# Comparative Study of Taiwanese Health Care System

*Theresa Min-Hyung Lee*

The health care system of Taiwan is an exemplary model of how modern health care reform and major policy changes can bring about high quality universal health coverage to a country in a relatively short period of time. After years of consulting international experts in the health policy field and studying numerous health care systems around the world, Taiwan instituted its universal National Health Insurance (NHI) program in 1995, extending a comprehensive benefits package ranging from doctor visits, prescription drugs to even traditional Chinese medicine to 99 percent of the Taiwanese population. The Taiwanese receive their health care services in a very timely manner with minimal wait times, and the result is that the overall population remains both healthy and happy with the health care system of their country.

Most of us are also satisfied with the health care we receive here in Canada (Statistics Canada, 2008), perhaps in lieu of the health care reform debate raging in the United States. Yet, we have had the unpleasant experience of sitting in the waiting room of the doctor's office for countless number of hours, or perhaps know of someone who has had to wait months to receive treatment or diagnosis that should not have been delayed. The Canadian government is quite aware of this problem challenging both the health care providers and receivers alike, and is making an effort to find a solution. One such initiative is the investment of 4.5 billion dollars into the Wait Time Reduction Fund since 2004 (Health Canada, 2004).

With all of this in mind, I leapt at the opportunity to partake in a Public Health Exchange program through McGill's Global Health Programs to observe best practices adopted by Taiwan's health care systems, and how it came to serve its citizens so effectively and efficiently.

The expansion of health care in Taiwan mirrors its rapid economic development. After a strong economic growth of more than twenty years, the public of Taiwan demanded a better health insurance coverage in the 1980s, leading to a full-fledged national health insurance program. The new health insurance coverage arose from years of in-depth studies of health care systems from other nations. The health reform resulted in the NHI, which is now a government-run, single-payer system with universal coverage similar to that of Canada's. Prior to the establishment of NHI in 1995, 41 per cent of the Taiwanese population was uninsured – the majority of the uninsured were young children and seniors, whose need for health care is usually the highest. As a result of the mandatory enrollment, the reform has since brought insurance to 99 per cent of citizens and legal residents, and increased the health care utilization rates of the uninsured up to par with those of previously insured populations (Cheng 2003).

Despite several similarities with the Canadian health care system as a whole, there are some notable differences between the two systems. Firstly, Taiwan's health care coverage is more comprehensive. It covers services that Canadians are usually pay out-of-pocket, or through supplemental health insurance. These services include prescription drugs, dental care, vision care and traditional Chinese medicine (Cheng 2003).

Secondly, patients are free to see doctors of any specialty without going through a referral or 'gatekeeper' system. There are also no limitations on the type of hospital that from which the patients can receive their health care. Due to the absence of a gatekeeper system, there is no need to first see your primary healthcare provider to receive a referral to see a specialist. As a result, there is virtually no waiting list for a visit to the doctor's office. There is also freedom to choose between health care facilities, ranging from small public health clinics to large private hospitals that offer comfort with luxurious décor.

Upon observing and learning about many health care facilities (including public and private clinics, large teaching hospitals, major public hospitals and private hospitals alike, to a psychiatric hospital, a Traditional Chinese Medical hospital and a regional Centre for Disease Control), and discussing with and listening to doctors, nurses, professors and medical students, the facilities appeared to be spectacular, well-equipped with modern technology; and the breadth of services available to the Taiwanese population presented was truly impressive.

With high health indicators comparable to any developed nation – infant mortality rate of 5.26 per 1000 births; and life expectancy at birth of 75.34 years for men and 81.2 years for women (Central Intelligence Agency, 2010) – it was clear that Taiwan was providing health care that successfully sustains a healthy general population. Furthermore, a closer look at Taiwan's national health expenditure rates indicate that this was being achieved at a fraction of the cost of other nations: only 6 percent of Taiwan's GDP is spent on healthcare, compared to 10 percent for Canada and 16 percent for the United States (Organization for Economic Cooperation and Development, 2010). Since its implementation, NHI has had a public satisfaction rating ranging from 70 to 80 per cent, dipping low only in the years where new policies introduced higher insurance rates (Cheng 2003). It remained unclear how Taiwan managed to sustain a health care system achieving similar, if not better, results than that of Canada's and the United States'

The NHI is publicly funded and financed on income-based premiums as opposed to general tax revenues. The premiums are based on payroll taxes paid by the employer, the employee and the government in varying amounts depending on different population groups. Most people who are employed pay 30 per cent of the premium, while their employee pays 60 per cent and the government subsidizes the remaining 10 per cent. The self-employed pay 100 per cent of the premium, and individuals from a low-income household are fully subsidized by the government. For the employed, the total insurance premium is typically 4.6 per cent of their

wages (Underwood, 2009). as well, the taxes from tobacco excise tax and the national lottery revenues are injected/infused into the system (Bureau of National Health Insurance, 2010).

