BRIEFING PAPER

HEALTH INSURANCE IN THE BAHAMAS:

An Analysis of the Blue Ribbon Commission's Proposals and an Examination of Alternate Policy Options

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This briefing paper is an abbreviated version of the research paper entitled *Health Insurance in the Bahamas: An Analysis of the Blue Ribbon Commission's Proposals and an Examination of Alternate Policy Options* published by The Nassau Institute. Further discussion of many of the topics presented in this briefing paper can be found in the full length version of the study.

Introduction

On January 31, 2004, the Blue Ribbon Commission on National Health Insurance presented its report to the Prime Minister of The Bahamas. The report contained a comprehensive review of both the current health program in The Bahamas as well as a proposal for a National Health Insurance program (NHI). The Commission's report, along with a cost and financing analysis completed in 2005, is supposed to form the basis for a change in government policies that will see the introduction of a universal access health insurance program for all citizens of The Bahamas.

There is a wealth of evidence from developed nations on both the economic costs of introducing new tax-funded initiatives and the costs/benefits of various health policy options. This evidence should be what ultimately guides policy development in The Bahamas. Not following the guidance contained therein will likely result in unnecessary and potentially costly consequences.

Put another way, an evidence based approach to health care policy is vital if The Bahamas wishes to ensure that the ultimate set of policies introduced is the best option available.

This examination of the health care program in The Bahamas is broken down into five sections. The first examines the case for NHI in principle. The second section provides an overview of the current state of health care in The Bahamas. In this context, section 3 analyzes the Blue Ribbon Commission's proposal, and considers whether or not the policies/options chosen by the Commission are the best options for The Bahamas based on economic research and international evidence. Section 4 provides a table examining the basic policy structures of the world's most successful health care programs, all of which can serve as a potential guide for policy in The Bahamas. Finally, section 5 offers several policy recommendations for The Bahamas based on the international evidence and economic research examined in sections 1, 3, and 4.

Section 1: The health care system and a population's health

A health care system generally encompasses, for the most part, acute care and physician services. There have been numerous studies, including one by the World Health Organization, showing that there is little or no correlation between the health care system (spending) of a country and a population's health status (Ramsay, 2001; WHO, 2000; Oxley and MacFarlan, 1994). This lack of connection between spending and health status explains why policy discussions about redirecting resources to public health and primary care are common, as there is evidence that public access to sanitation, safe water, immunization, screening services such as mammograms, and other preventive care have a positive effect on a population's health (see for example WHO, 2000; Ramsay, 2001).

Given the tenuous connection between the health system and population health, government really should focus on simply ensuring universal access to and the availability of basic health care. Beyond this, government should be concerned only with ensuring that those who cannot afford to pay for medical services have access to them when they require care and, perhaps, requiring their citizens purchase (public or private) health insurance for catastrophic events.

It can and has been argued that the health care market is different from other markets because of the severity of market failures: uncertainty of incidence of illness, economies of scale, insufficient evidence for rate making, moral hazard, and asymmetric information. For the discussion of public policy however, "market failure" should be used to describe instances in which the government can improve welfare in a way the market cannot. The mere existence of problems with the market is not reason enough to support government intervention, especially given that there has been documentation of serious government failures: poor public accountability, information asymmetry, abuse of monopoly power, and failure to provide public goods. (For example, see Clemens et al., 2004, Tullock et al., 2002; Harding and Preker, 2000; Mitchell and Simmons, 1994.)

Section 2: The Bahamas' Health Care System

There are many ways of organizing a health care system to achieve the goal of improving the health of the population. Despite many structural differences, most systems take into account three basic principles: affordability or cost, access to care, and quality of care. This section provides an overview in numbers of how The Bahamas currently fares in these areas.

Cost

In 2001, the most recent year for which data is available, total health spending in The Bahamas was approximately $343 million or roughly 6.9% of the total value of goods and services produced in The Bahamas that year (also known as the gross domestic product or GDP) (BRC, 2004). The government's share of this total expenditure was about 48% or approximately $164 million or 3.3% of GDP. Private health expenditures in 2001, including private health insurance expenditures and out-of-pocket spending,

added up to 52% of total spending or approximately $180 million or about 3.6% of GDP (BRC, 2004). The summation of spending is shown in table 2.1.

Total health care expenditures as a percentage of GDP can be compared between nations in order to gain a better understanding of the relative expenditure on health care in The Bahamas. Comparing the percentage of GDP spent on health care controls for the level of income in the countries compared and shows what share of total production is committed to health care expenditures in each nation. The percentage of GDP statistic also avoids flawed comparisons with low expenditures in less developed nations and does not overvalue high expenditures in relatively rich countries like Canada and Germany.

In order to compare health spending in The Bahamas with that in developed nations, it is also necessary to account for the fact that there are very few Bahamians over the age of 65 relative to the proportion of the population over that age in developed nations. Having few people over this age threshold will mean naturally lower levels of expenditures, while nations that have many older citizens will naturally have higher health expenditures. Thus, a comparison of health spending between nations should account for this natural increase in some way.

As shown in chart 1, health spending in The Bahamas tied for first among developed nations in 2001 after age-adjustment,[1] suggesting that the health care program is expensive. Put another way, The Bahamas' current health care program is more costly than those found in any other developed nation except for the United States once the relatively small proportion of Bahamians over age 65 is accounted for.

Access

When compared with the world's developed nations, The Bahamas ranks third on an age-adjusted basis with 3.6 physicians per 1,000 population (chart 2), well ahead of the 30-nation average of 2.9.[2, 3]

With respect to the availability of MRI machines The Bahamas ranks 11th among the 25 nations compared in chart 3. For CT scanners, The Bahamas performs a somewhat better 7th among the 24 nations compared in chart 4, with an above average inventory of this diagnostic technology.

The lack of comparability between international databases and databases that include information for The Bahamas makes further comparisons with OECD nations difficult. However, it is possible to examine other indicators of the accessibility of health care in The Bahamas and compare them with those for other Latin American and Caribbean nations to see if The Bahamas is as far ahead of the others as its health spending and GDP per capita numbers suggest it should be. It should be noted that the information for the following comparisons of nations in the Americas have not been age-adjusted, due to the developing nature of many of the economies and markets.

1 The methodology for age-adjustment used here is from Esmail and Walker (2005). The methodology is based on a measurement of Canadian spending growth related to the ageing of Canada's population, and has been used to compare health expenditures and access to services in developed nations.

2 The age-adjustment calculation used for spending has been applied to physician to population ratio. This is to ensure that this comparison of access to health care accounts for naturally higher demand in older nations and naturally lower demand in younger nations like The Bahamas. The underlying assumption behind the use of the spending adjustment formula is that increased use of services (physicians, technology, etc.) will rise roughly proportionally to the increased use of all services. This is the same process employed for the comparison of developed nations' health programs by Esmail and Walker (2005).

3 It should be noted that, before age-adjustment, The Bahamas ranked third last ahead of only Mexico and Korea with 1.67 physicians per 1,000 population.

In terms of hospital capacity, The Bahamas ranks 14th among the nations in the Americas with 3.4 hospital beds per 1,000 population (table 2). This compares to an average of 2.9 for those nations for whom data are available. In total, including consideration of the relatively low share of The Bahamas population over age 60 relative to other nations in the Americas, access to hospital beds in The Bahamas is well ahead of a number of nations and easily comparable with that in Canada or the United States. It should be noted that an increased reliance on day surgeries (where patients do not stay overnight in hospitals), reduced hospital lengths of stay, and greater use of pharmaceuticals that substitute for hospital treatment can affect the use of hospital beds and allow some nations to deliver more health services per bed than others. Information on hospital capacity that accounts for these facts is not available for international comparison. However, the average length of stay reported for Princess Margaret Hospital and Rand Hospital by the Blue Ribbon Commission compares favourably with the average lengths of stay in OECD nations (BRC, 2004: 51; OECD, 2005).

The use of hospitals, on the other hand, is relatively low in The Bahamas in absolute terms when compared with other nations. More specifically, the hospital discharge rate (the number of patients discharged from hospitals—a measure of the utilization of inpatient services) in The Bahamas was 78.4 per 1,000 population in 2002 compared to an average of 87.6 (26th of 44 nations for whom data was available - table 3). This utilization rate taken in the context of a very young population is not significantly different from that in Canada (91.0) or the United States (113.4), suggesting a developed-world level of inpatient service utilization.

In summary, access to health care in The Bahamas appears to broadly reflect the relatively high level of health expenditure in The Bahamas. It is, however, important to note that The Bahamas' GDP does not rank among the world's wealthiest nations and so Bahamians may require more health care naturally than citizens in wealthier nations such as Switzerland or Canada due to the correlation between lower income and poorer health (CIHI, 2004). This would negatively affect the adequacy of this relatively good level of access. Still the overall picture is one of fairly good access to the health system though aggregate statistics may disguise disparities among the population.

Quality

The fundamental purpose of a health sector in an economy is to provide health services for the population's benefit. This aspect of health services is the principal reason for much of the study in the field and the debate about the characteristics of health systems from all sides. Unfortunately, while there is a great body of literature on the economic aspects of health service provision and on the principles in health care provision (from each according to ability, to each according to need), comparatively little work has been done on the actual ability of health care systems to provide quality care for patients and the population in general.

In attempting to determine whether health care services are being provided at a level commensurate with the amount of money spent or commensurate with the level of quality that the current desire for change would suggest in The Bahamas (higher levels of quality would likely result in a lesser desire for change), it is important to compare the quality of health services delivered in The Bahamas to that delivered in other nations. This can be done through the comparison of measures that examine the ability of the health care system to provide a healthy long life, low levels of mortality from

disease, and effective treatment for terminal illnesses. It should be noted, as discussed in section 1 above, that the quality of health services delivered does not necessarily improve the health of the population as measured by population health statistics such as life expectancy. However the quality of health services can affect the likelihood of surviving an illness or disease known to be treatable. In other words, a comparison of statistics designed to measure health outcomes that are closely related to the quality of health care delivered can provide a reasonable basis on which the quality of health services can be judged.

