

# *Towards the Establishment and Promotion of Health Economics Research in Japan*

Aki Yoshikawa

William Vogt

Jim Hahn

Jayanta Bhattacharya

Aki Yoshikawa, Ph.D., is the Associate Director of the Comparative Health Care Policy Research Project, Asia/Pacific Research Center, Stanford University.

William Vogt is a doctoral candidate at the Department of Economics, Stanford University. Jim Hahn, Ph.D., is an Assistant Professor at the Department of Health Policy and Administration, School of Public Health, University of North Carolina at Chapel Hill. Jayanta Bhattacharya is a medical student at the School of Medicine, Stanford University and a doctoral candidate at the Department of Economics, Stanford University. All four are members of the Econ Group at the Comparative Health Care Policy Research Project, Asia/Pacific Research Center, Stanford University.

## Abstract

The Japanese government should be commended for establishing the Institute of Health Economics and Policy. The study of Health Economics has been long in forthcoming in Japan and hopefully, through this effort, more recognition and attention will be given to this growing field, already acknowledged for several decades in other countries like the U.S Issues which could hinder the success of the Institute are restrictions on data and research and limited recognition of the field by those outside the Institute.

Keywords: Health economics, comparative health care studies,  
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## I . Introduction

Over the last few decades, health economics has emerged as a vibrant discipline in the U.S and Europe. The rising interest in health economics has been driven by both the rising importance of service in developed countries and also by the perceived need to control the rising cost of health care. The rise of health economics has fostered a variety of new and exciting interactions between government, industry, and academia, as governments, payers and providers have drawn upon economists' thinking on such subjects as cost-benefit analysis, the theories of moral hazard and adverse selection, and imperfections in insurance markets. These interactions have led to many substantive changes in policy and, even more importantly, in how policy debates are founded.

With the establishment of the Japanese Institute of Health Economics and the Japanese Journal of Health Economics and Policy, we are hopeful that the benefits of active, robust, and rigorous economic inquiry will take root and grow in Japan. Furthermore, we are hopeful that a collaborative approach will be adopted in the development of health economics in Japan. Collaboration with colleagues in other countries should be the watchword of Japanese health economics for three reasons. First, many of the tools which have been honed in the U.S. and Europe by health economists will be of great use to Japanese researchers as well. To derive the greatest benefit from these tools, interchanges between Japanese and foreign health economists is critical. Second, to ensure the highest quality and most rigorous research, a wide and knowledgeable audience should be sought for work in Japanese health economics. Third, often the most interesting insights into the workings of a complex system (such as health care) arise from comparisons of separate and disparate systems. Thus, some of the most powerful insights in Japanese health economics are likely to come via comparisons and contrasts with other systems.

Our purpose in this paper is two-fold. First, we wish to raise our voices in support of the establishment of the Institute. We are thrilled to see the burgeoning interest in health economics in Japan, and we believe that institutionalizing this interest provides truly exciting opportunities for new contributions to the developing understanding of health systems. Second, we wish to offer our suggestions pertaining to the structures and functions the Institute should adopt to best achieve its lofty goals.

In Section II, we express our excitement towards establishment of the Institute and propose some ways to promote health economics in Japan. If this discipline is to be accepted, it is critical for others to understand why health economics is important. We must promote a research environment which maximizes academic freedom. In Section III, we provide an overview of health economics research at Stanford, giving

special attention to the University's Comparative Health Care Policy Research Project which was established in 1990. The Project's experiences may provide some useful insight into future U.S.-Japan joint projects and health economic studies using Japanese data. We would be very pleased if our experiences can help the Institute better understand what is necessary to quickly initiate a successful research effort.

## II . Mission of Promoting Health Economics in Japan

The Institute's statement of purpose begins by declaring that theoretical research and analysis of health economics and health care policy in Japan have not developed enough to affect the decisions of health care policy makers or managers of the medical insurance system. The Institute attempts to address this problem by promoting the study of health economics. The mission of the Institute is ambitious, exciting and constructive. The Institute will attempt to establish an academic discipline, "health economics," which, strictly speaking, does not yet exist in Japan. This is in contrast to many other countries including the U.S., Canada, and U.K. where there are many health economists. It is ironic that Japan is doing a good job of providing universal care and containing costs without health economists while the United States is not achieving either of these goals, despite an army of health economists! It is important for government officials to realize that the findings of health economists will not always compliment their decisions, but rather, as we elaborate below, may create a formidable, but ultimately healthy and constructive, challenge to policy makers. The contribution of health economists is to enlighten the debate so that policy can be formed using the best information available.

