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ANALYSIS & COMMENTARY

Reflections On The 20th Anniversary Of Taiwan's Single-Payer National Health Insurance System

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ABSTRACT On its twentieth anniversary, Taiwan's National Health Insurance (NHI) stands out as a high-performing single-payer national health insurance system that provides universal health coverage to Taiwan's 23.4 million residents based on egalitarian ethical principles. The system has encountered myriad challenges over the years, including serious financial deficits. Taiwan's government managed those crises through successive policy adjustments and reforms. Taiwan's NHI continues to enjoy high public satisfaction and delivers affordable modern health care to all Taiwanese without the waiting times in single-payer systems such as those in England and Canada. It faces challenges, including balancing the system's budget, improving the quality of health care, and achieving greater cost-effectiveness. However, Taiwan's experience with the NHI shows that a single-payer approach can work and control health care costs effectively. There are lessons for the United States in how to expand coverage rapidly, manage incremental adjustments to the health system, and achieve freedom of choice.

In 1986 Taiwan's government began planning to provide universal health insurance for its citizens. At the time, 41 percent of Taiwan's population (8.6 million people) was uninsured and either paid for care out of pocket or went without it. The objective was to provide every citizen with timely access to needed health care, on equal terms, without unduly burdening the budgets of households, but also with effective controls on the growth of overall health spending.

In the relatively short time from the late 1980s to 1994, Taiwan's health policy planners carefully studied alternative health care systems around the world. This global survey persuaded the planners to consolidate the more than ten insurance programs then in existence in Taiwan into a single-payer government-run health insurance system modeled after the Canadian provincial health plans, but coupled with a financing scheme inspired by Germany's payroll-based premium system.[1]

The legislation for implementing the reform was passed in July 1994, and the implementation began March 1, 1995. Uptake of the new insurance program was swift. By the end of 1995, 92 percent of Taiwan's population was enrolled in the National Health Insurance (NHI).[2]

This year marks the twentieth anniversary of Taiwan's major health reform. The rapid uptake of reform can be attributed to a "window of opportunity" presented by the confluence of several enabling factors: strong public demand, strong political leadership, competition between rival political parties, and the need to control double-digit growth in health care spending.[1(p73)] Other

facilitating factors were decades of high economic growth; a well-educated and highly motivated civil service; and a preexisting national health care service network, which provided the delivery capacity for the NHI.[3]

Overview Of The National Health Insurance System

BENEFITS Taiwan's NHI provides a comprehensive national benefit package, which includes inpatient, outpatient, and dental care; traditional Chinese medicine; renal dialysis; prescription drugs; prenatal care; physical rehabilitation; home nursing care; chronic mental illness care; and preventive services such as pediatric and adult health examinations and cancer screening. Patients have access to over 19,000 contracted providers (92.6 percent of all hospitals, clinics, and other health care facilities in Taiwan) and over 16,700 drugs.[4]

CHOICE, ACCESS, AND WAITING TIMES Patients in Taiwan have complete freedom of choice among providers when they seek care; they enjoy easy access to doctors, including specialists; and their access to care is protected by multiple measures. According to former health minister Ching-Chuan Yeh, "Anytime you wish to see a doctor, you can. For example, if you decide to see an ophthalmologist, within ten minutes you can find one to see, even in the evenings."[5(p1036)]

Patients in Taiwan rarely face long wait times for health care services and enjoy a high degree of timely access to care, which is a key measure of responsiveness for any health system. For example, wait times for joint replacement in Canada range from months to years and "often exceed the optimal time for many patients."[6] In Taiwan the average wait times for a total hip replacement and a knee replacement are twelve and eighteen days, respectively.[7]

Measures aimed at protecting access by removing financial barriers, especially for the sick and disadvantaged, include premium subsidies for the poor and relief loans and installment payment plans for premiums for the near-poor or people who are temporarily unemployed. There are also copayment exemptions for thirty catastrophic illnesses or conditions; prenatal care and delivery; preventive health services; medical services in remote, mountainous areas and on offshore islands; and low-income households, veterans, and children under age three. Copay ceilings further safeguard access to care.