One of the many metrics of health system quality is the ability to prevent death among children, particularly younger children. There are two basic measures of this dimension of quality that are commonly available for comparison between nations: infant mortality and mortality before age 5. Each measures only mortality in aggregate and is based on the assumption that death at the youngest ages should be preventable.

When compared with developed nations The Bahamas performs relatively poorly on infant mortality, ranking 28th among the thirty nations in table 4. While this performance is well below the average, it should be noted that The Bahamas' infant mortality rate is improving faster than the average.[4] Compared to other nations in the Americas however, The Bahamas ranks 18th among the 49 nations in table 5. In this comparison, The Bahamas' infant mortality rate is well below the average (14.3 vs. 20.9) but still well behind the leading nations (the top 10 nations have an average infant mortality rate of 7.6). The rate of improvement in The Bahamas is only slightly greater than the average for nations in the Americas (12.8 percent vs. 12.0).

The Bahamas performs similarly in mortality of children under the age of five: compared to other nations in the Americas, The Bahamas ranks 14th and well behind the top five nations compared. However, though the mortality rate in The Bahamas is well above that in the top five nations, it is also well below the average mortality rate for the Americas.

According to the World Health Organization's index of equality of child survival, which can be used to consider whether the incidence of child and infant mortality falls disproportionately on children from lower income families or whether mortality rates are relatively equal between income groups, The Bahamas puts in a middle of the road performance. The Bahamas ranks 39th among OECD nations and countries in the Americas for whom the calculation has been performed. Notably, The Bahamas' performance broadly reflects its income position: the equality rate of mortality in The Bahamas is above the Americas average but below the average for OECD nations.[5]

A measure known as Mortality Amenable to Health Care can be used to compare the actual quality of health care systems by examining their ability to prevent deaths from conditions where such an outcome should be preventable through appropriate medical intervention (the conditions and age-ranges used for this calculation are shown in table 6). As this breakdown relies on more detailed information on the causes of death than that used to develop aggregate mortality statistics above, only 19 OECD countries can be compared with The Bahamas. When compared with the performance of health programs in select developed nations, The Bahamas' health care program performs relatively poorly on this measure. The Bahamas ranks 20th among the 20 nations

4 The infant mortality rate and five-year performance for first-ranked Iceland should be treated with caution as the rate varies significantly from year to year due to the small population there.

5 This finding echoes an earlier one showing that the equality of mortality is correlated with the level of economic freedom, which itself has been shown to be related to income (Esmail, 2003; Easton and Walker, 1997).

compared in chart 5, with a mortality rate that is roughly 70 percent greater than the average mortality rate.

Two additional comparisons on health system performance can be found in a comparison of cancer incidence and mortality rates. In a comparison of ratios for estimated mortality from breast cancer in 2002 to estimated incidence of breast cancer in 2002,[6] using age-standardized ratios to eliminate any bias from older or younger populations, The Bahamas also performs relatively poorly, managing to outperform only two OECD nations (table 7). When compared the other nations in the Americas, The Bahamas manages a somewhat better though still below average performance of 11th of 30 nations for whom data is available (table 8). In a comparison of ratios for estimated mortality from colorectal cancer in 2002 relative to estimated incidence in 2002,[7] using age-standardized ratios to eliminate any bias from older or younger populations, The Bahamas falls behind most developed nations in the health system's ability to deal with disease, ranking 28th among the 31 nations compared (table 9). As was the case in breast cancer mortality, The Bahamas fares somewhat better when compared with other nations in the Americas but still manages a below average performance (table 10).

Conclusion

In summary, The Bahamas health care program is costly and delivers relatively good access to treatment. But the quality of that treatment does require some attention as it is below what might be reasonably expected for that level of income, health expenditure, and relative access to care. The important question to ask then is: will the Blue Ribbon Commission's proposal for health reform and the introduction of NHI improve the quality of health services in The Bahamas without increasing cost or adversely affecting income growth?

Section 3: Analysis of The Blue Ribbon Commission's Recommendations

Recommendation #1: *NHI should be Universal*

The first important concern that must arise from the discussion surrounding this recommendation is the use of the term "equal" (BRC, 2004:1). First, the use of this term could be construed as a recommendation for the prohibition or strict regulation of privately purchased care in The Bahamas. This would be the only way to ensure that care is provided to all Bahamians on income-neutral terms – no Bahamian would receive care of a higher standard than that which could be afforded for all.

The prohibition of private health insurance can have a number of negative effects. It is important to remember that, where privately funded health services are available, private health insurance provides citizens with quick access to care when needed in

6 Although these summary statistics do not measure the true underlying chances of surviving breast cancer in a given country, they can be used as comparative measures to give a rough approximation of the underlying efficiency of the health system in identifying and treating this disease.

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return for a regular premium payment prior to the onset of a condition. Insurance also allows those who might prefer to do so, to pay an anticipated and fixed premium over time for access to private care, rather than pay the higher and less predictable cost for private care when they wish to receive it (even if they can afford to do so). Thus, private health insurance creates opportunities for those in lower income groups and allows people to tailor their expenditures to their own preferences.

In addition, the monopolization of health care insurance, which happens when the government disallows private insurance, means that individuals other than those with sufficient means to pay directly have no effective choice in the health care they receive. Without effective choice, health care delivery becomes a common, uncontested standard, leaving patients in a situation where they cannot protest for better quality by choosing to purchase health services from a different provider. Monopoly insurance also abolishes the need for hospitals to be efficient and innovative due to a lack of competition. Since patients are not easily able to opt for higher quality accommodations, surroundings, or care when there is no private comprehensive insurance system to provide broad access to such services, the public health care system will not need to consider offering them (Boucher and Palda, 1996).

Restrictions on or regulation of private health care and private health insurance, while not as harmful as outright prohibition, are not benign. Regulation of services and prices can dampen the incentives for innovation and the introduction of greater choice through differentiated product offerings. Such regulation can also drive up the costs of health care services as competition stagnates and the incentive to decrease prices as a result of efficiency and innovation is virtually eliminated by a government determined rate. A private health sector, when active alongside a universal insurance scheme or even when acting as the sole provider of health services, must be allowed the flexibility to compete over the price and quality of services freely through the introduction of more innovative and effective forms of treatment and insurance cover.[8]

Clearly, the evidence supports the BRC's statement that private health insurance should continue to allow Bahamians to "access health care in their discretion," (page 100), but does not support the BRC's calls for regulation and government oversight (BRC, 2004). Recommendations that would attempt to create greater equity across income bands through the prohibition of PHI or through regulation of private fees for treatment (recommended by the BRC on page 50) should not be followed.

The second concern regarding the use of the term equity relates to the geographic distribution of the population and health care providers/facilities. The population of The Bahamas is distributed among a number of islands and cays, with the majority of the population (84.9%) residing on New Providence and Grand Bahama. In addition, The Bahamas three major public secondary/tertiary care facilities are located on either New Providence (Princess Margaret and Sandilands Rehabilitation Hospitals) or Grand Bahama (Rand Memorial Hospital). The Bahamas main provider of private

8 A good example of this sort of competition is the introduction of wait list insurance plans in the UK, which provide patients with access to private care only if their wait time for care in the public system is greater than a certain threshold. Such insurance policies allow greater access to private care because they are substantially less expensive than comprehensive private health insurance policies, and would not have been possible if insurance offerings and prices were heavily regulated. The case of LASIK laser eye surgery in the United States, which is not covered by insurance, not heavily regulated, and sold in a free market with price advertising, competition, and consumer driven purchases is yet another example of the benefits of competition. The average price for standard LASIK has fallen over time in the United States, which bucks the general trend for the cost of medical treatments, while innovators have introduced newer and more precise forms of LASIK treatment (which naturally cost more, but not much more than the standard procedure originally cost when introduced) (Wall Street Journal, 2006).

inpatient care, Doctors Hospital, is also located on New Providence. Finally, public clinics that provide primary and some secondary care are located throughout New Providence and the Family Islands, but are in greater number on New Providence, Grand Bahama, and Abaco (BRC, 2004).

While this distribution of facilities is sensible for both technical and economic reasons—care facilities are located in the most populated regions of The Bahamas and thus are able to enjoy economies of scale and provide the superior outcomes from treatment that come with higher patient volumes of certain treatments—it does mean that access to care is presently not equal in The Bahamas. The 15.1% of the population not residing on Grand Bahama or New Providence must travel to another island when in need of specialized treatment or hospital care. In addition, some residents of the Family Islands do not have access to a full service health centre in their area which means they must travel to other islands/areas for comprehensive primary care as well.

Politicians seeking election to parliament may use the term *equal* to mean all residents regardless of location should have the *same* access to care in their region. This could even include access to a hospital and/or larger health clinic on their island/in their area. This can easily lead to the proliferation of hospitals and larger health care clinics in areas where it is neither technically nor economically reasonable to locate such facilities. The demand for such expansion/proliferation is real in The Bahamas: the BRC noted that Bahamians asked about possible expansion of health care facilities in the Family Islands if NHI were implemented during public discussions (BRC, 2004: 91). All of this suggests that Bahamians must either abandon the term equal or very carefully define it to ensure that health care investment is not guided by political desire but instead by economic and technical realities.

A second important concern with the BRC's first recommendation is the provision of emergency care at no charge to illegal immigrants and the transient population as well as treatment for communicable diseases at no charge to illegal immigrants. While the idea of ensuring that all are cared for in times of need might be an attractive one, it brings with it serious effects that must be carefully considered. These include an increased burden on those paying NHI premiums, foreigners in need of high-cost services coming to The Bahamas illegally for treatment in the emergency room (possibly for both emergency and non-emergency cases), and illegal immigration by those seeking low-cost care for HIV/AIDS. Given the presence of a sizable illegal immigrant population in The Bahamas, a substantial travel and tourism sector, and The Bahamas' proximity to a number of less developed nations combined with the difficulties inherent in protecting vast oceanic borders, the provision of fully subsidized care should be carefully regulated and strictly governed at a minimum.

Recommendation #3: *NHI should be Administered by the National Insurance Board*

The BRC has proposed that NHI be administered by the National Insurance Board (NIB). The BRC claims that the NIB has an existing physical infrastructure that could be easily expanded/employed to implement an NHI program quickly and efficiently. However, the BRC notes that the NIB's relatively high administrative costs, which are roughly equal to 17% of revenue and are largely related to staffing costs, will pose a barrier to the introduction of NHI. More specifically, the BRC found the NIB was currently overstaffed by 25% and poorly managed (BRC, 2004).