The establishment of health economics research in Japan is important. Hopefully, with the founding of the Institute, a tradition of open inquiry and rigorous analysis will begin in the health care field in Japan. The establishment of the Institute provides a benchmark for the birth of a new research field, in itself a great achievement. However, the true challenge is not merely the birth of the field, but stimulating and guiding the growth of research and ensuring sustained interest.

For this challenge to be met successfully, there are several conditions which must prevail in Japan. Namely, data must be readily available to researchers, a *laissez-faire* research environment must exist, and interaction between policy-makers and researchers must be promoted. To attract enthusiastic researchers to any field, these conditions must be met and because health economics is so new in Japan, it is especially critical. Researchers are unlikely to commit to a field that has data and research restrictions and that has negligible impact and respect from the government.

## Data Availability

The absence of health economics research in Japan has been mainly due to a lack of interest among economists to study the health care field. This lack of interest has been partially caused by the unavailability of interesting data (specifically micro data) in Japan. Some have argued that providing micro data may jeopardize the confidentiality of patients. However, countries that release individual data for research purposes every effort to protect patient confidentiality and have had success in doing so. Thus, although patient confidentiality is critical, it should not obstruct scientific study since it is possible to achieve both simultaneously. The Institute claims that one of its main responsibilities is “collecting information on Health Economics and distributing it to the members.” This is a critical step in promoting health economics. Otherwise, Japanese economists will not be attracted to the health economics field and will continue to study other fields such as international trade and finance.

As we mention above, Japanese micro data are not currently available to researchers. At the moment, only aggregated data in published government reports, such as Kanja Chosa (Patient Survey), Shakai Iryo Shinryokouibetsu Chosa Hokoku (Point Survey), and Iryo Shisetsu Chosa (Facility Survey), are available. We strongly hope that the Institute will provide health researchers with access to Japanese micro data, such as individual data collected in the above mentioned surveys. Access to such data is crucial in conducting “exciting” health economic studies. Such studies allow researchers to investigate critical questions addressing the structure and performance of the Japanese health care system. Furthermore, we hope that access to data will not be limited to “members” of the Institute. To do so would only create another restriction which would be counter-productive to the Institute’s goal of promoting health economics as an exciting academic field within Japan. The availability of such data and the possibilities for research studies would also go a long way towards generating interest in the Japanese health care system among health economists outside of Japan.

Access to data is powerful and it will undoubtedly stimulate interest among innovative economists. To provide such important data to a limited group would certainly create bias in research and lead to questions of integrity. As stated, the ambition of the Institute is to create a new academic discipline, “health economics.” The availability of data should be used as an incentive to attract economists rather than to restrict them from the field. Those who restrict access to data are often accused of favoritism and will be strongly criticized both domestically and abroad. Data should be made available to researchers without prejudice, namely, the Institute should adopt an “open data” policy. In order to do so, the official publication of the Institute, *Journal of Health Economics and Policy*, should consider adopting a policy to make data from

published articles available to other researchers. One example of a publication which honors such a policy is the Journal of Human Resources which states, "Authors of accepted manuscripts will be asked to make their data available to other analysts from a date six months after JHR publication for a period of three years thereafter." Such a policy ensures the integrity of the published work and will go a long way towards establishing respect for the field.

### **Laissez-faire Research Environment**

Health economics must be conducted in a laissez-faire environment, with researchers having unlimited freedom to choose the topics of study and generous access to data. As economists, our job is to challenge and critique conventional wisdom and to test our hypotheses in an analytical manner. Clearly, we believe that our contributions can be highly valuable. However, if we are not allowed to formulate and evaluate unconventional hypotheses and are restricted from access to data, any attempt to improve the level of knowledge and understanding of the Japanese health care system would be seriously compromised if not futile.

