

Interview with By Dr Toh Han Chong, Editor Prof Harvey Fineberg



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Prof Harvey V Fineberg is President of the Institute of Medicine (IOM) of the National Academy of Sciences in the United States (US). He served as Provost of Harvard University from 1997 to 2001, and was Dean of the Harvard School of Public Health for 13 years. As President of IOM, Prof Fineberg advises the government on issues such as vaccine safety, healthcare delivery and quality, nutrition standards and cancer prevention and management.

His research interests relate to the processes of decision making in medical care, public health practice and health policy. He has special interest in the evaluation of diagnostic and screening tests, ranging from use of equipment (such as CT and MRI) to serologic tests for a variety of conditions. He has also contributed to the understanding of the ethical and social implications of new medical technologies.

Prof Fineberg is co-author of the books *Clinical Decision Analysis*, *Innovators in Physician Education*, and *The Epidemic That Never Was*, an analysis of the controversial federal immunisation programme against swine flu in 1976. Co-editor of several books on diverse topics such as AIDS prevention, vaccine safety, and understanding risk in society, he has also authored numerous articles published in professional journals and is the recipient of five honorary degrees.

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Dr Toh Han Chong: Dr Fineberg, can you tell us more about the Institute of Medicine?

Prof Harvey Fineberg: The Institute of Medicine (IOM) is unusual in that it is a private organisation in the United States (US), independent of the government and yet created for the purpose of public service. It is based on a charter from the United States Congress that authorises the establishment of the National Academy of Sciences. Today, there are four organisations that are part of what we call the National Academies, and they are the National Academy of Sciences, the National Academy of Engineering, the National Research Council and the Institute of Medicine.

Dating back to the original charter of the National Academy of Sciences in 1863, the Congress established the Academy for the purpose of providing advice to any agency of government on any matter related to science or technology, or in the case of the Institute of Medicine, related to health.

The Institute of Medicine, which was formally established as a separate elective body only in 1970, describes its mission to serve as “advisor to the nation to improve health.” Much of the work we do is directed to health professionals. Some is directed to the public. And the largest part, deriving from the original purpose, is directed to policymakers, the legislators and executives in different agencies of government.

THC: One of the key initiatives of the IOM is in the comprehensive review of medical errors and the quality of healthcare delivery. What came out of that set of policy issues?

HF: The studies that the IOM did on errors and quality are very good examples of the nature of our work and its potential impact. Eight years ago, experts working in the field knew that there was a serious problem with medical errors. However, the larger profession and the public did not really appreciate the significance of it. In its landmark report on this topic, called *To Err is Human: Building a Safer Health System (2000)*, the IOM pointed out that every year, tens of thousands of lives in the US are lost due to errors in hospital care. A companion study

which came on the heels of that first report, called *Crossing the Quality Chasm: A New Health System for the 21st Century (2001)*, laid out a blueprint for a systematic approach to improve safety and quality.

When the IOM report on medical errors appeared, it created quite an impact on public awareness. In a survey that was done soon after the report’s release, 52% of the American public were aware of the problems of medical errors. The President of that time, Bill Clinton, convened a White House Conference with leaders from several agencies involved in human services and others, including health administrators to talk about what could be done to reduce medical errors. Also, the Congress appropriated the first funds to the Agency for Healthcare Research and Quality (AHRQ) for the specific purpose of reducing errors and improving safety.

Since that time, anyone in the profession, I would say, who picks up an article relating to quality and safety will almost inevitably find a reference to these foundational reports from the IOM. They generated a tsunami of awareness and activity that flowed over hospitals and the healthcare organisations, both in the US and around the world.

I was very impressed yesterday when I visited one of Singapore’s health clusters, National Healthcare Group, with how much attention they are giving to this problem of quality and safety. When you walk around the hospital, you see continuous reminders about quality and safety. You see how thoroughly the hospital prepared for accreditation by the International Joint Commission and the commendations received for efforts to improve quality and safety. Much of this, you could say, was in the background and began to percolate through the health establishment eight years ago. I have no doubt, however, that the work of the IOM in highlighting these problems and then pointing out ways to solve them has markedly accelerated and intensified the movement to enhance the safety and quality of medical care.

THC: By releasing data on medical errors, was there a concern about inviting more medical litigation?

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HF: There still are hospitals in the US that are engaged in active debate on how much, when, and in what form to release such information. More and more, however, the simple idea is taking hold that honesty is the best policy, that transparency pays good returns, and that acknowledging, apologising and explaining what happened can go a long way towards reducing any sense of resentment. A lot of times, at least in the US, what I think is behind some litigation is resentment on the part of the family that no one has taken responsibility. No one has acknowledged what really happened. The family sees a court action not simply as a way of gaining compensation but as a way of vindicating their conviction that something bad that should not have happened occurred. If you acknowledge a problem straightaway and you explain and apologise, the lawyers will sometimes tell you that you have just lost your defence and can no longer deny that you caused this problem. Yet this strategy is proving in a lot of American institutions to be not only the right thing to do, but the less costly thing to do. It reduces litigation and settlement cost. So a growing trend in US, not universally accepted yet but growing, is that open acknowledgement, explanation and apology is a superior approach.

