

AN INTERGRATED APPROACH TO SOLVE TAIWAN'S NHI PROBLEMS

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Chaos is the law of nature; order is the dream of man. -- Henry Adams

Abstract. In this paper, I first introduce Taiwan's National Health Insurance program briefly and its problems extensively. NHI's approaches to its own problems are then described and their shortcomings and doomed failures are noted. Taiwan's new pension regulations are then introduced and the integrated strategy for solving Taiwan's NHI problems by combining NHI into individual retirement account is thus recommended with reasons. This strategy is expected to succeed because it will make free market work in the health care industry by fundamentally change the behavior of both consumers/patients and medical providers.

Key-words: health insurance, payment system, provider-induced demand, fee-driven practice, professional-fee system, IRA,LTC, Tragedy of the Commons

1 Introduction

Since its inception in 1995, Taiwan's National Health Insurance (NHI) program has been the focus of many research projects conducted by actuaries, medical economists, public health specialists, and health care professionals. The resulting academic and professional papers have been widely published, discussed and debated. However, Taiwan's NHI problems have become even more and more serious. This paper will first review the NHI program and examine all its problems. It will then introduce Taiwan's new pension system and our integrated strategy for solving Taiwan's NHI problems by combining the NHI program with the new pension scheme. Special features of the combined system will then be presented and conclusions drawn.

2 Taiwan's NHI Program

Before the establishment of NHI in 1995, Taiwan had thirteen different public insurance systems, each covering a particular group of the population. These systems include Labor Insurance (1950), Government Employees Insurance (1958), Farmers' Insurance (1985), Low-Income Household Insurance (1990), and so on. Together these programs covered about 59 percent of Taiwan's population, leaving well over 8 million, or 41 percent of the population uninsured. The majority of the uninsured were children under age fourteen and adults older than age sixty-five, whose need for health care is greatest.

Since Taiwan abolished the martial law in 1987, the country's opposition Democratic Progressive Party (DPP) has rapidly strengthened its position against the then ruling KMT. Under the pressure of losing elections, KMT government submitted in 1993 its NHI bill to the Executive Yuan which passed the bill on July 19, 1994. NHI then began operations on March 1, 1995, only two months after the establishment of the Bureau of National Health Insurance (BNHI).

Taiwan's NHI is a government-run, single-payer national health insurance program, financed through a mix of premiums and taxes, that compensates a mixed public and private delivery system predominantly on a fee-for-service basis. To ensure sufficient risk pooling and a broad-based collection of funds, NHI enrollment is mandatory. More than 97 percent of Taiwan's population is enrolled.

2.1 Premium Income

The NHI is financed on a pay-as-you-go basis with the premiums being based on income. Individual families, employers, and government all pay a share of premiums. Currently, 40 percent of the NHI's total premium revenue come from insureds, 33 percent from employers, and 27 percent from government.

The share of the premiums paid by the insureds, employers, and government varies greatly within the six categories of population groups. For employees of public or private enterprises, for example, government pays 10 percent of the premium, the employer 60 percent, and the employee 30 percent. The self-employed professionals pay 100 percent of their income-based premium without any government subsidy. For military personnel and their dependents, and low-income families, the government subsidizes 100 percent of the premium. The premium for an individual varies with the number of dependents (for whom premiums are levied on a per capita basis) which is capped at three. Currently, the income on which the NHI premiums are levied is capped at NT\$131,700 per month.

2.2 Benefits

The NHI's benefits are very comprehensive. They include inpatient care, ambulatory care, lab tests, diagnostic imaging, prescription and certain OTC drugs, most dental care, traditional Chinese medicine, limited home health care, and certain preventive medicine. Expensive treatment for HIV/AIDS and organ transplants are also covered. This benefit package is much broader than that of the U.S. Medicare program.

2.3 Freedom of Choice

More than 90 percent of Taiwan's health care providers contract with the BNHI. Unlike many managed care models in other countries, the NHI offers the insureds complete freedom of choice among providers and treatments. Unlike UK and Canada, there is no rationing of care, and there are no queues for care. The failure of a referral system and the completely free choice of providers means that patients can go doctor shopping. For example, they can seek care at medical centers without regard to the nature or severity of their illness.

