance from owners and occupiers.

In collaboration with the Tourism Authority, the inspection and monitoring of hotels and guesthouses is performed to assure safe and sanitary tourist and temporary accommodation. Drinking water supplies and food operations island wide are also overseen. Officers collaborate in the investigation of illness outbreaks and provide recommendations for containment and prevention.

The Environmental Health Programme aims to reduce the risk of food borne illness by monitoring food and beverage importation, storage,

preparation and sale by licensing all types of food businesses and establishments and ensuring hygienic conditions and operations. Services ensure food is fit for human consumption by sampling milk, frozen deserts, foods and beverages and inspecting locally slaughtered meat.

**Mr. Chairman,**

Following The *Burden of Illness Study* performed in 2012, which focused on gastro-intestinal illness in Bermuda; the Department of Conservation Services, BIOS and the University of Laval, Canada, partnered with the Department of Health in research to locate the environmental source of *Salmonella mississippi* – a pathogen identified in Bermuda gastro-intestinal outbreaks but not associated with the food chain.

Environmental reservoirs for *Salmonella mississippi* were researched and found to be feral chickens and feral pigeons which points to the need to keep these potential vectors of illness under control to prevent them from polluting drinking water catchments and tank water. It is also important to remind people to boil their tank water especially if they are immune-compromised or using tank water to make up infant formula. Point-of-use treatment, including filtration and ultra violet disinfection form part of the Department of Health's recommendations for assuring potable tank water supplies.

**Mr. Chairman,**

Bermuda's tank water systems are an important example of sustainable management and use of precious rain-water resource that many countries are envious of.

The Environmental Health Section reviews every planning proposal to ensure that adequate tank capacity is included in proportion to catchment area.

Environmental Health education stresses that catchments and tanks are open systems and heavy road traffic, and other pollution sources make them vulnerable to pollution. Existing health laws require that the sediment in the tank be cleaned out every six years. We must not be complacent and assume that our water tanks are maintenance free, because they are not.

**Mr. Chairman,**

Environmental Health has been instrumental in performing sea water sampling (results are posted at [www.health.gov.bm](http://www.health.gov.bm) ) and overseeing the installation of grease traps in City of Hamilton food establishments in collaboration with the Corporation in an effort to abate the grease balls that were washed up on Grape Bay Beach in April 2014.

Environmental Health Programmes for Institutional Hygiene, Pollution Control, Food Safety, Water Safety & Sanitation, Administration and Housing Conditions, **cost centres 32170, 32171, 32172, 32173, 32175,**

**32180** employs 12 FTEs; 2 administrative staff, eight environmental health officers (EHOs) and two EHO managers (**page B-128**). Results are recorded on page **B-149 & B-150** and the programme has an annual budget of \$1,512,000 (**page B-126**).

**Mr. Chairman,**

The Central Government Laboratory provides a range of analytical services and scientific advice to a number of Government and non-Government agencies. It operates three programmes: Water and Food Analysis, Urine Drug Testing and Forensic Analysis.

The Water and Food programme provides a laboratory service for the analysis of water and food to assist in reducing environmental threats to health, improving drinking water quality and food quality, and maintaining a low incidence of waterborne and foodborne disease.

During 2014 the laboratory continued to work closely with the Environmental Health section to meet their testing needs for licensing and regulatory purposes, and to enhance some routine monitoring programmes.

The laboratory regularly tests water from the piped water distribution systems in Bermuda, water producers, schools, restaurants, and other premises licensed by the Department of Health. A service for bacterial testing of residential waters is also offered to members of the public through Environmental Health.

It is important to remember that Bermuda tank water is open to contamination from any foreign matter that lands on the roof, and may contain disease causing bacteria, so it is important to disinfect tank water before using for drinking and cooking.

There was enhanced sampling and bacterial testing of seawater from the most highly used beaches, following the US Environmental Protection Agency (EPA) guidelines for Recreational Water Use. These bacterial results were published weekly on the government portal, and more recently in a graphical format for easier viewing and interpretation by the public.

In August 2014 scientists from the Caribbean Public Health Agency (CARPHA) visited Bermuda to assess and verify the Department of Health's Recreational Water quality sampling procedures, analytical methods and results. Their conclusion was that the seawater quality results generated by the Central Government Laboratory are reliable, and that the bathing beaches of Bermuda meet the US EPA requirements for safe recreational use.

**Mr. Chairman,**

In addition to water testing, routine testing of milk, ice cream, and frozen yogurt is also performed to ensure that bacterial and other regulated standards are met. Food testing services are also available for routine monitoring as well as in reported cases of suspected food poisoning.

Water and Food Analysis Services, **cost centre 32220**, employs 2 analysts and one lab technician as FTEs (**page B-128**). Results are recorded on page **B-151** and the programme has an annual budget of \$457,000 (**page B-126**).

**Mr. Chairman,**

The urine testing programme provides a laboratory service for drugs-of-abuse testing of urine specimens to agencies such as drug treatment programs, the Department of Corrections, the Department of Court Services, doctor's offices, workplace and sports drug programs.

These agencies receive accurate test results on which to base their treatment or disciplinary proceedings. The Central Government Laboratory is the only facility on the island with the analytical equipment and expertise to provide confirmatory testing, which is essential where there are any legal, disciplinary or any other serious implications.

Urine Drug Testing Services, **cost centre 32210**, results are recorded on **page B-150** and the programme has an annual budget of \$98,000 (**page B-126**).

**Mr. Chairman,**

The forensic programme provides laboratory services to the criminal justice system and toxicology services to the hospitals and general practitioners.

Services include:

- analysis of drugs seized by the Bermuda Police Service,
- forensic toxicology analyses in cases of sudden death,
- fatal road traffic accidents,
- impaired driving,
- suspected drug facilitated sexual abuse,
- general toxicology services and other criminal cases,
- evidence recovery and preservation of trace biological and non-biological evidence in cases of suspected assault, sexual assault, murder, burglary etc. and
- miscellaneous chemistry analyses and assistance in chemical or biohazard emergency.

Forensic Analysis Services, **cost centre 32200**, employs 3 analysts as FTEs (**page B-128**) though one relief employee soon will be lost to attrition from the hiring freeze policy. Programme results are recorded on page **B-134** and the programme which has an annual budget of \$642,000 (**page B-126**).

**Mr. Chairman,**

The Clinical Laboratory services are provided to the general public through the Maternal Health, Child Health, Community Health and Oral Health programmes.



Blood tests for communicable diseases, cultures and antibiotic testing for bacterial infections, diagnostic tests for sexually transmitted infections, and screenings for diabetes and HIV are performed.

The laboratory also participates in health promotion exercises with screening tests for diabetes, heart disease and HIV.

The Clinical Lab, **cost centre 32090**, employs two FTEs and has an annual budget of \$277,000 (**page B-125**).

This small but busy lab (see p **B-130**) is critical for the functioning of the Victoria Street Clinic (aka the Hamilton Health Centre) and is also tasked with processing and shipping exotic samples (including Ebola) for analysis at overseas labs.

In 2015 the clinical laboratory of the DOH will work toward achieving adequate Antimicrobial Resistance laboratory surveillance in the community. Antimicrobial stewardship is critical in combating the emergence of resistant bacteria in the community. This business unit, though critical to delivery of services is particularly vulnerable to the hiring freeze policy as the Laboratory supervisor is in her 65<sup>th</sup> year.

**Mr. Chairman,**

Our public health workforce helps prevent epidemics by limiting the spread of contagious diseases, protects against environmental hazards and preventable injuries, promotes and encourages healthy lifestyles, cares for our seniors, and assures that there is a basic level of quality health care for all the country's residents.

The well-being of our citizens, our most important resource, depends on high quality public health services. These essential services must be assured through adequate financial commitment.

It is very important to recognise that the true value of the Department of Health should not and cannot be measured in dollars and cents but rather in the health and wellbeing of our population.

Healthy people, strong families, a fit and capable work force help to create a strong economy, and ultimately a healthy community.

**Mr. Chairman,**

The Department of Health and its services will be impacted in the months ahead by the hiring freeze as fewer staff will remain to provide services.

On page **B-128** it can be seen that the Department has already been downsized by nine percent or twenty six posts. Projections of attrition

indicate for this financial year indicates that the Department will shrink 15 percent overall.

Department Programmes will do their best to minimize the impact on essential public health services. All services are being closely evaluated for opportunities to merge, restructure, streamline or undergo business re-orientation. Communication on service changes will be announced as far in advance as possible so that the impact on clients and the health sector can be mitigated.

Though there are indications that it will be a challenging year ahead the Department will continue to strive for its vision of HEALTHY PEOPLE, IN HEALTHY COMMUNITIES.

**Mr. Chairman,**

This concludes Head 22.



## MINISTRY OF HEALTH SENIORS AND ENVIRONMENT

2015-2016 BUDGET BRIEF

### HEAD 21

## MINISTRY OF HEALTH

**Mr. Chairman,**

The current account estimates for **Head 21 Ministry of Health, Seniors and Environment Headquarters** begin on **page B - 119** of the estimates book. A total of **\$13.345 million** has been allocated for this Head. This represents **7%** of the budget allocated for the Ministry as a whole, and is a decrease of \$2.233 million or 14% under the previous year.

The decrease is mainly due to the reduction in the FutureCare capital injection and the freezing of several posts.

**Mr. Chairman,**

**Head 21** is charged with providing strategic direction, policy guidance, management, and coordination of services operated by the Ministry of Health, Seniors and Environment. There are three programmes, however each programme is subdivided into cost centres, totalling nine cost centres within Head 21 . The programmes as seen on **page B – 119 include:**

- Programme 2101 – General
  - 31000 – General Administration
  - 31015 – Grants Administration
  - 31020 – Corporate Services
- Programme 2102 – Office of the Chief Medical Officer
  - 31030 – Administration and Research
  - 31040 – Epidemiology and Surveillance
- Programme 2103 – The National Office for Seniors and Physically Challenged
  - 31140 – Office of the Physically Challenged
  - 31145 – National Office for Seniors
  - 31150 – Orange Valley Centre
  - 31155 – Opportunity Workshop

The Ministry Headquarter's long term objectives are set out on **page B-119** and include:

- Ensuring the residents of Bermuda have the ability to secure affordable health insurance which enables **access** to essential health services.
- Addressing **quality** by ensuring that our health services are safe and effective.
- Working to ensure that our health system is **efficient** to improve its financial sustainability and population health.
- Holding the Ministry **accountable** and ensuring effective and transparent **leadership**.

## **General Administration - 31000**

**Mr. Chairman,**

The General Administration budget has decreased by \$1.933 million or 29% when compared to the original budget for 2014/2015.

The FutureCare capital injection was reduced by \$1.9 million. However, the implementation of a transfer from the Mutual Reinsurance Fund, which provides a prescribed sum each month to FutureCare and the Health Insurance Fund has significantly assisted in sustaining the Funds.

The remaining \$33 thousand decrease and the \$189 thousand decrease in Corporate Services - 31020 is from the freezing of four posts. The posts include, two policy analyst, one accounts assistant post and one accessibility intake worker.

The General Administration budget provides the following:

- funding for eight Headquarters staff ;
- administrative and utility expenses for the Ministry Headquarters (\$1,000,000); and
- funding of \$3.1 million for capital injections into the Health Insurance Fund and the FutureCare Fund.

## **Grants Administration – 31015**

**Mr. Chairman,**

The Ministry Headquarters provides funding for various organizations that deliver services to the community. On **page C – 17** is the list of the grants awarded for 2015/16 and as follows:

- LCCA for Overseas Medical Care (\$3 million);
- The Nursing Council (\$48,000)
- Bermuda Health Council (\$842,000);
- Age Concern (\$40,000)
- Admiralty House Senior Islanders Club (\$44,000);
- The Sexual Assault Resource Team (\$10,000)
- Public Health Scholarships (\$72,000);
- Tomorrows Voices (\$14,000); and

**Mr. Chairman,** these organisations provide valuable services, in some cases essential services, to the community and the Ministry of Health, Seniors and Environment. Unfortunately, we were not able to provide all the funding that was requested.

## **Bermuda Health Council**

**Mr. Chairman**, the Current Account Estimates for the Bermuda Health Council (BHeC) can be found under Head 21 - Grants - on **Page C-17**.

The Bermuda Health Council is a relatively new entity established in 2006 to regulate, coordinate and enhance the delivery of health services on our Island. **It has a broad mandate, but a small operation**, which contributes most efficiently to the stewardship of Bermuda's health system.