THC: Some doctors, because of their greater awareness of public concern, complaints, and litigation, end up over-treating patients. It is becoming a problem and we have to educate the junior doctors. Are you concerned about how defensive modern medicine has become in some quarters?

HF: There is a problem with defensive medicine. Though in the US, I think it is not the principal driver for overuse of tests and treatments. I think there are many other pressures that lead the doctor to introduce tests of dubious value. First, there is a bias toward acquiring information even though it might not be necessary to decide on treatment. Sometimes, it seems easier to order an array of tests rather than to take a very thorough history. In a typical polyclinic in Singapore, I understand the doctor may be expected to see 60 patients in a day so you probably have at most six to eight minutes per patient. This is not a recipe for thorough history-taking and careful examination. When you are in that kind

of situation, a treatment or a test is also a means to end the encounter in a way which the patient finds acceptable, but it may not be the best course of action for the patient at that moment.

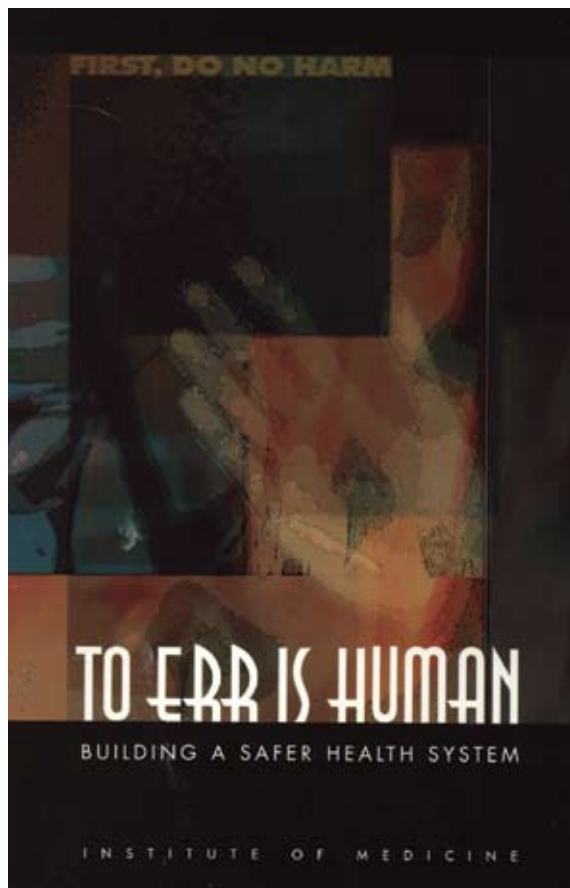
THC: Sometimes the medical marketplace of private practice, perhaps, might also bring with it incentives to prescribe a few more tests and medications?

HF: Well, whichever way you pay doctors, whether by procedure or per capita or by salary, will all have problems. In a wonderful paper on the design of physician payment, James Robinson begins by observing that there are good ways and bad ways to pay doctors, and the three worst are fee for service, capitation and salary. *(Laughs)*

Any system of reimbursement introduces incentives. Doctors are human beings like anyone else so they will respond to the incentives embedded in the particular system of payment. If you pay fee for service, you will get more service. If you pay per capita, you may introduce an incentive to neglect the long term problem, especially if the patient is unlikely to remain under your care for the long term. If you pay a straight salary, you may encourage people to slack off. So each payment system carries incentives and disincentives that have to be counterweighted by other organisational and structural forces. This is to keep an alignment between the incentives acting on the doctor and what is really best for the patient. All doctors like to think that they are professionals doing their best for their patients. Still, doctors are human beings, and if you pay more for services, you will get more services.

THC: Does the advent of more technology increase healthcare costs?

HF: Most analysts think that new technology does increase costs because there is more that you can do. Much new medical technology offers some benefits to certain patients, but then tends to be used more widely and often than would be optimal. And every time you use, of course, you incur a cost. Only when there is positive benefit might you achieve value for dollar. Whether or not it adds value, technology does tend to drive up costs.



More and more, however, the simple idea is taking hold that honesty is the best policy, that transparency pays good returns, and that acknowledging, apologising and explaining what happened can go a long way towards reducing any sense of resentment.

THC: Once upon a time we only had the x-ray, now we have the CT scan, the MRI and newer imaging systems. How are we going to resolve the issue of increasing demand for more costly investigations?