2.4 Utilization of Health Services

Overall, the volume of health services delivered has greatly increased since the inception of the NHI. In fact, the increase is far greater than what may be justified by population growth. With the exception of certain costly high-tech treatments such as heart, lung, liver, and bone marrow transplants for which prior BNHI authorization is required, there are effectively no ceilings on utilization in the NHI. This has resulted in high health care utilization rates, especially outpatient care. Taiwan's outpatient visits have averaged around 15 per capita and are comparable with Japan's. Both are by far the highest in the world.

2.5 Payment System

Out-of-pocket spending by households represents services not covered by the NHI, such as orthodontics, prosthodontics, Lab tests that are not medically necessary, extra charges for non-NHI beds, special nurses, and physicians requested by patients other than those routinely assigned by the hospital, long-term care, and nursing home care. It also includes user fees and copayments for NHI-covered ambulatory care, inpatient care, and pharmaceuticals. User fees are levied per contact with the provider. Copayments are levied on each component of a treatment. Exceptions are made for major illness or injury, deliveries, certain preventive services, etc. Moreover, copayments vary by type of provider. They are highest for outpatient care at medical centers and lowest for local clinics.

2.6 Payment of Providers

Taiwan's health care providers obtain their revenues from three sources: (1) payments by the NHI, (2) patient user fees and copayments, and (3) proceeds from the sale of products and services not covered by the NHI. The NHI pays providers on a classic fee-for-service (FFS) basis at uniform, national fee schedules. In recent years the BNHI has experimented with other payment methods, such as diagnosis-related groups (DRGs) for hospitals, primary care capitation for certain population groups and even payments linked to clinical outcomes, in an attempt to control costs and improve quality. However, the ultimate cost control measure has been the imposition of global budgets, phased in sector by sector.

3 Taiwan's NHI Problems

As a consequence of the design of NHI as described above, Taiwan's NHI has encountered numerous problems:

3.1 NHI' fee schedule tends to be too low, artificial, and arbitrary

Unlike the fee schedules used by the U.S. Medicare program, Taiwan's fee schedules are not based on the estimated relative resource costs of providing the services in the schedules. Instead, the NHI simply adopted the relative value scales of the fee schedules used by the Labor Insurance and government Employees Insurance in place prior to 1995. Note that these relative value scales are neither based on resource costs nor updated. Moreover, they tend to be at least somewhat artificial and arbitrary.

3.2 Providers respond by expanding volume of services, reducing resources for each unit of service, and profiting from sale of products and services not covered by NHI

These responses from providers facing the low fee schedules which tend to be artificial and arbitrary are to be expected.

3.3 Provider-induced demand for services, many of which are not medically necessary

Just as all open-ended health insurance systems relying on fee-for-service payment of providers, Taiwan's NHI has experienced rapid increases in the volume of services which, in turn, has led to charges of supplier-induced demand for services, many of which may not have been medically necessary.

3.4 Fee-driven practice may lead to misdiagnosis, improper treatment, or delays in proper treatment

Former BNHI's CEO once remarked that "Taiwan's doctors are well paid. But they work very, very hard to use volume to make up for the low fees." Taiwan's doctors are notorious for their extremely shortened visit length with patients. All this fee-driven practice style may lead to misdiagnosis, improper treatment, delays in proper treatment, or medical malpractice suits which have become more and more prevalent.

3.5 Doctor-patient relationships have been deteriorating

This is to be expected from items 3.2, 3.3, and 3.4 above.

3.6 "Professional Fee" (PF) system compensates doctors on the basis of their revenue productivity

Under the NHI, more and more hospitals have evolved to adopt the "professional fee" system. This system compensates doctors mainly on the basis of their revenue productivity: the number of patients seen, procedures performed, lab tests ordered, along with academic and professional papers published, speeches given, and even articles written in newspapers. The higher the service volume a doctor or a hospital delivers, the greater will be the hospital's revenue and the doctor's pay. Such a reward system can trigger physician-induced care that may not be clinically indicated.