The grant for the Health Council in 2014/15 was **\$886,000**. For the 2015/16 fiscal year the grant provided to the Council will be \$842,000. This is approximately two thirds of the Council's annual operating costs of \$1.3 million, the budget required for the Council to operate at minimum capacity. Since April 2014, the balance has been raised through a \$0.67 (cent) transfer from the Mutual Reinsurance Fund.

**Mr. Chairman**, fiscal year 2014/15 was a highly productive one for the Health Council. Significant among its achievements was the Tabling of its audited financial statements and Annual Report 2013/14, within three months of the fiscal year ending, and in the first Parliamentary Session following year-end.

I take this opportunity to highlight to Members and the public, that this achievement is evidence of the Health Council's excellent track



record with respect to its finances and operations. The Council has had consecutively clean audits since its inception. And this year's Tabling of the Council's audited financial statements in June, is a standard that is rarely seen locally, and which took close collaboration between the Council and the Auditor General to achieve.

**Mr. Chairman**, in the fiscal year 2014/15 the work of the Bermuda Health Council was centred around four strategic areas:

- care quality and standards,
- regulation,
- health system economics, and
- audit and governance.

Some highlights of the year's achievements are as follows:

### **Care Quality and Standards**

**Mr Chairman**, we all know that the quality of care is what matters most about the health system in any community. It is the real bottom line. Accordingly the Health Council places this imperative at the top of its priorities, and much of its work places care quality and standards at its heart.

The Health Council has a mandate to **regulate health professionals by monitoring** licensing, certification, standards and codes of practice to assure quality controls by professional boards. The Council monitors professional statutory boards and produces an

annual report of their performance with respect to registers, licensing and complaints handling procedures. The report assists the Ministry in determining annual board appointments.

In addition, **Mr Chairman**, the Council **publishes professional registers on its website**, which provides the authoritative record for the public of registered health professionals on the Island. The Health Council's pages for professionals are among the most visited on its website.

Following extensive discussion on **pre-certification**, this year the Council fulfilled the Ministry's request to develop policy guidelines for the Health Insurance Department to outsource and implement a centralized pre-certification contractor for select diagnostic tests covered under the Standard Hospital Benefit (SHB). The report was published as part of the Ministry's RFI, and outlines what procedures may benefit from pre-approval to contain utilization and health costs.

**Mr. Chairman**, to further improve the quality of healthcare in Bermuda, the Health Council collaborated with the Bermuda Dental Board and the Bermuda Nursing Council in rolling out the new **Standards of Practice for dental practitioners and for nurses**, respectively. Establishment of standards of practice for our local providers is a long-awaited and much-needed shift, and the public will be the beneficiaries of improved quality of care.

There have been long-standing concerns about the variation in clinical practice locally, given the diverse backgrounds of our

healthcare providers. While overall the standard is generally sound, there is variation in whether a professional follows best-practice clinical guidelines from the United States, the UK, Canada or elsewhere, depending on their training.

To eliminate this variation and improve standards for local patients, this year the Health Council **collaborated with the medical community to identify and agree on one set of international screening guidelines to be applied locally.**

The United States Preventative Services Task Force guidelines were selected and the Council continues to work with all relevant stakeholders to advance their rollout and implementation. Application of these guidelines is expected to improve screening where too little is done currently, and reduce it where our screening rates are unwarranted.

In addition, **Mr Chairman**, this year the Health Council has worked with stakeholders to try to **improve the processes for overseas referrals and coordination**, to address known deficits in communication that, at times, can prevent the best outcomes for patients. Given the unregulated nature of this work, and the diverse stakeholders involved, this is a work in progress, which we should like to see completed in 2015.

## **Regulation**

**Mr Chairman**, at this point it is worth reminding Members, stakeholders and the public that the regulatory powers of the Health Council are not as extensive as they are often believed to be.

While it has sound powers with respect to the Health Insurance Act 1970 and Standard Hospital Benefit Regulations, which it enforces in full, **the Health Council has no authority over health professionals, healthcare businesses, or the Bermuda Hospitals Board.**

Here I report on the aspects where the Council does have authority.

The Health Council monitors **employers' compliance with the Health Insurance Act 1970** to assure employees and their spouses receive the mandated health insurance coverage. Through collaboration with health insurers, the Department of Social Insurance (DOSI), and the Department of Public Prosecutions, the Council tracks and follows-up on errant employers. Hundreds of employers were contacted in 2014 to ensure compliance, and the Health Council is grateful for their collaboration. Three employers were successfully prosecuted last year.

The Council will continue to step up its enforcement actions to ensure employees are aware of their policy status and receive their coverage entitlements. A more efficient deterrent has been identified and approved, and in 2015 the Health Council will be granted authority to **publish the names of employers with inactive health insurance**

**policies** for their employees. This measure is expected to reduce the need for prosecution and enable employees to stay abreast of any irregularities in their coverage.

**Mr. Chairman**, the Health Council is tasked with enforcing the **Health Insurance (Health Service Providers and Insurers) (Claims) Regulations 2012**, which abolished upfront charges and introduced requirements for timely claims processing.

Monitoring of compliance indicates good cooperation from providers with respect to upfront charges. However, there remain significant concerns with the completeness of claims data provided. This year the Health Council has worked with stakeholders to ensure standard hospital benefit claims, in the first instance, are fully compliant with the Claims Regulations. This will enable timely adjudication of claims and proper monitoring of health system trends. From April 2015, incomplete claims will be rejected by insurers.

**Mr. Chairman**, in 2013 the Health Council introduced a new **Home Medical Services (HMS)** benefit per the Health Insurance (Standard Hospital Benefit) Regulations. This has enabled patients to receive select medical procedures such as IV therapy and wound care in their homes, payable by all private and public insurers. This service helps to ensure patient safety and to contain health costs, by providing care in more appropriate settings.

Preliminary evaluation indicates that over the first six months of implementation the Home Medical Services benefit yielded savings of

over \$103,000 to the health system and was successful in enabling care to be delivered outside the acute-care setting. This is an encouraging start, and the Health Council will look to expand this programme in the future. The Health Council would like to note its gratitude to the Bermuda Hospitals Board, private HMS providers, and referring physicians for making this benefit a success.

### **Health System Financing and Economics**

**Mr Chairman**, a major contribution from the Health Council each year is the annual **National Health Accounts Report**, which details Bermuda's health expenditure and financing over time.

This report is highly valued by stakeholders across the system, as it enables monitoring of trends to identify the policy direction needed to contain health costs. We know from this report that in the fiscal year ending 2013 our health system cost \$705 million dollars, or \$11,297 per person. While total costs increased by 5%, a 3% decrease in Bermuda's population meant that per capita health spending increased 8% overall. The main contributors to health spending increases were overseas care and health insurance administration. The amount of funds spent on local physicians declined again last year. With sound knowledge of health spending drivers, we can make policy decisions to contain costs.

In addition, every year the Health Council conducts the actuarial review of the Standard Premium Rate, inclusive of premiums for the Mutual Reinsurance Fund and the Standard Hospital Benefit. The Health Council publishes the **Actuarial Review Report** annually,

which provides a measure of accountability as we pursue sustainable financing of the mandated, basic health insurance package.

Lastly under the health economics priority, **Mr Chairman**, I have to note the great strides that have been made by the Health Council to develop a way to move Bermuda's **healthcare fees to a transparent and objective standard**.

There have been long-standing concerns about the use of various fee schedules locally, and the Council has identified a way to apply an internationally-recognized Resource Based Relative Value methodology to set fees locally, with an appropriate conversion factor to take account of the local cost of doing business.

The Council will pilot the methodology with a small set of diagnostic service providers this year. It is expected that this will set a standard for other regulated fees in the future, to bring stability to health costs and ensure fair payment to providers.

### **Public education**

**Mr. Chairman**, public education is vital in curbing the Island's health costs, and the Health Council is acutely aware of this. For this reason, in 2014 the Health Council conducted a new and highly successful information campaign called **SnapFacts**.

This was in addition to the Council's other public awareness initiatives, including news articles, a quarterly Newsletter, and social media outreach.

I take this opportunity to remind my Honourable colleagues and the public that the Health Council's reports, and more, are available on their web site. Publication of these reports enables transparency and public dialogue about health costs and outcomes, so that our whole community can be engaged in finding solutions for our health system.

**Mr. Chairman,** looking forward to **2015/16**, the Bermuda Health Council is well placed to continue to achieve its mandate and add value to the health system through regulation, monitoring and quality improvement.

In particular, the Health Council has been tasked with coordinating implementation of the Bermuda Health Plan, and it will work collaboratively with the Ministry to drive health system improvements to safeguard the sustainability of the health system and improve quality and equity for all our residents.

**Mr. Chairman,** I would like to acknowledge the 2014 Bermuda Health Council board members whose expertise and dedication contributed to these achievements:



**Mrs Simone Barton – Deputy Chair**

**Mr Richard Ambrosio**

**Mrs Naz Farrow**

**Ms Alison Hill**

**Ms Katura Horton-Perinchief**

**Dr Wesley Miller**

**Mrs Jane M. “Jasen” Moniz**

**Dr Joanna Sherratt-Wyer**

**Mr Andrew Simons**

**Mrs Venetta Symonds**

**Chief Executive Officer of BHeC, ex officio**

**Financial Secretary, ex officio**

**Permanent Secretary, Ministry of Health, ex officio**

**Chief Medical Officer, ex officio**

To conclude, I would like to express my sincere gratitude to all of the outgoing Council Members, but in particular to Dr Joanna Sherratt-Wyer, who resigned this year having handed over presidency of the Bermuda Medical Doctors Association. Her excellent work and dedication to the betterment of Bermuda's health system is greatly appreciated. We look forward to continued collaboration with her successor, Dr Henry Dowling.

## **Corporate Services – 31020**

The Corporate Services Unit (CSU) budget can be found on **page B-119** of the Budget Book.

**Mr. Chairman**, you will note that the budget for Corporate Services will decrease by \$189 thousand or 36%. This is the difference between the prior year's original budget of \$531 thousand and the approved 2015/16 budget of \$342 thousand.

**Mr. Chairman**, you will have also noted that I mentioned the decrease in this budget when I spoke of the General Administration budget – 31000. The reason being is that the two frozen policy analyst post which fall under this cost centre are interlinked with the General Administration section and it is important for me to make that connection with the two sections.

There is currently one policy analyst who is mandated to address the policy needs across the Ministry which is very critical to the Ministry.

Corporate Services' responsibilities include:

- Programme and policy development
- Programme evaluation
- Research and analysis
- Legislative review and
- Direct service delivery

## **OFFICE OF THE CHIEF MEDICAL OFFICER**

**Mr. Chairman,**

In its second year of operation as a program within the Ministry Headquarters, the Office of the CMO has been fully engaged in implementing all aspects of what are universally termed the “Ten Essential Functions of Public Health”.

You will recall that, among other responsibilities, these functions include:

- monitoring the health status of the community to identify problems and target resources;
- investigating health problems and hazards in the community, such as outbreaks of infectious disease;
- educating, and empowering people about health issues; and
- mobilizing community partnerships and collaborating with public health partners to address complex health problems such as preparing for the threat of Ebola and improving management of chronic non-communicable diseases.

These 4 critical functions have been particularly demanding in the past year. The other essential public health functions, are of a more routine nature, but are equally important to maintaining a healthy community. They include:

- developing policies which support individual and population health;
- enforcing legislation to assure public safety;

- linking individuals to personal health services when required;
- assuring a competent and professional healthcare workforce;
- evaluating personal health and population health services; and
- conducting research to identify new solutions and inform policy decisions. (Revised from American Public Health Association)

**Mr. Chairman,**

These 10 essential public health functions are undertaken in the Office of the CMO by a staff of six full-time employees and one part-time pharmacy consultant. The budget for the Office, is contained under two cost centres:

- 31030 Administration and Research, and
- 31040 Epidemiology & Surveillance

The total budget for the 2015-2016 fiscal year for the Office of the CMO is \$ 922,000 which represents a 2% increase over the previous fiscal year to support the necessary complement of staff in keeping with the reorganization of the office. This information can be found on page B-119 of the Budget Book.

**Mr. Chairman,**

To clarify the activities of the office, they can be categorized into 5 functional areas:

1. Registration and Regulation of healthcare professionals and facilities
2. Epidemiology and Surveillance

3. Drugs and Pharmaceutical Product Control
4. Statutory and public service consultative functions
5. Public Health Focal Point for national and international collaboration

**Mr Chairman,**

I will briefly highlight the activities, achievements and challenges faced in the past year in each of these functional areas of the Office of the CMO.

Corporate planning identified and prioritized the major areas of focus during the year, within each functional area of the Office of the CMO.