Two of the most powerful groups in any health care system are doctors and bureaucrats. This is true in many countries, but especially so in Japan. Therefore, perhaps it is not surprising that some of the most formidable challengers to health economists are doctors and bureaucrats. There is a joke that says doctors only acknowledge three classes: doctors, patients, and pharmaceutical salesmen. Whether or not the joke has a semblance of truth, it is arguable that traditionally, doctors have rarely been challenged by anyone with regards to their medical decisions. Therefore, it is not surprising that economists tend to offend doctors when they question what doctors believe to be "conventional wisdom." In Japan, doctors, still heavily swayed by their traditional hierarchy, often do not acknowledge the opinions of health economists. In the United States, leading health economists such as Victor Fuchs and Alain Enthoven fought to convince doctors of the valuable contributions of health economics several decades ago. Without such predecessors, Japanese economists must start a similar struggle today.

Economists also challenge bureaucratic authority. Japanese bureaucrats have strong political influence and perform a wide variety of duties. Within the Japanese system, they are the policy-makers who introduce new laws and regulations as well as the enforcers of these same laws and regulations. Therefore, they must also defend existing policies against criticism. In addition, they occasionally act as reformers who introduce new concept, such as improving care for the elderly. Unfortunately, these same bureaucrats who hold such political power, also control access to data. So, the situation in Japan is: the same bureaucrats who do not want direct challenges to their policies also hold the key to potential

challenges. However, an active interchange which continually seeks to find answers to difficult questions and better ways to achieve shared goals is critical to the improvement of a system as important and complex as the Japanese health care system.

It is easy to see inherent difficulties and barriers to conducting empirical health economic research in Japan. Academics question the validity of current policies, but also dispute the feasibility and desirability of reform. When Koseisho presents its “visions” for the future, academics pose a myriad of questions. Few people in positions of authority like to be asked many questions. If economists challenge seemingly conventional wisdom by aggressively conducting empirical research which strives to shed new light on established beliefs, we are certain that sooner or later, some economists will succeed in offending government officials. Therefore, restricting data from economic researchers may be understandably tempting to those who want to avoid intensive opposition. However, as researchers and academics, our intent is to seek a new and better understanding and to create knowledge, regardless of whether it contradicts or supports established policies.

By conducting health economics research, it is inevitable that economists will invade the “sacred ground” of bureaucrats and doctors. Economists consider it to be their responsibility to ask tough questions and to challenge conventional wisdom. Unfortunately, these challenges to conventional wisdom may be interpreted as direct challenges to the authority of doctors and policy-makers who are consequently offended by such questioning. We prefer to emphasize the contribution to knowledge gained through empirical research and its role in helping doctors and policy makers to be better informed decision makers.

Alain Enthoven once said “those of us [meaning economists] who believe in pricing control should return their doctorate degree in economics to their universities.” He said this somewhat jokingly, however, this is not entirely untrue. As economists, most of us strongly believe in the market mechanism, and regard price setting (e.g. on pharmaceutical prices) by authorities as unfavorable. Using empirical data, health economists may find many negative side effects of Japanese pricing control. They will pose tough challenges to policy-makers who endorse price controls and it is these challenges, backed by empirical research, that policy-makers and doctors are unwilling to face.

The Institute, in its efforts to establish and promote health economics in Japan, should adopt an open data policy and promote an environment of wide academic freedom to economists. Some of the studies conducted by economists will surely anger either policy makers or doctors if not both. However, this potential adversity should not prevent the growth of a very exciting and useful academic field and foreclose the contributions the field has to offer.

## Promoting Policy Debate

As an example of how health economics can have constructive effects on policy, we offer the following example from the U.S. In December 1993, several weeks after the unveiling of President Clinton's Health Care Reform Bill, a group of economists gathered in Princeton, New Jersey, and organized a two-day conference for the purpose of debating the President's proposal from an economic angle. The meeting was sponsored by the Robert Wood Johnson Foundation and hosted by the Princeton University. Many prominent economists, including both supporters and opponents of Clinton's Plan, attended.

Ira Magaziner, the White House's Senior Advisor for Policy Development, presented the view of the administration, and was promptly challenged by Professor Enthoven. Government economists, such as Alice Rivlin, Deputy Director of the Office of Management and Budget, defended the administration's plan. Spending an afternoon with a group of economists was probably not something Mr. Magaziner relished, but the important facts were (1) there was an opportunity for economists to debate the merits and shortcomings of the health care plan, and (2) Mr. Magaziner participated in the debate. Papers presented in the debate were published in *Health Affairs*. Similarly, the newly established Institute can provide a forum for health researchers to debate policies. In addition, those who analyze the micro data can provide useful information to policy makers about the implications of their projects.