3.7 Overuse and misuse of health care may constitute up to a third of the NHI's total expenditure

This view has been widely shared. Many people also decry the "commercialization of medicine" in Taiwan and the "profit-driven motives" of Taiwan's providers.

3.8 "Drug price black hole" leads to serious overmedication of patients, including that with antibiotics

In fact, Taiwan's antibiotic resistance in streptococci pneumonia is the highest in the world.

3.9 Poor health care quality

When patients in Taiwan are faced with life-threatening illness, the probability of losing their lives is several times greater than it is in the U.S. For Example, survival for all cancers in Taiwan is half the rate in the U.S., deaths from anesthesia is eight times that of the U.S., deaths from tuberculosis is ten times that of the U.S. Clearly, NHI's low cost insurance with prices frozen, which resulted in fast-food health care, has negatively impacted the quality of health care seriously.

3.10 Lack of family physician system

Unlike the U.S., Taiwan does not have the family physician system. As a result, Taiwan places far more emphasis on diseases than prevention.

3.11 The failure of the referral system

Under the NHI, the referral system has completely failed. As a result, Taiwan places far more emphasis on specialists than general practitioners.

3.12 NHI has been financially insolvent

4 NHI'S Approaches To Its Problems

We will briefly summarize NHI's approaches to solve its problems:

4.1 To counter worsening revenue shortfall

As expected, NHI has tried to increase premiums but has encountered great difficulties due to the public and politicians' resistance. NHI has also increased copayments, reduced drug prices, introduced "reasonable outpatient volume" policy, and payment reforms, all with limited effects. Borrowing from the Canadian and German experience, NHI has used global budgeting trying to control the costs. The evidence so far is that global budgeting has had its intended effect only in the short run. It is expected to fail in the long run.

4.2 To counter deteriorating health care quality

As expected, NHI has initiated a variety of quality monitoring and assurance programs to move providers toward greater accountability for quality. An example is the so-called fee-for-outcomes (FFO) approach. Another example is the construction of hospital quality indicators. In 2002, NHI introduced IC-card which contains important clinical and personal information on its holder. It will function as a communication tool between the NHI and providers and, once fully implemented, will also make it possible to electronically transfer medical records among providers. This sharing of clinical information may help reduce the waste of duplicative services and curb "doctor shopping" activities.

All these approaches are of limited value, all things being considered, since they are reactive, and of short-term nature. In particular, they ignore that social insurance programs can easily fall victim to the Tragedy of the Commons, in which commonly owned properties face the risk of depletion from overuse by individuals seeking to maximize their own well-being without regard for the common good. Our approach to fundamentally solve NHI's problems as described below in Section 6 is to face squarely this Tragedy of the Commons by transferring all funds (contributed to NHI) to each patient's (individual retirement) account.

5 Taiwan's New Pension Regulations

The new pension regulations were passed by the Legislative Yuan on June 11, 2004 and will be implemented on July 1, 2005. Although a dual system consisting of "individual account scheme" and "annuity scheme" is promulgated under the new pension regulations, most, if not all, Taiwanese employees will be covered under individual account scheme. Each month employers must contribute six percent of employees' monthly salary into their individual accounts under this scheme. Those employees who choose individual account scheme may contribute six percent of their monthly salary tax free to their own accounts. Clearly, this individual account scheme is very similar, if not identical, to all those individual

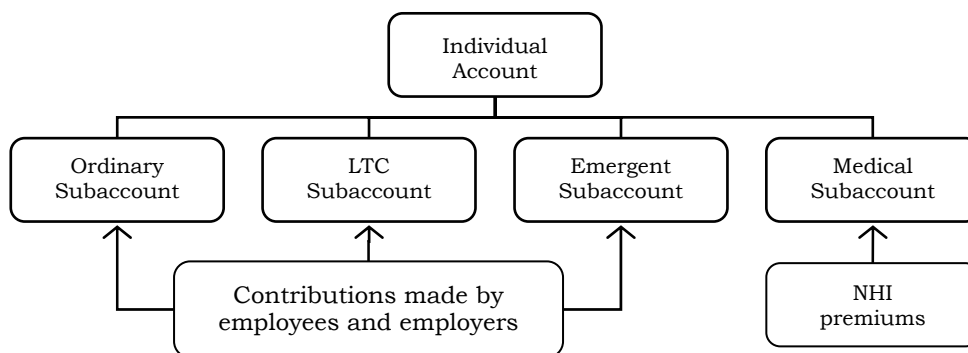
retirement accounts (IRAs) of, say, Singapore’s Central Provident Fund, Malaysia’s Mandatory Provident Fund, and Hong Kong’s Compulsory Provident Fund.