In the area of Registrations and Regulations of healthcare professionals and facilities, the activities focused on continuing the effort to create and update the electronic database of over 2,600 healthcare professionals on the island, representing 23 professions.

The process of registration and re-registration for these professionals is currently a paper-based manual process, and is managed by a single staff member, the Registrations Manager. With increasing demands for registration of new professions, the need for reliable authentication of credentials, and for continuous monitoring of professional competence and conduct, the current resources are inadequate.

In 2014, the registrations process was assisted by an administrative assistant in the office, allowing progress in creating the electronic

professional database. The administrative support also facilitated the re-registrations of approximately 230 medical practitioners, 70 pharmacists and over 300 allied health professionals. It is anticipated that by the end of the fiscal year, the first ever re-registration of the 100 dental professionals will be accomplished.

The value of enhanced record-keeping for registration is that it verifies a competent healthcare workforce, including documenting continuing professional education and assuring adequate liability coverage.

Refining the processes for all registered professions will remain a priority for the Office of the CMO, and efforts will be made to advance automation of these registration processes so that the regulatory responsibilities of the Office can be afforded more attention.

In this regard, the Office of the CMO has been kept busy receiving and addressing concerns from the public and from healthcare professionals. As the primary administrative support for the ten statutory Boards and six Councils, the Office received and investigated complaints and oversaw the management of these within the respective professional conduct committees.

**Mr. Chairman,**

This past year there were over 25 substantial complaints received by Office of the Chief Medical Officer. The CMO serves as executive officer for the Bermuda Medical Council which addressed 17 complaints, a significant increase over the previous two years.

As anticipated, the level of regulatory activity remained high due to the rising number of requests from health entrepreneurs, both locally and abroad. Health-related business endeavours are a fact of life. An increase in requests for new clinical laboratories, healthcare and diagnostic imaging facilities occurred this year.

It is the responsibility of the Office of the CMO to assure that all these endeavours maintain an optimal level of safety, and that they are appropriate additions to the health services on the island. Fortunately, this weighty regulatory role is supported by the Department of Health's Environmental Health Section and by the National Office for Seniors and the Physically Challenged.

The Office of the CMO aims to enhance standardization of its regulatory processes, and increase compliance monitoring and enforcement in the area of healthcare professional and facility regulation. This is required to assure the safety and wellbeing of the population and to protect the island's health system reputation in the world community.

The current resources within the Office of the CMO do not match the broad scope, diversity and quantity of healthcare regulatory responsibilities. Creative means of increasing resources and regulatory capacity will be sought in the coming year, including streamlining and automating some administrative processes and creating secondment opportunities within the office.

**Mr. Chairman,**

One key resource required to uphold the Office of the CMO's regulatory role is funding to provide legal support for the work of statutory bodies, as needed. Resistance to regulations set by statutory bodies and to efforts to enforce legislation and regulations is an increasing reality. The complaints management process requires investigation and legal expertise.

Respondents to complaints often engage a legal defence. Likewise, the regulatory bodies must be prepared to stand their ground to protect the public interest. Contingency funds must be identified to enable the execution of this regulatory mandate.

**Mr. Chairman,**

The Office of the Chief Medical Officer also had responsibility for executing multiple legislated processes including approving applications for burials, disinterment, and custom duty exemptions and drug import licenses.

The Office also gives consultation and advice to the public service in several areas. The Staff Medical Board is chaired by the CMO, as are meetings of the GEHI Appeals Tribunal. Decisions made in these domains affect public service workplace efficiency and impact insurance benefits for public service employees.

In addition, the CMO serves as an ex-officio member of the Bermuda Hospitals Board and the Bermuda Health Council.



**Mr. Chairman,**

The third functional area of the Office of the CMO is Epidemiology and Surveillance. The Epidemiology and Surveillance Unit (or ESU) of the Office upholds the most critical health protection function in public health. It identifies health threats and garners the resources to address them. The ESU has had an exceptionally active year.

This unit receives information from the general public, the hospital and from healthcare practitioners notifying them of occurrences of infectious disease or other health threats. The ESU investigates and responds to these reports by coordinating with public health partners, both within the Department of Health and in the wider community, to prevent and control outbreaks of contagious disease.

The capacity of the ESU to respond to public health incidents must at all times be maintained at a high level. Preparedness exercises and collaborative agreements with public health partners is an essential component of response capacity, and in 2014 the ESU exercised these skills continuously.

Although the ESU consists of just 3 professionals, an epidemiologist (or Assessment Officer), the Nurse Epidemiologist, and a Surveillance Officer, it is the front line of coordination of the response to public health threats for the island.

These threats can range from familiar diseases such as influenza, measles, mumps and other vaccine-preventable diseases, to more

unusual diseases such as Chickungunya and Middle East Respiratory Syndrome-Coronavirus (MERS-CoV).

As you are well aware, 2014 also saw the introduction to this region of the world a most unfamiliar and chilling threat: the threat of Ebola Virus Disease. In August 2014 the World Health Organization's International Health Regulations-Emergency Committee designated the Ebola outbreak in western Africa to be a Public Health Emergency of International Concern (PHEIC). This unique designation requires immediate international public health response.

In Bermuda, the Office of the CMO receives notification from the World Health Organization as the island's focal point for international public health communications. The response of the Office and its ESU was prompt and has been sustained.

The response has been multi-faceted and included outreach to a vast array of public health partners. Collaboration with the acute care hospital, the Emergency Medical Services, Airport Operations, Civil Aviation, Customs and Immigration, Fire Rescue Service, Police, the US Consulate and others, has been ongoing from January 2014.

More intense collaborations have occurred since the August 2014 designation of Ebola as a PHEIC. The ESU has engaged multiple sectors of the community in scenario planning, preparedness self-assessments, and coordinated problem-solving.

These activities included multi-sectorial “tabletop” exercises, collaborative meetings, and policy development. In October 2014 the ESU hosted experts from the Pan American Health Organization (PAHO) to assist with these collaborative meetings and with public health capacity-building.

These coordinated efforts resulted in implementation of new procedures, such as screening of travellers at ports of entry, as well as new national policy documents such as the “*Public Health Management of Ebola and other Viral Haemorrhagic Fevers*” and Bermuda’s national “*Public Health Emergency Response Plan*”. All the ESU’s collaborative efforts are aimed at identifying public health threats early and coordinating an effective, multi-sectorial response to mitigate the threat.

**Mr. Chairman,**

We are extremely grateful for the spirit of collaboration and cooperation shown by our public health partners. Many professionals, from healthcare to housekeeping, and many government departments and private healthcare professionals have welcomed our team, and worked with dedication alongside us, to protect the island from the introduction of serious health threats.

**Mr. Chairman,**

We recognize that it has been by the grace of God that our island has thus far been spared direct impact from the Ebola outbreak or from other deadly infectious disease outbreaks. Nevertheless, the ESU and its public health partners will be maintaining vigilance and will

continue to create and refine our public health policies and practices in preparation for worse case scenarios.

Even while the activities of the ESU focus on the threat of infectious diseases, the unit must also maintain attention on the increasing threat of chronic non-communicable diseases (or NCDs).

**Mr. Chairman,**

This year the work of the ESU included implementation of the STEPS to a Well Bermuda population survey. The research and community assessment public health functions required the cooperation of several community partners, as well as support from the Caribbean Public Health Agency (CARPHA) and PAHO.

The STEPS Survey aims to determine the prevalence of high-impact chronic diseases such as diabetes, hypertension, and obesity, as well as their risk factors. The prevalence of chronic disease risk factors such as obesity, poor diet, tobacco use and inactive lifestyle, are good predictors of the chronic disease burden in the future.

The STEPS survey was launched in November 2013, and the small group of interviewers concluded their field work in late December 2014. The data from over 1,200 detailed interviews will be analysed and interpreted in the final months of this fiscal year by the ESU with the assistance of the CARPHA team of experts. The findings of the survey are eagerly awaited and will surely inform public health policy and action in the months ahead.

**Mr. Chairman,**

I would like to take this opportunity to offer a sincere note of appreciation to the dedicated STEPS survey interviewers and technical staff who persevered to the end. Also, I offer thanks to our many colleagues, especially the Bermuda Hospitals Board's Chronic Disease Management Unit, the Department of Health staff, our public health partners such as the Bermuda Diabetes Association, and a very special thanks to the Bermudian public for their willing participation.

**Mr. Chairman,**

The Epidemiology and Surveillance Unit continues to routinely collect information on the prevalence of communicable diseases such as influenza, gastroenteritis, tuberculosis and many other reportable diseases. Its responsibilities of reporting to PAHO and WHO are taken very seriously and are carried out by this unit on a weekly basis.

In the year ahead, we intend to expand this surveillance to chronic NCDs. The goal of establishing chronic disease registries will be a top priority. This will allow for ongoing community health monitoring assessment and tracking of Bermuda's health system outcome over time. Trends in the health system and in our health outcomes will be able to be compared internationally and appropriate interventions chosen to address our many problems. The aim of all this assessment is of course a reduction in preventable illness, disability, and premature mortality.

Enhancement of mortality coding reporting has occurred in the year due to the special efforts of our Surveillance Officer. As a result the lag time for mortality data has been reduced from 3 years to one year. Our capacity to track changes in causes of death has been improved, and preventive action must follow.

**Finally, Mr. Chairman,**

The fourth functional area within the Office of the Chief Medical Officer is Drugs and Pharmaceutical Product Control.

This area is tasked with monitoring the importation and exportation of pharmaceuticals; documenting the use of controlled drugs according to the requirements of the International Narcotics Control Board (INCB); and reporting to the INCB to confirm Bermuda's adherence to mandatory quotas. The Office of the CMO also issues licenses for personal and commercial importation of drugs and pharmaceutical products.

Monitoring of compliance to the Pharmacy & Poisons Act 1979 and the Misuse of Drugs Act 1972 is executed with the expertise of the Pharmacy Consultant. The Pharmacy Consultant post is currently part-time. It has long been identified that this arrangement is inadequate for the expanding volume of regulation required in the realm of drugs and pharmaceutical products control.

In the past two years, there has been an increase in drugs and pharmaceutical control issues, and the emotive debates surrounding the importation of Cannabinol containing products continues.

Justification for more policy development and pharmacy professional expertise is apparent. It has become a priority to increase support in the Office of the CMO to address public demands for improved drug control and/ or reform.

**Mr. Chairman,**

As with all Ministry departments, staff in Office of the Chief Medical Officer has laboured tirelessly, and with slim resources, this year to address a multitude of routine, long-standing, and emerging problems in the health sector. The Office has relied on the support of many public health partners, within and outside of government. It is grateful deeply for these collaborations and for the many individuals who work daily to positively impact the health and wellbeing of the people of Bermuda.

The coming year promises no relief in the public health challenges, locally and internationally. However, we are confident that with the collaborative arrangements here in Bermuda, and with regional and international public health authorities, we will meet these challenges.

**National Office for Seniors and Physically Challenged – 31140 and 31145**

**Mr. Chairman,**

The Current Account Estimates for the National Office for Seniors and the Physically Challenged (the Office) can be found under Head 21 on **Page B – 119.**

The Office has four programmes;

- the Office for Ageing 31145,
- the Office of the Disabled 31140,
- Orange Valley Centre 31150 and
- Opportunity Workshop 31155.

The combined budget for the Office is \$3.136 million which is essentially unchanged from the previous year due to furlough days being reinstated.

The vision and mission for the Office are:

**Vision**

A caring and inclusive Bermuda that supports the well-being of Seniors and Persons with intellectual and physical disabilities.

**Mission**

To facilitate improved quality of life for Seniors and Persons with Intellectual and physical disabilities through assurance



coordination and delivery of programmes in collaboration with a public-private network of stakeholders.

**31140 Disabilities** – Develops and coordinates programmes and services that promote improved quality of life for persons with disabilities. The Disabilities section has a budget of \$358,000 and has three full time staff.

**31145 Ageing** – Develops and coordinates services for seniors and their families in addition to providing case management. The Ageing section has a budget of \$514,000 and employs four staff.

**31150 Orange Valley** is designed to facilitate training and guidance for developmentally challenged clients to strengthen, support and /or maintain levels of independence in the areas of functional life skills, pre-vocational, recreational, social skills and community awareness. The total budget for Orange Valley is \$972,000.

**31155 Opportunity Workshop** provides training and coaching services for young adults with physical and/or cognitive disabilities with the intent of maximising each client's level of independence in the areas of living, vocational and social skills. The budget for the Opportunity Workshop is \$1.292 million.

There are a total of 22 staff who work collaboratively between the Opportunity Workshop and Orange Valley.

The Disability and Ageing sections have four themes under which they operate: case management, compliance, policy development and enhancing awareness.