## III. Research at Stanford University

### Health Economics Studies at Stanford University

Stanford University is home to a number of very prominent economists working on issues related to health economics. Some focus exclusively on the field while a significant number of others conduct research in health economics as a component of applied economics research. Because of the substantial amount of data accessible to researchers, many graduate students in economics also choose to write doctoral dissertations in the field of health economics. Unlike the Japanese government, both federal and state governments in the U.S. have provided economists with almost unlimited access to data.

American health economists are indebted to a number of talented researchers who shaped health economics into a prominent and highly regarded field. Without such strong predecessors, students of health economics would still face obstacles in obtaining data and conducting research. Several of these innovative researchers are at Stanford today. One of the most prominent members of the University is Kenneth

Arrow, winner of the 1972 Nobel Prize in Economics. His paper, "Uncertainty and the Welfare Economics of Medical Care"<sup>1</sup> continues to be recognized as one of the seminal works in health economics.

Also at Stanford are two of today's most eminent health economists, Victor Fuchs and Alain Enthoven. Fuchs, currently president of the American Economic Association (AEA), is a prolific author, having published numerous books, including The Future of Health Policy<sup>2</sup> and The Health Economy<sup>3</sup>. He is equally well-known for his journal articles, some of which have sparked controversy. One example is his model of physical-induced demand for medical care<sup>4</sup>. Fuchs is also a popular professor on campus; he teaches a class entitled "Economics of Health and Medical Care" which invariably draws a large number of both undergraduate and graduate students. Fuchs challenges his students and encourages classroom discussion.

Since both economics and medical students enroll in his class, many lively debates are held between those who believe in and those who doubt the significance of economics in the field of health care. This year, Fuchs was the keynote speaker at the graduation ceremony for the Department of Economics. Both students and family alike appreciated his insightful speech on the current health care debate.

Professor Alain Enthoven is widely known as the "father of managed competition." Today, he is recognized as one of the most formidable opponents to Clinton's health care reform. He has had numerous unique experiences, reaching beyond academia. Under the Kennedy and Johnson administrations, he served in top positions at the Department of Defense. Asked if there were any similarities between being in the Pentagon and being a health economist, his wry response was that the two experiences were essentially the same. In the Pentagon, he fought with generals in uniforms who have little respect for civilians. Now, in trying to reform the health care system, he fights doctors in white uniforms who have little respect for economists. Enthoven has also probed the business world as a the manager of a health care company. Therefore, having the experience of being a top government official, business executive, and academic, Enthoven is very influential in policy-making. In fact, many of the current health care bills, such as the President's Plan, Cooper's Plan, and Chafee's Plan all use elements from Enthoven's idea of managed competition. On campus, he is a popular professor at the Graduate School of Business and many students attempt to enroll or audit his classes. Enthoven directs a special MBA program offered to those with a medical background. By providing MBA training to doctors, Enthoven has envisions of creating a platoon of highly proficient health researchers who will direct the future health care system. However, he once lamented that too many of those with joint MD/MBA degrees become venture capitalists and leave the field of medicine and health research.

Today, there is a new class of technically oriented health economists. Alan Garber

has distinguished himself in this new class. With both a medical degree and a doctoral degree in economics, Garber is currently an Associate Professor at the Stanford Medical School. Therefore, he has the distinction of being one of the few economists who can actually touch patients. With his unique background, he has a definite advantage over other economists---he is able enter the sacred ground of physicians. One of his best-known works is an empirical study he did with Victor Fuchs, comparing doctors who are professors at the medical school and doctors who practice in the community<sup>5</sup>. He wanted to see if there is a significant difference between the two groups of doctors in terms of outcome, cost, and intensity of their practice. Controlling case mix, he found that doctors on the medical school faculty provide more intensive and costly treatment than community doctors. However, there was little difference in terms of outcome. This discovery apparently upset some of the Stanford faculty. Furthermore, Garber has conducted very technical studies, including one with Thomas MaCurdy, a well-known health economist and econometrician, entitled "Nursing Home Discharges and Exhaustion of Medicare Benefits."<sup>6</sup> Garber has also provides academic advice to various policy-making groups, including the Office of Technology Assessment(OTA).

