
Editorial

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As an economist exploring the healthcare complex for the last eight years, I have learned a great deal although I still seem to have more questions than answers. While it is not clear how much we, as an economy, can afford and how much we should spend on healthcare, one thing is for sure, resources are limited. As a consequence, it is increasingly pressing for policy makers, executives and researchers to devise finance policies and mechanisms that promote productivity, equality and quality.

Resource allocation, reimbursement and budgeting methodologies are key components in healthcare finance and should not be separated from productivity performance. Resource allocation or reimbursement without considering productivity may reward inefficiency, which in turn results in inequality, poor quality and over consumption of resources. Furthermore, resource allocation, reimbursement and productivity evaluations can hardly be acceptable without reasonable risk adjustment. However, risk adjustment can never be perfect and room for improvement always exists. In short, healthcare finance is a dynamic and complex field.

This special issue is dedicated to promoting communication among policymakers, executives and researchers on these important issues. Thanks to the talented and experienced experts, this special issue is full of insightful and informative papers. Some of the contributors are true pioneers and leaders in the field.

The first paper, by C.A. Knox Lovell, with groundbreaking contributions in the field of productivity analysis, presents us with the tools that healthcare industries can deploy to assess their productivity and identify best practices. This paper also clearly depicts the principles of these methodologies.

Michael Shwartz and Arlene S. Ash, two experts in the field of risk adjustment and outcome evaluations, with their colleague Erol Pekoz, have crystallised the methods and processes of risk adjusted provider profiling. Improving productivity and quality of care requires changes of provider behaviour. Rationally comparing performances and outcomes of the providers is an essential step in materialising behaviour change. This paper provides a valuable roadmap for those who are interested in the field of risk adjustment and outcome evaluations.

Amy K. Rosen, Cindy L. Christiansen and their colleagues hit a home run on mental health risk adjustment. The authors thoroughly compare the performance of the major risk-adjustment methods for mental health patients. This paper will serve as an excellent guide for those who are involved in mental health quality management and resource allocation.

Magnus A. Bjorkgren and Brant E. Fries present a 360-degree view of Resource Utilization Groups (RUG) applications in an international context. This paper analyses the confounding factors that are crucial to the success of applying RUG. The authors also explore the potential of RUG applications in Finland. This paper is a must-read for those who are interested in long-term care quality and finance.

Kenneth D. Smith, Elaine J. Yuen, Andrea Donatini and their colleagues describe a project that was launched to establish a prospective budgeting mechanism for Emilia-Romagna, Italy. This project adopted Disease Staging Groups (DSG) and

developed Chronic Condition Drug Groups for risk adjustment, which provides valuable insight for those who are using DSG and drug information to develop risk adjuster and budgeting systems.

Dean G. Smith, John R.C. Wheeler and Joshua Wynne dug into the real-life practice of physical capital budgeting. The authors interviewed chief financial officers from Michigan's hospital and healthcare systems. The authors unveil the actual methods that hospital and healthcare systems use for physical capital planning and investment.

S. Hamid Fakhraei describes the actual process of restructuring Maryland's Medicaid reimbursement rates. This project compared the Medicaid and Medicare reimbursement rates. In addition, the paper analyses relationships between reimbursement rates and physicians' Medicaid participation rates that were closely associated with medical care access of Medicaid patients. This paper is particularly informative to those States and healthcare systems that intend to adjust their reimbursement rates.

The last paper, combining the latest development in healthcare finance and stochastic frontier analysis, presents a resource allocation framework that has been used since 1999. This framework can be employed by public and private healthcare systems to guide resource allocation and efficiency assessment.

In brief, the papers in this special issue pursue practicability rather than theoretical perfection. These papers render significant contributions to the practice of healthcare resource allocation, reimbursement, productivity evaluation, risk adjustment, provider profiling and quality management. These papers also provide practical insight and methods to reduce practice/geographic variation.

Variation in healthcare resources use is one of the greatest problems policymakers face. Given limited resources, over-use of resources in one area results in under-use in another area. Take USA as an example: Medicare data demonstrates that medical spending varies more than two-fold even after controlling for demographics. Studies on homogeneous patients (for example, those with heart attacks or hip fractures) or on rate of procedure use (for example, MR and CT) have confirmed that the variation is largely independent of patients' medical needs. An average 65-year old in Miami costs Medicare \$50,000 more in lifetime expenditures than in Minneapolis.

However, we need to make it clear: practice variation, inefficiency, supply-induced demand, etc. may not be the biggest problem. Even if 'equitable resource allocation' prevails, geographic variation is minimised and productivity reaches its optimal level, healthcare, as a whole, can still be on a wrong path. This is simply because

- how much should be spent on healthcare is not clear
- how much should be spent on preventive education/care out of the total healthcare expenditure is unknown
- the impact of rising healthcare cost on the health status of the poor is largely ignored where countries lack universal coverage.