Bases on our observation of evolutions of IRAs internationally, we expect Taiwan’s individual account scheme will be undergoing similar evolution. For example, most countries vary employer and employee contributions according to macro-economic conditions. Also, most countries subdivide the IRA into, say, ordinary account, medical account, long-term care account and emergent account with a mandatory minimum amount (which changes over time) specified for the ordinary account (the bona fide retirement account).

6 The Integrated Strategy For Solving Taiwan’s NHI Problems

As pointed out in Section 3 above, Taiwan’s NHI, after only ten years operation, has encountered numerous serious and difficult problems for which the government’s solutions have proven of limited value at most. Many academic papers have offered ideas to solve the problems but they have either failed to attract NHI’s attention or have proven of very short-term or limited value once adopted by NHI. This is because none of the ideas and approaches have dealt with the Tragedy of the Commons directly. In other words, all the ideas and approaches have encountered the same difficulty that free market mechanism does not work in the health care industry without being able to overcome it.

Our approach to solve NHI problems is to make free market mechanism work in the health care industry. To do so, we merge NHI into Taiwan’s new pension system so the within each individual account we create a medical subaccount into which all the original NHI premiums are deposited. As is pointed out in Section 5, each individual account may evolve and become subdivided into ordinary retirement subaccount, long-term care subaccount, emergent subaccount, and medical subaccount. It is this medical subaccount we put in all the NHI’s original premiums (from employees, employers, and the government). Conceptually, we can further illustrate this integrated approach in the following graph:



Under this integrated approach, all the medical expenses incurred by each individual, whether small or large, from doctor’s visit, hospital stay, all the way to major surgery, must be paid from that individual’s Medical Subaccount. Just like all other subaccounts, this Medical Subaccount is cumulative in that if an individual is so healthy as to stay away from using medical services, he will be

accumulating the fund in his Medical Subaccount. At the very least, medical service consumers' behavior will thus be fundamentally changed; they will no longer utilize medical services deemed unnecessary! The accumulated balance in the Medical Subaccount once reaches a certain amount, the excess may be withdrawn or deposited into other subaccounts.

Knowing that each patient is spending his own money from his Medical Subaccount to pay for his medical services received, all medical providers' behavior will thus be fundamentally changed too. Medical providers know all too well now under our integrated approach that patients are no longer taking advantage of the Tragedy of the Commons prevailing under a social insurance program.

To do well in this new environment, providers must offer much better medical services in order to attract and keep the patients. In fact, the best providers could easily charge the highest fees and still attract enough patients. The worst providers could be wiped out of the market. It is clear that free market mechanism will be working in the health care market in Taiwan under this approach.

In order to cope with potential health disasters, Medical Subaccount holders could use their funds to buy such health insurance as Hospital & Surgical, Major Medical, Dread Diseases, Cancer Insurance, etc. Since these health insurance policies are privately owned, commercially available, they will not affect the workings of free market mechanism in the health care industry. In fact, they will provide ever better protection while making free market work better in the health care industry.

7 Conclusion

Our integrated approach to solve Taiwan's NHI problems is to empower consumers/ patients so as to fundamentally change medical providers' behavior. In doing so, consumers/ patients will no longer take advantage of the Tragedy of the Commons enabling free market mechanism to work in the health care industry. Since Internet has provided ample health information, information asymmetry in the health care industry has been greatly lessened. This in turn enhances the power of consumers/ patients and increases competition in the supply of medical care. We believe that health care is too important NOT to be exposed to the market and only through free market mechanism can we make health care affordable at great quality.

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