#### **Comparative Health Care Policy Research Project**

The Comparative Health Care Policy Research Project was initiated at Stanford University in 1990 with the cooperation and support of the Japanese Ministry of Health and Welfare(Koseisho). Building on Stanford's long and distinguished record of research in medicine and health issues, the purpose of the project is to make the study of Japan an integral part of international comparative health policy research at the University, and in turn, to make Stanford a leading center on Japanese health policy in the United States. The goal is to see what experiences and policy recommendations might be shared internationally, as all nations grapple with the growing importance and challenge of providing effective yet affordable health care. The Asia/Pacific Research Center(A/PARC) serves as the administrative home for the project. The Director of the Project is Daniel Okimoto and the Deputy Director is Alan Garber. Members of the board of directors for the Project include Alain Enthoven and Mark Hlatky, chief of the Division of Health Services Research at Stanford Medical School.

The Project is truly multidisciplinary, since Stanford believes that complex issues related to health care can be best understood if they are examined from a variety of perspectives. To do this, faculty participants have been brought together from the Medical School, Law School, Graduate School of Business, and the Departments of Political Science, Economics and Sociology. Graduate students from these schools and departments serve as research assistants for the project. Also, we were recently joined by Michael Calhoun, former Chief of Staff of the U.S.Department of Health

Human Services.

The two main missions of the Project are (1) to understand the Japanese health care system accurately and to use its experience to improve the U.S. system, and (2) to inform Japanese health researchers and policy makers of the advantages and disadvantages of a market oriented system. Even though many Japanese believe that a market mechanism in the health care system is totally inappropriate, the market mechanism should not be dismissed without further study.

Because of the successes of the program to date, the expanding scope of project activities, and the importance of this timely research, we recently undertook a successful endowment campaign, enabling us to create at Stanford, a permanent center for the comparative study of health care in Japan and the other industrialized nations.

### Initial Challenges

As described above, the Project was established to study the health care systems of different countries, giving special attention to Japan, thereby attempting to provide useful policy implications for U.S. policy-makers. We immediately encountered several major challenges.

To conduct a health care policy study that focuses on Japan, clearly, all members of the research team must have at least basic knowledge about both Japan and health care. Unfortunately, specialists on Japan had very limited background in health care research while most American health care experts were neither familiar with Japan, nor had an interest in learning about the system.

Gaining a thorough understanding of the Japanese health care system in the U.S. was very difficult process, but one which we felt was imperative for a successful U.S.-Japan study of health care policy and economics. A weekly study group was organized and we boldly attempted to understand Japan's health insurance system, its fee schedule, and Japanese hospitals. What is the definition and actual function of Japanese hospitals, *byoin*, and differences with American hospitals? What is *iryō-hojin*? What are difference between hospitals and clinics? What are geriatric (*rojin byoin*) hospitals?

We are indebted to our Japanese friends for their selfless support and encouragement. Many of our tutors were Koseisho officials stationed in the U.S. We would like to acknowledge the imperative contributions of Yasuhiro Fujii, Junichi Shiraishi, and Shiro Yamasaki, Toshihiko Takeda, and Nobuyuki Takakura. In addition, we organized monthly informative seminars to further learn about the Japanese system.

Invited speakers included: Professor Shigekoto Kaihara, University of Tokyo; Dr. Toshitaka Nakahara, Japan Institute of Public Health; Professor Tsuruhiko Nanbu, Gakushuin University; Professor Shigeru Tanaka, Keio University; Professor Ryu Niki, Japan Social Welfare University. Many policy makers from Koseisho also were also invited lecturers: Mr. Masataka Koda, Mr. Ken Shimomura, Mr. Nobuharu Okamitsu, Mr. Masaru Wada, Mr. Akio Ono.

These professors and policy makers, with their first-hand insights and experience, helped us immeasurably. As result of such efforts, researchers at the Project now feel comfortable with the Japanese system and terminology.