The finding that the NIB is operating inefficiently should come as no surprise. A vast literature and body of evidence exists showing that governments and government

business enterprises (GBEs) tend to be inefficient service providers compared to market equivalents. Put simply, though it may be convenient to hand the administration of the proposed NHI program to the NIB, there is no economic rationale for the NIB to be the preferred option over a competitive private contractor or a competitive private marketplace

The BRC's proposal that the health system be subjected to systems which ensure accountability is not a solution to the problems inherent in public provision of services. Accountability in the delivery of any service comes from freedom of access to information on pricing and costs as well as the ability to punish those who act poorly either by removing them from their position or by purchasing goods and services from a competitor. An appointed board for the NIB which is not elected or accountable to citizens and "systems which ensure accountability" for government ministries are not a replacement for the competitive marketplace where consumers have the ability to not purchase goods and services from those whom they feel are offering a poor package.

Recommendation #4: *NHI should Offer a Comprehensive Benefits Package*

The level of generosity proposed by the BRC raises several important concerns, the first of which is how access to new and expensive medical technologies will be handled. New medical technologies can be remarkably expensive but can and do provide better health outcomes and more comfortable treatment for patients. The world's most developed nations, and many less developed nations, are struggling with the implementation of newer technologies in their health programs because of the effect this has on aggregate spending. Notably, one research paper has found that the growth in aggregate health spending by ten OECD governments between 1970 and 2002 was determined primarily by growth in benefit levels (defined as real health spending per person at a given age) while the ageing of the population played a much smaller role (Kotlikoff and Hagist, 2005).

This is not to say that NHI should not be implemented, but rather to caution that implementation without a clear plan for how these costs will be tackled is ill advised. The BRC seems to have recognized this reality and has proposed several measures that appear intended to control the introduction of new medical technologies. However, their recommendations do not deal with the problem in an optimal manner and emulate poorly thought out policies that have been implemented in other nations.

The BRC has proposed that a national essential drug list be created which would list those pharmaceuticals that would be provided through the NHI program. The BRC has also recommended that this list include generic drugs. While no specific requirement for generic substation has been recommended by the BRC, it is likely that this would eventually become a part of the plan as it has in many other nations. The development of a national essential drug list is similar to the creation of a formulary, where only the drugs listed by government/the insurer are available to patients. Interestingly, the global evidence regarding formularies' effectiveness in containing costs is mixed: Horn *et al.* (1996) found, in an examination of privately insured US patients, that restrictive formularies were generally related to an increase in visits to emergency rooms and admissions to hospital. In addition, restricting access to newer (and typically more costly) pharmaceuticals through a formulary process does not necessarily save money in the long run.

A second cost containment proposal from the BRC is to employ gatekeepers who would control access to specialist treatment. In such a model, primary care physi-

cians would be required to see all patients and would refer patients to specialists only when they felt it was appropriate for patients to seek specialist treatment. In theory, this reduces the number of patients accessing specialists and thus reduces the use of a higher cost level of care. In practice, regulations that force patients to see primary care providers before they can receive specialist care have been found to be strongly correlated with the existence of waiting lists in European countries (Hjertqvist, 2006).

The BRC has also recommended that access to high technology services be made available only on referral per defined criteria. In other words, those who will decide who can and cannot access high tech medical care are not necessarily the patients in need of treatment or the physicians who are responsible for diagnosing precisely what treatment is required and delivering that treatment. Put simply, while centrally determined restrictions on access to services can save a few dollars by reducing the number of patients who receive treatment, such restrictions are a poor substitute for the informed decisions that would be made by physicians and patients in the presence of appropriate incentives.

The main focus of the last two mechanisms being proposed by the BRC is the reduction of what the BRC calls "unnecessary use of services" (BRC, 2004: 6). While some might be surprised by the statement, the excess use of insured goods and services is well understood. This excess use results from the incentives created by reducing the prices of goods and services reimbursed by insurance.

When individuals do not face any charges for health services (i.e., a third party – the government or a private insurance company – covers their medical expenses), they have no incentive to restrain their use of health care. As well, individuals covered by insurance will likely use more health services for an event than those who do not have insurance coverage (Arrow, 1963). This is called moral hazard: insured patients demand more services than they would in the absence of insurance because the marginal cost of care to them is lower than if they did not have insurance. In insurance literature, moral hazard is often seen as a moral or ethical problem. However, Pauly notes that moral hazard is more a result of rational economic behaviour than of lower morality (Pauly, 1968). Individuals may recognize that their excessive use of health care will result in higher premiums or taxes, but their increase in benefits from over-consumption is large, while the incremental cost of their excessive use is small, because the entire population bears the cost. This situation can result in excessive demand and wasted resources, to the extent that the costs of producing these services are greater than what individuals would be willing to pay for them directly.

Co-insurance, deductibles, and co-payments are commonly used to control excessive use due to under valuation of insured consumption. Co-insurance requires individuals to pay some fraction of each dollar of cost (usually set as a percentage). For example, a health insurance plan with a 25% co-insurance rate will either require individuals to pay for a quarter of all expenses or only reimburse them for three quarters of all expenses. With co-insurance, patients pay a price for health care that is lower than the market price but greater than zero.

Co-insurance payments, co-payments, and deductibles have a number of advantages. The first is that they increase efficiency in the health delivery sector and reduce costs: if required to bear a portion of health care costs, individuals will curb their consumption of medical care, and medical services of lesser value will eventually be eliminated. A second advantage is that these payments can reduce the financing burden of NHI because they redirect health care financing from payers to users. It is important,

however, for the cost-sharing program to either completely exempt low-income individuals, the chronically ill and others, have differential rates and/or caps for these groups, exclude certain procedures from user fees (for example, immunization, mammograms or flu shots) or in some other way include a safety net as cost sharing can negatively affect the health and wellbeing of low income populations.

A cost sharing scheme (employing co-payments, co-insurance payments, or deductibles) will create the appropriate incentives mentioned above. Patients will have the incentive to make a more informed decision about when and where it is best to access the health care system and about what services should be employed in the course of their treatment because they will bear a portion of the cost of each service delivered up to the annual limit. A cost sharing scheme is far superior to centrally planned restrictions on service use because they leave the decision over which service is best to those best placed to make the decision – the doctor and the patient being treated.

Recommendation #5: *Contributions should be Set at a Rate which is Affordable for the Majority of the Population*

The first concern that rises immediately from this recommendation is the potential impact the implementation of NHI would have on The Bahamas' economy. A new mandatory premium for health care that increases with income for salaried workers will have an impact that is not dissimilar from a new tax on economic activity. Increases in taxes affect the incentives for investment, risk-taking, entrepreneurial activities, and working by reducing the value of any gains that might accrue from these activities.

Additionally, it is important to ask why employers should be involved in the payment of premiums as the BRC has proposed. Doing so could lead to difficulties when changing jobs or tie individuals to a job rather than allowing them greater freedom to move between jobs as well as enter and leave the workforce at will. This is an unnecessary restriction on the labour marketplace.

If the belief underlying employer payment is that this will relieve the burden on employees however, then this mechanism will not accomplish what the BRC intends. It is important to remember that, from the firm's perspective, the wage of an employee is their total income including all benefits and taxes that must be paid (or total payments to/for the employee). This total value is determined by the firm according to the value of the employee's output. Unless the value of an employee rises post NHI implementation, the NHI premium must ultimately be factored in to total income through a reduction in other forms of income.

In summary, a premium cost levied on the employer will ultimately be paid by the employees through lower take-home wages. Thus, it makes most sense to simply require that individuals fund the entire premium themselves. This will also have the added benefit of greater cost recognition by the insured population, who would be responsible for the full cost of their NHI premium and not just a share of it.

A second concern regarding the affordability of NHI is whether or not NHI will be affordable in the future and for future generations. While an NHI program may appear to be affordable in the short term for the relatively young Bahamas population, over the longer term the number Bahamians over age 65 will increase. This will have the effect of increasing the cost of health care services in total because of the well-known relationship between health expenditures/needs and age. While the BRC has pro-

posed that those over the age of 65 should be required to contribute according to their ability to pay (BRC, 2004: 3), it is also true that individuals over the age of 65 have usually passed their peak earning years and will require significant subsidies from the younger and healthier in order to pay for their health care needs.

The question of the future affordability of NHI should loom large in the discussion over its implementation in The Bahamas. All indications are that health expenditures in large developed nations are growing significantly faster than their overall economies, bringing the sustainability of public health expenditures into question. That growth is related to both the growth in benefit levels over time and the general ageing of their populations (Kotlikoff and Hagist, 2005). More specifically, the average inflation-adjusted growth rate of total health expenditures per capita in OECD nations (excluding Turkey) between 1995 and 2003 was 4.0% compared with an average inflation-adjusted per capita economic growth rate of 2.9%; an average differential of 1.1 percentage points per year or about 9.1 percent greater total growth over the 8 year period examined (OECD, 2005).

This must be contrasted with the fact that The Bahamas is a small economy based largely on financial services and tourism that is neither as developed nor as diversified as the larger economies of the OECD and thus may be more susceptible to external economic shocks. The Bahamas' economy is also growing at a significantly slower rate than the economies of the OECD. Between 1995 and 2002 the average growth rate of The Bahamas' economy, inflation-adjusted per capita, was just 1.1%, while the economy actually contracted by 3.5% per capita in 2001 (World Bank, 2005). Over a longer horizon, 1990-2002, The Bahamas' GDP (inflation-adjusted per capita) actually contracted by 3.1% compared to an average growth of 29% in OECD nations (excluding Turkey). Average annual GDP per capita (inflation adjusted) growth over the period was 2.1% in OECD countries (excluding Turkey), and -0.2% in The Bahamas. If the future growth rates of NHI spending are similar to those in developed nations, and there is little reason to suspect they wouldn't be given the generosity and universal nature of the proposed program, their sustainability is an even greater issue in a slower growth economy.[9]

There is one final issue within the concern over economic affordability that has not been taken into account by either the BRC or the Steering Committee on National Health Insurance (SCNHI) in any way: the impact the introduction of NHI might have on the practice of medicine in The Bahamas. Specifically, the SCNHI's estimates of the cost of NHI are based on projected 2005 data – data which do not incorporate the effect of an NHI program on the health sector. Recently published research on the introduction of government insurance in the United States suggests that this could lead to a gross underestimate of the cost of NHI.

