



GOVERNMENT OF BERMUDA
Ministry of Health

National Health Plan: Bermuda Health System Reform Strategy





**National Health Plan
Bermuda Health System Reform Strategy**

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Government of Bermuda
Ministry of Health

Message from the Minister of Health



It gives me great pleasure to present the ‘National Health Plan: Bermuda Health System Reform Strategy’. The purpose of this important document is to establish the foundation for a 21st century health system for the people of Bermuda, based on redefined values and principles.

It is often said that “*A community is judged by the way it treats its weakest members*” And this sentiment applies to all aspects of physical, emotional and social well being. For this reason, it is essential that we treat health and healthcare as fundamental human rights. It does not befit a fair and humane society to treat healthcare as a privilege of employment or as welfare for the poor. It must be a right endowed equally on every resident, based on purely need. The ‘National Health Plan’ sets the stage for the new direction of Bermuda’s health system.

The vision for the ‘National Health Plan’ was initially conceived in 2009 by my dear friend and colleague, the late Minister of Health, the Honourable Nelson B. A. Bascome, Jr, JP, MP, just months before his passing. It was under his successor, the Hon. Walter Roban, JP, MP, that the Plan was developed, in conjunction with the capable and discerning leadership of then Permanent Secretary of Health, Warren Jones. The humble privilege of completing the task and presenting the Plan to the public fell on myself and the team at the Ministry of Health, alongside the Bermuda Hospitals Board and the Bermuda Health Council. Following a period of public consultation in early 2011, I am honoured to present the final ‘National Health Plan’ to the people of Bermuda.

The reform strategy set out in the ‘National Health Plan’ is wide-ranging and profound and is based on the core values of equity and sustainability. I am confident that the reforms contained in the Plan will bring about long awaited and much needed improvements to our health system. The containment of escalating healthcare costs will require all of us to adopt a unified approach to ensure that the entire system is affordable to everyone. The containment of escalating healthcare costs will require all of us to adopt a unified approach to ensure that the entire system is affordable to everyone.

I am extremely confident that the unity, commitment and caring nature that distinguishes Bermuda’s community will bring the ‘National Health Plan’ to fruition and will result in a health system that this island can be justifiably proud of.

The Hon. Zane De Silva, JP, MP
Minister of Health
Bermuda

Executive Summary

Purpose: The purpose of the National Health Plan 2011 is to reset the direction of Bermuda's health system. It lays the foundation to make healthcare more affordable and improve access and quality.

Context: Bermuda's healthcare system has served the island well for forty years. We have a healthy population and good quality of services in many areas. However, healthcare reviews over the past fifteen years have identified areas for improvement. In particular, increasing healthcare costs and lack of affordability for some have become major concerns. The Plan builds on the recommendations of past reviews, on current priorities, and existing strengths to establish a platform for reform.

Mission: *"Healthy people in healthy communities"*. Bermuda's health system shall assure the conditions to enable the human capacity to adapt and cope in achieving optimal health and quality of life.

Core values: The core values for our health system will be *equity* and *sustainability*. Equity is defined as equal access to basic healthcare and proportional financial burden. Sustainability is defined as spending growth in line with inflation and a health system resourced to be affordable for the economy, payors, providers, employers, individuals, and families. These values will be the founding principles for all health system decisions in Bermuda.

Health sector goals: There are eleven health sector goals that provide the roadmap for reform:

1. Universal access to basic health coverage shall be assured for all residents of Bermuda.
2. Basic health coverage shall include urgent physical and mental health care, hospitalization, primary care, preventive care, and health maintenance.
3. Health coverage contributions shall be affordable to all, to ensure equitable access to healthcare.
4. Streamline use of overseas care to efficiently meet the needs of the population.
5. Mechanisms to pay healthcare providers shall ensure optimal quality to patients and maximum efficiency to the healthcare system.
6. An integrated health IT system shall be established throughout the health sector to improve efficiency and quality.
7. Implement strategies to meet the healthcare needs of people with chronic illnesses, and physical, cognitive and mental disabilities.
8. The quality of healthcare provision shall be monitored and regulated.
9. Bermuda's health system shall be financed through the most cost-effective means available.
10. Introduction of health technology shall be regulated to ensure adequate level and mix of resources to efficiently meet the healthcare needs of the population.
11. Health professionals and organizations shall assure the promotion of healthy lifestyles and maintenance of health conditions

Building on strengths: Three areas will be enhanced through the reform goals, while retaining their basic structure: the delivery of healthcare by private and public providers, Government run public health services, and the commitment to subsidize vulnerable populations.

Implementation & Evaluation: Implementation of the National Health Plan will take place over seven years. Task Groups will develop policy options to implement the goals of the Health Plan, under the leadership of a Steering Committee in the Ministry of Health, which will coordinate overall implementation and report on progress. The Bermuda Health Council will evaluate the outcome of reforms through public reports.

Purpose

“A community is measured by the way it treats its weakest members”

The purpose of the National Health Plan is to lay the foundation for a 21st century health system for Bermuda, outline the goals for the organization of our healthcare sector, establish the context and direction of future reforms, and provide for all stakeholders unequivocal clarity that the founding principles of our health system shall be equity and sustainability.

I. Context

Why a National Health Plan?

In 2009 the Government’s Throne Speech announced that a new National Health Plan would be developed.¹ The need for this initiative arose from ongoing long-term concerns about healthcare costs, weaknesses in our health system and its inability to meet the needs of contemporary Bermuda.

The core structure of Bermuda’s health system was established by the Health Insurance Act 1970. The system served Bermuda well for four decades, particularly in the context of a small-knit, affluent community, during many years of economic growth and high employment. However, after forty years, that structure is no longer enough.

Numerous health sector reviews have repeatedly identified gaps within our health system; and although there have been changes in the health sector, the core structure has remained, with proposed reforms focusing on isolated aspects. Over the years, many improvements have been seen but, as in health systems around the world, many challenges have also emerged, often as a result of economic, social and demographic shifts, and sometimes as unintended consequences of the system itself. With limited containment measures, healthcare costs have been increasing significantly above inflation; and with rising unemployment an increased number of individuals are being left without coverage. In a global context, Bermuda compares unfavourably to most other high-income nations in its failure to secure universal health coverage despite a comparatively high level of expenditure. The need for reform has been long identified. The time for reform is 2011.

The purpose of this National Health Plan is to bring Bermuda’s health system into the 21st century. The aim is to build on our strengths, establish new goals for our health system, and set on course the necessary reforms to modernize the health sector, correct existing gaps and lay the blueprint for a fairer and sustainable healthcare system for Bermuda.

Current Strengths & Weaknesses

The Health Insurance Act 1970 provided for Bermuda’s health system to be financed primarily through compulsory private insurance for employed persons and their spouses, and secondarily through government subsidies for children, indigent

individuals, and elderly persons (aged 65 years and over). The Act mandates that employers provide health insurance and finance 50% of a minimum package – the Standard Hospital Benefit (SHB). The subsidies established were to cover SHB for the specified populations. This has been the core structure of Bermuda’s health system for four decades.

The first large-scale review of Bermuda’s healthcare sector was commissioned in 1993. Seventeen years and numerous reviews later, the health system remains largely unchanged in its basic structure. For the past forty years, it has been delivered through a mix of private and public sectors in both provision and financing, with significant reliance on private health insurance. Appendix I provides a summary of the healthcare reviews produced between 1996 and 2010, covering 16 known reportsⁱ, starting from the seminal Oughton Report, which was commissioned in 1993 and completed in 1996. Some of the reports cover similar ground, and others have specific areas of focus. However, reviewing them as a collective highlights the commonality between them in the problems they identified in Bermuda’s health system, and in the recommendations they made to correct these challenges. In particular, the common themes repeated throughout the reviews are:

Box 1: Summary of recurrent themes in healthcare reviews between 1996 and 2010

Recommendations / Observations	Reports including recommendation
<ul style="list-style-type: none"> Review the Standard Hospital Benefit 	Oughton Report 1996, Morneau Sobeco 2008, PwC Report 2009
<ul style="list-style-type: none"> Contain the rate of increase in healthcare costs 	Oughton Report 1996, Arthur Andersen 1998 & 2000, Ernst & Young 2004, PwC 2009
<ul style="list-style-type: none"> Address the inequitable access to insurance coverage for some populations 	Oughton Report 1996, Essential Public Health Functions Assessment 2005, Ramella 2005, Health Accounts Report 2010
<ul style="list-style-type: none"> Place greater emphasis on prevention and health promotion 	Oughton Report 1996, Essential Public Health Functions Assessment 2005, Well Bermuda 2006
<ul style="list-style-type: none"> Reform the reimbursement methodology for providers 	Oughton Report 1996, Arthur Andersen 1998 & 2000, Ernst & Young 2004, PwC 2009
<ul style="list-style-type: none"> Establish a central electronic data repository for all healthcare data 	Oughton Report 1996, Arthur Andersen 1998, Ernst & Young 2004, PwC 2009

ⁱ These are the Oughton Report (Health Care Review Sub-Committee, 1996), Creating Solutions that Work (Arthur Andersen, 1998), Bermuda Healthcare Redesign Initiative (Arthur Andersen, 2000), Physician reimbursement review (Ernst & Young, 2004), Health Priorities Report (Department of Health, 2005a), Health Systems and Services Profile (Ramella, 2005), Essential Public Health Functions Assessment (Department of Health, 2005b), Well Bermuda: A National Health Promotion Strategy (Attride-Stirling, J., 2008), A Tale of 2 Hospitals (Ombudsman for Bermuda, 2007), Actuarial Review for BHeC (Morneau Sobeco, 2008), Estate Master Plan Review (Johns Hopkins Medicine International, 2008); Bermuda Fee Schedule Project (PwC, 2009), Health System Profile 2009 (Bermuda Health Council, 2010), the Mental Health Plan (Bermuda Hospitals Board, 2010), National Health Accounts Reports (Bermuda Health Council, 2010 & 2011), and Health in Review (BHeC & DOH, 2011).

These recommendations, covered to a greater or lesser extent in each of the stated reports, are the common themes that have appeared systematically in reviews over the past fifteen years. This National Health Plan includes each of these points in the goals set out for a 21st century health system for Bermuda.

But ultimately, these issues must be addressed not just because past reports have said to do so, but because current evidence continues to demonstrate the need. In assessing the performance of Bermuda's current health system its core challenges reflect the tenor of the recommendations of past reviews. Different models exist to evaluate the performance of a health systemⁱⁱ, but they generally share a focus on assessment of health status, access or responsiveness, cost and financial risk protection. Bermuda's health system can be crudely assessed on some of these variables and benchmarked against other high-income countries with strong economies and sophisticated healthcare systems such as Bermuda's. The Organization for Economic Cooperation and Development (OECD) provides a suitable point of comparison.²

- Health status: Bermuda compares well with the OECD on 2007 life expectancy at birth (Bermuda 79.0; OECD mean 79.1), and infant mortality rates (Bermuda 3.0ⁱⁱⁱ; OECD average 3.9).
- Access: Bermuda has approximately 2 physicians per 1,000 population; the OECD average is 3.1 per 1,000. Nurses are 8.2 per 1,000 population in Bermuda while the OECD average is 9.6. However, the Bermuda figures have not been adjusted for use of overseas physicians and facilities, which will reduce these gaps; and the ratios must be interpreted in the context of the island's size. Conversely, Bermuda has 3.1 MRI and 3.1 CAT scans per 10,000, while the OECD average is 1.1 and 2.3, respectively. Likewise, medical technology overseas has not been accounted for, which increases access and utilization.
- Cost: Bermuda's level of expenditure per capita is greater than the OECD average; in 2007/08 Bermuda spent USD PPP \$4,959^{iv}, while the OECD 2007 average was USD PPP \$2,984. Health expenditure represented 8.5% of Bermuda's national wealth; the OECD average was 8.9%. However, this level of per capita expenditure places Bermuda as the second-most expensive health system compared to other high-income countries, surpassed only by the United States (2007 USD PPP \$7,290).
- Financial risk protection: Bermuda compares unfavourably to the OECD on health insurance coverage for a core set of services, with 94%^v estimated to have insurance coverage in Bermuda, whereas most OECD countries provide 100% coverage^{vi} of a basic package in excess of Bermuda's.