Finally, an integrated delivery system, established in 1999, delivers health care—including twenty-four-hour emergency service and evening and overnight outpatient care—to over 400,000 residents of Taiwan's forty-eight mountainous areas and offshore islands via medical personnel from twenty NHI contract hospitals who rotate in and out of these areas.[4]

New drugs are often not introduced in Taiwan until two years after their introduction in the United States. For expensive drugs, the delay can be up to five years.[5]

ENROLLMENT AND ADMINISTRATION An enrollment mandate applies to all citizens and foreign nationals living in Taiwan for longer than four months. Enrollment is simple and straightforward, with the NHI serving as the single insurer and thus forming a single risk pool. One flat premium rate and a uniform enrollment process apply to everyone, regardless of sex, age, health, or employment status.

As of 2013 over 99.9 percent of Taiwan's 23.4 million residents were insured. Only 40,000 people were uninsured—mostly Taiwanese living overseas permanently, who are exempt from enrollment (Wen-Ta Chiu, minister of health, Taiwan, personal communication, February 26, 2013).

The NHI is administered by the government-run National Health Insurance Administration, under the Ministry of Health and Welfare. As the single purchaser, the National Health Insurance Administration wields considerable monopsonistic power over the providers of health care.

FINANCING A national health system may be financed by taxes, premiums, out-of-pocket payments, or some combination of the three. From the NHI's inception in 1995 to 2012, Taiwan used premium financing, with premiums derived from regular (primary) payroll income, which constitutes approximately 60 percent of Taiwan's total national income.[8] However, government premium subsidies based on general taxation for certain population groups play a role in the NHI's overall financing.

The NHI premium base proved insufficient to meet the program's expenditure growth. This led to periods of serious financial imbalances, which threatened the stability and sustainability of the system. In addition, purely payroll-based financing was deemed to be inequitable.

Thus, in January 2013 a supplemental premium scheme based on six sources of income not based on a regular payroll—bonuses, professional fees, pay for second jobs, interest, dividends, and rents—was introduced as an important part of a major reform known as the Second-Generation National Health Insurance reform. The new premium base draws on over 90 percent of Taiwan's total national income,[8] which is a significant improvement in the fairness of financial contribution based on people's ability to pay. In 2014 the insured, employers, and the government contributed 36.92 percent, 29.30 percent,

and 33.78 percent, respectively, of the premiums for the NHI.[9]

The current monthly premiums consist of a flat rate of 4.91 percent of the insured person's wages or salary and supplemental non-payroll-based premiums, at a flat rate of 2 percent. For both types of premiums, ceilings and floors apply. For example, any amount of a monthly salary in excess of US $6,067 and the first US $166 of monthly income from a second job are exempt.[4]

The NHI levies premiums per capita, up to a maximum of three dependents (children and elderly parents) per household. Families with dependents thus pay more in premiums.

People insured by the NHI are categorized into six population groups, based mainly on occupational status (Exhibit 1). Premiums are levied on members of the six groups that make up the program's insurance pool. There are government subsidies in varying amounts for members of each group.

DELIVERY SYSTEM Taiwan's health care delivery system is a mixture of private nonprofit and government-owned hospitals, private clinics, and other health care facilities. For-profit hospitals are not allowed in Taiwan. However, many nonprofits behave as if they were for profit: They compete fiercely to maximize their revenues and profits.

Compared to countries in the Organization for Economic Cooperation and Development (OECD), excluding Japan and South Korea, Taiwan has a much higher number of beds per 1,000 population, as a result of hospital capacity expansion in response to competition (Exhibit 2).

Taiwan also has much lower numbers of doctors and nurses per 1,000 population compared to other OECD countries (Exhibit 2): The doctor-population ratio in Taiwan is 58.6 percent that of the median in OECD countries (3.0 per 1,000 population in 2010).[8] Taiwan's government limits the number of graduates from medical schools to 1,300 a year, a policy decision Taiwan's physician associations agree with. Hospitals keep nurse staffing ratios low to save costs.