Amy Finkelstein (2005) examined the effects of market-wide changes in health insurance during the introduction of Medicare in the United States, which provides public health insurance to all non-poor Americans over age 65. Finkelstein found that Medicare's introduction "altered the practice of medicine" and resulted in "an increase in hospital utilization, measurable hospital inputs (i.e. employment and beds), hospital spending, and hospital technology adoption" (Finkelstein, 2006: Abstract & 31). Put another way, the introduction of public insurance affected the utilization of hospital services as well as the introduction of new technologies and the intensity of care

9 Notably, the SCNHI has noted that The Bahamas would have to experience sustained economic progress in order to implement a "fully functional and progressive" NHI (SCNHI, 2005: vii), which is not in keeping with recent economic experience.

delivered by hospitals (Finkelstein, 2006). This suggests that the impact of NHI cannot be assessed using current cost and intensity figures because these figures will expand significantly following its introduction. The future cost of NHI is likely to far exceed estimates of its cost compiled by the SCNHI thus elevating concerns about its impact on Bahamians and The Bahamas' economy.

Recommendation #6: *Public and Private Providers should be offered the Opportunity to Join the NHI Service Network*

Recommendation #7: *All Provider Payment Mechanisms should be Considered for use, with Capitation being the Preferred Option*

The BRC's recommendation that private providers be permitted to deliver NHI services is premised on the fact that many Bahamians currently use private health care providers. However, there is a large and well researched base of evidence that recommends private providers be involved in the delivery of health care services because of their greater efficiency and the competition this creates (Esmail and Walker, 2005). A number of European nations have also allowed private providers to deliver primary and acute care services, as well as privatized public providers, and seen improvements in efficiency and consumer-focus as a result (see for example Esmail and Walker, 2005; Lofgren, 2002; and Evans, 2006). While the BRC's desire for private provision of services is not based on the economic and international evidence, it does ultimately reflect best practice.

However, the BRC is mistaken in believing that capitation payments are the best way to fund NHI services. It is important to note that there are large differences in economic incentives and the efficiency of provision that result from different payment schemes for both doctors and health care facilities. The evidence on physician remuneration suggests that capitation is, on balance, inferior to a payment regime based principally on fee-for-service. Thus, the BRC's recommendation that The Bahamas move away from fee-for-service remuneration of physician services is ill-advised. Following the BRC's advice could in fact end up making the health system more costly than necessary because of the increase in the number of physicians that would be required in order to deliver the same quantity of service that would be delivered under a fee-for-service regime. The BRC's recommendation that hospitals and facilities be paid by a capitation-based budget (contracting with a capitation based payment) is also ill-advised. Hospitals and facilities in The Bahamas should be funded using a case-based, or DRG-type, funding model, which encourages both greater efficiency and cost control, and encourages a more patient-focused care setting.

With respect to contracting, the NHI program must also be designed to permit competition and innovation in the delivery of services. Detailed contracts for services or replicating currently successful models across the health care program (as proposed by the BRC on page 109) can lead to a single model of service delivery. In the long run, that single model may not be the most efficient and effective even if it works well today in a specific region. For this reason, innovation and competition must be permitted so that physicians and patients can, over time, determine what model works best in their particular circumstance. While this may lead to several competing models, such an outcome is unquestionably superior to an enforced one-size-fits-all approach because it better reflects the needs and desires of patients and their care providers.

One additional concern with recommendation 6 is the BRC's desire that the Ministry of Health accredit all health care providers. It is far wiser for The Bahamas to simply require that practitioners and/or facilities maintain certification with an independ-

ent third party, which could be any of several licensing bodies in Canada, the United States, or Europe, or independent quality certification organizations that also practice in these regions.[10] Certification by an independent, reputable, and preferably offshore third party would provide the quality signal desired by the BRC and likely by many Bahamians, while a lack of local oversight over the certification process would ensure that harmful political intervention would be constrained.

In implementing an NHI program, Bahamians must also take notice of one additional potential cost pressure that relates to human resources. As it stands, many physicians practicing in The Bahamas were trained in Canada, the United States, and Europe (PAHO, 2002). While out migration of health personnel is not a problem for The Bahamas today, it could be tomorrow as the number of health professionals in Canada and the United States falls further and further short of what the populations desire, and thus these nations' desires to attract physicians from abroad increases. This may require increased incomes for Bahamian practitioners or greater flexibility in practice in order to ensure satisfaction, particularly for those who were trained in Europe and North America. Alternately, this reality may at the very least severely constrain the NHI program's ability to control expenditure growth in professional services.

Recommendation #8: *A Percentage of Revenues should be set aside for Purposes that ensure the Stability and Sustainability of NHI*

The BRC, under recommendation 8, discusses using a portion of reserve funds to encourage improvements in quality care and patient/provider satisfaction, and for ongoing infrastructure improvement. If the appropriate funding mechanisms are in place however, there is no need for additional funds to encourage quality improvements or satisfaction as these would already be encouraged by the funding model. An appropriate funding model would also include capital costs within its structure, thus giving providers an incentive to invest in capital structures that benefit patients not politicians. In other words, these suggested uses for reserve funds (which themselves could be subject to significant harmful political intervention) are only necessary if the wrong policy choices are made in the first place.

Conclusion

The BRC's proposals, if implemented verbatim, would create a substandard health care program whose cost far exceeded what was necessary to deliver the level of quality/access that would be provided to residents of The Bahamas. The cost of that program is also likely to be unsustainable in the long run. In addition, the economic costs associated with the introduction of NHI in general and the BRC's expensive proposal in particular would be significant. If Bahamians insist on forging ahead with NHI, the policy package implemented must not be that proposed by the BRC.

Section 4: The Developed World's Most Successful Health Care Models

Most developed nations have policies in place that strive to ensure that their citizens have access to health care services when they need it, regardless of their ability to pay

10 One potential example is the Joint Commission International (JCI) accreditation program for hospitals (www.jointcommissioninternational.com).

for it. However, some nations manage to deliver on this promise far more efficiently than others. The available evidence on cost, quality, and access suggests that the structures of the health care programs in Australia, France, Japan, Singapore, Sweden, and Switzerland, should serve as a lesson for those who desire an NHI program in The Bahamas (Esmail and Walker, 2005; Esmail 2006; Esmail, 2004; Ramsay, 2001; WHO, 2000). The basic health structures of these nations are outlined in table 11.

Section 5: Policy Recommendations for The Bahamas

The ultimate goals of any health care reform should include the formation of a system in which the population's health is improved, people have access to medical services when they need them, consumers control their own health care decisions, and there is accountability (by both providers and consumers) for the use of health care services. Health reforms in The Bahamas must also consider the facts that a universal comprehensive health insurance program does not necessarily improve population health outcomes (discussed in section 1 above), and that The Bahamas' government currently ensures universal access to basic health care services including hospital care (PAHO, 2002; BRC, 2004). The Bahamas must also recognize that the financial sustainability of publicly funded health care programs is a serious concern in developed nations. These goals and realities together suggest that The Bahamas might be best served by the privatization of hospitals and other health related activities, and the introduction of cost sharing for services delivered by the current taxpayer-funded health program. The introduction of a comprehensive NHI program, given the evidence discussed in sections 1 and 3, may not be advisable for The Bahamas.

However, if Bahamians insist that an NHI program must be the goal of any health reform in The Bahamas, then the following recommendations must be implemented within that NHI program to ensure cost effectiveness and quality.

1. Hospitals, clinics, and other health activities/services should be privatized

Some areas of health care seem to fall naturally under the purview of the public sector. For example, it would be difficult for the private sector to provide enough public health and communicable disease management services, yet these services are important in that they have been shown by more than one study to have a net positive social benefit. However, the argument for public sector provision of many other services—including acute and primary care—is less credible.

There is a substantial quantity of literature on the relationship between ownership—private versus public, not-for-profit versus for-profit—and costs and outcomes, both for medical institutions and business in general. The literature generally indicates that for-profit and not-for-profit providers/hospitals are equally efficient, but that there are distinct efficiency advantages in relying on private providers/hospitals vis-à-vis publicly owned providers/hospitals. Further, private health care providers, because of their incentives to increase efficiency and provide a higher level of care in order to attract more patients, will end up enhancing care for all patients, including the very poor. Evidence from the United Kingdom has shown that the lower socio-economic classes benefited the most from the private sector's involvement in hospital care provision (McArthur, 1996).

The privatization of hospitals, primary care facilities, and other services cannot, however, be done without the introduction of competition. As Ferguson notes: "[p]rivate clinics will produce socially desirable results only when they are introduced into a competitive environment" (2002). Without competition between providers, most of the incentives to improve both cost performance and quality will be lost.

2. Other government activities related to the health sector should be subjected to a competitive bidding process where private sector and public sector bidders are treated equally.

The benefits of outsourcing government activities have been well documented in academic studies.[11] In general, outsourcing of activities reduces the cost of services delivered, and results in either the same or a higher level of quality. It should also be noted that competitive bidding can improve the efficiency of service provision whether the provider chosen through a fair and unbiased process is publicly owned or privately owned. The key to improving service delivery is the involvement of the private sector in a competitive process.

3. Accreditation/certification of facilities and caregivers should be handled by a private third party.

The certification of practitioners and facilities should be maintain by independent third parties, which could be any of several licensing bodies in Canada, the United States, or Europe, or independent quality certification organizations that also practice in these regions.[12] Certification by an independent, reputable, and preferably offshore third party would provide the quality signal desired by the BRC and likely by many Bahamians, while a lack of local oversight over the certification process would ensure that harmful political intervention would be constrained.

4. Hospital and facility care should be funded using a prospective fee-for-service, or case payment, system.

While budgetary allocation systems and capitation payments allow governments to exercise control over hospital expenditures, such schemes result in fewer services and a lower standard of care for patients because they disconnect funding from the provision of services to patients. Opting for a prospective fee-for-service payment regime would create powerful incentives to deliver a greater quantity and quality of services without leading to dramatic cost increases.