ⁱⁱ See, for example (WHO, 2000), (WHO, 2003), (OECD, 2009), and (Roberts, Hsiao, Berman, & Reich, 2008).

ⁱⁱⁱ Based on five-year average between 2003 and 2008. (Bermuda Health Council, 2010)

^{iv} Bermuda 2007/08 total health expenditure per capita was BDA \$7,885. To enable international comparison Bermuda dollars are converted to USD Purchasing Power Parity (PPP), resulting in US PPP \$4,959, applying 2007 PPP rate of 1.59.

^v The Health Survey of Adults in Bermuda 2011 commissioned by the Bermuda Health Council and the Ministry of Health reported that 6% of the population had no health insurance; 10% of adults in low-income households fell into this category, as did 2% of seniors (Mindmaps Ltd, 2011).

^{vi} Of 30 OECD countries studied in 2007, 18 provide coverage to 100% of their population, and a further 8 provide cover to 98% of their population. Only 4 countries covered less than 97% of the population: the Slovak Republic (95.5%), the United States (85.3%), Mexico (82.5%) and Turkey (77.2%). (OECD, 2009)

Thus, at the broadest level, it can be said that Bermuda's healthcare system is delivering overall population health outcomes comparable to other high-income countries, and that resources may be generally meeting need adequately. However, the level of expenditure is comparatively high, and there is inequity in the financial risk protection offered to the population, which compares unfavourably to most high-income countries.

There are, therefore, many strengths in Bermuda's health system, not least its strong public health sector, good personal care provision, good access to high-quality overseas hospitals, sufficient manpower and infrastructure capacity, a high overall level of financing, and government subsidies for vulnerable populations. These strengths have yielded the positive outcomes enjoyed by the island to date, and they must be maintained and built upon. Further, a strong economy, historically high levels of employment and generous insurance benefits from employers have secured good cover and access to healthcare for many individuals. Nevertheless, the system is not without challenges.

In 2009/10 Bermuda's per capita health expenditure was BDA \$9,734; which represented 11% of our national wealth. Comparison to OECD countries places our health system as the second most expensive, while failing to achieve universal coverage. Indeed, all but four OECD countries provide health insurance coverage to more than 98% of their population and spend less on healthcare than Bermuda. This highlights concerns about the cost-effectiveness of our system.

In addition, the level of expenditure is not affordable for a significant number of people. In 2008 it was reported that 11% of households were below the low-income threshold of \$36,605; for these households a per capita health expenditure of \$8,661 would represent a substantial financial challenge. In 2004 well-off households spent 4.5% of their income on healthcare, while poor households spent 10.3%.³ Likewise, white households spent 6.3%, while black households spent 8.1% of their income on health. These differences result in inequitable access to healthcare and inequitable outcomes. Life expectancy over the past half century has increased by 14 years; however, the gap in life expectancy between blacks and whites has narrowed by only one year in six decades^{vii}. Inequity is a significant and material concern in Bermuda's current health system, a position incongruous with the Universal Declaration of Human Rights contention that we "*should act towards one another in a spirit of brotherhood*"^{viii}. Inequity may be expected in our society with respect to material wealth and consumer goods; but it cannot be accepted with respect to basic rights, like care and dignity, in a sophisticated, cultured and affluent community such as ours. Bermuda's health system must redress this injustice.

Analysis of our performance and comparison to high-income countries indicates where the problems may lie. In Bermuda 72% of healthcare is financed through the private

^{vii} Overall Bermuda life expectancy increased from 65 years in 1950 to 79 years in 2007. In 1950 life expectancy was 63 for blacks and 68 for whites. In 2007 life expectancy was 76 for blacks and 80 for whites. The gap narrowed from 5 years in 1950 to 4 years in 2007.

^{viii} The first article of the declaration states that "*All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood*". (Universal Declaration of Human Rights, 1948).

sector, compared to 30% in the OECD^{ix}. Globally, evidence indicates that reliance on private insurance is closely associated with higher overall levels of expenditure^x and greater inequity in healthcare financing^{xi}. In Bermuda most provider fees are not regulated, which is generally associated with higher price levels; and the fee for service methodology we apply to reimburse providers is also associated with higher costs, particularly where fees are unregulated.⁴ Additionally, peculiar to Bermuda's context is the use of overseas care, which has contributed the greatest increases to overall health expenditure, having risen by 118% between 2004 and 2010 (or an average of 20% per year)⁵.

Furthermore, Bermuda, like most high-income countries, anticipates a future where the demographic characteristics and health status of the population will present significant financing obstacles for the health system. As the size of the elderly population increases relative to the working population, health systems around the world are grappling with identifying sustainable means of financing. In addition, the growth in chronic non-communicable diseases like heart disease, cancer and diabetes also places greater strains on the system's capacity, particularly as the population ages. Significantly, the size of the elderly population and health status do not alone determine the overall levels of expenditure; for example, the population aged over 65 years is 12% in the United States (and Bermuda), compared to 21.5% in Japan where healthcare costs are nearly two thirds lower. Further, rates of obesity or smoking have not been shown to have a direct relationship to the overall level of healthcare expenditure of a country.⁶ Nevertheless, these factors contribute to the financing stresses faced by any health system, as dependency ratios change and fewer able-bodied adults are available to provide for the infirm.

Bermuda is not alone in these challenges, but it is unique in its combined characteristics of size, affluence, geographical position and political cohesion. All of which place our small island in an inimitable position to bring about positive change.

^{ix} There are wide variations across the OECD; for example private expenditure on healthcare is 10% in Luxemburg, 25% in the UK, 30% in Canada, and 65% in the USA. (OECD, 2009)

^x Private contribution mechanisms have been found to involve limited pooling of risks and to link payment to risk of ill health and benefits to ability to pay; further, it is hypothesised that reliance on private finance may exacerbate healthcare expenditure growth due to weak purchasing power of private insurers and individuals against providers. (Thomson, Foubister, & Mossialos, 2009), pp. xxiii).

^{xi} Private health insurance has been found to be "highly regressive in countries in which it plays a significant role and the majority of the population relies on it for coverage (as in the United States and Switzerland)" (Thomson, Foubister, & Mossialos, 2009) pp.33).

II. Mission & Core Values

“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services.” (Universal Declaration of Human Rights, 1948) Article 25(1)

Mission: Healthy People in Healthy Communities

“Bermuda’s health system shall assure the conditions to enable the human capacity to adapt and cope in achieving optimal health and quality of life”

One of the primary goals of any health system is to assure a healthy population. Health and medical care are fundamental human rights, so it is befitting that a health system should seek to ensure that the population it serves enjoys the maximum state of health possible within its time and circumstances.

Health itself is defined by the World Health Organization as *“a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”* (WHO, 1948). To define health thus is to aspire to not merely remove disease through medical interventions, but to ensure that the conditions exist for individuals to be able to cope and adapt in achieving for themselves the best possible state of well being. Within the health system such conditions include public health measures, health system structures, and individual responsibility.

The National Health Plan takes the WHO definition as an aspirational starting point, as it embodies the spirit of the Plan and the intent of Bermuda’s health system: to achieve optimal health for all residents. To embrace this definition in the Plan is to pursue the highest standard as the bedrock of our reform strategy. And while we must accept that everyone cannot be healthy all of the time, the purpose of the plan is to ensure that our health system bears no characteristics that would impede residents from being able to attain the best health possible within our reach as a community and as individuals.

Thus, the mission of the National Health Plan is that **Bermuda’s health system shall assure the conditions necessary to enable, in all her people, the capacity to adapt and cope in order to achieve optimal health and quality of life, within existing resources and circumstances.**⁷ This shall be achieved by building a health system based on the core values of equity and sustainability.

Core Value: Equity

“Equal access to basic healthcare and proportional financial burden”

Health and medical care are fundamental human rights. As such, a strong and successful health system must ensure that every member of the population has equal access to them. Health and medical care are essential to the physical, emotional and intellectual prosperity of individuals. Equal access to health and medical care are essential to the economic and social prosperity of a community. For these reasons, it is not sufficient to guarantee health only to some. Any portion of the population left without basic healthcare becomes a burden to their community because, as health inequalities take hold, children develop less well, become young people who struggle with basic skills necessary to compete in the labour market, and become parents less able to provide opportunities for their families, and seniors with greater health problems, more likely to die prematurely. As a country we must ask not only ‘what is the price of equity’, but ‘what is the price of inequity’. Equal access to health and medical care are not just social priorities, they are fundamental ethical imperatives.

Significantly, it is essential to note that more equity does not mean greater expense for our health system. International experience of other high income countries provides evidence that total health expenditure does not determine equity in coverage and access to healthcare. The more significant predictor of equity is not cost but organization of financing mechanisms, and Bermuda should adopt models that satisfy the right of equity.^{xii}

A core value of Bermuda’s 21st century health system, therefore, will be equity. Equity is defined as **equal access to basic healthcare and proportional financial burden**. The structure of the system, the provision of healthcare and the mechanisms for financing it will be founded on the ethical principle that “everyone has a positive right to the minimum level of services and resources needed to assure fair equality of opportunity”⁸. Thus, Bermuda’s health system will provide universal coverage, solidarity in financing, and equal access to basic and essential healthcare. This shall recognize that individual healthcare needs differ according to factors such as age, gender and disability, and that capacity to contribute financially is least among those with the greatest need. All residents shall have access to essential care based on need, and contributions to healthcare financing shall be based on ability to pay. To achieve this core value, significant changes are needed in the way the health system is structured.

^{xii} A study by the Commonwealth Fund found that health coverage design affects access to care and health spending levels, with the most equitable systems not being the most expensive (Schoen, 2010).

Core Value: Sustainability

“Spending growth in line with inflation and resourced to be affordable for the economy, payors, providers, employers, individuals, and families”

The second of the two core values for Bermuda’s 21st century health system is sustainability. The growth in health spending as a proportion of gross domestic product (GDP) must be contained. Health spending cannot be permitted to threaten other areas of economic activity; it must be economically and fiscally sustainable if it is to serve its purpose and achieve the ultimate goal of assuring a healthy population. Significant reforms will be needed for Bermuda to achieve this, revolving largely around cost-containment. The proportion of national wealth we dedicate to health is comparable to other countries, but more efficiency can be gained, and the rate of increase can be slowed with appropriate cost-containment measures.

Sustainability, therefore, shall be a priority in all decisions about Bermuda’s healthcare system. Sustainability is defined as **spending growth in line with general inflation, levels of expenditure that continue to be affordable to the economy, coverage levels that are affordable to public and private payors, reimbursement levels affordable to providers, and financial contributions affordable for employers, individuals, and families.**

Sustainability also refers to the need for individual responsibility among the public and healthcare providers with respect to wellness and preventive care, which together contribute to a healthier population with reduced need for expensive medical interventions. Furthermore, sustainability requires that healthcare resources be sufficient to meet the healthcare needs of current and future generations, and assure the economic and social prosperity of the island. Thus, sustainability in all aspects of the health system is paramount to Bermuda’s prosperity, which will require prudence in resource utilization, and significant cost-containment efforts across the health system.

Balancing the requirement for sustainability with the need to maintain high quality in the delivery of healthcare, and with the realities of an ageing population, the increase in chronic non-communicable diseases, and the ever-growing availability of complex and expensive medical technologies is a tremendous challenge; but not an insurmountable one. With solidarity, innovation, knowledge of local trends, vigilance of international experience, and an ability to capitalize on current strengths, Bermuda can achieve a sustainable healthcare system.

III. Health Sector Goals

The Ministry of Health of the Government of Bermuda, as the primary steward of the island's health system, has established the following as the goals for Bermuda's health sector. These are grounded on the founding principles for the health system: *equity and sustainability*, with the aim of achieving our mission of *healthy people in healthy communities*. The purpose of these goals is to set the agenda for reform and developments in the health sector, and to provide unequivocal clarity to all the stakeholders on what the priorities are for our health system as of 2011.