In USA, rising healthcare costs constantly hit headlines and increasingly cause labour disputes, sometimes even strikes. During the 2004 Presidential election, polls show that healthcare costs and benefits are the second most important issue. To find a cure for skyrocketing healthcare costs, researches have turned every stone: aging, end of life care, health insurance, income, supplier-induced demand, productivity, public versus private spending, pharmacy and technology. So far, empty-handed: technology has been largely blamed as the main driving force behind the rising cost. In USA healthcare, no one

component has been found disproportionately higher except for pharmacy costs (in 2001, prescription drug costs increased by 15.7% while overall healthcare expenditure increased by 8.7%). However, many argue that more drugs can reduce total cost by keeping the population healthier. According to OECD data, Japan spends approximately twice as much as USA on drugs as a proportion of the total healthcare expenditure while its total expenditure only accounts for 8% of its GDP.

Not only do the Japanese spend a much smaller proportion of GDP on healthcare, but also live 4.4 years longer. That is something that needs looking into. Apart from inefficiencies and wastes in the American healthcare industry, the question is 'does the population have to be that sick?' For example, OECD data shows that 30% of the population of USA is obese compared to only 3% in Japan. A vigorous study published on *Health Affairs* recently reported that the obesity/overweight population incurs 37.4% more cost than those with normal weight. One can imagine what the result would look like if cholesterol and hypertension data were available and studied. Worse still, the prevalence of obesity has an upward trend and is not a USA-only problem. With an alarming pace, China is moving from malnutrition to 'over-nutrition'. If visiting China, you will see over-weight adults and kids everywhere while ten years ago you hardly saw any. Obesity is a major contributor to many chronic ailments, such as diabetes and cardiovascular diseases. Unfortunately, a fat body has been largely perceived as a symbol of healthy living there.

It seems that we all have missed the big picture – how much of total healthcare resources should be spent on preventive education and preventive care? This reminds me of Milton Friedman's story. A man was earnestly searching for something under a street lamp. 'What are you looking for?' Friedman asked. 'My ring, I lost it', the man replied. 'Where did you lose it?' Friedman asked. 'Over there', the man said. 'Why you are looking here if you lost it over there?' Friedman asked. 'It is dark over there and there is light here', the man replied.

Few would deny that, overall, high tech/cost saves lives and improves quality of living. However, this does not automatically meet the Pareto criterion – not everybody is better off. Higher medical care costs force small employers to drop health benefits and drive more low-income families out of the insurance coverage. This is what exactly happened in USA and the situation was augmented over the last couple years by the 2002 recession. But even during the time period between '1994 and 2000, a period of great economic prosperity, the most striking finding is that the uninsured rate was essentially unchanged – 17.3% in 1994 and 17.2% in 2000' as a study by Kaiser Family Foundation and the Urban Institute reported. Furthermore, rising healthcare costs create a financial barrier for the uninsured; thus, inhibiting their ability to seek preventive care and even needed medical care. This, in turn, deteriorates the health status of the uninsured and consequently drives Medicare and Medicaid costs up.

Taken together, we do not know how much should be spent on healthcare, we do not know what portion of the pie should be on preventive education/care, and we do not know the consequences of rising healthcare costs on the economy and the health status of the poor. Nevertheless, healthcare costs have kept going up. Even with a conservative estimate, USA healthcare costs will reach 17% of the GDP in five years. On one hand, none of the interventions (regulation, voluntary action, and even managed care) have been successful in containing costs, on the other hand, we do not know if 17% is too much or too little. A multidisciplinary approach must be taken to untangle these

important and complex issues. One would think that mainstream economists should lead the charge, but they are still on the sideline of healthcare evolution. Titles concerning the burning healthcare issues are rare in the leading economic journals, such as *American Economic Review* and the *Journal of Public Economics*.

Unfortunately, due to a combination of misleading results and unrealistic assumptions, mainstream economic models have been largely ignored by policymakers. For example, economic research agendas and graduate education are dominated by mathematical models that are based on general equilibrium, which feature assumptions, such as, supply equals demand, price equals marginal cost, savings equals investment, and one representative agent. These models have failed to predict, interpret and guide the economy, and they will fail to guide healthcare policy design. One representative agent models based on equilibrium cannot reveal the impact of a change in money supply because of ignoring the effect of redistribution. In the same vein, these models will not shed much light on the impact of rising healthcare costs on the health status of the poor.

If it is not fair to ask how much we should spend on healthcare and how much we can afford, at least we should explore the impact of healthcare costs on other sectors of the economy, for example, what the economic and social structure looks like when healthcare spending reaches, say, 20, 25 and 30% of the GDP. We also need to explore the optimal range if not the optimal point of spending on preventive education/care, and the impact of rising healthcare costs on health status of the poor. From Adam Smith's *Wealth of Nations* to Keynes' *General Theory (The General Theory of Employment, Interest and Money)*, no answers can be found regarding these critical issues. However, the healthcare landscape has fundamentally changed since then and answers are needed now. Mainstream economists are more than capable of systematic thinking and analysing convoluted economic and social issues. If they were to burrow more deeply into real issues, mainstream economists would turn dirt into gold. We all should remember William Vickrey's (died in 1996, three days after winning the Nobel Prize in Economics) last words: [Let us focus on] human welfare rather than abstract economics.