The Project recently completed a book, published by Faulkner & Gray, about the Japanese universal insurance system. The book is titled Japan's Health System: Efficiency and Effectiveness in Universal Care<sup>7</sup>. It is a descriptive book on the Japanese health care system, covering a wide range of topics, including health insurance, geriatric health care, and use of medical equipment. The publication of the book represents the culmination of our learning stage. Although it took us two years to become comfortable with the Japanese system, we now believe that we are well prepared to conduct more extensive studies of the system.

One of our main commitments is the comparative study of teaching hospitals in Japan and the United States. We are conducting this study in collaboration with the University of Tokyo. The first phase of the study has already generated two publications, "Performance, Characteristics and Case Mix in Japanese and American Teaching Hospitals,"<sup>8</sup> and Medical Ivory Towers and the High Cost of High Cost of Health Care: A Comparison of Teaching Hospitals in the United States and Japan<sup>9</sup>. We are now conducting the second stage study which are more in-depth analyses of the two university hospitals: University of Tokyo Hospital and Stanford Medical Center. We would especially like to thank the gracious and generous help of Dr. Shiegekoto Kaihara from the University of Tokyo without whom this study would not be possible.

Despite much support from our new Japanese friends and colleagues, we must also mention that we have encountered negative reception from some established health care researchers in Japan. Perhaps they felt we, the inexperienced new-comers, were encroaching on their territory. In fact, our experience with these few, but defensive academics who were accustomed to safeguarding their field, was so grave that we feel it merits a warning from us. While most in the field of academia feel that academic competition fosters new ideas and improves the quality of research, these few academics apparently did not share this idea. It is likely that unless their conservative opinions are changed, the future of health economics is doubtful. They must be convinced that there is much room and need for the ideas and contributions of economists who share the desire to improve the current system through quality

research and constructive debate. Perhaps, especially in the field of health care research, conservative protectionism by these academics exists due to a small number of players. It is a sort of oligopolistic academic equilibrium. We strongly hope that, as the barriers to entry fall, Japanese health economics and the Japanese health system will be the beneficiaries of the resulting academic competition.

Recently, our research and activities have expanded beyond Japan. Today, we are also conducting joint research projects with colleagues in Singapore and France. We found Singapore's system very interesting and with our French colleagues, are planning to conduct health economics research as well as a legal research on issues surrounding hemophiliac AIDS cases. We provide policy consultations to the World Bank, and to various developing nations. Some developing countries find that studying the Japanese experiences, especially those in the 1940s and 1950s, when Japan was struggling to recover from the war and establish universal health insurance, is extremely useful for their own agendas.

Increasingly, we are paying attentions to the ongoing health care debate in the U.S. The Project hosted a debate on Clinton's Health Care Reform in December 1993. Four leading economists, Michael Boskin, Alain Enthoven, Alan Garber, and Peter Stamos debated the advantages and disadvantages of Clinton's Plan<sup>10</sup>. In addition, we are trying to help Japanese health care researchers understand the nature of the American health care debate. Our assistant Director, Mini Nishimura, is authoring a series of interview articles with top American opinion leaders, aimed at the Japanese audience<sup>11</sup>. Ms. Nishimura's book on American health care reform, is scheduled for publication in Japan this autumn.

### **Health Economic Studies at the Project**

Research in health economics is now the primary emphasis at the Project. The Health Economic Project Group (Econ Group) was created within the Project about two years ago. The advice of Alan Garber is a valuable asset for the Econ Group and we have occasionally solicited advice from Japanese economists as well. The Econ Group meets twice a week, cooperating in the design of new models for analyses and discussing recent articles in health economics. Although these weekly meetings are rather informal, upon completion of a paper, the main author is encouraged to present his paper in a more formal seminar offered by the Department of Economics, often attended by about 15 faculty members and graduate students. In such a departmental seminar, each of our research papers undergoes a very stringent academic review. After surviving such a review, the paper is then submitted for journal publication.

Since 1993, we have invited a number of researchers from Japan to join in our Econ Group. Qualifications for such an appointment include having an advanced degree in

economics, with at least one publication in an academic economics journal, and familiarity with empirical research utilizing computer and statistical programs such as SAS and TSP. These visiting economists seem to enjoy the dynamic research environment at Stanford. Japanese economists are relatively unfamiliar with empirical health economic research, and they feel that working with innovative American economists who are very familiar with such empirical research is beneficial. Conversely, Stanford economists also benefit from the visiting Japanese economists since they provide valuable insight into the Japanese health care system.