The goals have been produced through collaboration with numerous stakeholders under the Ministry of Health, comprised of the Department of Health, the Health Insurance Department, the Bermuda Hospitals Board, the Bermuda Health Council, the National Office for Seniors and the Physically Challenged, the Corporate Services Unit, and the Minister of Health.^{xiii} They reflect current priorities and address existing problems, but have been grounded on historical identification of the reforms needed, and represent evidence-based policy imperatives.

The goals are built around three themes: access, quality and efficiency. Equity and sustainability resonate as the foundation of each goal.

Access

1. Universal access to basic health coverage shall be assured for all residents of Bermuda

Beginning from the premise of the Universal Declaration of Human Rights that everyone has a right to health and medical care, the National Health Plan pledges to ensure basic and essential healthcare coverage for 100% of Bermuda's residents. Coverage enables financial access to healthcare⁹ and, globally, the relationship between access to healthcare and improved health outcomes is irrefutable¹⁰. Thus, for Bermuda to achieve better health outcomes, improve life expectancy, and reduce disparity, universal access is a necessary condition. This shall include mechanisms to ensure that persons with chronic health conditions have access to necessary coverage and services. Eligibility for universal access shall be determined according to residence which shall be defined in law, and the package of services covered shall be defined in law and sufficient to meet the basic needs of the population.

Implementation of this goal is dependent on achievement of other goals, which are anticipated to require three years to complete. It is expected that this goal will be fully met in 2014.

^{xiii} See Appendix II Strategic Planning Process, for a summary of the planning and development process.

2. Basic health coverage shall include urgent physical and mental health care, hospitalization, primary care, preventive care, and health maintenance

To enable universal access to basic and essential health coverage, a core set of services will be defined as the basic level of healthcare or essential healthcare. OECD countries that have achieved universal coverage of healthcare costs do so by prescribing the services covered. Defined benefits packages generally include acute in-patient care at 100% and outpatient primary and specialist care at varying levels of cover, sometimes requiring co-payment. Pharmaceuticals and dental care are often partially covered, but countries vary greatly in the extent of cover available.¹¹ Bermuda's current minimum package, the Standard Hospital Benefit, covers most acute in-patient care, excluding fees of non-salaried professionals. The basic package will be reformed and enhanced to ensure it provides financial risk protection and appropriate access to essential healthcare beyond hospitalization. Bermuda's basic health cover shall be defined in law to include urgent physical and mental health care, medically-necessary care required in acute in-patient settings, basic primary care, health maintenance, and clinical preventive services including screening, counselling and treatment. In Bermuda's context, portability of coverage for medically-necessary treatment not available locally will be required. Benefit package design will be guided by the principles of equity and sustainability, to ensure the level of coverage is accessible, appropriate and affordable.

Designing a level of coverage appropriate and affordable for Bermuda is anticipated to require one year of development. The cover shall be implemented in 2014.

3. Health coverage contributions shall be affordable to all, to ensure equitable access to healthcare

Equity is a founding value of the National Health Plan. It is defined as equal access to essential healthcare and proportional financial burden. The goal of universal access will be of limited value if achieving it impoverishes the sick, the old and the socio-economically disadvantaged. Indeed one of the core goals of health systems, as defined by the World Health Organisation, is to exact a fair financial contribution from the population¹². Equity, therefore, shall not be undermined in the pursuit of universal coverage in Bermuda. Empirical analysis of international experience has concluded that "to truly provide risk protection, a universal system based on ability to pay is required"¹³. Thus, to enable contributions for basic health coverage to be affordable to all, contribution levels should, if possible, be based on ability to pay. Moving Bermuda to proportional contributions would represent the most significant reform of the National Health Plan, and it requires financial modelling and further structural analysis to assess local feasibility. Nevertheless, it is the position of the National Health Plan that this is the ideal way to enable health coverage to be affordable by all members of the community. This shift fundamentally changes the way in which healthcare is defined, abandoning its treatment as a consumer good or commodity, and accepting its position as a merit good¹⁴ - a public good; one which must be accessible based on need.

Like universal access, this goal is dependent on completion of other goals in the Plan with a timeframe of three years. It is anticipated that proportional contributions will be implemented in 2014 alongside universal coverage.

4. Streamline use of overseas care to efficiently meet the medical needs of the population

Bermuda is like other small-island nations, and unlike other high-income countries, in its need to access overseas hospitals for specialist care not available locally. The Bermuda Hospitals Board provides the major part of acute care needed by residents, but a community hospital in any jurisdiction is not capable of developing the volumes or economies of scale necessary to provide complex, tertiary treatment. However, overseas care represents the most significant area of increase in health expenditure in Bermuda, having risen by 118% since 2004 (20% annual average).¹⁵ This is unsustainable for private and public payors, and for ordinary people who ultimately finance the premiums and contributions to pay for this access. Resources must be redirected to streamline the use of overseas hospital care to medically necessary cases where high quality, cost-effective treatment is not available locally; and patients must be directed to facilities with proven clinical quality that are cost effective. Providers, payors and patients will have a role in curtailing the use of overseas facilities to contain the increase in healthcare costs, while assuring quality care for the population. Patient choice shall remain a structural characteristic of our health system, while protecting the cost of a sound basic package through evidence-based, medically appropriate decisions that deliver good health outcomes equitably. Improved coordination of care across the health system will be pursued to achieve this goal.

Strategic development to address this systemic challenge is expected to require two years to develop. Roll-out is anticipated alongside the new basic package.

Quality

5. Mechanisms to pay healthcare providers shall ensure optimal quality to patients and maximum efficiency to healthcare system

International experience demonstrates that no payment system is without flaws. Different mechanisms to pay healthcare providers, such as fee-for-service, salary, case rates, capitation or pay-for-performance, each produce a set of incentives and distortions to behaviour, which impact on the cost of healthcare and the quality of care. Decisions on which reimbursement methodology to employ have to be appropriate for the context of a particular jurisdiction, and must be adopted with the knowledge of which disadvantages the system is prepared to tolerate.¹⁶ Nevertheless, evidence indicates the advantages and weaknesses of each methodology¹⁷, which Bermuda must consider to determine appropriate reimbursement mechanisms for the various providers in the healthcare system^{xiv}. As part of the review and reform of reimbursement mechanisms, fees to providers shall be regulated to ensure affordability and financial sustainability of the basic package. This will address recommendations of numerous past healthcare reviews¹⁸ and introduce an essential component to cost-containment. Jurisdictions that

^{xiv} In particular, the impact of the Bermuda Hospitals Board's 2009 switch to a diagnostic related groups (DRG) billing methodology (Bermuda Hospitals Board, 2010) will continue to be monitored and improved to ensure local hospital costs result tangible cost-containment outcomes in the health system.

regulate provider fees have lower healthcare costs¹⁹ with no negative impact on outcomes or resources²⁰. International experience demonstrates that application of regulated fee schedules is associated with greater success in containing healthcare costs; more so than variables such as ageing, health status or utilization of services.²¹ In Bermuda more than half of healthcare expenditure is attributable to services with unregulated fees. Mechanisms shall be implemented to review regulatory oversight of regulated fees and expand the scope to include non-hospital care. Furthermore, following successful experience in other jurisdictions, the cost impact of increases to regulated fees shall be prevented from escalating above inflation²².

It is anticipated that this work will take three years to develop and implement, and to be rolled out in 2014 alongside universal coverage.

6. An integrated health IT system shall be established throughout the health sector to improve quality of care and efficiency

Health information technology (IT) system is used here to refer to digital records of patient data designed to enable the systematic collection of information about healthcare for individual patients and populations. Such systems can apply to a single institution or be shared across a range of healthcare settings. They may include a range of information including demographics, medical history and billing.²³ Integrated health IT systems have been found to improve healthcare quality by reducing medical errors²⁴, streamlining the patient journey, and providing evidence-based decision support; they have also been found to reduce healthcare costs and improve reporting²⁵. Such systems must ensure confidentiality and may enable improved patient access to relevant information. They have also been shown to improve coordination of care between healthcare settings and providers, which improves patient outcomes and reduces testing, errors and costs. Bermuda's healthcare sector requires improved communication and coordination between stakeholders, to which an integrated health IT system can contribute significantly. In particular, any system introduced must provide sufficient access and support to primary care physicians, and tie in laboratories and diagnostic facilities; as this will make it possible to improve quality of care, and reduce costs to the system. Collaboration between providers and payors will be required to build on current electronic data interface capability, and extend it further to include integrated electronic health records.

Moving Bermuda's health sector to an integrated health information system is estimated to require five years to develop, design and achieve a phased implementation in 75% of the health sector. Initial developments to establish infrastructure requirements and build on electronic claims submission will take place in the first two years.

7. Implement strategies to meet the long-term healthcare needs of people with chronic illnesses, and physical, cognitive or mental disabilities

Long-term care for vulnerable populations has been a challenge for Bermuda, as for other high-income countries. These can be individuals of any age, but are often primarily seniors and persons with physical, cognitive or mental disabilities. With changing cultural values, growing dependency ratios, and weakening family ties, individuals and their families can suffer unduly and face dire financial challenges to meet long-term healthcare needs. While ageing, mental health and disability can be

discrete populations, the challenges surrounding them in Bermuda often overlap around long-term care and home care. In particular, three issues are of concern: availability, coordination, and financing. Many of the needs have been identified in reports on ageing²⁶, disability²⁷ and mental health²⁸, but a strategic approach is required to develop a coordinated network of services to assure availability of appropriate institutional and community care through the private and public sectors. Structural changes are also required within the health system to ensure continued improvement to mechanisms to safely discharge long-term care patient from inpatient beds, where clinically appropriate; and to ensure there are accessible services in the community for persons with chronic health conditions. With respect to financing, subsidies are an appropriate mechanism but concerns exist about the level of financing available and structural challenges in meeting this need. Evidence from other jurisdictions indicates that private insurance solutions have not succeeded in addressing this gap²⁹. The mechanisms of actuarial insurance appear to not be suitable to the risks associated with needing long-term care³⁰. Indeed, the circumstances of this need are increasingly seen as better suited to financing from general taxation and social insurance which enable broader risk spread and better financial security for the population. Bermuda is currently using this mechanism, but not by design. Reforms are required to implement strategies to meet the health needs of these populations, and formalize financing mechanisms to ensure fiscal and economic sustainability.

Development and implementation is expected to require four years to complete.

8. The quality of healthcare provision shall be supervised and monitored

Outside the hospital setting, Bermuda's healthcare system has limited mechanisms to monitor the quality of healthcare offered by individual professionals and providers. Statutory bodies allow for professional self-regulation and oversight, but there is limited accountability and, in a small, tight-knit community, the challenges of self-regulation are especially marked and evident³¹. Existing regulatory structures establish mechanisms for setting standards of behaviour, competence and education of health professionals, keeping of registers of licensed professionals, and provide for handling cases of poor practice. However, there are insufficient mechanisms to deal with patients' concerns with respect to quality and billing, and inadequate provision for professional peer review or clinical audit. Some categories of service provision are closely monitored, and a small number require accreditation, but a majority of community provision is unmonitored. It is the aim of the National Health Plan to broaden the scope and quality of oversight and monitoring in order to assure patient safety. Efforts to enhance oversight shall include improved coordination of care across the health system to achieve this goal.

Development is expected to require four years, starting after other key reforms are in place.

Efficiency

9. Bermuda's health system shall be financed through the most cost-effective means available

The Ministry of Health will identify the most cost-effective mechanisms to finance healthcare using international experience and benchmarks of financial performance in comparable jurisdictions. The academic and policy literature indicates that financing healthcare via numerous disparate agents can have negative implications for cost containment³², efficiency³³ and equity³⁴. International experience has demonstrated empirically that healthcare access and cost are determined greatly by the way in which coverage is financed. Indeed, countries that rely less on voluntary health insurance can be less expensive and provide better access to healthcare.³⁵ Assuring equitable universal coverage of a sound basic package requires application of health financing arrangements that provide value for money for the health system, proportional financial burden for individuals, and solidarity in financing for the community.³⁶ Importantly, private insurance will continue to play a significant role in healthcare financing in Bermuda; however, the scope and function will reflect the priorities and imperatives necessary to achieve equity and sustainability. International experience globally provides evidence of efficiency measures available that may be applied in Bermuda. Detailed financial modelling to reform and optimize Bermuda's financing mechanisms will be undertaken to enable evidence-based decisions on coverage and funding sources, including grants, subsidies, and private insurance.