This method of funding is one in which the service provider is paid a fee for each individual treated, based on the expected costs of treating the diagnosis of the patient at the time of admission. It creates incentives for hospitals to treat more patients and to provide the types of services that patients desire. It also facilitates the introduction of competition into the hospital sector because the cost of performing procedures is clearly identified.

5. Physician care outside of hospitals should be funded fee-for-service.

Ultimately, the best remuneration systems are those that are output based. Physicians receiving salaries and capitation payments, unless well supervised, will tend towards

11 See, for example, Domberger and Rimmer (1994), Savas (1982), McDavid (1988), and Domberger et al. (1995).
12 One potential example is the Joint Commission International (JCI) accreditation program for hospitals (www.jointcommissioninternational.com).

less output because their pay is not dependent on the quality or quantity of services provided. Fee-for-service payment schemes, or some mixed payment scheme that has a significant output-based component, are clearly the superior choice for remuneration in terms of the quantity, and possibly the quality, of care provided. Opting for a payment scheme that is not based principally on fee-for-service serves to reduce the cost-effectiveness of the NHI program—costs would either rise to maintain services, or service provision would fall to maintain cost.

6. Patients must be required to share in the cost of NHI-funded services they consume through either co-payments or deductibles. Low income populations should be exempt from this requirement.

When individuals do not face any direct charges for health care at the point of service, they have no incentive to restrain their use of health care. Such a situation can produce excessive demand for care and result in wasted resources, to the extent that the costs of producing these services exceed what individuals would be willing to pay for them. Co-insurance, deductibles, and co-payments can increase efficiency in the health delivery sector and reduce costs, and can reduce the burden on those funding the NHI program because they redirect health care financing from payers to users. Since cost sharing can have an adverse effect on the health of the poor and the sick poor, these and certain other groups should be exempted from such a program.

7. NHI should be provided by both public and private insurance companies in a competitive marketplace. Bahamians should be required to purchase insurance by law, while those who cannot afford insurance should be given vouchers to purchase insurance from the provider of their choice. NHI insurance providers should also be permitted to offer a multitude of insurance options and not be regulated to the extent that consumer sovereignty or insurance plan flexibility is needlessly restricted.

A system of competitive social insurers has a number of benefits over a single government insurer model where premiums are levied in a manner which mirrors an income tax. Principally, this system is less likely to suffer from politically-motivated intervention and is more accountable to citizens than a system directly managed by government, as independent bodies collect the insurance payments and disperse the funds for health services. Some tax financing may still be required however to provide coverage for the poor, the unemployed, and possibly the elderly. Additionally, the freedom to choose among insurers generates efficiencies in the health care system as a result of competition and the possibility of varying cost-sharing schemes and benefits that allow lower insurance costs for those willing to pay more out of pocket.

8. A private parallel health care sector must continue to exist and should be subject to a bare minimum of regulation.

A parallel private health care sector gives individuals effective choice in the health care they receive. Without effective choice, health care delivery becomes a common, uncontested standard, leaving patients in a situation where they cannot protest for better quality by choosing to purchase health services from a different provider. It also allows individuals to seek care that the NHI program is either unable or unwilling to provide.

Private health insurance provides citizens with quick access to care when needed in return for a regular premium payment prior to the onset of a condition. Insurance

also allows those who might prefer to do so, to pay an anticipated and fixed premium over time for access to private care, rather than pay the higher and less predictable cost for private care when they wish to receive it (even if they can afford to do so). Thus, private health insurance creates opportunities for those in lower income groups and allows people to tailor their expenditures to their own preferences.

Restrictions on or regulation of private health care and private health insurance are not benign. Regulation of services and prices can dampen the incentives for innovation and the introduction of greater choice through differentiated product offerings. Such regulation can also drive up the costs of health care services as competition stagnates and the incentive to decrease prices as a result of efficiency and innovation is virtually eliminated by a government determined rate. A private health sector, when introduced alongside a universal insurance scheme or even when acting as the sole provider of health services, must be allowed the flexibility to compete over the price and quality of services freely through the introduction of more innovative and effective forms of treatment and insurance cover.

A complete list of references is available in the full study.

Tables

Table 1: Spending on Health Care in the Bahamas 2001

Government Health Expenditure	$	163,781,000
Private Health Expenditure	$	179,191,000
Total Health Expenditure	$	342,972,000
GDP	$	4,950,000,000
Government Expenditure (%GDP)		3.3%
Private Expenditure (%GDP)		3.6%
Total Expenditure (%GDP)		6.9%

Sources: BRC, 2004; World Bank, 2005

Table 2: Health Spending in OECD Nations and Bahamas, age-adjusted % of GDP, 2001

	2001 Age Adjusted		2001 Age Adjusted
United States	14.9	Denmark	8.2
Bahamas	**14.9**	Ireland	8.0
Mexico	13.2	Belgium	7.7
Iceland	10.6	Sweden	7.6
Switzerland	10.1	Hungary	6.9
Canada	10.1	Czech Republic	6.9
Australia	9.8	Austria	6.9
Germany	9.4	United Kingdom	6.8
Greece	8.9	Italy	6.7
Netherlands	8.8	Japan	6.6
New Zealand	8.8	Spain	6.5
Average	8.6	Luxembourg	6.5
Korea	8.5	Finland	6.5
France	8.5	Poland	6.5
Norway	8.4	Slovak Republic	6.4
Portugal	8.4		

Sources: OECD, 2005; BRC, 2004; Esmail and Walker, 2005; calculations by author

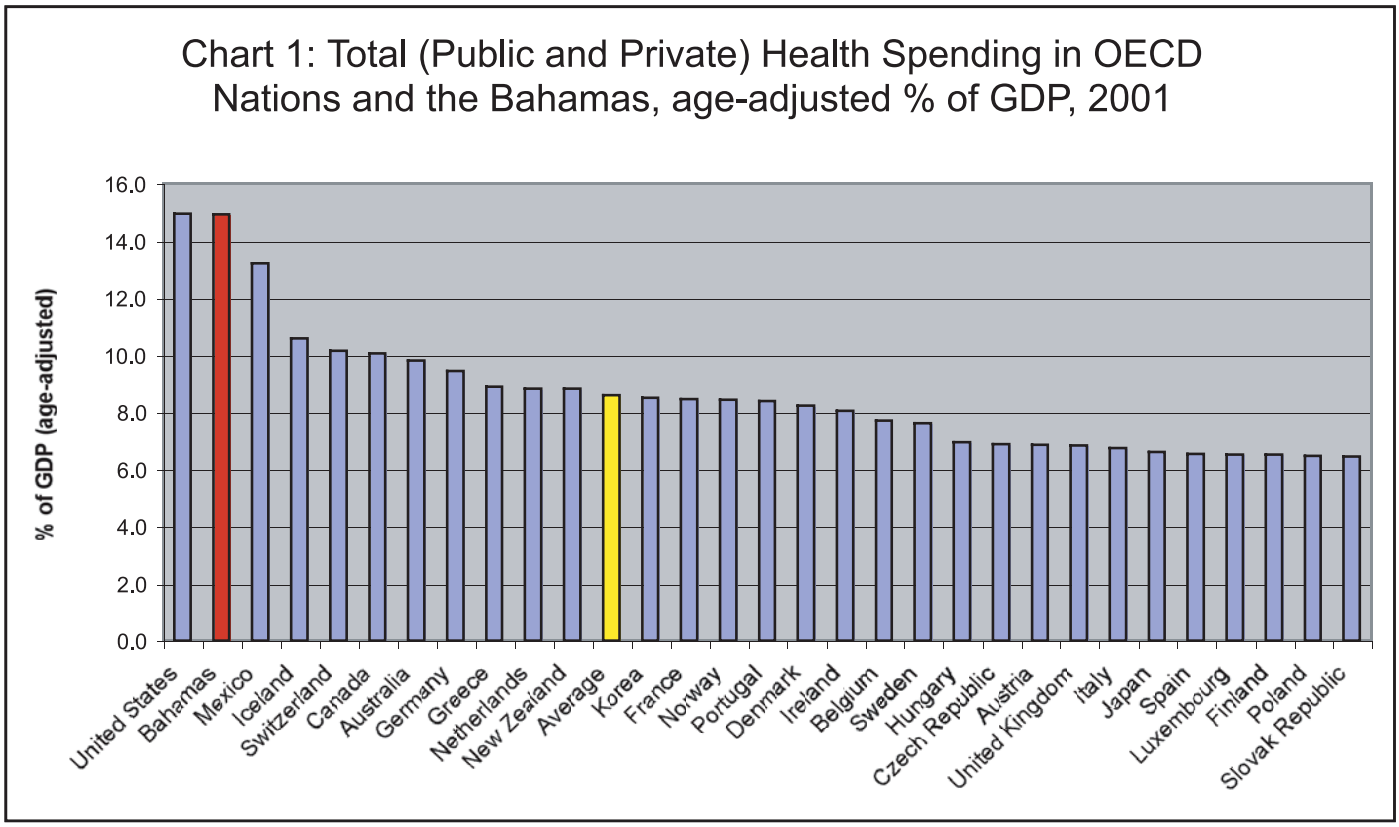

Table 3: Age-Adjusted Comparison of Doctors per 1,000 Population for the Bahamas and Select OECD Countries

	2001		2001
Iceland	4.0	Ireland	2.8
Greece	3.8	Norway	2.8
Italy	3.6	Sweden	2.8
Slovak Republic	3.6	Australia	2.7
Bahamas (2002)	**3.6**	Denmark	2.7
Belgium	3.4	Spain	2.7
Czech Republic	3.4	Finland	2.5
Netherlands	3.3	Luxembourg	2.5
Switzerland	3.3	New Zealand	2.5
Mexico	3.3	Poland	2.5
Austria	3.1	United States	2.4
France	3.0	Canada	2.2
Germany	2.9	Korea	2.2
Average	2.9	United Kingdom	1.8
Hungary (1999)	2.9	Japan (2000)	1.6
Portugal	2.9		