PAYING PROVIDERS Taiwan's providers derive revenues from three sources: NHI payments, copays by patients, and the sale of services and products not covered by the NHI. Fee-for-service is the predominant payment method for pro-

EXHIBIT 1

Taiwan's National Health Insurance Premium Contribution Percentages, By Population Group

Group (percent of population)		Contribution (%)		
		Insured	Employer	Government
GROUP 1 (53.76)				
Civil servants, volunteer servicemen, public office holders	Insured and dependents	30	70	0
Private school teachers	Insured and dependents	30	35	35
Employees of publicly or privately owned enterprises or institutions	Insured and dependents	30	60	10
Employers, self-employed professionals, technical specialists	Insured and dependents	100	0	0
GROUP 2 (17.08)				
Occupation union members, foreign crew members	Insured and dependents	60	0	40
GROUP 3 (11.85)				
Members of farmers', fishermen's, and irrigation associations	Insured and dependents	30	0	70
GROUP 4 (0.69)				
Military conscripts, alternative servicemen, military school students on scholarships	Insured	0	0	100
Institutionalized convicts	Insured	0	0	100
GROUP 5 (1.34)				
Low-income households	Household members	0	0	100
GROUP 6 (15.28)				
Veterans	Insured	0	0	100
Dependents of veterans	Dependents	30	0	70
Others	Insured and dependents	60	0	40

SOURCE Author's analysis of data from Bureau of National Health Insurance, National Health Insurance in Taiwan (Note 4 in text). **NOTE** "Insured" includes up to three dependents in the household.

viders under the NHI's global budget system. Under an umbrella global budget that covers total NHI expenditures, there are five separate global budgets for the following sectors: hospital care, primary ambulatory care (at independently owned and operated clinics), dental care, traditional Chinese medicine, and renal dialysis.

All providers expand their volume of services to maximize their share of the common budget, making it a classic zero-sum game. This sets off fierce competition for patients, who in a fee-for-service system always "are both objects of human compassion and cash-yielding biological structures."[10]

The National Health Insurance Administration is in the process of expanding diagnosis-related group (DRG) payments to hospitals. As of 2013, 164 DRGs had been introduced, which accounted for 17.36 percent of hospital inpatient payments.[8] As of 2014, 401 of 1,062 DRG items, accounting for 23 percent of total inpatient claims, have been implemented.[11]

The National Health Insurance Administration has pilot programs aimed at improving the quality of outcomes and reducing waste. Examples include pay-for-performance, capitation, family physician–based integrated care, hospital outpatient integrated care, and a plan to improve the quality of postacute care to reduce disability and avoid repeat admissions.[8]

SETTING FEES With input from the National Health Insurance Commission—a thirty-five-member multistakeholder body under the purview of the Ministry of Health and Welfare—the National Health Insurance Administration sets national uniform fees for the five sectoral global budgets, which are paid out quarterly. A basic relative-value schedule for the various services is expressed initially in points, with different point values assigned to different services (for example, the value for a normal vaginal delivery was 36,335 points—approximately US$1,200—in 2010). That schedule is then translated into a monetary fee schedule by valuing one point at NT$1 at the start of each quarter. To keep the lid on global budgets, the administration uses a "quarterly floating NT$–point-value mechanism," under which the value "floats," or is automatically adjusted. The adjustment is usually downward so that total payments to providers each quarter do not exceed the total budget for the quarter.

Quarterly NT$–point values may differ among the five sectors, depending on the total number of points—that is, the sum of all the services provided in the sector for the quarter—billed by the providers within the different sectors against their common budget. For example, from the first quarter of 2007 through the third quarter of 2014, quarterly NT$–point-values ranged from a high of NT$0.992 for the dental sector to lows of NT$0.919 for the hospital sector and NT$0.828 for the renal dialysis sector (Cheng-Hua Lee, deputy director-general of the National Health Insurance Administration, Taiwan, personal communication, November 14, 2014).

Different fee schedules apply to hospitals and clinics, according to which of four categories (levels) they belong to: large hospitals and medical centers, regional hospitals, district hospitals, and clinics. All providers in a single level are paid the same fees. Providers cannot bill patients for more than the fees in the fee schedule except for several devices (for example, special-function intraocular lens implants, drug-eluting stents, and artificial joints and limbs). In those cases, patients can pay extra for their preferred choices.