Stanford researchers are extremely fortunate because the university provides them with very generous use of the mainframe computer system. Each member of the Econ Group has at least 600 MB of memory for his research, and free use of statistical programs such as SAS. Some empirical econometric studies require over 1,000 hours of SAS time to run each regression. Although we occasionally receive complaints from other main frame users, such time consuming research is at least possible at Stanford. This environment gives Stanford researchers a very strong advantage.

The first step we took towards our economics research was to collect various published data sources, such as *Shakai Iryo Shinryokouibetsu Chosa Hokoku*, *Kanja Chosa*, and *Iryo Shisetsu Chosa* which provide aggregated data on the Japanese health care system. Needless to say, the most serious difficulty researchers in Japanese health economics face is not having access to the micro data which economists value most. Of course, some studies may be conducted utilizing aggregated data from published sources. However, it is not possible to conduct some of the more interesting economic studies without micro data.

With aggregated data, one cannot examine many hypotheses in economic models. It is more difficult to publish studies based on aggregate data in prestigious academic journals. Without the chance of such publication, research interest withers. The motto of American academia is "publish or perish" and given the availability of micro data in other fields in applied economics, economists will not long stay in health economics without such data.

### **The Importance of Micro Data**

There are two broad categories of questions which can be most effectively addressed by the use of micro data. The first of these is the behavior of patients. Economists are concerned with the interactions between institutional and individual characteristics in forming patients' incentives. Empirical studies using micro data shed light on how these incentives affect patients' choices and what effects these choices have on variables of interest to policy makers. In particular, suppose one were to find that the effect of price differs by the type of service provided. If price sensitivity is greater for preventive care than for acute care, it might actually be cost increasing to raise

copayment rates across the board, as people substitute away from preventative care and end up using more acute care. In this case, a cost-reducing strategy of increased copayments for acute care only might be appropriate. These substitution patterns can only be precisely estimated with individual-level data.

In fact, many of the variables of primary policy interest are influenced strongly by individual patient decisions. Utilization patterns, geographic variations in resource use, and aggregate expenditures are all driven by individual-level decisions and are thus essentially microeconomic phenomena. Since the important interactions occur at this level, studies which rely upon only aggregate variables will yield, at the very best, an incomplete and imprecise understanding of the underlying structure, this impairs our ability to forecast intelligently the effects of changes in policy instruments, demographics, and institutions.

Other important actors in the health care marketplace include the providers. Our understanding of their behavior is also greatly enhanced by access to data on the behavior of individual providers. Providers affect outcomes of interest through many of their decisions. Virtually all decisions regarding how providers choose to provide care to their patients affect costs, utilization, and quality. One of the most commonly cited culprits in the escalation of medical costs is the diffusion and utilization of new medical technologies. Decisions to acquire and use medical technologies are made by individual hospitals and clinics and are influenced by a number of factors. These include costs, competitive position, and the goals of the institution, all of which may vary substantially across institutions. As above, by restricting researchers' access to micro data, their analyses of these factors are impoverished by the loss of heterogeneity across providers, and their ability to identify causal influences is lost.

There are currently a number of micro data sets collected by the Japanese government which could be used directly to address the kinds of questions we highlight above. Questions regarding the effects of individual patient decisions on costs and utilization could best be addressed with the Kanja Chosa and Shakai Iryo Shinryokouibetsu Chosa Hokoku. Similarly, Iryo Shisetsu Chosa provides the information necessary to perform analyses of provider behavior. Linking these surveys would provide even greater opportunities for exploring the workings of Japan's health system.

#### IV. Conclusion

We have presented a frank view of our enthusiasm as well as some reservation toward the newly established Institute of Health Economics and Policy Research.

The establishment itself represents a milestone in the acceptance of health economics as an academic discipline in Japan. The Institute has the potential to have a positive impact on health research in Japan; this responsibility is great and cannot be taken lightly. Members of the Institute must remember that the ultimate goal of all in the health care field is improving the understanding and function of the system. As all countries struggle to improve health care under severe budget constraints, it seems clear that research done by health economists is both necessary and helpful. Through examining the experiences of U.S. and Stanford in their struggle to develop health economics, we believe the Institute can learn how to best advance health economics in Japan. Clearly, one of the most important factors is stimulating an open research environment.

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