**Case Management** is the process of providing assessment, coordination, monitoring, follow-up and evaluation of the services provided by and through various agencies. This process occurs in conjunction with the client and the client's support network.

**Compliance** relates to enforcing the provisions of the Senior Abuse Register Act 2008, the Residential Care Homes and Nursing Homes Act 1999 and the Commercial Building Code.

**Policy Development** requires the Office to research new international trends and programmes and make recommendations for implementation of programs for Seniors and Persons with disabilities in Bermuda.

There are many in the community who are not aware of their rights as seniors or the rights of persons with disabilities. The National Office gives presentations on both topics as well as advocating on behalf of seniors and persons with disabilities in order to **Enhance Awareness**.

**Cost Centre 31140 Disabilities which is aligned with:**

**Cost centres 31150 Orange Valley Centre and 31155 Opportunity Workshop**

The work within Disabilities is not a single agency effort. The Office works with many other stakeholders to ensure that initiatives and programmes geared to persons with disabilities are successful.

***Establish research to investigate needs***

- While NOSPC has no legal responsibility with respect to the Building Code, the Accessibility Officer sits with technical officers within the Department of Planning to review building applications. At this time input is provided regarding the new building code adopted as of January 12, 2015.
- With the integration of Orange Valley and Opportunity Workshop, case management was tasked with the responsibility of testing each client to formulate an action plan to launch new initiatives. Data collected determined the types of services clients received, which included functional, creations of goods or employment training. The merger of the two facilities has seen better utilization of staff expertise and as a result, clients have benefitted greatly.
- NOSPC Disability section in collaboration with Workforce Development has increased the proportion of persons with learning disabilities who are seeking employment or a career change.

- The transition team, a multi-agency taskforce, assisted with self-sufficiency of people with physical and sensory disabilities by providing researched information and support for coordinated services
- The National Accessibility Advisory Council (NAAC) has a new Chairperson; she and her team are tasked with looking at amendments to the Human Rights Act (1981) to include “mental /intellectual” disability.

### **Increased employment for persons with disabilities**

- Adopting the International Labour Organization report (2013); Employment Training Division at Opportunity Workshop linked clients to various business resources. To date 95% of the clients have day-release jobs.
- Through the Training/Employment and Production initiatives, clients are acquiring workforce skills, and productive community partnerships are being developed with respect to job opportunities.

I would like to thank those companies and Government Departments that have assisted with giving our more advanced clients the work experience that they need to improve their socialisation skills and their employability.

## **Awareness**

- The Disabilities section surveyed parents to determine unmet needs. A comprehensive study determined a community home is needed. A team consisting of a social worker, case worker and administration was formed November 2014 to address this request.
- NOSPC will hold a One Day Accessibility Seminar (March 12, 2015) promoting Bermuda's new building code 2014. Mr. Richard Duncan , Executive Director Universal Design Institute, will discuss marine and dock access, restrooms guidelines outlined in the American Standard Institute.
- The Disability section has been very intentional about speaking at awareness seminars including: Department of E-Commerce's safe internet day and the Bermuda Economic Development Corporation Small Business Seminar – both held in February 2015.
- In 2014, CITV began highlighting Opportunity Workshop clients working in their day release business settings, utilizing their skills and job training. This joint venture will continue throughout 2015.
- NOPSC introduced, in November 2014, Ride Share for seniors and persons with disabilities for special community events.

- The UN International Day of Persons with Disabilities was held December 2014. NOSPC's new Acting Manager and Coordinator for Disabled marked this occasion by speaking with the media to raise awareness of disability and accessibility.
- To strengthen local efforts to ensure equal participation in our society, Opportunity Workshop/Orange Valley had an exhibition showcasing and selling their handcrafted candles and bags at the Washington Mall and Hamilton Market Place. This was the Workshop's second annual exhibition/craft market.

### **Cost Centre 31145 Ageing**

The primary functions of this cost centre are case management, compliance, advocacy and awareness.

### **Case Management and Compliance**

There are two areas of Compliance within the Ageing cost center: Residential Care Homes and Senior Abuse.

Case Management of a Senior or Person with a disability can occur without a report of abuse; however there are times when these two functions are closely intertwined.

A complaint regarding a senior in the community or a residential care facility for abuse could result in the senior being case managed. Or vice versa a referral for assistance may indicate that some form of abuse may be occurring.

## **Case Management**

- In 2014 the Case Management team managed 243 cases. Not all case management cases are abuse cases. Some of the cases are complex and require constant monitoring. Others are resolved once the client's concern has been addressed, a short term need is met, or long term placement has been secured.
- In 2014 there were 129 persons who were referred to the Community Assessment Referral Team (CART) for additional support (resources) in the home or placement in a residential care facility.

## **Compliance**

***The Senior Abuse Register Act 2008*** is designed to bring awareness to Bermuda regarding Senior Abuse, protect seniors from abuse, provide for the mandatory reporting of abuse, initiate investigation of alleged senior abuse; and establish a register of persons who have been convicted of abusing a senior.

- In 2014 there were 25 investigated abuse cases, abuse types being defined as psychological/emotional, physical, sexual, and financial exploitation. These cases were either investigated and subsequently case managed by the Case Management Team alongside the Registrar for the Senior Abuse Act, or referred to the Bermuda Police Service for further investigation.

### ***The Residential Care Homes and Nursing Homes Act 1999***

refers to the Chief Medical Officer as the responsible officer of this act and the regulations. However, NOSPC acts as the agent for the CMO with regards complaints and inspections.

All homes have to be inspected and registered annually, and the number of inspections will be increased in 2015 on an ongoing basis. The inspections are performed by a multidisciplinary team of healthcare professionals. A separate inspection is conducted by the Bermuda Fire and Rescue Service. Fire safety is an area of concern as some homes are challenged to meet the required standards.

- Excluding the Continuing Care Unit at KEMH; there are nineteen (19) care facilities, including Summerhaven (a facility designed specifically for persons who have disabilities but are able to manage their own care. Two of these facilities are government operated. All of these facilities are at maximum capacity.
- The senior population is expected to be 22% of the Bermuda population by 2025. This has been seen as a business opportunity by some entrepreneurs. There has been an increase in applications to open and register new residential care home facilities, adult day care centres and private home care provider agencies. These entrepreneurial pursuits have highlighted challenges and service gaps, as many wish to convert buildings designed as family homes into care facilities,



and we currently do not have regulations or standards to guide adult day care centres or private home care providers.

### **Advocacy and Awareness**

A significant function of the Office is to bring awareness to the public in general on matters concerning seniors.

- In 2014 NOSPC partnered with Department of Health's Health Promotions team and participated in their Annual Expo held in Victoria Park. The office provided information and interacted with the community through an engaging pop quiz to test their knowledge of Senior's matters on the island.
- NOSPC also participated in a health fair hosted by Dept of Health in the western end of the island in 2014.
- In January 2015 NOSPC hosted in-service training with Attorney General's Chambers on the Residential Care Homes Act and Regulations for the residential care home administrators.
- On February 10<sup>th</sup>, 2015 NOSPC staff participated in the first annual Safer Internet Day hosted by the Dept. Of Ecommerce. This event was held at Somerfield academy and was an opportunity for NOSPC to bring awareness to seniors in the community about their rights, the importance of future planning and the services provided at NOSPC. Those in attendance asked many questions and eighty-nine (89%) rated NOSPC's

presentation in the top ranking and found the information useful.

- On February 19<sup>th</sup>, 2015 NOSPC collaborated with the Bermuda Economic Development Corporation (BEDC) and participated in a senior care matters in-service training for those interested in opening a business related to senior care. Our Accessibility officer and Coordinator for Seniors were able to give helpful information to possible future business owners regarding the new building codes, and the areas to look at when considering opening a residential care home facility or private home care provider agency.

**Mr. Chairman,**

That concludes my remarks on Head 21.



**MINISTRY OF HEALTH SENIORS AND  
ENVIRONMENT  
2015-2016 BUDGET BRIEF**

**HEAD 72**

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**FOUND BEGINNING ON PAGE B – 144 OF THE ESTIMATES OF  
REVENUE AND EXPENDITURE**

**Mr. Chairman,**

It gives me great pleasure to present the budget for Head 72, The Department of Environmental Protection, found beginning on pages **B – 144** of the Budget Book.

**MANDATE OR MISSION**

The Mission of The Department of Environmental Protection is to protect Bermuda's environment and manage the sustainable use of its natural resources.

**EXPENDITURE OVERVIEW**

**Mr. Chairman,**

The total current expenditure is estimated to be \$3.776 million for fiscal year 2015/16 and represents a decrease of \$101,000 or 3% compared with the budget of previous year's budget.

**Mr. Chairman**

Professional local service contractors and consultants included BIOS for the Marine Environment Programme (or MEP \$150,000) and Ambient Air Quality Programme (AQP \$200,000); the Bermuda Zoological Society's 'Amphibian Research Project' (\$39,000). All of these figures can be found on Page C – 17 under Grants and Contributions.

**CAPITAL EXPENDITURE**

**Mr. Chairman**

The Department began planning in 2008 for a facility that would support offshore fishing in the wider 200-mile Exclusive Economic Zone (EEZ), and a *pro forma* business plan was developed in 2010. In response to the Bermuda Land Development Corporation's 2014 Request For Proposals (RFP) to develop Marginal (Ships) Wharf in St. David's, the Department of Environmental Protection saw an opportunity to advance the 2008 project.

The submission to establish the Shoreside Fisheries Complex was prepared by a Project Team that is chaired by the Director. The Project Team includes technical officers from the Department of Environmental Protection and the Department of Health, the Chairman of the Bermuda Fishermen's Association, and other businessmen.

It is proposed that the Shoreside Fisheries Complex be developed in two phases, beginning with a pilot facility operating within an existing building. We had hoped that Government Capital Development funding could be used for the first phase of development, but as can be seen on Page C – 5, we were not able to secure Capital funding for this fiscal year.

That notwithstanding, we will continue to work on the development plan and look for alternative methods of funding.

**Mr. Chairman**

The first phase of this important project for Bermuda will adapt and perfect the 'cold-chain' processes leading to small scale export shipments to Florida where market contacts have already been established. A formal business model will be developed during Phase 1 to be available for privatization and the scaling up to a commercial business venture.

The vision is that Phase 2 will be built on a new footprint at the Marginal (Ships) Wharf and privately funded as a fully commercial enterprise. By working in tandem with both the reef and the offshore fishermen, the Shoreside Fisheries Complex will turn out Bermuda fish products of exceptional quality, capable of meeting or exceeding the stringent import standards for the United States market. It will establish a Bermuda brand, much as Barbados did some years ago.

**Mr. Chairman**

When fully operational on a commercial scale, this project will, for the first time, provide the necessary shore-based infrastructure to overcome a major barrier to the expansion of the Bermuda commercial fisheries sector. It will open up new jobs and business opportunities in the fisheries sector. It will also introduce a requisite component for the introduction of commercial mariculture and aquaculture. As a member of the International Commission for the Conservation of Atlantic Tunas (ICCAT), Bermuda

must fish its quota of highly migratory tunas and swordfish taken within our Exclusive Economic Zone or risk erosion of quotas issued annually by ICCAT for these species.

**Mr. Chairman**

Finally, \$100,000 in minor works capital will provide for the general maintenance and upgrading of the main building at the Botanical Gardens, the Coney Island Facility (for marine resources management and enforcement) and the Government Marketing Centre in Prospect.

**MANPOWER**

**Mr. Chairman**

After two recruitment attempts to find a suitable Bermudian candidate for the vacant post of Hydrogeologist the Department has recently identified a suitable candidate from overseas to fill the post. Once the Hydrogeologist arrives one of his tasks will be to develop a suitable Bermudian trainee to shadow him and obtain suitable qualifications over the contract period.

Also during 2014 the department saw the departure of Mr. Norbert Simmons, Bermuda's first Fisheries Officer, Extension who retired after 42 years of tireless service. He'll be missed by both commercial fishermen and by the many recreational fishermen whose vessels descend on Bermuda annually for the internationally renowned marlin tournaments.

## **Mr. Chairman**

A review of the Department of Environmental Protection and the Department of Conservation Services is expected to be completed shortly and could lead to significant organizational changes.

## **OUTPUT MEASURES**

A complete tabulation of the Output Measures for the Department of Environmental Protection can be found on pages **B-148 to B-149** of the Approved Estimates of Revenue and Expenditure for 2015/2016.

## **MAJOR ACHIEVEMENTS**

### **Mr. Chairman**

The Marine Resources Section's activities during 2014/15 continued to be guided by the "Strategy for the Sustainable Use of Bermuda's Living Marine Resources" (a document released in 2010 that combines all of the aspects of the Marine Resources programme into a coherent plan).