The cost of the services from providers is covered mainly through reimbursements from the NHI, but it is also partially covered by co-payments from users (Cheng, 2003). The NHI is also supplemented by a co-insurance system where the user pays a nominal co-payment to the health care provider upon the use of its services. Its purpose is to discourage overuse. This may be compared to how wait times stemming from the referral-system in Canada discourages unnecessary hospital visits. The co-payment is usually a few dollars, or a fraction of the true cost of the service provided. The amount is capped by the NHI to eliminate any concerns of bankruptcy resulting from an accumulation of the fees. It is also waived for catastrophic diseases, individuals from low-income households or remote areas, infants and veterans.

One problematic area of health care that the NHI has tackled progressively is implementing the universal coverage and assuring similar health status between the indigenous and marginalized populations, and the rest of Taiwan. In order to eliminate disparities regarding access to health care, NHI has approached both the demand and supply side. On the demand side, it ensured that the population at risk were provided with insurance, and exempted them from co-payment. On the supply side, it has implemented an Integrated Delivery System (IDS), and guaranteed income for physicians practicing in remote areas (Bureau of National Health Insurance, 2010). Although certain disparities still exist, policy tools such as IDS and rural payment bonuses contribute to continuous improvements (Chou, Huang et al., 2004).

Another innovation is the integration of traditional methods in a modern system. As traditional Chinese medical practice is an accepted form of medicine, and is a mainstream medical care in Taiwan. Chinese medicine is insured under the NHI. Traditional Chinese Medical (TCM) services ranges from acupuncture and fire cupping massages to medicinal herbs. It is believed to be effective in alleviation of many illnesses and disease, managing pain and promoting well-being. Traditional Chinese medicine is often used in conjunction with Western biomedicine (Chen, Chen et al. 2007) and accounts for six per cent of health expenditure on outpatient services in Taiwan (Bureau of National Health Insurance, 2010). However, not all TCM clinics are registered under the NHI, and standardization regarding the quality was not so straightforward.

As it turns out, the NHI began facing deficits in the late 1990s, relying on bank loans to pay health care providers. Between 1996 and 2009, NHI expenditures grew at an average of 5.27 per cent a year, exceeding NHI revenues with an average growth rate of 4.02 per cent a year (Bureau of National Health Insurance, 2010). The exceeding expenditures were a fault of the open-ended health insurance system relying on a Fee-For-Service (FFS) payment of the providers. The health care

providers performed unnecessary procedures and prescribed unnecessarily expensive, drugs at the expense of the NHI. Submission of false reimbursement claims was another example of misuse of the system (Cheng 2003).

Due to the competitive nature of FFS, physicians were called upon to see an overwhelmingly large volume of patients per day, leading to rushed visits and insufficient time to get a complete patient history or conducting a thorough exam, which could lead to misdiagnosis, improper treatment or delays in proper treatment. This led to a vicious cycle of doctors ordering frequent follow-ups, which contributed to higher patient volumes and shorter visits. Moreover, many patients were led to believe/feel that their problems were not adequately addressed, resulting in repeat visits and 'doctor shopping' – visiting numerous practitioners simultaneously, and seeking unnecessary care, or care that does not require specialists, all further impinging on the system (Gunde, 2004).

To address some of these issues, the NHI made a number of changes in how the health care providers were reimbursed. From 1998 to 2002, a global budget policy was imposed on different sectors, replacing the Fee-for-Service system. The Global policy set an expenditure cap for each sector, whereby services provided beyond the cap would be reimbursed at lower rates. The new policy incentivized health care providers to stay within their set budget. Global budgeting proved to be effective, and overall growth rates of per capita medical spending declined in nearly all of the health sectors in the early 2000s. However, it was an incomplete solution as the NHI continued to face ever increasing expenditures.

In 2004, the NHI implemented a Resource-Based Relative-Value Scale (RBRVS) into the physician fee schedule, where physicians were paid according to the "relative value" of services provided and the resources they consumed. It is based on the amount of physican-involving work that goes into the service, the practice expense associated with the service, and the professional liability expense for the provision of that service; also being adjusted according to the geographic region (American Association for Pediatrics, 2005).

The NHI continues to experiment with different methods of payment of provider. The most recent change to the heatlh care system was in 2010, where the NHI introduced a diagnosis-related-group reimbursement (DRG) scheme to pay physicians. Under this scheme, the physicans are reimbursed at a certain rate for different types of patients according to their primary diagnosis (Bureau of National Health Insraunce, 2009).