Sources: OECD, 2005; PAHO, 2006; Esmail and Walker, 2005; calculations by author

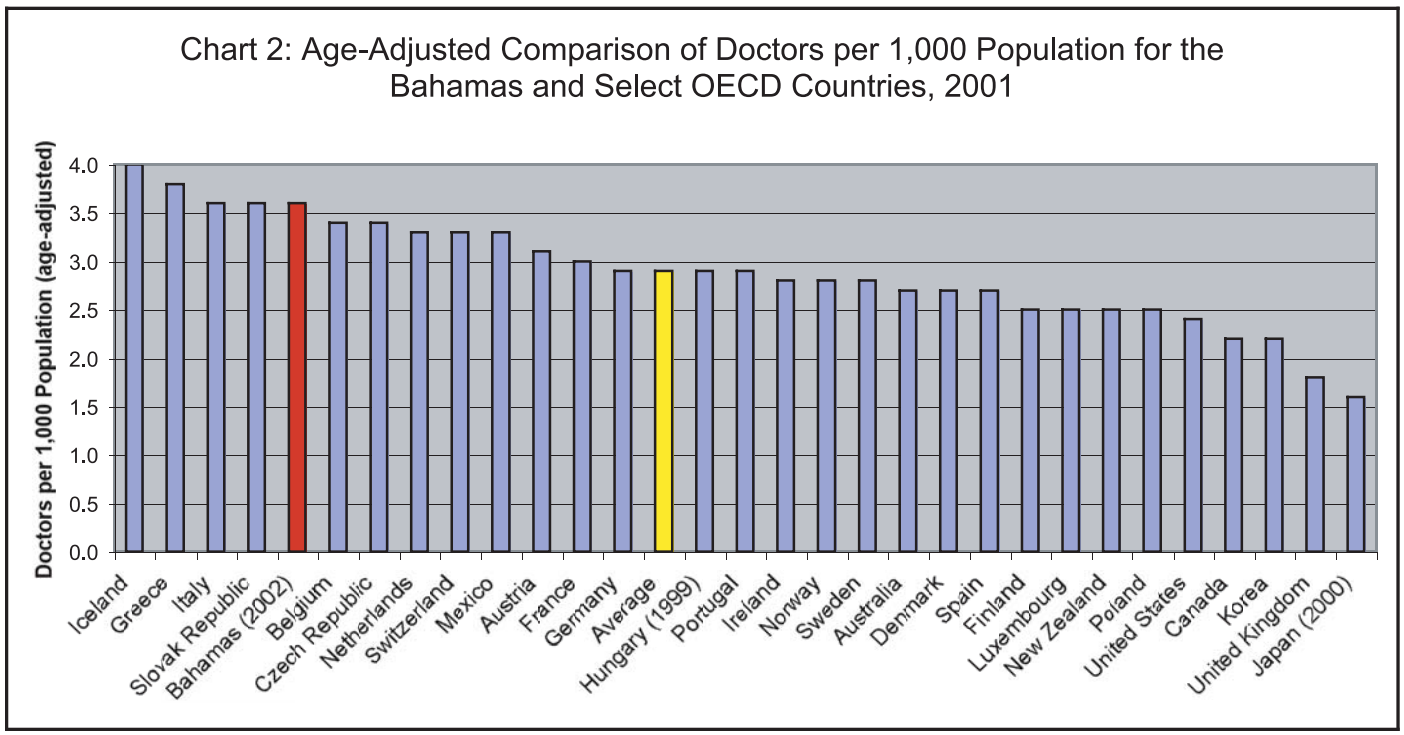

Table 4: Age-Adjusted Comparison of MRI Machines per Million Population for the Bahamas and Select OECD Countries

	2003		2003
Japan (2002)	29.9	Belgium (2002)	5.8
Iceland	19.7	Germany	5.4
Korea	14.2	Canada	4.8
Switzerland	13.2	New Zealand	4.1
Austria	12.5	Australia	4.0
Finland	12.1	Portugal	3.5
Luxembourg	11.1	France	2.5
Italy	9.5	Czech Republic	2.4
United States (2002)	9.3	Hungary	2.4
Denmark	8.7	Slovak Republic	2.3
Average	7.8	Greece (2002)	2.0
Bahamas (2006)	**6.7**	Poland	1.1
Spain	6.4	Mexico	0.4

Sources: OECD, 2005; Lowe, 2006; PAHO, 2006; Esmail and Walker, 2005; calculations by author

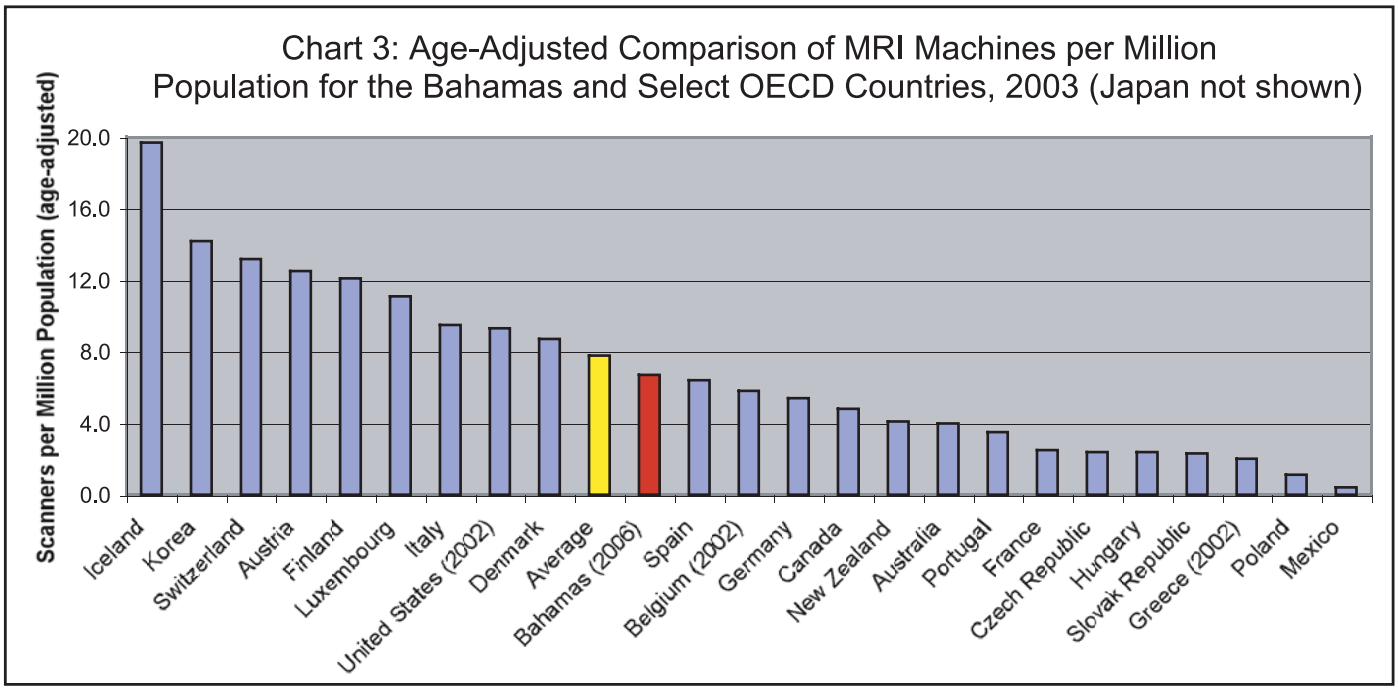

Table 5: Age-Adjusted Comparison of CT Scanners per Million Population for the Bahamas and Select OECD Countries

	2003		2003
Japan (2002)	78.3	Finland	13.2
Korea	50.3	Germany	12.9
Luxembourg	26.8	New Zealand	12.8
Austria	25.2	Czech Republic	12.6
Belgium (2002)	25.2	Portugal	11.4
Iceland	23.5	Spain	11.3
Bahamas (2006)	**20.1**	Canada	11.0
Italy	19.7	Slovak Republic	10.0
Average	18.7	France	7.6
Switzerland	16.8	Poland	6.8
Greece (2002)	14.9	Hungary	6.5
United States (2002)	14.2	Mexico	3.3
Denmark	13.9		

Sources: OECD, 2005; Lowe, 2006; PAHO, 2006; Esmail and Walker, 2005; calculations by author