EXHIBIT 2

Numbers Of Physicians, Nurses, And Hospital Beds Per 1,000 Population In Taiwan And Selected Organization For Economic Cooperation And Development (OECD) Countries, 2012 Or Nearest Year

	Physicians	Nurses	Beds
Taiwan	1.7	5.06	6.9
OECD median	3.2	8.8	4.8
Australia	3.3	10.2	3.8
Canada	2.5	9.4	2.7
France	3.3	9.1	6.3
Germany	4.0	11.3	8.3
Japan	2.3	10.5	13.4
South Korea	2.1	4.8	10.3
Switzerland	3.9	16.6	4.8
United Kingdom	2.8	8.2	2.8
United States	2.5	11.1	3.1

SOURCE Author's analysis of data from the following sources: (1) Second-Generation National Health Insurance Evaluation Commission. [Second-generation National Health Insurance comprehensive evaluation report] (Note 8 in text). (2) OECD. Health policies and data: OECD health statistics 2014—frequently requested data (Note 13 in text).

System Performance

COST CONTAINMENT Before implementation of the NHI, annual growth of national health expenditures in Taiwan averaged in the double-digit range. During the period 1992–95, for example, average annual growth was 13.9 percent.[12] In the years immediately following the NHI's introduction, that growth decreased to 6.0–9.0 percent. Since full implementation of the global budget system in July 2002, annual growth in national health expenditures has slowed further, averaging 3.0–4.5 percent (Ex-

EXHIBIT 3

Growth In Taiwan's National Health Expenditures (NHE), 1992–2013

Year	Growth in NHE (%)	Growth in GDP (%)	NHE as % of GDP
1992	17.37	11.62	4.68
1993	13.55	10.40	4.81
1994	10.74	9.42	4.87
1995	17.33	8.86	5.25
1996	10.84	8.64	5.36
1997	8.29	8.46	5.35
1998	8.87	7.34	5.43
1999	8.14	4.83	5.60
2000	4.26	5.58	5.53
2001	3.67	–2.52	5.88
2002	6.32	4.85	5.96
2003	5.98	2.73	6.15
2004	7.23	6.25	6.21
2005	4.27	3.30	6.26
2006	4.34	4.29	6.27
2007	3.79	5.45	6.17
2008	2.87	–2.25	6.49
2009	5.26	–1.10	6.91
2010	2.61	8.58	6.53
2011	2.57	1.16	6.62
2012	2.75	2.68	6.63
2013	3.21	3.43	6.61

SOURCE Author's analysis of data from the following sources: (1) For 1994–2007: Health Statistical Trends 2010. National Health Expenditure 2010. Department of Health, Taiwan. 2011. Chinese. (2) For 2008–13: Taiwan Ministry of Health and Welfare. [Statistics and trends in health and welfare 2013] (Note 14 in text). **NOTE** GDP is gross domestic product.

hibit 3).[8] For 2015 the National Health Insurance Commission recommended a 3 percent annual growth rate.

Total national health expenditures in Taiwan were 6.63 percent of gross domestic product (GDP) in 2012 (Exhibit 3). This is low when compared to the average of 9.3 percent for OECD countries in the same year.[13]

Per capita health spending in purchasing power parity US dollars in 2012 was $2,668 in Taiwan.[14] In contrast, the average spending in 2012 was $3,484 for the OECD countries and $8,745 for the United States.[14]

In 2013 NHI expenditures accounted for 52.2 percent of Taiwan's national health expenditures. Out-of-pocket spending by the insured accounted for another 35.8 percent.[14] Government public health and general administration expenditures accounted for 6.0 percent, and health care investments (capital formation) accounted for 5.4 percent.[14]

Out-of-pocket spending in Taiwan may appear high at first glance. But according to Huang San-Gui, director-general of the National Health Insurance Administration (personal communications, August 8 and September 4, 2014), only 33.8 percent of reported out-of-pocket spending was for medical expenses associated with office visits and inpatient care in the form of copays and coinsurance. Therefore, out-of-pocket spending in Taiwan associated with necessary health care (such as medical and dental care and drugs) amounted to only 12.1 percent of the national health expenditures in 2012.