Work during the year was heavily focused on developing strategies to mitigate the impacts of the invasive lionfish. A notable increase in lionfish numbers has been observed in recent years, particularly by lobster fishermen who trap in depths greater than 150 feet. The presence of lionfish in the lobster traps negatively impacts lobster catches and lionfish are also undoubtedly impacting the ecosystem in these deeper areas.

Section staff tested several lionfish trap designs during the summer months with varied success. The trap which showed the most promise was one that incorporated a smaller funnel ring than that currently used in the

lobster traps. Following these experiments, six lobster fishermen offered to incorporate the lionfish traps into their offshore lobster sets. At the beginning of the lobster season (i.e. September), significant lionfish by-catch was reported from the standard lobster traps as well.

In addition to the trapping experiments, the Marine Resources Officer continued collaboration with BIOS, the Department of Conservation Services and the Bermuda Lionfish Taskforce to conduct lionfish surveys in order to gather more information on the dynamics of the lionfish population in Bermuda. Funding for the surveys and the traps was obtained in 2013 from the UK Darwin Plus Grant. The Section also issued permits to an additional 190 divers wishing to use special spears to cull lionfish. Reports on culling activities from these individuals are deposited into an online database funded by the Ocean Support Foundation.

**Mr. Chairman**

The Section also received support from the Ocean Vet TV Series for the grouper research project this past summer. The Series donated four external acoustic tags, three of which were deployed on black grouper at the southwestern grouper aggregation site during the filming of the TV Series' grouper episode. Previously, groupers had been internally tagged. The late Dr. Neil Burnie also introduced an improved system for releasing tagged grouper.

**Mr. Chairman**

Licensing of commercial and recreational fishermen is a core responsibility of the Marine Resources Section. This fiscal year, there are 555 licenced



recreational lobster divers, 268 licensed recreational spear fishermen, 293 registered commercial fishermen and 195 licenced commercial fishing vessels. The commercial finfish catch for the year is estimated at 942,100 pounds and lobster landings (including guinea chick lobster landings) are estimated at 45,502 individuals. This compares to catches of 879,000 pounds of finfish and 47,157 lobsters in the previous year. The variability in finfish catches from year to year is due mainly to fluctuations in landings of wahoo and yellowfin tuna (the two main pelagic species landed).

The highly migratory nature of these and other pelagic species require that they be managed on a regional and international basis. To this end, the Senior Marine Resources Officer continued to participate in meetings of the International Commission for the Conservation of Atlantic Tunas (ICCAT), and led negotiations for appropriate quota and catch limits of these species for Bermuda, and the other UKOT members of ICCAT (BVI, TCI and St. Helena), at the November 2014 ICCAT Commission meeting. The main outcome of this meeting for Bermuda was an increase in the UKOTs bluefin tuna quota from 4 metric tons to 4.5 metric tons.

Collaboration with the Sargasso Sea Commission in areas of mutual interest continued. As a result, the Commission funded the attendance of the Senior Marine Resources Officer at the meeting of ICCAT's Standing Committee on Research and Statistics (SCRS) in September 2014. The ICCAT Committee recommended continuing contact with the Sargasso Sea research teams and the UK-Bermuda scientists to develop a scientific plan per ICCAT's Resolution on the Sargasso Sea passed in 2012. An update on the progress of this work was presented to the Commission in 2014, and

final recommendations are due to be presented in 2015. A draft proposal to strengthen the Sargasso Sea Resolution was also tabled at the Commission meeting and was supported by the European Union but was not ultimately adopted.

**Mr. Chairman**

A key Theme of the Marine Resources Strategy is to establish a Shoreside Facility to support local fishermen, providing supplies and processing capability that will enhance the product supplied to the market. This year, a Project Team chaired by the Director and comprising technical staff, interested fishermen and private businessmen was established to progress the goal. A business plan drafted for such a facility several years ago was modified and used as the basis of a proposal to BLDC for a Shoreside Fisheries Complex at Marginal (Ship's) Wharf, St. David's.

Work also progressed, through the drafting of a Cabinet Memo, on the establishment of a regulatory framework for the development of aquaculture in Bermuda.

**Mr. Chairman**

Fisheries Wardens continued work to limit illegal fishing activities and during the past year conducted 153 land based inspections at restaurants, food wholesalers, roadside vendor stalls, the airport and all shoreline areas where fishing occurs. Wardens spent approximately 2,400 man hours patrolling the Bermuda Platform, with special attention to the seasonally Protected Areas off the east and west ends of the island.

Approximately 425 vessels were stopped with attention being paid to daily bag limits, size and species restrictions. These include the vessels engaged in licenced sport lobster diving.

There were 35 complaints from the general public concerning illegal fishing and sales of fish by fishermen both licenced and unlicenced. Fisheries Wardens recovered 16 illegal fish traps and also helped licenced lobster and Guinea Chick fishermen recover 12 lost or stuck traps.

Wardens issued 22 warnings to mainly recreational fishermen for a variety of minor offences. Wardens spent approximately 430 man hours on the maintenance vessels and other equipment. Wardens also assisted in the annual inspections of approximately 195 registered fishing vessels.

### **Mr. Chairman**

Under the Clean Air Act 1991 a total of 21 new and 464 re-issued Operating Licenses (485 total) plus 23 Construction Permits for Controlled Plants were presented to the Environmental Authority by the Environmental Engineering Section and issued over the calendar year of 2014.

Under the Water Resources Act 1975 this section currently has 4,150 active Water Rights for abstraction wells and disposal boreholes, including 16 new Water rights for 2014. Currently 101 Water Rights are with Debt Collection.

36 stakeholder consultee responses were provided by the Environmental Engineering Section to the Department of Planning for a range of

developments including the South Beaches Development, Fairmont Hamilton Princess , Pink Beach, North Channel widening and South Basin for the America's Cup.

A total of 565 fuel storage tanks are registered in Bermuda, 362 of which are buried in the ground or vault. In 2014 a total of 13 fuel storage tanks were excavated and remediated according to Bermuda's Risk Based Corrective Action (RBCA) Guidelines. A total of 5 new tanks were installed in 2014.

**Mr. Chairman**

Total rainfall for 2014 was 66.24" compared to a long term average of 57." This above average rainfall will help to address the shortfall that had existed from 2010 to 2012. The Island's freshwater lenses have not been monitored for the past year due to the lack of a Hydrogeologist in post. With the higher than average rainfall over the past 2 years, coupled with DEP's understanding of abstraction rates from the commercial water abstractors, the lenses are not expected to be lower than the previous monitoring period.

**Mr. Chairman**

Further to Cabinet accepting the Cabinet Memorandum for the proposed Clean Air Act Amendments in September 2013 the public consultation is underway for licencees of Controlled Plants before the detailed drafting instructions will be developed.

Following consultation and stakeholder meetings with the HVAC industry a mandated permit process for refrigerant handlers has been re-introduced through the Clean Air Rules 1993. The Environmental Engineering section has been working closely with Bermuda College and the HVAC Working Group to develop a process whereby refrigerant handlers need to first pass a US test (many already do so) or be assessed for equivalency at Bermuda College before applying for a licence from the Department of Environmental Protection. This process is necessary to ensure that Bermuda meets its obligations under the Montreal Protocol, 1976.

**Mr. Chairman**

DEP has assisted with the requirements of the Scientific Technical Advisory Committee (STAC) required by Cabinet to identify the contributing factors to the grease/sewage balls occasionally detected on South Shore Beaches and to work to define short, medium and longer term solutions to address this issue.

Completion of a new monitoring tool to relate nuisance dust to the probability of complaints has been effectively implemented in Bermuda. The process has identified the exact source of the dust and this data will be used to assist in the development of mitigation measures to address the issue.

The Marine Environmental Programme contracted to BIOS is completing year #3 of the 3-year iteration of a benthic community mapping programme. This is using a range of satellite spectral wavelengths and spectral

processing to provide spatially explicit information on the structure and distribution of benthic biological communities across the Bermuda Platform.

The Air Quality Programme contracted to BIOS highlighted that the site closest to exceeding the annual limit stipulated in the Clean Air Regulations 1993 was at East Broadway.

The Amphibian Research programme, contracted to the Bermuda Zoological Society, has started to clean-up the pollutants derived from vehicle soot washed from the road surfaces in Cloverdale pond through a pilot study. These pollutants, linked to poor quality vehicle emissions, are causing deformities and diseases in toads, killifish and terrapin species in many ponds. The Air Quality data relative to the limits stipulated in the Clean Air Regulations 1993 coupled with the pollutants monitored in Bermuda's ponds highlight the need to enact the vehicle emission standards.

### **Mr. Chairman**

The Animal Control (Enforcement) Section is composed of the Head Animal Warden and three Assistant Animal Wardens. This represents a 20% reduction in staffing that was a direct result of financial constraints. The remaining staff have coped with the increased individual work load as they continue to provide a 24/7 public service. This level of service does exact a toll on this small embodiment of only 4 officers, and so service levels will have to be re-examined.

The Animal Control Section probed 775 complaints in 2014, only 11 more complaints than the number recorded in 2013. These complaints included execution of 55 search warrants. The 320 dogs collected represents a 26% increase, which is attributable in part to the “Zero Tolerance” stance taken regarding illegally bred prohibited dogs. During 2014, twenty-six files were submitted to the DPP, twenty-three of which are in some stage of the prosecutorial process. Conviction rate stands at 90%. Of all dogs collected, 44% were returned to owner or otherwise made available for adoption.

#### **Mr. Chairman**

The Plant Protection Laboratory inspected approximately 1.5 million imported plant items. These represented 1,746 individual shipments, a decrease of 4%. Of these shipments, 542 shipments were infested with plant pests and diseases, and the number of shipments resulting in confiscation declined by almost twenty one percent (21.0%).

Trend wise, there was an 8% reduction in the total number of items inspected, 37.5% fewer pesticide entries, 12% more import permits and a 27% increase in phytosanitary certificates issued in 2014-2015. Ten percent of the actual number of plant *items* arriving in Bermuda were infested with plant pests and diseases.

The number of Christmas trees imported decreased by 11% from 10,582 trees in 2013 to 9,521 trees in 2014. Despite this decrease many Christmas trees were still available after Christmas.

**Mr. Chairman,**

During 2014-15 the Plant Protection Lab (PPL) continued to review some of the pesticides currently permitted entry. This is an ongoing undertaking which requires extensive time to thoroughly research, evaluate and formulate decisions which impact the pesticides' eligibility for importation.

One of the challenges is to find and make decisions based on scientific information as opposed to fringe reports. Some of the pesticides under review include Captan, Atrazine, Pyrethrins, Mancozeb, Roundup with POEA, Oxadiazon, Diclofop-methyl and Carbaryl.

The Department has taken a precautionary approach in the management of neonicotinoid pesticides as they continue to receive poor reviews in the scientific world, particularly as they relate to the decline in bee populations world-wide. This year the decision was made to revoke permission for the entry of homeowner formulations of neonicotinoids. Subject to approval by the Minister, this will take effect in 2015. All other importations of neonicotinoids will be evaluated on a case by case basis.

**Mr. Chairman**

Personnel in the Plant Protection Lab are routinely engaged in plant inspections, floral inspections, research and preparation of import documents, processing of export documents, development of regulatory policies, the provision of diagnostic services, extension visits, surveys for



insect and plant pathogens, Bermuda Customs processing of imported pesticides and related agricultural items, carrot inspection, Christmas tree inspections, local personnel development, educational lectures for schools and hobby groups, meetings which fostered healthy relationships with our government and non-governmental partners, the provision of technical support for start-up agricultural initiatives and researching the importation of mangoes from previously prohibited areas. PPL staff were also instrumental in the formation of the Bermuda Fruit Growers Association and continues to work with this organization to promote the cultivation of local fruit trees.

During 2014-2015, a survey for the bio-control agent (the wasp *Aganaspis citricola*) of the citrus leafminer pest (*Phyllocnistis citrella*), released in 2013, indicated that the agent has established well and is performing as expected all months of the year, which bodes well for the future control of the citrus pest.

### **Mr. Chairman**

While the daily matters of imports, exports and animal welfare consume much of the energies of the officers of the Veterinary Section, focus on the dairy industry continues in an effort to strengthen this contributor to Bermuda's agriculture and Bermuda's economy. Veterinary Services continued its logistical support of the Dairy Enhancement Programme, the primary goals of which are to improve efficiencies in production, sustain the industry and the benefits it brings to the Island, and to minimize increases in the retail price of milk. The Department, through Veterinary Services,

played an important role in the transition of a defunct farm operation to a new owner to ensure an uninterrupted supply of fresh milk.