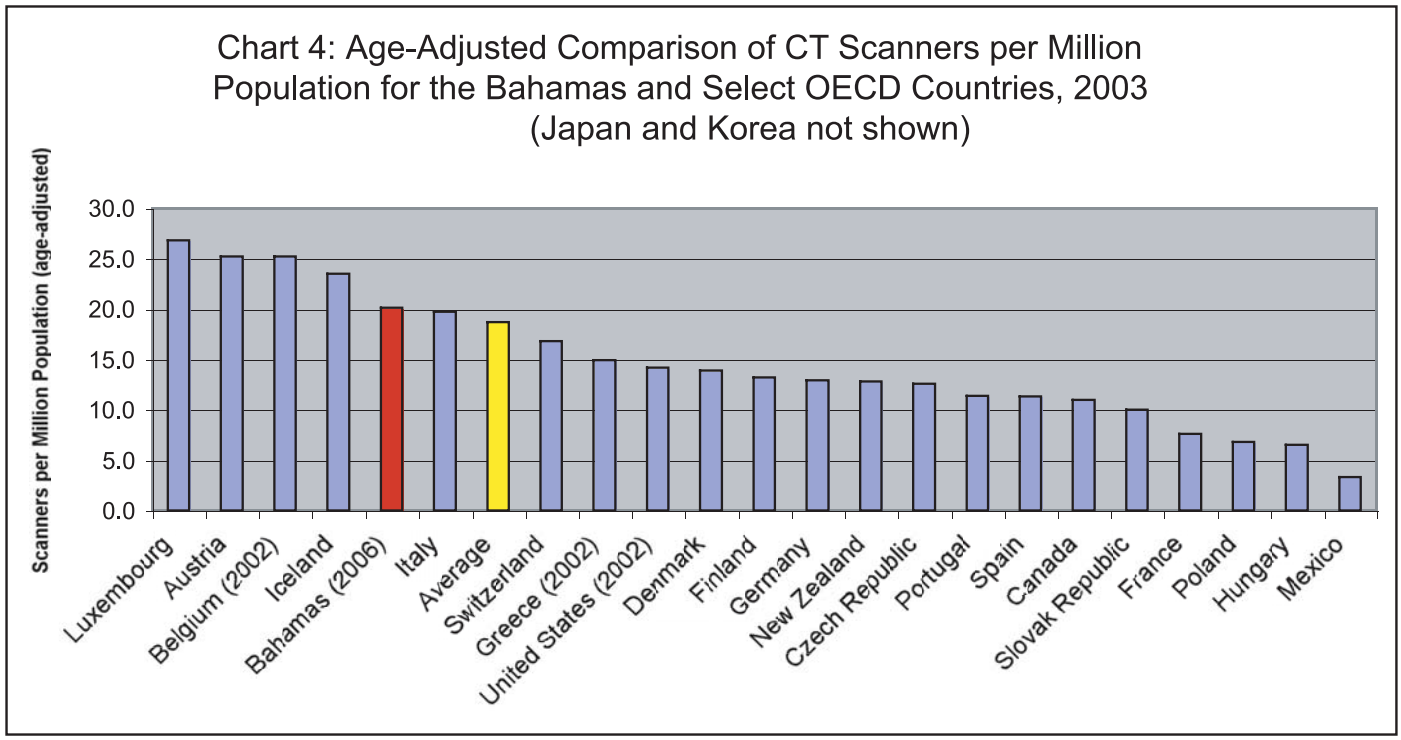

Table 2: Hospital Beds per 1,000 Population for Select Countries in the Americas

	2001	Rank		2001	Rank
Cuba	5.0	1			
St. Vincent & Grenadines	4.7	2	Puerto Rico	3.3	17
Martinique	4.5	3	Guyana	2.9	19
Canada	4.3	4	Antigua and Barbuda	2.6	20
Saint Kitts and Nevis	4.3	4	Chile	2.5	21
El Salvador	4.1	6	Barbados	2.1	22
Honduras	4.1	6	Colombia	1.6	23
Guadeloupe	3.9	8	Ecuador	1.6	23
Montserrat	3.8	9	Costa Rica	1.5	25
French Guiana	3.6	10	Jamaica	1.5	25
Suriname	3.6	10	Mexico	1.1	27
United States	3.6	10	Bolivia	1.0	28
Dominica	3.5	13	Nicaragua	1.0	28
Bahamas	**3.4**	**14**	Venezuela	0.8	30
Cayman Islands	3.4	14	Guatemala	0.5	31
Trinidad and Tobago	3.4	14	*Average*	2.9	—
Aruba	3.3	17			

Note: Some nations were not included due to a lack of data availability

Source: PAHO, 2006

Table 3: Hospital Discharges per 1,000 Population for Select Countries in the Americas

	2002	Rank		2002	Rank
Martinique (2000)	201.9	1	Barbados	80.0	24
French Guiana (2000)	177.2	2	Montserrat	79.4	25
Guadeloupe (2000)	174.5	3	**Bahamas**	**78.4**	**26**
Aruba	164.8	4	Panama	76.7	27
Cayman Islands	136.7	5	Belize (2000)	66.6	28
Colombia (2000)	123.2	6	Dominican Republic	66.1	29
Dominica	120.9	7	Jamaica	66.1	29
Saint Kitts and Nevis	115.8	8	Turks & Caicos Islands	66.1	29
United States (2001)	113.4	9	El Salvador	65.2	32
Cuba	111.0	10	Brazil	64.6	33
Puerto Rico	109.8	11	Mexico	61.2	34
Anguilla	104.8	12	Argentina	60.9	35
Chile (2001)	104.3	13	Ecuador	55.3	36
Bermuda (2000)	92.4	14	Nicaragua	51.8	37
St. Vincent & Grenadines	92.2	15	Guyana	49.3	38
Trinidad and Tobago (2000)	91.2	16	Bolivia	49.1	39
Canada	91.0	17	Uruguay (2000)	46.1	40
Saint Lucia	90.2	18	Honduras (2001)	42.8	41
Suriname (2000)	87.7	19	Peru	35.7	42
Grenada	86.6	20	Guatemala	31.3	43
Costa Rica (2001)	83.1	21	Paraguay	25.1	44
Antigua and Barbuda	81.8	22	*Average*	87.6	—
Virgin Islands (UK)	80.3	23			

Note: Some nations were not included due to a lack of data availability. Source: PAHO, 2006

Table 4: Infant Mortality (per 1,000 live births) in Select OECD Nations and the Bahamas

	2001	% Change from 1997		2001	% Change from 1997
Iceland	2.7	-50.9%	Canada	5.2	-5.5%
Japan	3.1	-16.2%	Australia	5.3	0.0%
Finland	3.2	-17.9%	Netherlands	5.4	8.0%
Sweden	3.7	2.8%	United Kingdom	5.5	-6.8%
Norway	3.9	-4.9%	New Zealand	5.6	-17.6%
Czech Republic	4.0	-32.2%	Ireland	5.7	-6.6%
Germany	4.3	-12.2%	Luxembourg	5.8	38.1%
Spain	4.4	-12.0%	Slovak Republic	6.2	-28.7%
Belgium	4.5	-26.2%	United States	6.8	-5.6%
France	4.5	-4.3%	Poland	7.7	-24.5%
Italy	4.7	-16.1%	Hungary	8.1	-18.2%
Austria	4.8	2.1%	**Bahamas***	**14.3**	**-12.8%**
Denmark	4.9	-5.8%	Mexico	22.4	-13.5%
Portugal	5.0	-21.9%	Turkey	40.6	-4.2%
Switzerland	5.0	4.2%	*Average*	7.1	-11.0%
Greece	5.1	-20.3%			

** Estimate of infant mortality for the Bahamas produced by the United Nations' Population Division (PAHO, 2006)* Sources: OECD, 2005; PAHO, 2006

Table 5: Estimated Infant Mortality (per 1,000 live births)* in Select Countries in the Americas

	2001	Rank	% Change from 1997		2001	Rank	% Change from 1997
Canada	5.1	1	-7.3%	Turks & Caicos Islands	18.1	26	-13.4%
Aruba	6.4	2	-8.6%	Venezuela	18.2	27	-12.1%
Cuba	6.8	3	-29.2%	Virgin Islands (UK)	20.3	28	-14.7%
United States of America	7.0	4	-5.4%	Panama	21.3	30	-10.1%
Martinique	7.3	5	-8.8%	Mexico	21.9	31	-20.9%
Guadeloupe	7.5	6	-9.6%	Antigua and Barbuda	22.3	32	-12.9%
Montserrat	8.2	7	-10.9%	Anguilla	24.6	33	-8.6%
Chile	8.7	8	-24.3%	St. Vincent & Grenadines	26.1	34	-7.4%
Cayman Islands	9.1	9	-16.5%	Suriname	26.4	35	-10.5%
Bermuda	9.6	10	-6.8%	Colombia	26.5	36	-11.7%
Virgin Islands (US)	9.8	11	-12.5%	Ecuador	26.6	37	-20.1%
Puerto Rico	10.1	12	-8.2%	El Salvador	27.5	38	-14.1%
Costa Rica	10.7	13	-9.3%	Brazil	28.7	39	-15.8%
Barbados	11.1	14	-10.5%	Belize	31.0	40	-5.5%
Netherlands Antilles	13.4	15	-5.6%	Nicaragua	31.1	41	-11.1%
Trinidad and Tobago	14.0	16	-6.7%	Honduras	32.7	42	-8.7%
Uruguay	14.0	16	-20.0%	Peru	35.2	43	-16.4%
Bahamas	**14.3**	**18**	**-12.8%**	Dominican Republic	35.7	44	-11.4%
French Guiana	14.6	19	-11.0%	Paraguay	37.4	45	-4.6%
Grenada	14.6	19	0.0%	Guatemala	40.3	46	-12.0%
Jamaica	15.1	21	-3.8%	Guyana	50.5	47	-10.0%
Saint Lucia	15.3	22	-8.4%	Bolivia	57.8	48	-13.3%
Saint Kitts and Nevis	16.3	23	-28.2%	Haiti	63.0	49	-7.9%
Argentina	16.4	24	-24.8%	*Average*	20.9	29	-12.0%
Dominica	16.5	25	-12.7%				

*The estimated infant mortality rate is produced by the United Nations' Population Division (PAHO, 2006)
Source: PAHO, 2006

Table 6: Causes of Death Considered Amenable to Health Care

Cause of Death	Age Range
Intestinal infections	0-14
Tuberculosis	0-74
Other infections (diphtheria, tetanus, poliomyelitis)	0-74
Whooping cough	0-14
Septicaemia	0-74
Measles	1-14
Malignant neoplasm of colon and rectum	0-74
Malignant neoplasm of skin	0-74
Malignant neoplasm of breast	0-74
Malignant neoplasm of cervix and uteri	0-74
Malignant neoplasm of cervix uteri and body of uterus	0-44
Malignant neoplasm of testes	0-74
Hodgkin's disease	0-74
Leukaemia	0-44
Diseases of the thyroid	0-74
Diabetes mellitus	0-49
Epilepsy	0-74
Chronic rheumatic heart disease	0-74
Hypertensive disease	0-74
Cerebrovascular disease	0-74
All respiratory diseases (excluding pneumonia and influenza)	1-14
Influenza	0-74
Pneumonia	0-74
Peptic ulcer	0-74
Appendicitis	0-74
Abdominal Hernia	0-74
Cholelithiasis and cholecystitis	0-74
Nephritis and nephrosis	0-74
Benign prostatic hyperplasia	0-74
Maternal death	All
Congenital cardiovascular anomalies	0-74
Perinatal deaths, all causes, excluding stillbirths	All
Misadventures to patients during surgical and medical care	All
Ischaemic heart disease (50%)	0-74

Source: Nolte and McKee, 2003

Table 7: Age-Standardized Incidence and Mortality from Breast Cancer in OECD Nations and the Bahamas, 2002