Formulation of financial models to identify cost-effective financing mechanisms is anticipated to require three years to complete and implement.

10. Introduction of health technology shall be regulated to ensure adequate level and mix of resources to efficiently meet the healthcare needs of the population

Bermuda currently has limited control on the introduction of new health technologies to the system. Health technologies refer to medical equipment, facilities, pharmaceuticals and professionals. Internationally, high rates of availability of high-cost technologies are associated with increased health system costs with no corresponding benefit on outcomes³⁷. Conversely, high rates of human resource are not associated with increased utilization or costs³⁸. The lack of regulatory control of high-cost equipment in Bermuda has been identified as a priority area to assist in containing costs and preventing unnecessary duplication of services.³⁹ While entry of professionals is regulated by statutory bodies under the Ministry of Health, past reviews have raised concerns about the need for processes to make evidence-based decisions on Bermuda's human resource needs⁴⁰.

Pharmaceuticals are a specific area of concern within the context of health technology. As new drugs are developed and population demographics and health status change, expenditure on pharmaceuticals has accounted for a growing proportion of healthcare costs across health systems. Policy makers globally have been addressing the challenges presented by the growth in pharmaceutical expenditure, relative to the economy. Bermuda's pharmaceutical expenditure was

10% of total health expenditure in 2004.⁴¹ In 2007 the island spent 1.4% of gross domestic product on prescription drugs alone, compared to the OECD average of 1.5% for all pharmaceuticals including over-the-counter drugs⁴². Significant challenges are faced by Bermuda as a small, isolated jurisdiction with respect to importation, control and pricing⁴³, which have negatively impacted access for some sectors of the population. Review of this sector will identify policy options to enhance the affordability of prescription drugs, and may consider development of a list of essential drugs with regulated prices to ensure affordability.

Mechanisms shall be implemented to control the entry of new technologies with a phased approach prioritising high-cost medical equipment, followed by facilities, pharmaceuticals, human resources, and services. It is estimated that the initial phase will take two years. Subsequent developments are estimated to require a further three years to implement.

11. Health professionals and organizations shall assure promotion of healthy lifestyles and maintenance of health conditions

Over the last forty years, chronic non-communicable diseases have replaced infectious diseases as the major causes of mortality in Bermuda, as in other high-income countries. In 2007, 77% of all deaths in Bermuda were due to chronic non-communicable diseases, specifically heart disease (47%), cancer (25%), and diabetes (5%)⁴⁴. This is believed to be directly linked to the obesogenic environment⁴⁵ prevalent within the community, characterised by inactivity and poor nutrition, which has resulted in 67% of the population being overweight or obese⁴⁶. In addition, health professionals share concern over the prevalence of other health problems that are induced or exacerbated by poor lifestyle choices and socio-environmental conditions, including respiratory diseases, sexually transmitted infections, mental illness, and substance abuse.⁴⁷ No health system can address these challenges with an exclusively curative approach to healthcare. Health promotion and health education have been identified as priority areas globally and in Bermuda to tackle these wholly preventable problems, which are placing unnecessary stress on limited healthcare resources.⁴⁸ The Well Bermuda Strategy has set out the agenda for health promotion on the island, with broad community support.^{49,50} The National Health Plan embraces the progress made across the health sector in this regard, with the expectation that further gains will be made and monitored, resulting in a measurably healthier population.

This goal is already underway; the objective is to encourage, and monitor, greater progress.

IV. Building on Strengths

Despite the broad reforms of the National Health Plan, key elements of the current health sector will continue to be the bedrock of the system's structure: the way in which healthcare is delivered, the public health infrastructure, and the principle of subsidizing vulnerable populations. In all areas, review and reorganization will be essential to ensure continued improvement in their execution, but overall there has been no historical precedent identifying them as significant challenges to the sector, and there is no evidence to indicate a need for overarching reforms. Indeed, international evidence supports adherence to the current organisation in these core areas.⁵¹ These existing strengths have been omitted from the health sector goals which focus on areas where significant reforms will take place. By contrast, the National Health Plan will pursue maximum improvements in efficiency and effectiveness in the organisation of healthcare delivery, public health services and subsidies, without reforming them fundamentally.

Organisation of healthcare delivery

Currently healthcare is delivered in Bermuda by a mix of private and public providers. In total 47% of expenditure is by the public sector, with 40% accounted for by the Bermuda Hospitals Board. The remaining 53% of expenditure is by private sector healthcare providers, including pharmaceuticals and overseas care. None of the reviews of the healthcare system over the past fifteen years have identified weaknesses or challenges with respect to this distribution. Further, there is no empirical evidence to suggest that this mix has a negative impact on quality of care or healthcare costs⁵². Past reviews have highlighted a need to enhance coordination of care between the various sectors and providers, and it is anticipated that introduction of an integrated health information system will assist in this regard. Consequently, the current organisation of the healthcare delivery system will be maintained, with a majority of healthcare delivered by private providers, public health services by the government, and hospital care by the Bermuda Hospitals Board as a quasi-autonomous non-governmental organisation. Essential components requiring review are communication and coordination between stakeholders, accessible services for all persons with chronic health conditions, and organization of the medical community, in particular primary care, in order to optimize the capacity within the system, reduce duplication, eradicate information gaps, and improve the patient journey and population health outcomes. Any necessary changes in this area will be subsumed under various reform goals including #5 on reimbursement, #6 on health IT, #7 on long-term care, and #8 on quality of care.

Public health services

The public health authority of any jurisdiction lies within the state. This is also the case in Bermuda.⁵³ The role of public health is to assure the conditions in which people can be healthy. Its focus is on the health of the population, as opposed to individual patients or personal care. The Department of Health is responsible for promoting and protecting

the physical, psychological and social well being of the community to enable the island's residents to realize their optimum quality of life⁵⁴. It achieves this through numerous public health programmes delivered in large part at no charge to the public and financed through taxation. Unlike personal care, which benefits primarily the individual, public health benefits the population as a whole, for example, by keeping it free of vaccine-preventable diseases, and controlling infectious diseases such as HIV/AIDS. The 2005 assessment of Bermuda's public health functions highlighted strengths in public health provision⁵⁵. Consequently, the financing and delivery structures for public health shall be maintained, ensuring adequate resources are available to meet the changing needs of the population.

Essential public health functions that require review and improvement include: monitoring and reporting on population health status, implementation of health promotion strategy, promotion of public health principles and health-promoting environments in government, the private sector and civil society, enhanced organizational capacity, research, evaluation and quality assurance of public health services, and fuller enforcement of public health laws. In addition, given the National Health Plan goals and the continued interface with the private sector, restructuring of some public health services may be considered to enhance coordination with primary care providers. Public health services should complement and supplement private provision, focusing on community interventions and public health priorities. Any necessary changes will be identified through various health sector goals, including #1 on universal access, #2 on basic and essential cover, #5 on quality of care, #6 on health IT, #7 on long-term care, and #11 on wellness.

Subsidies for vulnerable populations

Communities have an ethical imperative to provide for those among them who, for circumstances beyond their control, cannot provide for themselves. In Bermuda's case, this is the purpose of the subsidies provided by the Ministry of Health, which ensure public coverage, through taxation, of hospitalization coverage for the youth, the aged, and the indigent (under the Health Insurance Act 1970). This is in keeping with the Universal Declaration of Human Rights which, after establishing the right to health and medical care, states that everyone has "*the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control*". (Universal Declaration of Human Rights, 1948), Article 25(1)

The declaration goes further to identify two special categories of population: mothers and children, which are entitled to additional care and attention. Specifically, all children are to be granted equal social protection:

Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection". (Universal Declaration of Human Rights, 1948), Article 25(2)

The subsidies provided in the health system, and the mechanism to finance them, shall be strengthened to enable Bermuda to protect the right to basic healthcare for vulnerable, dependent populations, and ensure solidarity in financing for the long-term benefit and security of Bermuda as a whole. The subsidy programmes shall be enhanced to optimize the principles of equity and sustainability. This must include a review of eligibility criteria, consideration of means-testing where appropriate, cost-containment measures for providers and patients, and commitment to adequate levels of financing by Government. Measures to optimize sustainability shall continue to provide for the vital protection of Bermuda's children. Any necessary changes will be identified through goals #7 on long-term care, and #9 on cost-effective means of financing our healthcare system.

These three areas of the health system will be retained, as they represent strengths in the health sector, and contribute to the quality of health outcomes and the achievement of equity and sustainability of the health system. However, continued improvement in all areas is expected to address known gaps and adapt to National Health Plan reforms. Improved administration in these three areas of the health sector should contribute to greater efficiency and sustainability. However, their conceptual role and basic structure will be retained in Bermuda's reformed health system.

V. Implementation

The goals set out for the health sector are extensive in scope, conceptually profound and technically complex. Implementation will thus require a phased, multi-team approach, aiming for broad implementation over a seven-year period overall, but anticipating achievement of the core principles of universal and affordable coverage by 2014. Priority will be given to the goals requiring more urgent action, ordering priority according to technical requirements.

Table 1 shows the timeline intended for development and implementation of each health sector goal; however, implementation details are not included here. The National Health Plan is a medium to long-term plan that outlines the strategic direction of reforms, but the detail of how to achieve the eleven goals will be developed separately as individual implementation plans.

The Ministry of Health will oversee rollout by establishing Task Groups to develop policy options to implement the Health Plan goals. Task Groups will be comprised of volunteers with a shared interest in the success of the National Health Plan for the benefit of Bermuda, and will include representatives from across the community, including health, civil society, business, and government. Task Groups will be required to work collaboratively with relevant stakeholders and technical experts in the development of policy options. A central Steering Committee will oversee the Task Groups to ensure coordination of developments. Leadership for specific goals will be assigned to Task Group Chairs, who will ensure adherence to the spirit of the Health Plan mission, its core values and goals, and will lead implementation of approved policy options. Some goals will be rolled-out concurrently due to their overlap as necessary precursors to other goals; others will be rolled out consecutively, following

implementation of the more urgent goals. The Ministry of Health will report on progress on an ongoing basis through social and traditional media, to ensure accountability and timely completion.

Significant technical expertise will be required in the development of the policy options and implementation plans. The nature of each goal will define the expertise required; however, given the centrality of equity and sustainability as the founding values, which demand the most significant reforms, much of the initial work will require detailed policy, economic, financial, actuarial and technological analyses. Health policy and economic analyses will be required to identify the financing and reimbursement mechanisms that will achieve the efficiency gains needed in the system. Financial modelling will be required to establish financing sources and levels, with future projections allowing for demographic changes. Medical, policy and actuarial expertise will be required to design a new package of defined benefits for Bermuda, to replace the current standard hospital benefit. Expertise in information and communication technology, and knowledge and understanding of the health sector's readiness for transfer to an integrated health information system will be essential to its successful design and implementation. Pharmacoeconomic and medical expertise will be required to develop an effective national drugs formulary. Lastly, continued public health leadership, and the collaboration of all healthcare professionals, community stakeholders, and the public will be needed to shift Bermuda's culture with respect to health and healthcare.