**Mr. Chairman**

Veterinary Services also took on a new role with the establishment of tilapia farming in Bermuda. Tilapia farming represents a new industry that holds promise in the realms of food production and increased food security. Sandy's Secondary Middle School established the first licenced tilapia facility, and through its model, tilapia also represents an alternative educational model for its students.

Veterinary Services spearheaded local efforts to modernize the Endangered Animals and Plants Act 2006 to bring it into full compliance with the CITES treaty (Convention on the International Trade of Endangered Species of Wild Flora and Fauna). Similarly, Veterinary Services has played a leading role to harmonize the rules for the importation of pets throughout the Caribbean, as called for by veterinary counterparts of CARICOM nations.

**Mr. Chairman**

The Agronomy Section (the Government Marketing Centre) saw its staff reduced this year from four (4) posts to three (3). During the year, 110 embargoes went into effect in a year of mediocre performance for the crops sector of the Agriculture industry. Keep in mind, there were two (2) hurricanes in October 2014 that wiped out all the major crops.

There were 1,500 customer visits to the Marketing Center during the past year and the total value of the transactions was \$225,000. Transactions include the purchase of ice, seed, agricultural chemicals, produce boxes and the rental of refrigerated storage and banana ripening facilities. Complaints were minimal at fewer than the targeted five (5) per annum.

The crops sub-sector of the agriculture industry saw a small increase in the number of registered farmers from 22 to 24, and the number of farming operations 58 to 63, exclusive of home gardens. Registered home gardeners showed a small decrease from 23 last year to 22 this year.

**Mr. Chairman**

2014 was another poor year for overall honey production. Production had an estimated value of just over \$43,000 less than half of last year's disappointing harvest. The two hurricanes in October 2014 destroyed most of the nectar producing plants during a major nectar flow period. The already fragile population of bees had few remaining trees and plants to forage on and had to survive on any honey gathered prior to the devastating storms.

**PLANS FOR THE UPCOMING YEAR**

**Mr. Chairman**

During 2015-2016, initiatives already begun in support of expanding the contribution of agriculture to Bermuda's GDP will continue into the implementation phase after the adoption of the National Agriculture Strategy. Tilapia farming will be encouraged in conjunction with

hydroponics and a government hatchery now in its pilot stage will provide the 'seed stock' for grow out operations run by private entrepreneurs. Approximately \$10,000 from the minor works budget will be required to support this work in 2015-2016.

### **Mr. Chairman**

The Marine Resources Section will continue implementation of the Sustainable Fisheries Strategy initiatives under all Themes:

- Management of Fish Stocks
- Management of the Commercial Fishery
- Management of the Non-commercial Sectors
- Spatial Management
- Investigating New Harvest Opportunities
- Increasing Local Seafood Production Through Aquaculture
- Post-harvest Handling of Seafood Products
- Legislation and Policy
- Enforcement (in collaboration with the Fisheries Enforcement Section)
- Outreach

High priority will again be given to finding solutions for lionfish control, and the public are invited to join in these efforts as cullers, volunteers or even just by eating lionfish whenever possible!

The development of management plans for commercially important species will continue, although the implementation of plans currently in place will

take precedence. If necessary, legislation will be drafted to support management objectives.

Funding has been secured for the continuation of the grouper aggregation research, and Section staff will again be working with Dr. Rick Nemeth of the University of the Virgin Islands and local partners on this project.

The review of the commercial licensing system delayed for the past two years will also be a priority for the coming fiscal year. Efforts to strengthen catch reporting from the recreational sector will continue as well.

Staff will continue work on the Marine Spatial Planning (MSP) project in conjunction with local and international partners. The steering committee's work will focus on the MSP process, with a policy working group focusing on legislation and a technical working group focusing on data needs. Public participation in this effort will be critical to its success.

Bermuda's involvement in ICCAT will continue and efforts will be made to ensure that Bermuda has access to adequate fishing quotas of tunas and billfishes as the development of the offshore fishery progresses.

The Section will also continue to support persons interested in establishing aquaculture ventures and it is anticipated that legislation will be drafted during the upcoming year to support the sustainable growth of this industry.

In conjunction with these activities, work to progress the Shoreside Fisheries Complex will continue.

The Marine Resources Section will also assist the Enforcement Section with implementing a ticketing scheme to cover certain offences in order to reduce the administrative workload for fisheries wardens.

Outreach activities targeting different sectors of the public will continue with a main goal for the upcoming year being to operate a Facebook page. This will hopefully improve communications between the Section and the public.

**Mr. Chairman**

Following completion of the stakeholder consultation for the proposed changes to the Clean Air Act the feedback will be used and considered during the drafting of the detailed instructions for the development of legislation.

Following completion of the surveys of marinas and boatyards in Bermuda that are underway consideration will be made with respect to reducing their environmental impact through either:

- a policy with recommended guidelines (*i.e.* Good Marina / Boatyard Practice), or potentially through
- a new licensing process that would require proposed changes to the legislation.

Following completion of the pilot study to address both remediation and ingress of road-derived pollutants into Bermuda's ponds DEP will work with Public Works to determine how the oil absorbent materials can be effectively and efficiently implemented into road drains and soakaways.

DEP will continue to work with the Department of Planning and developers to expedite the Planning process for new developments, including that of the America's Cup and the associated infrastructure and the remediation of Morgan's Point.

**Mr. Chairman**

With the support of the Ministry, the Agriculture Strategy will command much of the focus of the Veterinary Officer. The Department will focus on legislation and policies that hinder efficiency, production and stability of the industry. Job descriptions and facilities will be reviewed so to best utilize these assets to accomplish a successful strategy. The strategy calls for a collaborative approach to the various issues, and so the Department will work with stakeholders towards a successful farming model.

**Mr. Chairman**

Also related to the Agriculture Strategy will be a review of legislation and policies regarding farm standards. Recent increases in interest from the public in keeping livestock for personal and commercial gain speaks to the need for these reviews. The standards and protocols will speak to animal welfare, health and safety of the keepers, impacts on neighborhoods and production of products that meet a standard indicating fitness for public consumption. These same issues also pertain to fish farming that we hope will flourish in Bermuda.

Veterinary Services will continue to include itself in matters involving public health that bear some connection, directly or indirectly, to animals. These issues could range from the quality and safety of our food supply (e.g., milk quality) to such risk factors as bird flu. This collaboration between Veterinary Services and the Department of Health strengthens the concept of “One Health”.

**Mr. Chairman**

This concludes the Budget Brief for Head 72. As Minister responsible for the Environment, I wish to express my sincere thanks to the staff of the Department of Environmental Protection for their solid commitment to serving the people of Bermuda as best they know how.





**MINISTRY OF HEALTH, SENIORS AND ENVIRONMENT  
2015-2016 BUDGET BRIEF**

**HEAD 69**

**DEPARTMENT OF CONSERVATION SERVICES**

**Mr. Chairman**, it gives me great pleasure to present the budget for Head 69, The Department of Conservation Services.

**[Mission Statement]**

**Mr. Chairman**, the Mission of the Department of Conservation Services (DCS) is to ***conserve and promote Bermuda's natural and marine heritage through research, education, advocacy and restoration.***

**Mr. Chairman**, the Department is responsible for the Aquarium and Zoo, Natural History Museum and Library, Government Nature Reserves, and programs focused on environmental assessment, protection of Bermuda's biodiversity, recovery of protected species, management of invasive species and monitoring of marine heritage.

**Mr. Chairman**, the Department functions in a dynamic partnership. Technical officers from the Conservation section and the Bermuda Aquarium, Museum and Zoo undertake monitoring and research to develop management programs, environmental policy and legislation.

BAMZ acts not only as Bermuda's top tourist destination but also as a repository for all of Government related environmental research and as its very successful educational and visitor outreach vehicle. The Bermuda Zoological Society (BZS), as the official charity for the Department, provides much added value with volunteer and research support, raising capital funding and delivering education programs.

### **[Programmes]**

**Mr. Chairman**, the Department has seven programme areas, each with a number of sub-programmes or Cost Centres, as shown beginning on page **B-139** of the Approved Estimates of Revenue and Expenditure, namely:

- 1) Programme 79000 General Administration
- 2) Programme 79020 BAMZ Administration
- 3) Programme 79030 Aquarium and Zoo
- 4) Programme 79040 Museum
- 5) Programme 79050 Marine Ecology
- 6) Programme 79070 Marine Heritage and Health
- 7) Programme 79090 Terrestrial Ecology

### **[Staffing]**

**Mr. Chairman**, the key to the success of the Department is its highly motivated and trained staff. The Department has a staff complement of 50 full time employees, as seen on page **B-141**. While the number has remained static over the last two years it should be noted that much effort has been made by management to modify job descriptions and "retool" in order to increase efficiency and secure

technical staff, with specialised skills, in order to better provide critical services in areas such as zoo animal care and eco system management.

#### **[2015/2016 Operational Budget]**

**Mr. Chairman**, the Department's current account expenditure can be found on [Page B-140](#). The Budget for 2015/16 is \$4.638 million, which is an increase of \$79,000 or two percent (2%) on the original estimate for 2014/2015. While savings were found in operations, this increase is due to the discontinuation of the furlough day. The resulting budget will ensure that the Department of Conservation Services, with prudent management, will be able to deliver its core services and operate efficiently.

**Mr. Chairman**, the Department continues to look at innovative ways to reduce operational costs while ensuring a high level of customer satisfaction. I would highlight its aggressive energy reduction strategy that includes the installation of solar panels, use of natural light tubes for aquarium exhibits and energy efficient lighting throughout the campus. In the coming years the department will reap the rewards from this investment.

Further, it continues to build on its unique relationship with the Bermuda Zoological Society that provides volunteers to help support the many programs and exhibits at the Bermuda Aquarium Museum and Zoo, or as it is better known, BAMZ. I would like to take a

moment to express my sincere gratitude to all those who volunteer countless hours to assist us to keep BAMZ open 364 days a year.

**Mr. Chairman,** 65% of the current budget is allocated to the Bermuda Aquarium and Zoo including salary and wages, energy, food costs and cleaning supplies needed to operate the Bermuda Aquarium, Museum and Zoo. The remainder is fixed costs to operate the Department's Administration and the Ecology Sections. **Eighty four per cent** of the total budget is dedicated to salary and wages for the Department.

#### **(Capital development)**

**Mr. Chairman,** the **Capital Development** allocation for the Department of Conservation Services as seen on page **C-5** is \$250,000 which will be used to complete the repair of the Aquarium Hall Roof and internal renovation of the hall. The renovations are scheduled for completion in June 2015.

A further \$200,000 is designated as minor works for the continued repair and improvement of the Aquarium & Zoo and nature reserves.

#### **(MAJOR ACHIEVEMENTS 2014/15)**

**Mr. Chairman,** the Performance Measures for the Department of Conservation Services can be found on **Pages B-139 – B-143** and I would like to bring a few measures to your attention. This year has been both a busy and successful one for the Department.

**Mr. Chairman, the Cost Centre 79000, General Administration or Headquarters** provides financial and human resource management to the Department, ensuring that programme delivery is efficient and in line with the Department's stated mandate, human resources policy and financial instructions. It plays a key role in administering Bermuda's Biodiversity Strategy, conservation legislation, protected species recovery, invasive species management, Geographical Information System (GIS) mapping and maintaining the department's website and Facebook page.

**Mr. Chairman,** Headquarters continued its mission to protect and promote Bermuda's unique biodiversity.

Headquarters collaborated with other Departments on a number of GIS projects such as supplying bathymetric data for the production of the recently released ***National Geographic*** programme '***Drain the Bermuda Triangle***'. It provided coastal environmental sensitivity data to ***Rubis*** to assist in the updating of their ***Emergency Response Plans***; worked with the Department of Health to develop an online map viewer to show the results of their water quality surveys of swimming beaches; collaborated with Dr Steven Ward at the University of California Santa Cruz to assist with storm surge and tsunami simulation modeling for Bermuda.

Notably the Section worked closely with the Works and Engineering Project Manager for the ***Ship Channel Widening Study*** to estimate

the volume of dredging material that would have to be removed from specified areas of the North Channel, creating maps indicating the areas of coral reef that would have to be removed and routing to minimize potential dredging.

**Mr. Chairman, Headquarters** submitted information to the UK to support **international environmental agreements to which Bermuda is a party.** These included a report to the ***Ramsar Convention on Wetlands of International Importance***, and the ***Convention on Migratory Species***. Further, the Department continued to support all partner organisations in carrying out their commitments as outlined in the ***Bermuda Biodiversity Action Plan (BAP)*** and a report was developed which detailed the activities carried out in 2013.