	Female Incidence	Female Mortality	Mortality Rate	Rank
United States	101.1	19.0	18.8%	1
Sweden	87.8	17.3	19.7%	2
Finland	84.7	17.4	20.5%	3
Korea	20.4	4.4	21.6%	4
Iceland	90.0	19.6	21.8%	5
Australia	83.2	18.4	22.1%	6
Luxembourg	82.5	19.3	23.4%	7
France	91.9	21.5	23.4%	8
Norway	74.8	17.9	23.9%	9
Switzerland	81.7	19.8	24.2%	10
Canada	84.3	21.1	25.0%	11
Japan	32.7	8.3	25.4%	12
Italy	74.4	18.9	25.4%	13
New Zealand	91.9	24.5	26.7%	14
Germany	79.8	21.6	27.1%	15
United Kingdom	87.2	24.3	27.9%	16
Austria	70.5	20.6	29.2%	17
Greece	51.6	15.4	29.8%	18
Belgium	92.0	27.7	30.1%	19
Portugal	55.5	17.0	30.6%	20
Poland	50.3	15.5	30.8%	21
Spain	50.8	15.9	31.3%	22
Denmark	88.7	27.8	31.3%	23
Netherlands	86.7	27.5	31.7%	24
Ireland	74.9	25.5	34.0%	25
Czech Republic	58.4	20.0	34.2%	26
Hungary	63.0	24.6	39.0%	27
Bahamas	**54.4**	**21.5**	**39.5%**	**28**
Mexico	26.4	10.5	39.8%	29
Slovak Republic	48.0	19.3	40.2%	30
Turkey	22.0	9.7	44.1%	31
Average	69.1	19.1	28.8%	—

Source: Ferlay et al., 2004; calculations by author

Table 8: Age-Standardized Incidence and Mortality from Breast Cancer in select countries in the Americas, 2002

	Female Incidence	Female Mortality	Mortality Rate	Rank
United States	101.1	19.0	18.8%	1
Canada	84.3	21.1	25.0%	2
Puerto Rico	50.4	14.3	28.4%	3
Uruguay	83.1	24.1	29.0%	4
Argentina	73.9	21.8	29.5%	5
Chile	43.9	13.1	29.8%	6
Brazil	46.0	14.1	30.7%	7
Dominican Republic	36.1	11.5	31.9%	8
Venezuela	34.3	13.4	39.1%	9
Nicaragua	23.9	9.4	39.3%	10
Bahamas	**54.4**	**21.5**	**39.5%**	**11**
El Salvador	13.6	5.4	39.7%	12
Mexico	26.4	10.5	39.8%	13
Belize	29.8	11.9	39.9%	14
Peru	35.1	14.0	39.9%	14
Guyana	29.5	11.9	40.3%	16
Trinidad & Tobago	51.1	20.6	40.3%	16
Paraguay	34.4	13.9	40.4%	18
Barbados	62.4	25.5	40.9%	19
Colombia	30.3	12.5	41.3%	20
Ecuador	23.5	9.7	41.3%	20
Panama	29.0	12.0	41.4%	22
Jamaica	43.5	18.3	42.1%	23
Suriname	30.0	12.9	43.0%	24
Costa Rica	30.9	13.6	44.0%	25
Haiti	4.4	2.0	45.5%	26
Guatemala	25.9	12.1	46.7%	27
Honduras	25.9	12.1	46.7%	27
Cuba	31.2	14.6	46.8%	29
Bolivia	24.7	11.6	47.0%	30
Average	40.4	14.3	38.3%	—

Source: Ferlay et al., 2004; calculations by author

Table 9: Age-Standardized Incidence and Mortality from Colorectal Cancer in OECD Nations and the Bahamas, 2002

	Female Incidence	Female Mortality	Male Incidence	Male Mortality	Average Mortality Ration (Male & Female)	Rank
United States	33.1	11.6	44.6	15.2	34.6%	1
Switzerland	25.2	9.7	42.7	15.2	37.0%	2
Australia	35.9	13.3	47.4	18.7	38.2%	3
Canada	30.6	11.7	42.2	16.1	38.2%	3
Japan	26.5	11.1	49.3	17.3	38.5%	5
Italy	26.6	10.9	39.2	16.5	41.5%	6
Luxembourg	30.7	13.4	43.6	18.6	43.2%	7
Iceland	27.0	13.2	34.0	12.8	43.3%	8
Korea	15.8	6.7	24.7	10.9	43.3%	8
Sweden	26.2	11.1	33.4	14.9	43.5%	10
New Zealand	42.2	18.5	53.0	23.2	43.8%	11
France	25.9	11.8	40.8	18.2	45.1%	12
Germany	33.1	15.7	45.5	19.9	45.6%	13
United Kingdom	26.5	12.4	39.2	17.5	45.7%	14
Finland	21.1	9.8	25.5	11.5	45.8%	15
Norway	37.1	16.8	43.4	20.1	45.8%	15
Netherlands	30.8	14.4	40.9	18.9	46.5%	17
Austria	27.8	13.9	42.1	20.1	48.9%	18
Spain	22.5	11.3	36.8	18.5	50.2%	19
Greece	15.6	8.0	19.4	9.7	50.6%	20
Belgium	26.8	14.1	37.0	18.7	51.6%	21
Ireland	27.0	13.7	43.1	23.6	52.7%	22
Poland	23.5	11.4	31.9	18.2	52.8%	23
Portugal	21.0	11.9	35.9	20.0	56.2%	24
Czech Republic	32.0	18.0	58.5	34.0	57.2%	25
Denmark	33.0	19.2	41.0	23.3	57.5%	26
Mexico	7.0	4.1	7.9	4.5	57.8%	27
Bahamas	**14.7**	**8.9**	**15.2**	**8.6**	**58.6%**	**28**
Slovak Republic	27.4	16.0	54.5	33.2	59.7%	29
Hungary	33.7	21.2	56.6	35.6	62.9%	30
Turkey	8.5	5.4	9.1	5.8	63.6%	31
Average	26.3	12.6	38.0	18.0	48.4%	—

Source: Ferlay et al., 2004; calculations by author

Table 10: Age-Standardized Incidence and Mortality from Colorectal Cancer in Select Countries in the Americas, 2002

	Female Incidence	Female Mortality	Male Incidence	Male Mortality	Average Mortality Ration (Male & Female)	Rank
United States	33.1	11.6	44.6	15.2	34.6%	1
Puerto Rico	20.5	7.4	26.6	10.5	37.8%	2
Canada	30.6	11.7	42.2	16.1	38.2%	3
Brazil	14.3	6.4	14.4	6.4	44.6%	4
Uruguay	29.5	14.2	39.6	18.4	47.3%	5
Argentina	19.1	9.8	30.1	14.6	49.9%	6
Chile	15.1	7.8	15.8	7.7	50.2%	7
Guyana	8.9	4.7	16.5	9.6	55.5%	8
Dominican Republic	12.3	6.8	11.6	6.5	55.7%	9
Colombia	14.5	7.6	11.7	7.3	57.4%	10
Venezuela	11.6	6.7	11.2	6.4	57.5%	11
Belize	5.8	2.9	4.9	3.2	57.7%	12
Mexico	7.0	4.1	7.9	4.5	57.8%	13
Nicaragua	10.6	6.2	5.2	3.0	58.1%	14
Suriname	12.5	7.2	10.1	6.0	58.5%	15
Bahamas	**14.7**	**8.9**	**15.2**	**8.6**	**58.6%**	**16**
Trinidad &Tobago	16.0	9.7	14.8	8.5	59.0%	17
El Salvador	6.2	3.7	4.4	2.6	59.4%	18
Paraguay	9.0	5.3	10.3	6.2	59.5%	19
Ecuador	10.0	5.9	7.6	4.6	59.8%	20
Peru	12.3	7.4	11.7	7.1	60.4%	21
Jamaica	12.0	7.3	14.3	8.6	60.5%	22
Barbados	18.5	11.1	24.1	14.8	60.7%	23
Panama	11.2	7.0	12.1	7.4	61.8%	24
Haiti	7.5	4.8	11.3	7.3	64.3%	25
Bolivia	8.5	5.5	15.9	10.3	64.7%	26
Guatemala	7.4	4.8	7.9	5.2	65.3%	27
Honduras	7.4	4.8	7.9	5.2	65.3%	27
Costa Rica	12.2	9.6	11.6	8.3	75.1%	29
Cuba	17.0	13.5	13.4	10.7	79.6%	30
Average	13.8	7.5	15.8	8.4	57.2%	—

Source: Ferlay et al., 2004; calculations by author

Table 11: Health Policies in Top-Performing OECD Countries'

	User Fees*			Private Delivery of Public Services Care	Purchaser/ Provider Split in Public System	Private Health Insurers within Public System**
	Hospital (Inpatient	GP/ Primary Treatment)	Specialist Care			
Australia	No	Yes	Yes	Yes, Contracted	No	n/a
France	Yes	Yes	Yes	Yes, Open Competitive	Yes	No
Japan	Yes	Yes	Yes	Yes, Open Competitive	Yes	Yes
Singapore	Yes	Yes	Yes	Yes, Open Competitive	Yes	n/a
Sweden	Yes	Yes	Yes	Yes, Restricted Competitive	Yes	n/a
Switzerland	Yes	Yes	Yes	Yes, Open Competitive	Yes	Yes

* Indicates whether the public system charges user fees or co-payments for publicly funded treatment.
** In countries with social insurance models of health care financing

Sources: Irvine, Hjertqvist, and Gratzer, 2002, with updates from Esmail and Walker, 2005; Esmail, 2004 & 2006; Ramsay, 2001; and Hilless and Healy, 2001.

Table 12: Mortality Amenable to Health Care in Select OECD Nations and the Bahamas, 2000

	Mortality per 100,000 (Age-standardized)
France	72.7
Japan	78.5
Australia	81.1
Canada	82.3
Sweden	84.2
Spain	85.2
Norway	88.0
Netherlands	90.6
Italy	94.0
Denmark	100.3
New Zealand	101.4
Germany	104.5
Finland	107.5
Average	108.1
Austria	109.9
Greece	118.3
United States	127.5
Portugal	145.1
Ireland	149.0
United Kingdom (1999)	157.0
Bahamas	**184.1**

Source: WHO, 2004; calculations by author