OVERCOMING FINANCIAL CRISES Except for the first three years of the NHI's operations, the program's expenditures have typically outstripped revenues. In the period 1996–2008, its revenues increased at an average annual rate of 4.34 percent, compared to a rate of 5.33 percent for its expenditures.[15]

To make the budget balance, NHI officials resorted to both supply- and demand-side measures. These included higher copays for certain types of health care visits, drugs, inpatient care, lab tests, and examinations; the sale of lottery tickets; higher tobacco taxes; and borrowing from banks.[1] Costs were reduced by cutting drug prices; introducing a sliding scale of payments for outpatient visits if providers exceeded the "reasonable" number of patients seen; stepping up claims reviews; eliminating subsidies for medical education; introducing DRGs for hospitals; and, ultimately, global budgeting, a measure proven to be effective for cost containment in OECD countries in the 1980s.[1]

These combined measures enabled the National Health Insurance Administration to keep the program in operation, even adding benefits annually. However, in 2009 the NHI's cumulative deficits reached 15.1 percent of its annual revenue.[16]

A long-overdue premium rate increase in 2010, only the second in the NHI's history, ultimately restored the program's financial balance. The increase eliminated all deficits by 2012 and enabled the NHI to begin accumulating healthy surpluses. As of October 31, 2014, cumulative surpluses amounted to 27 percent of the program's expenditures for the first ten months in 2014, or 2.7 times the monthly expenditure in 2014.[16] The NHI's sound financial status is expected to last through 2016 or 2017.

ADMINISTRATIVE SIMPLICITY In 2014 the National Health Insurance Administration's staff of 2,958 administered the program for Taiwan's population of 23.4 million.[8] Because the system uses a common nomenclature—that is, standard names for the various procedures performed by all providers of health care—it is easy to use modern health information technology (IT) to administer the NHI efficiently. In 2014 the Taiwan NHI administrative budget was only 1.07 percent of the program's expenditures.[8]

SATISFACTION OF THE PUBLIC AND PROVIDERS The NHI's public satisfaction ratings have been

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consistently high—around 80 percent in recent years.[8] Comprehensive benefits, low premiums, low copays, easy accessibility, free choice of providers, and virtually no waiting times explain the high ratings.[8] Public satisfaction with the NHI declined when the first premium rate increase took effect in 2002 and again in 2006, when a second premium rate increase was being considered. But both times public approval ratings recovered quickly.[4]

However, doctors in Taiwan, especially those based in hospitals, complain about being overworked and underpaid. These are common complaints from doctors in most countries. Nonetheless, doctors in Taiwan do work extremely hard, including seeing patients at night and on weekends. A 2013 study by researchers in Taiwan reported both high incidence of burnout ("emotional exhaustion") and high risk of malpractice among Taiwan's doctors.[17]

In recent years, serious doctor shortages have developed in four medical specialties[8]—internal medicine, surgery, pediatric medicine, and obstetrics and gynecology—as a result of discontent with the NHI's fee schedules, long hours, and prospects of malpractice suits. The program also faces serious nurse shortages.

INFORMATION TECHNOLOGY Taiwan's government invested in building a strong IT infrastructure at the NHI's inception. All claims are filed and processed electronically. The National Health Insurance Administration's automated IT-supported claims review checks for the overall appropriateness of claims. It also selects a small percentage of all claims for individual professional review by clinical experts.

Everyone in Taiwan carries an NHI card. The card has a memory chip that stores personal information, including the past six visits to health care providers, diagnoses, prescriptions, and allergies; and public health (vaccinations and organ donation and do-not-resuscitate instructions) and insurance data. The card makes seeing a doctor at a clinic or hospital as convenient as shopping in a mall with a credit card.

The patient presents the card at a clinic or hospital, and the provider swipes it through a card reader, along with the provider's own card. Data are transmitted to the National Health Insurance Administration instantly.

Providers are required to report to the administration all services delivered daily, by patient. This allows the administration to perform detailed profiling of both patients and providers.[5] The administration thus knows utilization and costs for the entire health care system in almost real time. Such rapid data transmission also makes it possible to efficiently detect and monitor public health emergencies—for example, cases of severe acute respiratory syndrome (SARS) in 2003 and of H1N1 flu in 2009.

In 2014 the National Health Insurance Administration implemented two IT initiatives aimed at improving quality and reducing the information asymmetry between patient and provider, so that patients could better manage their health care. The first initiative, which the administration dubbed the Pharma-Cloud program, aims to improve patient safety by enabling the prescribing physician to check for potential adverse reactions among multiple drugs prescribed by different doctors and to avoid duplication of prescriptions.