**Mr. Chairman,** staff continued to develop the Department's website, **[www.conservation.bm](http://www.conservation.bm)**, as well as the Department's Facebook page. To date the website received over 107,000 visits from users seeking information on Bermuda's flora and fauna. It is anticipated that use of the website will surpass last year's 113,611 visits. Additions to the site in 2014-15 included flyers on DCS projects and programmes, profiles of Bermuda's shipwrecks, new reports and management plans; as well as links to the Bermuda Conservation GeoTour, an inventory of marine spatial data and profiles of Bermudian habitats and species, with a focus on Protected Species.

**Mr. Chairman,** the Department continues to develop a range of products to assist both Government Departments and the public in the management of conservation areas. This year the department completed the ***Bermuda Plantfinder*** website. This product not only enables easy identification of Bermuda's common, and not so common plants, but gives helpful advice on where and what to plant for different situations.

**Mr. Chairman,** there continues to be a very high level of interest in researching Bermuda's endangered animals and plants. So far this year 17 protected species licenses were issued including one for a ***Bermuda Cedar Tree Coring*** project undertaken in collaboration with researchers from the University of Nipissing in Ontario, Canada to better understand the growth rate of our national tree. The Department also published the management and recovery plans for Bermuda's resident sea turtles, as well as for Bermuda's critically endangered cave fauna.

**Mr. Chairman,** work continued on the active recovery of Bermuda's most endangered plants and animals. Much of this work is undertaken in partnership with local and overseas partners at minimal cost to the tax payer. This is known as Bermuda's '***Lifeboat***' program whereby small populations of an endangered species are sent overseas for safe keeping, breeding and research.

**Mr. Chairman,** notable efforts this year included the return of a breeding population of Bermuda's endemic land snail from London Zoo, as well as several thousand young Governor Laffan Ferns cultivated by the Henry Doorly Zoo in Omaha. This year's efforts culminated in the reintroduction of this endemic species into the wild for the first time in 100 years.

**Mr. Chairman,** other highlights include the re-discovery of the endemic land snail *Poecilozonites bermudensis*. This species was believed to be extinct until a small, isolated population was found by a member of the public within the city of Hamilton. Efforts are now underway to safeguard this species to ensure that it does not go extinct again.

**Mr. Chairman,** invasive species continue to have a tremendous impact on Bermuda's ecology. Of specific note are the Red Eared Slider, feral chickens, feral pigeons and crows, as well as plants such as Brazil Pepper, the Indian Laurel tree and Jumbie Bean. As such the Department began the design of species specific management plans in order to develop effective means of control.

This year the focus was on implementing the **Feral Chicken Management Plan** to include innovative but humane ways of dealing with this pest. Since the inception of the program in October 2013 the department has received over 650 requests for assistance and



the program has now removed over 22,800 feral chickens, as well as 2,500 feral pigeons, 150 crows and 200 red eared sliders.

**Mr. Chairman,** it is hoped that these efforts have not only taken the pressure off of our threatened species but also given some relief to our farmers, gardeners and members of the public driven to distraction by noisy birds in the early morning hours.

**[Bermuda Aquarium, Museum and Zoo Section]**

**Mr. Chairman,** the mission of BAMZ is to promote care and appreciation for island environments by providing environmental education, high quality animal care for the specimens in the collection and engaging exhibits to support family fun for local and overseas visitors to the facility. It provides the resources needed to collect, maintain and care for BAMZ's collection of fish and other exotic animals and their exhibits on a daily basis. BAMZ continues to be the island's leading tourist attraction and is especially popular with local school children and families.

**Mr. Chairman,** following on from BAMZ' successful accreditation inspection with the Aquarium and Zoo Association, the facility formally received its accreditation certificate in April 2014 which is valid through March 2019. This was a vital and major accomplishment and provides an external measure of the facility's hard work and dedication in meeting the needs and expectations of our visitors while also providing excellence in animal care. It also provided a vital link to other accredited zoological institutions for

animal exchanges and species survival programs. Achievements noted as outstanding in the inspectors report included the BZS Education Programs, the Madagascar Exhibit, the veterinary care of the animal collection, the Museum library and of course our enthusiastic and very professional staff.

**Mr. Chairman**, the major work of the year was to prepare for the replacement of the aquarium hall roof while still providing the great majority of services to our visitors and students. This involved the construction of multiple temporary tanks and enclosures, complete with their life support systems, to accommodate thousands of animals that needed to be relocated while the construction was occurring. Additionally, BAMZ' electrical, water, air and data systems were also moved out of the aquarium hall roof and rerouted to provide uninterrupted service to both the hall and the rest of the facility in advance of the construction. Visitor amenities such as the BZS giftshop and BAMZ front desk also had to be relocated in advance of the September 2014 construction start.

**Mr. Chairman**, as a result of these extensive but much-needed works, visitation is expected to be temporarily lower than previous years and it is estimated that 72,000 people will visit the campus by the end of the fiscal year. Additionally, BAMZ collected and introduced fewer local fish into the collection this fiscal year than the three thousand (3000) specimens forecast in 2014/15. However, online rating websites such as ***TripAdvisor.com*** continue to provide

extremely positive feedback on the visitor experience with the majority of visitor rating the facility as excellent.

**Mr. Chairman,** in addition to replacing the aquarium hall roof, BAMZ staff also started the process of revamping the aquarium hall to provide an updated and higher quality visitor experience. Two teams of staff have been working diligently over the past year on both the physical construction of the tank facades and a much-needed update to the aquarium signage. These plans include new lighting schemes, new facades to the tanks, new audio-video capabilities and over 45 new educational panels that not only identify the animals but educate visitors on habitats around Bermuda and where to find them.

**Mr. Chairman,** Fall brought two hurricanes to our shores just prior to the start of the construction on the aquarium hall roof. BAMZ staff worked diligently to reopen the facility within a day of each weather event while also moving all the aquarium animals out into their new temporary tanks and dismantling the aquarium hall and all its associated tank life support systems. I am pleased to announce that construction started and continues on schedule. Work to repair the damage to the building and foreshore due to the hurricanes continues and work will start presently to reinstate the shoreline and reopen coastal pathways that were undermined.

**Mr. Chairman, Cost Centre 79040, the Bermuda Natural History Museum** continued its important work as the repository of Bermuda's flora and fauna collections and as Bermuda's only science library. It

also continued to provide oversight of the Bermuda Zoological Society's research and education programmes in order to instill environmental research into exciting education programmes.

The Museum Curator was a Principal investigator with the Darwin Lionfish project and led investigations of the Sargasso Sea, with support from the Sea Education Association and the Atlantic Conservation Partnership. The Museum Curator authored a report entitled "***Studies on the Geology and Biology of the Seamounts and the Ocean Floor in the Bermuda EEZ***". The Museum Curator has also taken the lead in the development of new graphic displays for the renovated Aquarium Hall, opening in Spring 2015.

**Mr. Chairman**, over 586 new plants and animals, photographic images and bibliographic records were added to the collections databases in 2014, a decrease from the previous year. In addition, the Museum staff delivered 39 lectures, tours and field trips to a variety of local and visiting student groups, including the BZS Natural History courses, the BZS/Audubon Nonsuch Camp and BIOS, which is reduced from last year. A total of **17** visiting scientists and graduate students were hosted by the Natural History Museum last year, a decline from the previous year.

**Mr. Chairman**, the **Natural History Library** continued to expand the **Online Public Access Catalogue** (OPAC) of Library materials, adding **160** books and scientific reports and **167** scientific journals, for a total of over 4,300 viewable online records. The database was

accessed by the public over **2,260** times last year. A total of **89** research papers were added to the Bermuda Natural History bibliography, bringing it to a total **5,924** research papers specifically concerning Bermuda's environment. The librarian responded to **205** direct queries last year.

**Mr. Chairman, the Bermuda Zoological Society (BZS)** is the registered charity that supports the work of the Bermuda Aquarium Museum and Zoo. In recognition of the close working relationship and support that both the charity and the department give each other I believe it is appropriate to provide information on its successful education programmes.

**Mr. Chairman,** BZS continued to offer its well-subscribed environmental education programmes throughout the academic year, which are provided at no cost to our students. The BZS Education programmes served 6,818 students (youth and adult) in 2014, an increase of 440 from 2013.

Diverse programmes were offered such as the **Bermuda Schools** programme which served **4,475** public school children, and **1,512** private school students, across all grade levels. Many of these students participated in **857** off-site classes (more than half on BZS's research vessel *Endurance*), all providing valuable experiential learning experiences. In particular, BZS created the innovative **Kids on the Reef** and **I am Water** programmes to further develop our

students' confidence when snorkeling, enhancing their abilities to explore and understand our ocean world.

Other popular classes were **Story Time** events for pre-schoolers, the summer **Aqua Camp**, the **Christmas Camp**, the teen **Junior Volunteer Programme** and the **Nonsuch Natural History Camp** for senior school students. Two college-level courses were conducted with visiting groups from Flagler College and the Sea Education Association. The staff at the Bermuda Aquarium Museum and Zoo have been excellent partners with BZS in delivering exceptional educational experiences for our young people.

#### **[Conservation Section]**

**Mr. Chairman, the Conservation Section** of the department is comprised of 3 sections including **Marine Conservation, Terrestrial Conservation and Marine Heritage**. This section manages the Government's field ecology programmes, providing expertise in monitoring and restoring the island's threatened habitats, protected species recovery, nature reserves, as well as its unique marine heritage.

**Mr. Chairman,** this past year was the eighth year of the ***Marine Habitat Assessment Program***. The marine ecology team resurveyed the **one hundred and eighty four (184)** sites, which include coral reef, seagrass, algal beds and sand habitat, across the Bermuda Platform. The captured data is continually analyzed to

determine whether there have been any changes in these marine habitats as well as the water column.

This important program will ensure that the Government has a better understanding of changes in habitat, identify key sites for endangered animals such as the sea turtles and Queen conch, fisheries organisms, and other benthic resources, such as corals and sponges, that support fisheries and tourism industries in Bermuda. The monitoring program also serves as a mechanism to increase the probability of detecting invasion by non-native marine species, for example lionfish and green algae.

**Mr. Chairman**, this year the data from this research program, and others, were used to develop a scientific paper “***Seagrasses in the age of sea turtle conservation and shark overfishing***” published in the peer reviewed journal “***Frontiers in Marine Science***” in August 2014.

**Mr. Chairman**, this year the Marine Ecology Section reviewed **twenty-five** (25) planning applications pertaining to the marine environment and **one** (1) dredging application and presented them to the Marine Resources Board within **four** (4) weeks of receiving the application.

**Mr. Chairman, Cost Centre 79070, the Marine Heritage and Ocean Human Health Section** is primarily responsible for carrying out the mandate of the Historic Wrecks Act 2001, providing advice and assistance to the Historic Wrecks Authority and developing and implementing an underwater cultural resources management program, specifically for shipwrecks and marine heritage sites. This programme also undertakes to explore, initiate and undertake collaborative evaluations of the impacts of environmental conditions on human health.

**Mr. Chairman**, this year was an exciting year for the section. It hosted and assisted in story production for a ***National Geographic*** special looking at the Bermuda Triangle mystery through the lens of Bermuda shipwrecks. The programme ***“Drain the Bermuda Triangle”*** has aired on prime time on the National Geographic Channel and featured a long section on Bermuda and her underwater heritage. The wrecks and Bermuda’s, Marine Environment were filmed in High Definition and looked fantastic.

**Mr. Chairman**, the Section continues to lead the research, in cooperation with the **Waitt Institute** and NOAA for the production of a comprehensive report on the archaeological recovery of artefacts from the ***“Mary Celestia”***. In particular this year saw the launch of a replica perfume based on bottles recovered from the Mary Celestia.

Produced by the Bermuda Perfumery the perfume “Mary Celestia 1864” was put out for sale as a limited edition. The free promotion



that Bermuda has received by international media related to the commercial release of this perfume has been astounding and highlights the net benefit that promoting Bermuda's shipwrecks can bring.

The Custodian also continues to partner in the story development and film production of the **South Carolina Education Television PBS/Look Bermuda film** on the "**Mary Celestia**" and its role in the US Civil War. Analysis of the contents of the wine found on the "**Mary Celestia**" in 2011 was initiated with Bordeaux University and the results will feature prominently in a special premiere event at this month's Charleston Wine and Food Festival.