Table 1: Timeline for implementation of health sector goals (2012 – 2018)

Health Sector Goals	Due	2012	2013	2014	2015	2016	2017	2018
11. Health professionals and organizations shall assure the promotion of healthy lifestyles and maintenance of health conditions	In place	X						
2. Basic health coverage shall include urgent physical and mental health care, hospitalization, primary care, preventive care, and health maintenance	2014	X	X	X				
4. Streamline use of overseas care to efficiently meet the needs of the population	2014	X	X	X				
9. Bermuda's health system shall be financed through the most cost-effective means available	2014	X	X	X				
5. Mechanisms to pay healthcare providers shall ensure optimal quality to patients and maximum efficiency to healthcare system	2014	X	X	X				
1. Universal access to basic health coverage shall be assured for all residents of Bermuda	2014			X				
3. Health coverage contributions shall be affordable to all, to ensure equitable access to healthcare	2014			X				
7. Implement strategies to meet the healthcare needs of people with chronic illnesses, and physical, cognitive or mental disabilities	2015	X	X	X	X			
10. Introduction of health technology shall be regulated to ensure adequate level and mix of resources to efficiently meet the healthcare needs of the population	2013 2016		X	X	X	X		
6. An integrated health IT system shall be established throughout the health sector to improve efficiency and quality	2016	X	X	X	X	X		
8. The quality of healthcare provision shall be monitored and regulated	2018				X	X	X	X

The National Health Plan is intended to set in place the direction of reforms; it is not intended to provide technical detail on activity towards implementation. The purpose is to establish the conceptual direction for Bermuda's health system in the 21st century in this brief, reference document. Notwithstanding, accountability in its roll-out, monitoring of implementation, and evaluation of outcomes will be essential to ensure minimum disturbance necessary to the most important elements of our health system: patients and the public, and the professionals who care for them.

VI. Evaluation

Assessment of performance is essential to any health system. The Ministry of Health will report bi-annually on progress towards the health sector reform goals to ensure accountability and timely completion. However, to proceed in the delivery of healthcare without measures of performance is unlikely to result in success. Therefore, evaluation of the performance of Bermuda's health system shall be an integral part of monitoring the outcome of reforms. To this end, mechanisms shall be established to assess performance across time and in comparison to other sophisticated health systems.

The Bermuda Health Council and the Department of Health have published the first report on the quality of healthcare in Bermuda in the report *Health in Review*⁵⁶. The model utilized is a compilation of over 100 indicators of performance developed by the OECD⁵⁷. It provides reliable information on measures across most OECD countries on key indicators of performance including health status, quality of care, access, cost and financial risk protection. They include, but go considerably beyond, the crude measures provided in section I of this document. Bermuda has been benchmarked against those jurisdictions which have similarly strong economies and sophisticated health systems. This shall be the mechanism to evaluate the performance of the health sector and the impact of the National Health Plan reforms.

Following the priority given to equity in the Plan, data collection will require bolstering to enable comparisons on core demographic variables: gender, age, income and race. By and large, the first two are generally covered in existing data collection mechanisms; but income and race are less frequently collected variables. It is anticipated that development of an integrated health information system will enhance data availability and Bermuda's capacity to accurately measure and report on performance.

VII. Conclusion

If we are to prosper as a country we must ensure the health of the population is protected first and foremost. Why? Because without health we perish: we perish physically, mentally, intellectually and economically.

The National Health Plan, thus, starts from the assumption, as stated in the Universal Declaration of Human Rights, that:

“All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood”.

It is in this spirit that the Plan has been devised: in the spirit of individual responsibility within community solidarity; to protect the right to dignity, the right to care and the right to physical and emotional integrity for every resident man, woman and child of Bermuda. The goal is to leave no one behind, because our community will only be as strong as the weakest among us. Equity, therefore, is a founding principle of Bermuda’s National Health Plan, and it is expressed in the inclusion of goals to achieve universal access and solidarity in financing.

Further, experience over the past forty years, exemplified in sixteen healthcare reviews over the past fifteen years, has repeatedly highlighted the need for sustainability. To control increases in healthcare costs beyond growth in national wealth will require significant reform to the system and considerable sacrifice for some healthcare providers, administrators, and the public. But these challenges pale in comparison to the insurmountable problems Bermuda would face should it fail to contain these costs. Thus, sustainability is the second founding principle of this Plan, which is expressed in the priority given to reforming the way in which we finance and pay for healthcare.

Finally, the National Health Plan has sought to establish the conditions necessary to ensure that every resident of Bermuda has a right to health and healthcare. Because this is not only about money, it’s about prosperity for all.

Appendix I: Summary of Healthcare Reviews 1996 to 2011

It can be said that Bermuda has been engaged in a process of healthcare reform since the early 1990's when the need for a review of our healthcare system was first commissioned.^{xv} Since that time, several reviews and studies have been conducted outlining a series of observations, reforms and recommendations deemed necessary for our healthcare system to continue to thrive. From the 1996 Health Care Review (the "Oughton Report"), to the most recent 'Health in Review' report of 2011, numerous reports have focused on various aspects of Bermuda's healthcare sector, which provide invaluable history, background, findings, verdicts and, above all, common themes. The 2011 National Health Plan begins from the lessons learned and outlined in those reports, consolidating repeated themes to ensure this plan sets on course the implementation of, both, reforms long-identified as necessary and new priorities for 21st Century Bermuda.

The purpose of this Appendix, therefore, is to provide a brief outline of sixteen healthcare reviews in Bermuda over the past fifteen years, in order to lay the context for the reforms to be sought over the next fifteen years.

Oughton Report 1996

In 1993 the Health Care Review Sub-Committee was formed by the Minister of Health, Social Services and Housing in response to community concerns over the escalation of healthcare costs and the quality of healthcare locally. The purpose of the Health Care Review was to determine whether Bermuda's healthcare system satisfied the healthcare needs of the population, was cost-effective, was efficient and provided an appropriate minimum level of care that was accessible to and affordable by all residents, with due regard to age, income and health status. The review was to make recommendations to optimise the delivery of healthcare services and to implement recommendations, where possible, in the process of conducting the review. The Committee completed its final report in 1996⁵⁸, formally entitled Health Care Review Final Report, but otherwise known as the "Oughton Report" after Senator Alf Oughton who headed the committee.

The Oughton Report advocated for a healthcare philosophy focused on nurturing a healthy nation by promoting good health, providing affordable basic healthcare services to all residents, promoting personal responsibility for health, reliance on market forces to improve services, and intervening in the health sector where market forces failed to keep healthcare costs down. In this regard, the report acknowledges that "we cannot allow market forces alone to structure our health system. The Government has to intervene to prevent over-supply, moderate demand and create incentives to keep healthcare costs under control"⁵⁹.

The review was conducted by four expert task groups, which together produced 104 technical recommendations. The report advocated for the basic structure of Bermuda's

^{xv} Healthcare reform had in fact been the object of public and political attention since the 1980's, as evidenced by studies to review healthcare for the elderly (Chappell & Marshall, 1991), (Department of Management Services, 1992), (Department of Management Services, Undated), and emergency services (Department of Management Services, Undated), as cited by Ramella 2005.

health system to remain unchanged, but to enhance home care and preventive care programmes. Overall, the 100-plus recommendations focused on enhancing coordination of the health system to: improve quality of care; control costs; enhance data availability through integrated, electronic systems; and enhance financial structuring through various mechanisms affecting subsidies, coverage for the indigent, overseas care, and pricing of the standard hospital benefit. Key among their recommendations was the improvement of the “basic medical care package”; this was seen as necessary because, even at that time, “the standard hospital benefit [fell] short of what might be considered in today’s world [1996] as being reasonable coverage”⁶⁰.

Arthur Andersen Report 1998

Following publication of the Oughton Report, the Government commissioned Arthur Andersen Healthcare Services in 1997 to review its 104 recommendations, and investigate and prioritize various strategic initiatives. The outcome sought was to improve quality and access to health care in Bermuda while maintaining or reducing total healthcare expenditure. Their report, *Creating Solutions that Work*⁶¹, was completed in 1998.

Arthur Andersen’s findings conclude that the growth in healthcare expenditure taking place in Bermuda was due to the growth in the elderly population, inflation in medical costs due to demand and technological developments, dramatic increases in the cost of pharmaceuticals and ancillary costs, inappropriate delivery of site of care utilization, public demand for highest-level of care in the world, and use of overseas facilities for tertiary and elective care. In addition, the report identified that: the quality of healthcare services required improved monitoring and benchmarking; the focus of the standard hospital benefit on curative medicine and acute episodic interventions required broadening to place greater coverage of prevention and medical management programmes; and it would be critical to the implementation of changes to the system “to have accessible, timely, and accurate data relative to disease management, general health planning, health status, cost detail and utilization”⁶². The report advocated for a central, electronic repository of this data.

The report condensed the Oughton Report’s 104 recommendations into seven broad recommendations:

1. Promote the use of alternative and preventive care services, sites and personnel.
2. Develop partnering relationships with overseas providers.
3. Implement diseases management and prevention programmes (for specific chronic diseases).
4. Address physician-owned ancillary services/equipment.
5. Develop a universal billing and coding format (for hospitals and physicians).
6. Create a central data repository for all healthcare data (including clinical and financial data).
7. Conceptually evaluate various reimbursement methodologies for hospitals, physicians and ancillary providers.

In addition, the report observed an apparent paucity of system-wide vision at that time, noting that the provision of healthcare services seemed fragmented and uncoordinated, without a central group or body accountable for system-wide healthcare activities.

Arthur Andersen Report 2000

In 2000 the Health Insurance Commission, under the Ministry of Finance, commissioned Arthur Andersen to conduct the “Bermuda Healthcare System Redesign Initiative”.⁶³ This report reviewed the healthcare reimbursement model in place in Bermuda. It followed from Arthur Andersen’s earlier report, focusing on recommendation #7, and aiming to develop alternative “reimbursement methodologies for hospitals, physicians and ancillary providers”. The report is presented as an interim update of the redesign efforts, which at that time were at the stage of considering alternative reimbursement options for the hospital, including tiered per diems, case rates, percentage premium and utilization management; and alternative reimbursement options for physicians, including fee for service, budgeted fee for service, percentage premium and utilization management. In addition, the review was considering alternatives to other aspects of healthcare delivery to lower costs, including a fast track unit for some urgent care, overseas care contracts, use of home health rather than extended care unit, disease management programmes, and establishment of a pharmacy formulary.

Available evidence suggests this initiative ceased to operate at some time after this report was produced, and by 2004 when the next review was undertaken by a new contractor, the Arthur Andersen initiative had been abandoned.

Ernst & Young 2004

In August 2004 Ernst and Young conducted for the Ministry of Health and Social Services an analysis and recommendations “to identify a new physician fee-setting methodology and fee schedule to better meet the needs of government, providers and payers”⁶⁴. Their report notes that in 2003 Bermuda adopted a commercial Relative Value System employed by Ingenix, a US company that published data reflecting fees charged by physicians in various US regions. Ernst & Young reported that the Bermuda Joint Fees Committee (which recommended adjustments to regulated physician fees for treatment in hospital or in relation to a hospital stay)^{xvi}, was considering whether to adopt the Ingenix schedule based on fees for Tampa, Florida (at the 50th percentile). Although undecided on this point, the Joint Fees Committee is reported to have agreed that a new reimbursement model should be developed in the longer term, and in the interim a fee schedule increase should be implemented to the existing regulated fees.

The Ernst & Young report considered the implications of these proposals, and analyzed and compared Bermuda 2004 fees, to Ingenix, Tampa 50th percentile charges, and to the US Resource Based Relative Value System (RBRVS). Their report recommended:

1. Conversion to the RBRVS, which was widely accepted in the USA.
2. Use of a single conversion factor for all physicians.

^{xvi} As per the Medical and Dental Charges Order of Bermuda Hospitals Board Act 1970 (Under section 13A).

3. Use of site-of-service differential.
4. An immediate fee update to reflect inflationary trends; specific rates were included in the recommendation.

Ernst & Young did not support the proposed use of the Ingenix Tampa 50th percentile for Bermuda on the grounds that there was no basis for using Tampa as a benchmark, and estimating that such a shift would result in an 80 percent increase in the cost of physician care.