Further efforts to improve the quality of the NHI system led to the introduction of the IC (Integrated Circuit) Smart Card: a mandatory health card of sorts, but integrating innovative information technology. The Smart Card contains electronic data about the cardholder's personal identity, medical record, prescription history, remarks for catastrophic diseases, number of visits, administrative and expenditure information among other things (Smart Card Alliance, 2005). The introduction of

the Smart Card in 2002, had allowed Taiwanese hospitals and clinics to send electronic records on a daily basis to the Bureau of NHI, where the data is analyzed and audited on a regular basis. The Smart Card makes it possible to monitor high-utilization cases through patient profile analysis; prevent fraud from aberrant medical claims; and keeps surveillance of public hazards, tracking down suspects of communicable disease (Bureau of National Health Insurance, 2009).

The tracking of symptoms of communicable diseases is becoming increasingly important with the rise of pandemic disease, where persons infected must be identified and isolated as soon as possible to prevent the spreading of the infection. Although it is a relatively new system, preliminary results have indicated that the Smart Card has enormous potential to be a key tool in reducing infectious outbreaks, such as severe acute respiratory syndrome (SARS), through implementation of an on-line real-time mechanism for disease control, tracking and surveillance (Huang and Hou 2007).

Another major benefit from the use of Smart Card technology is the reduction in administrative costs due to improved administrative, billing and provider efficiencies. The technology has allowed for automatic operation of electronic transfer of medical records and bills, resulting in expedited reimbursements of providers. As the Smart Cards last for several years, it has also eliminated costs involved with frequent replacement of older health cards, which were previously made of non-durable material. As a result, Taiwan's health care system has the lowest administrative costs in the world, accounting for only two per cent of its total health expenditure. Comparatively, Canada spends 16 per cent of total health expenditures on administration and the United States spends 31 per cent (Woolhandler, 2003). The low administrative cost significantly contributes to how Taiwan has maintained the low rate of health expenditure spending over the accumulated GDP spending.

In spite of these efforts of new innovations and policy implementation, health care costs are still rising in Taiwan. The NHI's deficit is expected to reach $3.2 billion US dollars by the end of 2010 if effective measures are not put into place. The government could increase spending from its GDP by raising the premiums although it would cause public unrest in the process. But even so, the extra income generated from increased premiums will only be a temporary measure in keeping the balance and offsetting the existing deficit of $1.84 billion dollars US (Taiwan Today, 2010).

Taiwan is now looking overseas for other potential solutions. Medical tourism is a new and growing area in the world economy (Morgan, 2009) and it has come to the attention of the Taiwanese health care industry. In hopes of easing its growing deficit and financial burden, the Taiwanese government's Department of Health began planning distribution channels and marketing campaigns on medical tourism. Now, Taiwan brands itself as a home for first-rate medical care services (International Medical Tourism Journal, 2009). Taiwan has long been popular with its expatriate population as a medical-travel destination (Tung, 2010). However, the

market is expected to expand by several folds as Taiwan further opens its door to mainland China. With the recent lift of travel restrictions, 2009 alone brought 40,000 visitors from China to Taiwan to undergo health checkups and cosmetic surgery (Kastner, 2010).

Creating a system that is both financially sustainable and meets the needs of an evolving population is a fine balancing act with many factors. Taiwan will face health care challenges common to many other countries in the near future: an aging population; rising cost of the workforce in the medical health industry; and increasing costs of new technology and drug research and development.

The two weeks I spent in Taiwan taught me that there are no easy tricks to finding a solution to a problem. The development of the health care system is a continually evolving process that is sensitive to time, place, political and economic state of the country, and the needs of the people.

As it stands, the Taiwanese government is currently working on a 'second generation' NHI reformation, implementing new policies and strategies to make the health care system more sustainable (Bureau of National Health Insurance, 2010). Collaborating with other nations by sharing information on policy implications, research data, consultations and other innovations have led to the development and establishment of what is the NHI today. Further innovation and collaboration among nations can ensure that future steps taken to develop and to implement health care policies are more effective.

For now, Taiwan and the NHI stands as a successful case of how a nation was able to successfully established a universal health care coverage for the entire nation – almost from ground up. The system offers, at an affordable cost to the users, easy access to comprehensive health care of high quality. Despite some of the financial weaknesses it has shown and the downfalls it has faced in the last fifteen years, it is an example of how a government can strategically manage its resources in order to serve its people effectively; providing access to health care to those who need it most.

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