The second initiative is the "My-Health-Bank" book, a personal health record book that contains the patient's complete medical history for the past year and that can be downloaded from the Internet and updated at any time. As of November 2014 more than 443,000 Taiwanese had obtained a personal identification number—which is required to safeguard patient privacy—to access their records online and download the information into their "My-Health-Bank" book.[18]

HEALTH OUTCOMES As of 2013 life expectancy in Taiwan was 76.69 years for men and 83.25 years for women.[19] The figures for the United States in 2011 were 76.3 for men and 81.1 for women.[13]

Researchers in Taiwan have found a positive correlation between better access to health care and improved population health outcomes. One study showed that life expectancy increased 1.8 years in the ten years before the implementation of the NHI, and 2.9 years in the ten years after it. The increase was greater among people in less-than-perfect health.[8]

A 2010 study showed that the NHI has been associated with a reduction in deaths from amenable causes—that is, deaths avoidable through

access to timely and effective health care—in Taiwan.[20] Deaths from amenable causes had been declining between 1981 and 1993, but the decline slowed between 1993 and 1996. Following the NHI implementation in 1995, the decline in deaths from amenable causes accelerated significantly, reaching 5.83 percent per year between 1996 and 1999.

Challenges

Overall, Taiwan can be justly proud of what its National Health Insurance has achieved in terms of safeguarding and improving the health of the Taiwanese population, and of the peace of mind that citizens enjoy when comprehensive health insurance coverage protects them from financial shocks due to illness. However, certain tasks and some future challenges remain.

POPULATION AGING Taiwan's population is aging rapidly. The cost of health care for the elderly accounted for 34 percent of NHI spending in 2011, when only 11 percent of the population was ages sixty-five or older.[8] According to government statistics, in 2015, 12.5 percent of Taiwan's population will be in this age group. That percentage will increase to 24.1 percent by 2030 and to 36.9 percent by 2050.[18] The share of spending for health care for the elderly will increase apace.

LONGER-TERM FINANCIAL SUSTAINABILITY In addition to the aging population, other factors will continue to put financial pressure on the NHI: the increase in noncommunicable disease, the introduction of expensive new technology, and the population's rising expectations.

There is room to expand the NHI's premium base. In September 2014 a major government report that evaluated the performance of the second-generation NHI so far recommended that additional sources of income be added to the premium base to increase the NHI's revenue and fairness in financial contribution.[8]

Taiwan's health spending as a percentage of GDP is low by international standards, considering its relatively high GDP per capita (US purchasing power parity $41,539) in 2013.[21] Taiwan therefore appears to have enough economic elbow room to improve the economic and clinical performance of the NHI system.

PAYMENT-INDUCED DISTORTIONS As of 2014, people in Taiwan had 11.05–12.07 outpatient visits per year, excluding visits for dental care and traditional Chinese medicine.[8] These visits tend to be short, usually under five minutes. The number of annual visits is lower than in Japan (13.0 visits in 2011) and South Korea (14.3 visits in 2012),[12] but much higher than in most other OECD countries (OECD median: 6.6 visits in 2011).[13] The low fees paid by the National Health Insurance Administration to providers and fierce competition among providers contribute to the high numbers of visits in Taiwan.

Taiwan's case illustrates that health policy makers should not miss windows of opportunity for major health reform.

In addition, the manner in which hospitals pay staff physicians affects the number of visits. A significant part of staff physicians' salary is a percentage of the money they generate for the hospital in the form of payments from the National Health Insurance Administration, copays from patients for insured services, and out-of-pocket payments for services not covered by the NHI.

The easy access that patients have to physicians drives up visit rates from the demand side. It is the age-old "moral hazard" problem that is inherent in all health insurance contracts, especially if fee-for-service is the predominant payment method.