Health Priorities Report 2004

In 2004 the Department of Health conducted an exercise to establish Bermuda's Health Priorities. Such a review had been among the recommendations of the Oughton Report⁶⁵. Community and government organisations were convened to review health and population data in the context of an established methodology, the Assessment Protocol for Excellence in Public Health (APEX) method⁶⁶. APEX is an established tool designed to help communities determine priorities among health problems in an impartial, systematic and objective manner^{xvii}. The group of twenty community and government partners reviewed Bermuda's leading causes of death, the 2000 Census information on self-reported health conditions, the 1999 Adult Wellness Survey⁶⁷ and the 2001 Teen Wellness Survey⁶⁸. These were considered in the context of Bermuda's social fabric to agree on a prioritisation of our most important health concerns. Through a process of discussion and ranking it was established that our most pressing health issues, in order of priority, are: overweight and obesity, heart disease and stroke, respiratory diseases, diabetes, accidents and violence, sexually transmitted infections, HIV/AIDS, mental illness, back/spine problems, cancer, substance abuse, smoking, chronic renal disease, and arthritis. This process of prioritisation was intended as a first step towards creating a common agenda for health across all sectors.⁶⁹

Ramella Report 2005

One of the key recommendations of the Oughton Report, echoed to some extent in the first Arthur Andersen Report, was the creation of the Bermuda Health Council. The prevailing view was that Bermuda's health system would benefit from an independent entity to coordinate its various elements. Thus, in 2004 the Bermuda Health Council Act established the Bermuda Health Council as a Quasi-Autonomous Non-Governmental Organisation with the mission to regulate, coordinate and enhance the delivery of healthcare services in Bermuda. In preparation for the establishment of the Council, the Ministry of Health and Family Services conducted a series of exercises to launch the new entity. Among them was the commissioning of Bermuda's first Health Systems and Services Profile in 2004. The "Ramella Report", informally named after its author, utilized an established methodology from the Pan American Health Organization⁷⁰, and represented the most comprehensive review of Bermuda's healthcare system since the Oughton Report. The methodology is not designed to produce recommendations, but to describe the current status of the health system and its reform efforts. The report

^{xvii} The tool is a modification of a method developed by J. J. Hanlon in 1954 (Pickett & Hanlon, 1990), (Hanlon, 1954).

presented, among other analyses, Bermuda's first update of health accounts since the Oughton Report. The report conducted, for the first time an analysis of household healthcare financing and expenditure by income bracket, race and age, demonstrating significant inequity in Bermuda's health system⁷¹.

Essential Public Health Functions Assessment 2005

In 2005 as part of the work to establish and launch the Bermuda Health Council, the Department of Health, in collaboration with the Pan-American Health Organisation, conducted the Essential Public Health Functions Assessment⁷², to evaluate the performance of Bermuda's public health system.⁷³ This assessment was conducted with assistance from 23 public health partners and stakeholders from the community and other government agencies.

The overall assessment was a positive one, indicating areas of strength in:

- Public health surveillance, control of risks and threats.
- Institutional capacity for regulation and enforcement.
- Monitoring, evaluation and analysis of health status.

Areas for improvement were in:

- Health promotion.
- Evaluation and promotion of equitable access.
- Human resource development and training.
- Social participation in health.
- Quality assurance.

Well Bermuda 2006

In 2006 the Department of Health produced "Well Bermuda: A National Health Promotion Strategy", which was updated in 2008. The strategy was produced in large part as a response to the Essential Public Health Functions Assessment result of 2005, which identified health promotion as an area requiring strengthening, and in response to earlier calls since the Oughton Report of 1996 that Bermuda place a greater emphasis on health promotion. The aim of the strategy was to provide "a unifying vision and set of goals for a healthy Bermuda".⁷⁴ The strategy is based on three broad themes: healthy people, healthy families, and healthy communities, which outline 18 goals for national priorities, objectives and action areas for health promotion. Examples include encourage maintenance of a health body weight, reduce prevalence of diabetes and associated complications, promote positive parenting, promote a better quality of life for seniors, encourage smoke and drug free lifestyles, and stopping violence before it begins. Implementation of the strategy was to be rolled out in collaboration between the Department of Health and various community and government partner agencies.

The Ombudsman's 'A Tale of 2 Hospitals' Report 2007

In 2007 the Office of the Bermuda Ombudsman conducted a systemic investigation into allegations of discrimination involving medical professionals at King Edward VII Memorial Hospital. While not a review of Bermuda's health system, and focused exclusively on Bermuda's single, acute hospital, the report does include a recommendation that pertains to the health system more broadly. Recommendation VI states that "The Bermuda Hospitals Board (BHB), in conjunction with relevant internal committees, the Ministry of Health, the Bermuda Medical Council (BMC) and the Bermuda Health Council should engage in a strategic review of Bermuda's clinical manpower needs, including whether BHB, BMC or other entity should hold the work permits of the specialists who practice only at KEMH". Several recommendations also address issues of data collection and systematization. The Bermuda Hospitals Board accepted the Ombudsman's recommendations and moved swiftly to implement necessary changes.⁷⁵

Morneau Sobeco Review 2008

In 2008 the Bermuda Health Council, having taken over the recommendation of the Standard Premium Rate (SPR, the price of the Standard Hospital Benefit (SHB)) from the by-then defunct Health Insurance Commission, commissioned Morneau Sobeco to conduct the actuarial work to determine the SPR. As preparation for the actuarial review, a report⁷⁶ was produced analyzing the status of various elements affecting the SPR and SHB, including the Mutual Reinsurance Fund (MRF) and the Health Insurance Plan (HIP) which, at the time, were legislatively under the management of the Bermuda Health Council. The report reviewed the purpose of the rate setting mechanisms and its underlying philosophy, the pooling of risks, equalization, transparency and profitability within the system, the rate table structure and cross subsidization, sufficiency of the data, and discussion around a desirable rate setting target and the adequacy of reserving. The report described how the system operated and made a number of recommendations based on its findings:

- With respect to the Standard Hospital Benefit the report recommended an analysis of the aged subsidy, a review of the pricing of supplementary benefits, formulation of a policy with respect to the determination of the SPR, and obtaining and analyzing more insurance data.
- With respect to the Mutual Reinsurance Fund the report recommended reviewing the methodology to determine the MRF premium, reviewing the rebalancing mechanisms it intended to provide and the role it played in the system, and reviewing whether the benefits covered were appropriate.
- With respect to the Health Insurance Plan it recommended to determine a target level of reserving, considering the appropriateness of the rate table structure and the effect of the aged subsidy, considering the impact of the upcoming FutureCare plan.
- With respect to the Annual review process the report recommended gathering data from insurers on a more regular basis, and gathering data by age bands and category of coverage to enhance analysis.

Johns Hopkins Medicine International Report 2008

In 2008 the Johns Hopkins Medicine International, commissioned by the Bermuda Hospitals Board (BHB), produced a review of the BHB's Estate Master Plan⁷⁷. Produced with public consultation throughout, the report was published in November 2008 with a recommendation on how to develop BHB's acute care hospital over the coming 25 years. It also concluded that the mental health hospital and continue care services required further consultation and collaboration with the community to agree strategies for these populations; consequently, it recommended that these be managed as separate projects to ensure appropriate consultation and attention for each one. Subsequently Government approved the a plan to renovate and build 50% more new space at the existing King Edward Memorial Hospital building over five years.⁷⁸

Price Water House Coopers Report 2009

In 2008 the Bermuda Health Council (BHeC) commissioned Price Water House Coopers (PwC) to conduct a review of physician fee setting in Bermuda to analyze physician payment levels and arrangements, and develop an alternative fee schedule for the existing regulated fees (for physician procedures in hospital or in relation to a hospital stay). The report made numerous findings regarding the availability of physician claims data, the quality of the data available, variations in coding practices and the level of regulated physician fees in Bermuda. The study also compared Bermuda rates to the US, but the report noted that comparisons between Bermuda and US benchmarks should be treated with caution because the cost of doing business had not been taken into account (including income tax requirements). The study found that:⁷⁹

- a) From 2003 to 2008 physician fees in Bermuda increased by an average of 4.8%. This fell mid-way between CPI (3.7%) and CPI: health & beauty (6.1%) increases.
- b) Compared to Medicare RBRVS (i.e. public rather than commercial rates), Bermuda fees were 23% higher than New York, 28% higher than Chicago, 33% higher than Dallas and 26% higher than Boston.
- c) Compared to Medstat commercial rates in the US, Bermuda fee levels overall were: 1% lower than NY City, 12% higher than Chicago, and 15% higher than Dallas.
- d) Compared to NY City commercial rates (Medstat), Bermuda fees per specialty were: 7% higher for surgery, 15% higher for evaluation & management (composite), and 59% lower for obstetricians. Further, the reports notes that it is possible that rates for anaesthesia may have been approximately 50% lower, although this could not be demonstrated empirically with the data available.

The PwC Report produced six recommendations to address data quality and standardization, and physician reimbursement issues:

1. Develop standard definitions for regulated services.
2. Work to further improve the systematic collection of annual aggregate data regarding health care delivery (including physician services) and health care

financing (including health insurance loss ratios) to facilitate a more robust analysis of payment levels in the near future.

3. Work to improve the quality of health care data collected, with a focus on data elements required for transparent implementation of current regulations, including physician identifiers, physician specialty identifiers, CPT-4 codes and CPT-4 modifiers, and units of service.
4. Consider reporting of claims processing metrics, e.g. payment, processing and financial accuracy rates and turnaround-time.
5. Continue to determine the dollar value of fee multipliers specific to Bermuda.
6. Consider use of US Medicare Resource Based Relative Value Scale (RBRVS) to replace the current Ingenix relative value units, including consideration of the implication of eliminating variation in payment levels by specialty for the same procedure codes.

Health System Profile 2010

In 2010 the Bermuda Health Council produced an update of the Health Systems Profile 2009, as an update on the original 2004 version. The report utilized the same PAHO methodology to describe the structure of Bermuda's health system and review reform initiatives and updates since the previous publication. In particular, the report outlines key health system changes in the five years since 2004, among which were:⁸⁰

1. 2006 the Bermuda Health Council was established.
2. 2006 the National Health Promotion Strategy was launched.
3. 2008 the Sylvia Richardson Care Facility was opened to provide residential, nursing and day care to seniors.
4. 2008 approval was granted to expand the KEMH.
5. 2009 FutureCare was launched to provide a low-cost, comprehensive health insurance plan for seniors.
6. 2009 the Lamb Foggo Urgent Care Center was opened to improve access to care for the East End of the island, and reduce the strain on the emergency department at KEMH.
7. 2009 KEMH implemented a new billing system based on Diagnostic Related Groups, which replaced the previous per diem billing.
8. 2009 BHB introduced a hospitalist programme to enhance the quality of care.
9. 2009 the Health Insurance Department (HID) engaged in a project to upgrade their information technology infrastructure to improve efficiency.
10. 2009 two of the seven licensed health insurers operating in Bermuda withdrew from the market, one voluntarily, the other put into receivership by the Bermuda Monetary Authority.
11. The Ministry of Health introduced reforms to regulations for professionals including physicians, optometrists and opticians, and dentists.

12. 2009 Throne Speech announced the Ministry of Health had been charged with developing a National Health Plan, which would represent the first attempt to modernize Bermuda's health system since the introduction of the Health Insurance Act in 1970.

Mental Health Plan 2010

In 2010 the Bermuda Hospitals Board published Bermuda's first Mental Health Plan⁸¹. The plan aimed to enable the people of Bermuda to receive mental health services that are necessary, specialized and coordinated. The plan devised an approach that focused on patient-centred care in the community, and was structured around three segments with several supporting strategies: to expand the community based-care model (via home treatment programmes, outreach, long-term residential care, and relocation of services); service improvements (in autism, geriatrics and addictions); and reforming forensic mental health services. The broad goal of the Mental Health Plan is to continue the progress in deinstitutionalizing the population with mental illness, and halt the revolving-door of clients returning due to lack of community support.