**Mr. Chairman**, recognizing the potential benefit that Bermuda's extensive marine heritage brings to attracting visitors to Bermuda the section worked with the **Bermuda Dive Association**, the body that represents the local dive shops, and the **Bermuda Tourism Authority** on several marine heritage related initiatives as part of the ongoing revitalization of the tourism sector including the production of several documentaries and news articles, the promotion of the Mary Celestia Perfume and the continued search for the "**Roanoke**", an historic vessel scuttled at the East end of Bermuda during the Civil War.

**Mr. Chairman**, the film "**Downings Wreck**" detailing the rediscovery of Bermuda's founding shipwreck, the "**Sea Venture**", was featured at the **Bermuda Film Festival**. The Department has worked in

partnership with the film producers and directors since its inception **two** (2) years ago and the film is already in use by local schools and historical institutions adding an engaging element to Bermuda's history and education curriculum.

**Mr. Chairman**, this year this section wrapped up its work with the ***University of Laval's Atlantis mobile laboratories***. The three (3) research campaigns conducted in partnership with the Department of Health and BIOS included an assessment of the environmental contributors to the incidence of ***Salmonella mississippi*** in Bermuda water tanks, (a primary cause of gastroenteritis in Bermuda) and an assessment of the incidence and extent of antibiotic resistant bacteria associated with Bermuda's principle sewerage outfalls.

In addition a follow up study was carried out measuring the documented beneficial impact of public health advisories for pregnant women in regards to the consumption of local fish that recommended the consumption of fish with high levels of beneficial nutrients and low levels of contaminants such as Mercury. All of these research programmes are in the writing phase with results being presented at several conferences in early 2015.

**Mr. Chairman** this section also continued important work with partners at the ***Bedford Institute*** in New Brunswick to consolidate 10 years of sea level rise research in Bermuda. The inclusion of Bermuda's sea level rise dataset in broader regional studies will add

an important element to the scientific models used in predicting the rate of future sea level rise in the Atlantic.

**Mr. Chairman**, the Department, with financial support from the **Stempel Foundation** and **BZS**, continued to maintain the protected **Dive Site moorings**, which allow visiting local and tours boats to tie up safely in important ecological and historical areas, while minimizing damage that would have otherwise been caused by anchors. By the beginning of the 2014 summer season, **seventy-five per cent** (75%) of the dive site moorings had been serviced. The Department is grateful to the Stempel Foundation for its support on this important project.

**Mr. Chairman**, **Cost Centre 79090**, The **Terrestrial Conservation Section** manages all Government Nature Reserves, some **two hundred** (200) acres. Activities include clearing invasive plant and animal species, and building artificial habitats such as Cahow and Longtail burrows. The unit is also responsible for developing management plans for all Government nature reserves as mandated by the **National Parks Act 1986**, as well as managing the historic fortifications within the Castle Islands Nature Reserve. An important part of its mission is to provide environmental and habitat assessment advice to the Department of Planning for all matters related to terrestrial conservation zones. In addition, the unit comments on landscape and conservation management plans submitted as part of the Planning process.

**Mr. Chairman**, while proposed development application numbers remained at the same levels as previous years, the Department noted that there was a substantial increase in complexity and consequent detailed oversight in order to mitigate environmental damage to Bermuda's sensitive areas. As such the Department undertook **one hundred and ninety seven** (197) consultations on planning applications, Environmental Impact Assessment Scoping Reports, Conservation Management Plans and proposed landscape schemes.

**Mr. Chairman**, the section continued its research, management and recovery work, focusing on endangered endemic and native species, invasive species control, native reforestation, habitat rehabilitation, and environmental education and tours. Under the direction of the Terrestrial Conservation Officer, **the Cahow (Bermuda Petrel) Recovery Program**, continued to break exciting new ground following the successful establishment of a new nesting colony on Nonsuch Island, which has now reached **fourteen (14)** nesting pairs. The need for such a project was highlighted during recent hurricanes, **including hurricane Gonzalo in 2014**, which resulted in little damage to Nonsuch but caused serious damage to Cahow nest burrows on the neighbouring nesting islets, which have also suffered heavy erosion and are threatened by ongoing sea-level rise.

**Mr. Chairman**, due to our intensive conservation efforts I am pleased to note that the population of Bermuda's unique and endangered National Bird, the Cahow, has grown to a new record number of **one hundred and eight** (108) nesting pairs, and **fifty-nine** (59) chicks

fledged in 2014. This compares to only **eighteen** (18) nesting pairs with **eight** (8) chicks in 1960. It is fitting that the **one hundred** (100) pair milestone for Bermuda's official National Bird was attained during our 400<sup>th</sup> anniversary year.

**Mr. Chairman**, the restoration of **Coopers Island Nature Reserve** continued with the very active and enthusiastic support of **HSBC Bermuda**. This year's efforts culminated with the planting of additional native and endemic coastal plants around the former radar tower, now a **Wildlife Watch Tower**, which has become recognized as one of the best places from which to watch the annual whale migration and returning Cahows.

**Mr. Chairman**, work continues to improve Nonsuch Island Nature Reserve. With financial and volunteer support from the **Ascendant Group of Companies** the island was made energy independent by 2014 with a new solar power system. A new interpretive display describing protected species and habitats has also been installed in the Octagon building to assist with future education tours and the Nonsuch Natural History Camp. In addition, a new infra-red **"burrow-cam"** was installed inside a Cahow nest burrow on Nonsuch Island to enable video footage of the growth of a Cahow chick to be taken through its development and posted on the internet for the first time for the benefit of the public and students. This was live-streamed over the internet to enable live viewing between February and July 2014.

On Nonsuch Island, work by the Terrestrial Conservation Officer to establish a second Cahow breeding colony continued for the second year with the translocation of twenty Cahow chicks to Nonsuch. Highlighting the danger posed by introduced pest species to Bermuda's natural heritage, Rats were confirmed as having swum over to Nonsuch Island from Coopers Island for the first time since 2005. As they pose a real threat to the eggs and young of the Cahows now nesting on Nonsuch, as well as the seeds of some endangered native plant species, eradication efforts are underway to remove the rats completely from the island again.

**Mr. Chairman**, with the assistance of volunteers from the **Ascendant Group of Companies**, work to eradicate Casuarina and Brazil Pepper trees and other invasive introduced plant species on **Nonsuch and the other Castle Harbour Islands** has continued, with over **eighteen thousand, seven hundred and eighty-three** (18,783) invasive plants being removed from Nonsuch Island alone during 2014. Volunteers from Ascendant have also helped Department staff in removing over a thousand Casuarina and Pepper trees on Castle Island and have completely cleared them from the historic fortifications of the **King's Castle Fort** and the **Landward Fort** on the Island, where they had been damaging the masonry of the forts with their rampant root growth. In addition, about half of the **Devonshire Redoubt Fort** was also cleared of damaging Casuarina trees.

**Mr. Chairman**, I would like to take a moment to publicly thank **HSBC Bermuda, Ascendant Group and the Bermuda Garden Club** for all their support in helping us maintain our nature reserves. On behalf of the Government I must express my gratitude for their investment in our natural heritage from which we all benefit.

**Mr. Chairman**, the **Nonsuch Island Nature Reserve** has continued to be extremely popular for School Education and Natural History Tours. **Fifty-one** (51) groups, totaling **just under one thousand (1000)** visitors, **Seven hundred and seventy-six** (776) of which were students, were given guided tours of the island during 2014, despite a number of tours being cancelled due to stormy weather conditions. Groups included school tours, the Bermuda Sloop Foundation's '**Spirit of Bermuda**' sail training ship education program, BZS, Senior Learning Center, Bermuda Audubon Society and BIOS.

**Mr. Chairman**, removal of invasive plants such as **Brazil Pepper and Casuarinas** in mainland Nature Reserves continued to be a major and important component of the Terrestrial Conservation Unit's work. Work sites for the Terrestrial Conservation Unit included Cooper's Island Nature Reserve, Lover's Lake Nature Reserve, Shelly Bay Nature Reserve, Spittal Pond Nature Reserve, and the Walsingham and Blue Hole Nature Reserves. This work was interrupted in October by hurricanes Fay and Gonzalo, which caused extensive tree and vegetation damage in some Nature Reserves. The Terrestrial Conservation Crew spent the remainder of the year clearing and opening up trails and pathways in these reserves, in

particular Coopers Island Nature Reserve, Spittal Pond Nature Reserve and the Walsingham/Blue Hole Nature Reserves.

### **(Plans for the Upcoming Year 2015/16)**

**Mr. Chairman,** in the coming year the department will focus its attention and resources on ensuring that services are provided efficiently and critical projects are delivered on budget.

**Mr. Chairman,** construction on the aquarium hall roof is expected to be complete at the end of March 2015. BAMZ staff have already begun work on reinstating the aquarium tanks and revamping the interior. This is expected to take eight to ten weeks with the hall being reopen to the public in April 2015 ready for the summer season. The new hall will be an excellent addition to the facility and again improve the visitor experience. Increased visitation to the facility is expected by both locals and tourists as a result of this change.

**Mr. Chairman,** further construction to the frontage of the facility will occur in the Fall 2015 to improve the front entrance layout. This will create a more modern open plan feel on the interior while maintaining the historic frontage of the aquarium itself. The new visitor entrance will be welcoming and provide immediate access to an enlarged and updated the Gift Store. The BAMZ front desk will be improved as will the transition to the newly updated aquarium hall.



**Mr. Chairman**, over the last decade BAMZ has improved and added a great number of visitor amenities, as well as improving our animal care facilities. This has been achieved through following a Master Plan that was conceived and laid out in partnership with the Bermuda Zoological Society.

**Mr. Chairman**, the completion of the aquarium hall and front entrance will mark the end of the previous Master Plan. Consequently a new Master plan will be created in 2015-16 that will lay out BAMZ's course for the next decade. This will be done in consultation with all our partners and key stakeholders in the interests of inclusion and transparency.

**Mr. Chairman**, 2015-2016 will also be an exciting year for our Bermuda Zoological Society's educational offerings and the BZS and BAMZ look forward to continuing to grow and improve these free classes to all the island's school children.

**Mr. Chairman**, recognizing that **alien invasive species** are considered to be the main threat to island biodiversity worldwide the Department will complete a **National Invasive Species Strategy**. It is expected that this will result in the amendment of existing legislation and the creation of new legislation in order to effectively manage the island's nuisance species. Additionally it is envisioned that each species will required a customised management control plan that will focus on prevention, risk assessment, fast reaction,

control and mitigation. Publish management control plan for feral pigeons and red-eared sliders.

**Mr. Chairman**, the Department is mandated to lead efforts to preserve and restore the island's threatened species and habitats. Working with international research partners the department will advance the preservation of key species such as the ***Killifish, Skink, Governor Laffan's Fern*** and the endemic ***Bermuda Land Snail***.

**Mr. Chairman**, in order to better manage the island's threatened habitats the Department will develop and implement strategic long-term **Nature Reserve management plans**. This year's focus will be placed on ***Nonsuch Island and Castle Island***, which are in the final stages of preparation.

**Mr. Chairman**, work will continue on ***Castle Island*** as a priority, both for its historical and ecological importance. While the Management Plan is being developed to ensure the preservation of Bermuda's earliest fortifications and protected species, invasive Casuarinas and Brazil Pepper will continue to be removed from the Landward Fort and the outer ramparts of the Devonshire Redoubt.

**Mr. Chairman**, the Department will continue to ensure the ***environmental assessments and monitoring*** program for proposed development to Government is undertaken as a priority, specifically to the Department of Planning, on matters related to Bermuda's

important terrestrial, marine and marine heritage protected area; as well as protected and invasive species.

**Mr. Chairman, the Marine Conservation Section** will analyse the data from the **eight** (8) year ***Marine Habitat Assessment Program*** which will provide data on over **one hundred and eighty three** (183) sites across Bermuda's reef platform. This data set will help develop an integrated ***Marine Spatial Plan for Bermuda's reef platform***. Further a Green turtle population study will be conducted in order to better understand whether Bermuda's green turtle population is increasing or decreasing.

**Mr. Chairman,** the Department will continue to monitor, preserve and promote Bermuda's unique marine heritage. The Historic Wrecks Authority will undertake a review of the Wrecks legislation, develop a ***National Underwater Cultural Heritage Management Plan*** and continue the ***Protected Dive Site Mooring*** program as an important component of the National Tourism Plan for offshore Bermuda.

### **[Closing Comments]**

**Mr. Chairman,** in closing I would like to express my sincere thanks and appreciation to the dedicated team of officers and staff of the Department of Conservation Services. Theirs is an often unseen but nevertheless important role. They are charged with the custody of our marine and terrestrial ecological heritage. The sustainability of our island's natural resources depends on their success.

Mr. Chairman, this quite comprehensive overview of the Department, concludes Head 69.