Reforming the payment system to eliminate or at least reduce these distortions remains a major challenge for the future. Taiwan and other nations can learn from current efforts at payment reform in the United States—for example, demonstration projects now under way for bundled payments that cover entire defined episodes of health care and the Alternative Quality Contract implemented by Blue Cross Blue Shield of Massachusetts.[22]

SUBSTANDARD ADMINISTRATIVE BUDGET The extremely low administrative budget for the National Health Insurance Administration—as noted above, a mere 1.07 percent of the NHI's expenditures in 2014[8]—has forced the administration to be highly efficient in managing Taiwan's NHI program. But that budget severely constrains funding for other tasks, including continuous recalibrations of the fee schedules in light of evolving medical technology, health services research by academics or researchers in think tanks, health care technology assessment, workforce planning, more general payment reform (for example, a move to bundled pay-

ments), and continuously upgrading the IT system. The administrative budget has been declining over the years (Exhibit 4). Taiwan's government has recognized this deficiency, concluding in its 2014 evaluation of the second-generation NHI that the program's administrative budget is "seriously low for the proper administration of the National Health Insurance."[8(p236)]

Lessons Learned

Taiwan offers lessons for other nations, especially emerging-market countries that aspire to equitable universal health care.

The most important lesson of Taiwan's experience is that the single-payer approach can offer all citizens timely and affordable access to needed health care on equal terms, regardless of the patient's social, economic, and health status; sex; age; place of residence; and employment status.

A second lesson is that a single-payer model such as Taiwan's can control costs effectively. It is administratively simple and inexpensive and is the ideal platform for a powerful health IT system. It also facilitates global budgeting, if that is the only way to keep health spending in line with the growth of GDP.

A third lesson is the importance of investing heavily, up front, in a modern IT infrastructure. A modern IT system such as Taiwan's allows the government to have information about health utilization and spending in almost real time.

Fourth, Taiwan's case illustrates that health policy makers should not miss windows of opportunity for major health reform. Enabling factors include rapid economic growth, which makes it easier to redistribute resources; strong popular demand for reform; strong political leadership; a broad social and political consensus on the ethical principles that guide the health system; and the availability of a cadre of competent civil servants motivated and able to implement reform.

Lessons For The United States

Taiwan's experience demonstrates that with competence and goodwill, the challenge of adding a large influx of newly insured citizens can be met. Health systems appear to be adaptive, and the case of Taiwan illustrates that incremental improvements on reform are possible.

Taiwan's experience also might induce Americans to think more deeply about the term *freedom of choice*. In health care, freedom of choice could mean choice among health insurance carriers and health insurance contracts, choice among health care providers, or both. For Taiwan's citizens, freedom of choice among providers of health care trumped freedom of choice among insurance carriers and contracts. These citizens' high satisfaction with their health system suggests that they still endorse that choice. By contrast, in the United States freedom of choice among insurance carriers and products ranks above freedom of choice among health care providers, which often is limited to narrow networks of providers.

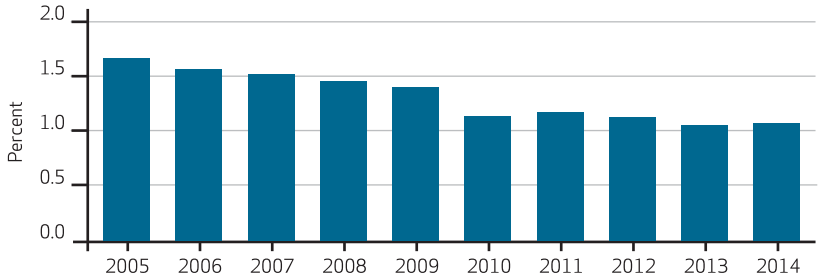
A growing body of literature has shown that by international standards, enormous human resources are used in the United States to facilitate choice among insurers and insurance products, process claims, and annually negotiate a payment system that results in rampant and bewildering price discrimination.[23] Relative to the less complex health systems elsewhere in the industrialized world, the US system is a poor platform for the effective use of modern health IT.

According to a recent report by the Institute of Medicine, the US system has excessive administrative costs that in 2009 amounted to $190 billion.[24] That is more than it would cost to attain true universal health care in the United States.[25]

It is not this author's role to prescribe what Americans should or should not do in regard to freedom of choice. But it is appropriate to invite readers to think more deeply about the relative benefits and costs of their choices. It is remarkable that in cross-national surveys, Americans have consistently given their health care delivery system relatively high marks, but their health system relatively poor ones.[26] ■

EXHIBIT 4

Administrative Expenses As Percentage Of Total National Health Insurance Expenditures, 2005–14



SOURCE Author's analysis of data from the National Health Insurance Administration, Taiwan.

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