National Health Accounts Reports

In 2010 the Bermuda Health Council published Bermuda's National Health Accounts Report⁸², as the first of an annual series. The reports detail the finance and expenditure for Bermuda's health system for the fiscal year ending 31st March of the year preceding publication. The analysis explains the estimated growth in the system since the 2004 Health Systems and Services Profile. It was the first study since the 1996 Oughton Report to have benefitted from comprehensive data provided by all payors in Bermuda's health system. The health accounts report does not include recommendations or actions, but details the total health system costs. Key findings of the first report (2010) include:

- In the fiscal year 2008/09 the health system cost BDA\$557,739,445, 28% of which was financed by government and 72% of which was financed by the private sector. In total, 53% of health financing came from health insurance, 14% from out-of-pocket payments, and 4% from the charitable sector. This represented 9.2% of Bermuda's 2008 gross domestic product and an expenditure ratio of BDA\$8,661 per capita.
- The expenditure was accounted for in largest part by the Bermuda Hospitals Board (40%), overseas care (15.5%) and local physicians and dentists (15.5%). Health insurance administration accounted for 8%, prescription drugs for 7%, non-physician providers for 7%, public health accounted for 5% and Ministry of Health administration for 1.5%. Overall, 47% of total health system expenditure was accounted for by the public sector (including the hospitals), and 53% by the private sector.
- Growth in the total health system financing between 2004 and 2009 was 47.5%, or an average of 9.5% per year. The areas of expenditure with the largest increases were overseas care with 106% increase over the five years (21% per year), health insurance administration with 68% (13.6% per year), Ministry of Health

administration with 67% (13% per year), and the Bermuda Hospitals Board with 59% (12% per year). The area of growth with the slowest rate of increase was prescription drugs, with a 2.8% increase over the five years (0.6% per year).

- Finally, the report projected that continuation of the 8.1% average compounded rate of growth would see Bermuda's total health system expenditure grow to just over BDA\$1 billion by 2017.

Health in Review

In 2011 the Bermuda Health Council and the Department of Health published Bermuda's first-ever compilation of healthcare quality indicators: *Health in Review: An international comparative analysis of Bermuda health system indicators*. The report presented trend data for Bermuda on 76 indicators of quality, quantity, access, outcomes, and cost; and it benchmarked Bermuda against countries of the Organization for Economic Cooperation and Development (OECD). This model was chosen because it enabled benchmarking against high-income countries with similarly strong economies and sophisticated healthcare systems. The report found, for example, that Bermuda's rate of 'diabetes lower extremity amputations' was among the highest globally; that overall our cancer mortality is lower than average; and that our smoking rates are comparatively low. More broadly, the report enabled health system stakeholders to objectively evaluate the strengths and weaknesses of our health system.

Appendix II: The Strategic Planning Process

On 2nd July 2009 the Ministry of Health held its annual strategic planning session, chaired by the late Minister of Health, the Hon. Nelson B. A. Bascome Jr., JP, MP. At this meeting the Minister noted that affordable healthcare should be a fundamental right for all citizens of Bermuda. Agreement was reached among participants that the health system must move towards achievement of this goal, while balancing the cost of health insurance and the quality and coordination of patient care.

Following the November 2009 Throne Speech announcement that a National Health Plan would be developed, on 14th April 2010 the Ministry of Health's strategy group convened to advance this initiative (see box 2 for participants).

Box2: Ministry of Health Strategy Group membership

The Hon. Zane DeSilva, JP, MP*	Minister of Health (2010 to date)
The Hon. Walter Roban, JP, MP	Minister of Health (2009 – 2010)
Mr Kevin Monkman*	Permanent Secretary of Health (2010 to date)
Mr Warren Jones, Chair	Permanent Secretary of Health (2006 – 2010)
Mr Collin Anderson	Assistant Director, Health Insurance Department (HID)
Dr Jennifer Attride-Stirling	CEO, Bermuda Health Council (BHeC)
Ms Claudette Baisden	Project Officer, HID
Dr John Cann	Chief Medical Officer, Department of Health (DOH)
Mr Dane Commissiong	Director of Health System Regulation, BHeC
Ms Sarah D'Alessio*	Policy Analyst, MOH
Mr David Hill	CEO, Bermuda Hospitals Board (BHB)
Mr David Kendell	Chief Environmental Health Officer, DOH
Mrs Gaylia Landry	Chief Nursing Officer, DOH
Ms Linda Merritt, JP	Chairman, BHeC
Mr John Payne	Acting Manager, National Office for Seniors & Physically Challenged
Dr Cheryl Peek-Ball	Senior Medical Officer, DOH
Mr Jai-Michael Phillips	Policy Analyst, MOH
Ms Shauna Sylvester	Policy Analyst, MOH
Dr Donald Thomas	Chief of Staff, BHB
Mrs Tawanna Wedderburn	Programme Manager, BHeC

* Joined Ministry of Health and Strategy Group in October 2010

The 14th April 2010 meeting was presided over by the Minister of Health, the Hon. Walter Roban, JP, MP, and chaired by the Permanent Secretary of Health, Mr Warren Jones. Facilitated by Dr Jennifer Attride-Stirling, the group conducted an analysis of Bermuda's health system using the Strengths/Weaknesses/Opportunities/ Threats methodology (SWOT), for each of the following domains: Political, Economic, Social, Technological, Legal and Environmental (PESTLE).

The Strategy Group met again on 19th May 2010. Dr Attride-Stirling presented the analysis of the SWOT/PESTLE brainstorm and the group deliberated and agreed conclusions from the analysis. Based on this, the group conducted a breakout exercise to deliberate health system ambitions with respect to equity, effectiveness, efficiency, and sustainability. Breakout group conclusions were shared with the larger group for discussion, and priorities were indicated on the desired direction for Bermuda's health system.

On 16th June 2010 the Strategy Group met to continue the process. A presentation by Mr Ruben Suarez, Senior Advisor in Health Economics and Financing at the Pan American Health Organization, was heard by the group entitled, "International Developments in Health Financing: Single-Payer and Multiple-Payer Systems". Agreement was reached on the reform principles to be pursued with respect to equity, effectiveness, efficiency and sustainability. Facilitator Dr Attride-Stirling was tasked with producing the first draft of the plan for consideration by the group.

On 9th December 2010, the Strategy Group met to review the first draft of the National Health Plan, circulated by the Permanent Secretary of Health. Based on feedback and discussion, detailed revisions were outlined and agreement was reached on the core values, the health sector goals, and the direction of reforms. The new Minister of Health, the Hon. Zane DeSilva, presided over the meeting and determined that, following the agreed changes, the National Health Plan would be taken to Cabinet for approval, and subsequently to the public for consultation.

On 8th February 2011 the Minister of Health unveiled the "National Health Plan 2011 Consultation Paper". This initiated a period of public education, discussion and debate, with the deadline for written submissions set at 30th April 2011. The Ministry of Health and BHeC held over 40 meetings and presentations with 583 stakeholders from across the community, including physicians and other health professionals, health insurers, local and international business advocacy groups, unions, charities and public advocacy agencies, and radio, television and print media. In total 100 formal, written responses were received. The analysis of the feedback was published on 20th October 2011, indicating broad support for the core value of sustainability and mixed feedback regarding equity; opposition to equity came largely from the business community. The Consultation Feedback Report also outlined recommended next steps, of which publication this revised National Health Plan was the first. At the time of publishing this revised National Health Plan, six Task Groups and a Steering Committee had been formed and announced publicly.

Citations and Notes

- ¹ (Speech from the Throne 2009. On the Convening of the Legislature, 2009)
- ² Bermuda data is from Health in Review (BHeC & DOH, 2011), unless indicated. OECD data is from (OECD, 2009a)
- ³ Analysis based on data from 2004 Household Expenditure Survey, by (Ramella, 2005)
- ⁴ (Fujisawa & Lafortune, 2008) and (Docteur & Oxley, 2003)
- ⁵ (Bermuda Health Council, 2011)
- ⁶ Pearson, 2009.
- ⁷ This definition is inspired by the work of Huber, et al (2011).
- ⁸ Deniels 1985, cited by (Roberts, Hsiao, Berman, & Reich, 2008)
- ⁹ (OECD, 2004)
- ¹⁰ (WHO, 2000)
- ¹¹ (OECD, 2009a)
- ¹² (WHO, 2000)
- ¹³ (Roberts, Hsiao, Berman, & Reich, 2008), page 315
- ¹⁴ (Musgrave, 1959)
- ¹⁵ (Bermuda Health Council, 2011)
- ¹⁶ (Roberts, Hsiao, Berman, & Reich, 2008)
- ¹⁷ (Smith, 2009)
- ¹⁸ In particular, (Health Care Review Sub-Committee, 1996), (Arthur Andersen, 1998), (Arthur Andersen, 2000), (Ernst & Young, 2004) and (PwC, 2009)
- ¹⁹ (Masuyama & Campbell, 1999)
- ²⁰ (Fujisawa & Lafortune, 2008)
- ²¹ (Ikegami & Hiroi, 1999)
- ²² (Weissert, 1999)
- ²³ (NIH National Centre for Research Resources, 2006)
- ²⁴ (Klazinga & Ronchi, 2009)
- ²⁵ (OECD, 2009b)
- ²⁶ (Riley, 2008) and (Gutheil, 2004)
- ²⁷ (Committee for a National Policy on Disability, 2006)
- ²⁸ (Bermuda Hospitals Board, 2010)
- ²⁹ (Joseph Rowntree Foundation, 2005)
- ³⁰ (Barr, 2010)
- ³¹ As seen, for example in (Ombudsman for Bermuda, 2007)
- ³² (Grabowsky, 2007)
- ³³ (Woolhandler & Himmelstein, 1991)
- ³⁴ (WHO, 2000)
- ³⁵ (Schoen, 2010)
- ³⁶ (Thomson, Foubister, & Mossialos, 2009)
- ³⁷ (Hisashinge, 1999)
- ³⁸ (Anderson & Squires, 2010)
- ³⁹ (Bermuda Health Council, 2010b)
- ⁴⁰ (Ombudsman for Bermuda, 2007)
- ⁴¹ (Ramella, 2005)
- ⁴² (Docteur, Ensuring Efficiency in Pharmaceutical Expenditures, 2009)
- ⁴³ (Bermuda Health Council, 2010d)
- ⁴⁴ Source: Epidemiology & Surveillance Unit, Department of Health, cited in (Bermuda Health Council, 2010a)
- ⁴⁵ Egger & Swinburn propose that obesity must be viewed from an ecological approach which “regards obesity as a normal response to an abnormal environment”. In this context, today’s obesity epidemic is seen to have resulted to a great extent from environmental conditions that make obesity the most likely outcome. This is referred to as an “obesogenic” environment. (Egger & Swinburn, 1997)
- ⁴⁶ (Mindmaps Ltd, 2011)
- ⁴⁷ (Department of Health, 2005a)
- ⁴⁸ (WHO, 1986)
- ⁴⁹ (Attride-Stirling, J., 2008)
- ⁵⁰ (Central Policy Unit, 2007)

- ⁵¹ See, for example, (WHO, 2000), (OECD, 2009b), (Roberts, Hsiao, Berman, & Reich, 2008), and (Thomson, Foubister, & Mossialos, 2009)
- ⁵² See, for example (Roberts, Hsiao, Berman, & Reich, 2008) and (WHO, 2000)
- ⁵³ (WHO, 2000)
- ⁵⁴ Taken from www.health.gov.bm
- ⁵⁵ (Department of Health, 2005b)
- ⁵⁶ (BHeC & DOH, 2011)
- ⁵⁷ (OECD, 2009a)
- ⁵⁸ (Health Care Review Sub-Committee, 1996)
- ⁵⁹ (Health Care Review Sub-Committee, 1996), point 1.6.7, pp.10
- ⁶⁰ (Health Care Review Sub-Committee, 1996), point 1.7, pp.10
- ⁶¹ (Arthur Andersen, 1998)
- ⁶² (Arthur Andersen, 1998), page 6
- ⁶³ (Arthur Andersen, 2000). Reported as a “Reimbursement redesign (interim report)”
- ⁶⁴ (Ernst & Young, 2004)
- ⁶⁵ (Health Care Review Sub-Committee, 1996), point 1.15.3(b), page 18.
- ⁶⁶ (National Association of County Health Officials , 1991)
- ⁶⁷ (Department of Health, 1999)
- ⁶⁸ (Department of Health, 2001)
- ⁶⁹ (Department of Health, 2005a)
- ⁷⁰ (PAHO, 2006)(*updated methodology from 2004*).
- ⁷¹ (Ramella, 2005)
- ⁷² (PAHO, 2000)
- ⁷³ (Department of Health, 2005b)
- ⁷⁴ (Attride-Stirling, J., 2008)(*2nd edition updated from original 2006 version*)
- ⁷⁵ (Ombudsman for Bermuda, 2007)
- ⁷⁶ (Morneau Sobeco, 2008)
- ⁷⁷ (Johns Hopkins Medicine International, 2008)
- ⁷⁸ (Bermuda Hospitals Board, 2010)
- ⁷⁹ (PwC, 2009)
- ⁸⁰ (Bermuda Health Council, 2010a)
- ⁸¹ (Bermuda Hospitals Board, 2010)
- ⁸² (Bermuda Health Council, 2010c)

References

- Anderson, G., & Squires, D. (2010). Measuring the U.S. Health Care System: A Cross-National Comparison. *Issues in International Health Policy*, The Commonwealth Fund pub 1412 Vol. 90.
- Arthur Andersen. (2000). *Bermuda Healthcare Redesign Initiative*. Government of Bermuda: Unpublished Report to the Ministry of Health and Family Services.
- Arthur Andersen. (1998). *Creating Solutions that Work*. Government of Bermuda: Ministry of Health and Family Services.
- Attride-Stirling, J. (2008). *Well Bermuda: A National Health Promotion Strategy (2nd Ed.)*. Government of Bermuda: Department of Health.
- Barr, N. (2010). Long-term care: A suitable case for social insurance. *Social Policy & Administration*, 44(4) pp.359-374.
- Bermuda Health Council. (2010a). *Health System Profile Bermuda 2009: Monitoring and Analyzing Health System Reform*. Hamilton: Bermuda Health Council.
- Bermuda Health Council. (2010b). *Health Technology Assessments: A Proposed Model for Cost Containment*. Hamilton: Unpublished Internal Report to the Bermuda Health Council.
- Bermuda Health Council. (2010c). *National Health Accounts Report 2010: Bermuda health system finance and expenditure for fiscal year 2008-2009*. Hamilton: Bermuda Health Council.
- Bermuda Health Council. (2010d). *Bermuda Drug Sector Assessment*. Unpublished Report by the Bermuda Health Council.
- Bermuda Health Council. (2011). *National Health Accounts Report 2010: Bermuda health system finance and expenditure for fiscal year 2009-2010*. Hamilton: Bermuda Health Council.
- Bermuda Hospitals Board. (2010). *2008 Annual Report*. Devonshire: Bermuda Hospitals Board.
- Bermuda Hospitals Board. (2010). *Mental Health Plan: Case of Need, Analysis and Plan*. Devonshire: Bermuda Hospitals Board.
- BHeC & DOH. (2011). *Health in Review: An international comparative analysis of Bermuda health system indicators*. Hamilton, Bermuda: Bermuda Health Council and Department of Health.
- Census Office. (2001). *Report on the 2000 Census on Population and Housing*. Government of Bermuda: Department of Statistics.
- Central Policy Unit. (2007). *Charting our Course: Sustaining Bermuda*. Government of Bermuda: Cabinet Office.
- Chappell, N., & Marshall, M. (1991). *A Study of the needs of elderly people in Bermuda*. University of Manitoba and University of Toronto.

Committee for a National Policy on Disability. (2006). *Recommendations for a National Policy on Disability*. Government of Bermuda: Department of Human Affairs.

Department of Health. (2005a). *Health Priorities Report*. Government of Bermuda: Ministry of Health and Family Services.

Department of Health. (2006). *Health Survey of Adults and Children in Bermuda*. Ministry of Health and Family Services: Government of Bermuda.

Department of Health. (2001). *Personal Wellness Report: Teen Edition. Group Reports and Executive Summaries*. Government of Bermuda: Ministry of Health and Social Services.

Department of Health. (2005b). *Report on the Performance Measurement of Bermuda's Essential Public Health Functions*. Government of Bermuda: Ministry of Health and Family Services.

Department of Health. (1999). *The Adult Wellness Report*. Government of Bermuda: Ministry of Health.

Department of Management Services. (1992). *Co-ordinated Case Management of Community Services for Bermuda's Elderly*. Government of Bermuda: Cabinet Office.

Department of Management Services. (1994). *Parish Council's Rest Homes*. Government of Bermuda: Cabinet Office.

Department of Management Services. (Undated). *Review of Emergency Medical Services in Bermuda, Phase 1*. Government of Bermuda: Cabinet Office.

Docteur, E. (2009). Ensuring Efficiency in Pharmaceutical Expenditures. In OECD, *Achieving Better Value for Money in Health Care* (pp. 101-128). OECD Publishing.

Docteur, E., & Oxley, H. (2003). *Health-Care Systems: Lessons from the Reform Experience*. Organisation for Economic Cooperation and Development: OECD Health Working Papers: DELSA/ELSA/WD/HEA(2003)9.

Egger, G., & Swinburn, B. (1997). An ecological approach to the obesity pandemic. *British Medical Journal*, 315:477-480.

Ernst & Young. (2004). *Untitled Letter to the Permanent Secretary for Health on Physician Reimbursement Methods*. Government of Bermuda: Unpublished Report to the Ministry of Health and Social Services.

Fujisawa, R., & Lafortune, G. (2008). *The Remuneration of General Practitioners and Specialists in 14 OECD Countries: What are the Factors Influencing Variations Across Countries?* Organisation for Economic Cooperation and Development: OECD Health Working Papers No.14: DELSA/HEA/WD/HWP(2008)5.

Grabowsky, D. (2007). Medicare and Medicaid: Conflicting Incentives for Long-Term Care. *The Milbank Quarterly*, 579-609.

Gutheil, I. C. (2004). *Ageing in Bermuda: Meeting the Needs of Seniors*. Bermuda: Atlantic Philanthropies.

- Hanlon, J. J. (1954). The design of public health programs for underdeveloped countries. *Public Health Reports*, Vol. 69 (Nov), pp 1028.
- Health Care Review Sub-Committee. (1996). *Health Care Review Final Report ("The Oughton Report")*. Government of Bermuda: Ministry of Health and Social Services.
- Hisashige, A. (1999). High-Cost Technology in Health Care: The Adoption and Diffusion of MRI in Japan. In N. Ikegami, & C. Campbell, *Containing Health Care Costs in Japan* (pp. 106-120). USA: University of Michigan Press.
- Huber, M., Knottnerus, J.A., Green, L., v d Horst, H., Jadad, A. R., Kromhout, D., Leonard, B., Lorig, K., Loureiro, M. I., v d Meer, J. W. M., Schnabel, P., Smith, R., v Weel, C., and Smid, H. (2011) How should we define health? *British Medical Journal*, 343, Jul 26, d4163-d4163.
- Ikegami, N., & Hiroi, Y. (1999). Factors in Health Care Spending: An Eight-Nation Comparison with OECD Data. In N. Ikegami, & C. Campbell, *Containing Health Care Costs in Japan* (pp. 33-44). USA: University of Michigan Press.
- Johns Hopkins Medicine International. (2008). *Estate Master Plan Review for the Bermuda Hospitals Board*. Devonshire: Bermuda Hospitals Board.
- Joseph Rowntree Foundation. (2005). *Options for Financing Long-Term Care*. York, UK: Joseph Rowntree Foundation.
- Klazinga, N., & Ronchi, E. (2009). Using ICT [Information and Communication Technology] to Monitor and Improve Quality in Health Care. In OECD, *Achieving Better Value for Money in Healthcare* (pp. 129-150). OECD Health Policy Studies: Organisation for Economic Cooperation and Development.
- Masuyama, M., & Campbell, C. (1999). The Evolution of Fee-Schedule Politics in Japan. In N. Ikegami, & C. Campbell, *Containing Health Care Costs in Japan* (pp. 265-277). USA: University of Michigan Press.
- Mindmaps Ltd. (2011) *Health Survey of Adults and Children in Bermuda*. Bermuda Health Council and Ministry of Health: Bermuda.
- Morneau Sobeco. (2008). *Actuarial Review for the Bermuda Health Council*. Hamilton: Unpublished Report for the Bermuda Health Council.
- Musgrave, R. (1959). *The Theory of Public Finance: A Study in Public Economy*. Palgrave Macmillan .
- National Association of County Health Officials . (1991). *Assessment Protocol for Excellence in Public Health*. Washington, DC: National Association of County Health Officials.
- NIH National Centre for Research Resources. (2006). *Electronic Health Records Overview*. McLean, Virginia: The MITRE Corporation.
- OECD. (2009b). *Achieving Better Value for Money in Health Care*. OECD Health Policy Studies: Organisation for Economic Cooperation and Development.

- OECD. (2009a). *Health at a Glance 2009: OECD Indicators*. OECD Publishing.
- OECD. (2004). *Towards a High-Performing Health System*. Paris: OECD Publishing.
- Ombudsman for Bermuda. (2007). *A Tale of 2 Hospitals: Who gets the benefit of the doubt?* Hamilton: Office of the Bermuda Ombudsman.
- PAHO. (2006). *Methodological Guidelines, Health Systems Profiles: Monitoring and Analyzing Health Systems Change/Reform*. Washington, DC: Pan American Health Organization.
- PAHO. (2000). *Public Health in the Americas: Conceptual Renewal, Performance Assessment and Bases for Action*. Washington, D.C.: OPS.
- Pearson, M. (2009). Disparities in health expenditure across OECD countries: Why does the United States spend so much more than other countries? *Written Statement to the Senate Special Committee on Ageing*. Organisation for Economic Cooperation and Development.
- Pickett, G., & Hanlon, J. (1990). *Public Health Administration and Practice, 9th ed.* St. Louis: The C.V. Mosby Company.
- Profiles of Bermuda. (2008). *Research Review: An Analysis for the Bermuda Health Council*. Hamilton: Bermuda Health Council.
- PwC. (2009). *Bermuda Fee Schedule Project Phase II Report*. Hamilton: Unpublished Report to the Bermuda Health Council.
- Ramella, M. (2005). *Bermuda Health Systems and Services Profile*. Government of Bermuda: Ministry of Health and Family Services.
- Riley, C. (2008). *Ageing Trends: Report on the Seniors test for ageing trends and services*. Bermuda: Age Concern.
- Roberts, M., Hsiao, W., Berman, P., & Reich, M. (2008). *Getting Health Reform Right: A Guide to Improving Performance and Equity*. New York, NY: Oxford University Press.
- Roumie, C., & Rothman, C. (2010). Advanced practice nurses achieve results equal to or better than those of GPs in cardiovascular risk management in primary care. *Evidence-Based Medicine*, Vol.15.
- Schoen, C. O. (2010). How health insurance design affects access to care and costs, by income in eleven countries. *Health Affairs*, 29, no.12, 2322-2334.
- Smith, P. (2009). Market Mechanisms and the Use of Health Care Resources. In OECD, *Achieving Better Value for Money in Health Care* (pp. 53-72). OECD Publishing: OECD Health Policy Studies.
- Speech from the Throne 2009. On the Convening of the Legislature. (2009, November 6). Hamilton, Delivered by His Excellency the Governor: Government of Bermuda.
- Thomson, A., Foubister, T., & Mossialos, E. (2009). *Financing Health Care in the European Union: Challenges and Policy Responses*. Copenhagen: European Observatory on Health Systems and Policies & World Health Organization.

Total Marketing. (2005). *Public Perceptions [of Healthcare] Study*. Government of Bermuda: Unpublished Report to the Ministry of Health.

Universal Declaration of Human Rights. (1948, December 10). G.A. res. 217A (III), U.N. Doc A/810 at 71 (1948) : General Assembly of the United Nations.

Vrijhoef, B. (2002). *Is it justifiable to treat chronic patients by nurse specialists? Evaluation of effects on quality of care*. Thesis, Maastricht University.

Weissert, W. (1999). Afterword: Implications for U.S. Health Care Reform. In N. Ikegami, & C. Campbell, *Containing Health Care Costs in Japan* (pp. 193-199). USA: University of Michigan Press.

WHO. (2003). *Health Systems Performance Assessment: Debates, Methods and Empiricism*. Geneva: World Health Organization.

WHO. (1986). *Ottawa Charter for Health Promotion*. Geneva: World Health Organization.

WHO. (2000). *World Health Report 2000. Health Systems: Improving Performance*. Geneva: World Health Organization.

Woolhandler, S., & Himmelstein, D. (1991). The deteriorating administrative efficiency of the US health care system. *The New England Journal of Medicine* , 1253-1257.