HF: With difficulty – because you are right, there is a tremendous pressure to use what is available. Right now and for some time, we have not done enough to give guidance through real evidence and data about the circumstances when different tests or intervention strategies make the most sense. Also, we have not done enough to encourage, by making it more profitable to produce results more efficiently. In general, within healthcare, the more charges you generate, the more money you are reimbursed.

A smarter way to reimburse would be to pay for value and efficiency.

Over time, I think two things would help. One is a greater intensity of effort on value-added research that can provide more accurate information on exactly who are the patients who will benefit from treatment and testing. And secondly, more incentives should be designed to promote more efficient, rather than costly technology. If we get better evidence, and we reinforce the development and deployment of more efficient models of care, then we have a chance to dampen rising costs even as technology advances.

THC: When doctors today do ward rounds, one of the things that the older generation of doctors might say is: “Electronic prescriptions, data or imaging systems are a pain. They can still crash just when you think they are foolproof. Instead of having a real x-ray that I can very quickly flash in front of me in ward rounds, I now have to walk back to the ward station each time, download the scan image which takes minutes than seconds and then walk back to the patient. All such technology does is slow down my day-to-day function as a physician.” What is your response to such concerns?

HF: All new technologies are not necessarily improvements. When a physician experiences what you are describing, the situation demands attention and a remedy. When you design a system of electronic records with access to images that are relevant to the patient, this system has to work in a way that contributes to the ease of a doctor’s practice and does not create complications. What you describe is a very legitimate complaint. The challenge for those of us who believe that new technology can improve quality of care and service is to create and implement technology that does not produce these problems, but rather contributes to the ease of care and better decision making.

THC: On a day-to-day basis, we do see problems with information technology because we expect infallibility out of computer systems and our expectations are sometimes not met.

HF: Well, lumping everything together may not be the right way to think about support technologies. For example, there is a lot

of evidence on technology to help reduce medication errors, including computerised order entry and automated pharmacy packaging, individual dosing and labeling and bar-coding. These steps help reduce transcription errors and dispensing errors, ranging from inability to read what the doctor has written to the selection of the wrong tablet at the patient's bedside when the nurses are distracted. These automated, routine systems can improve the quality of care. When it comes to imaging tests, I suspect there have been many occasions here when the doctor has been delayed because a physical x-ray is not available or is difficult to locate, while a digital image could have been readily available. So a traditional physical film system is an imperfect alternative.

The idea, over time, is to make an electronic system more convenient and more reliable, so that it is available at the bedside, at the time the doctor needs it, and can also be accessed anywhere.

THC: How about giving patients unprecedented access to doctors' mobile phones, which actually puts a lot of pressure on us?

HF: I think it is not necessarily a boon to have access by telephone, but email interaction can be more efficient and less intrusive.

THC: A doctor might then get a thousand emails from patients or their relatives.

HF: You cannot handle a thousand emails. If you get a thousand, then it is not functional. But if you get dozens and you have specified hours in the day for response, you could handle in one half-hour 20 interactions with patients quickly via emails that you could click through. And you could never do 10 telephone calls in that same time. So if you organise it properly and patients cooperate and understand when they are going to hear from you, I think it is a wonderful technology.

THC: Well, maybe overall, the Americans tend to be less opportunistic about reaching their doctors outside office time, emergencies notwithstanding. Some Asian patients might feel a need for more access to their doctors. It is perhaps a cultural thing.

HF: Maybe. So do your patients email you everyday?

THC: It can be a very Asian thing to get a good bargain if it is offered!

HF: There are a few Americans who feel that way too. Getting back to our quality discussion, the big idea in IOM's quality blueprint is to think about healthcare as a system, not as pieces of one profession or one interaction at a time but all of the parts working together. Maybe nurse practitioners, for example, or other allied health professionals working with the doctors can help to respond to patients' messages, screen some of the messages and in doing so, make the interaction and the doctor's limited time more effective.

THC: There is this new television show in the US called *Eli Stone* and in one episode, there was the issue of a link between childhood vaccination and autism. Is that not irresponsible media?

HF: I did not watch the programme. However, I read a lot about it. As I understand, the first episode of this new programme talks about a protagonist – a lawyer named Eli Stone – who has a sudden fit of conscience, abandons his previous career as a highly-paid corporate lawyer and dedicates himself to help the disadvantaged or downtrodden to gain justice. I think that is the premise. The first episode, unfortunately, used as its theme a family whose child has autism and brought a suit against a vaccine manufacturer for causing the autism. This is a subject which is controversial in the public mind but not in scientific evidence.

The IOM, four years ago, released a study that was the last of a series of eight studies on vaccine safety and that focused specifically on the question of a link between the vaccine preservative thimerosal (which is no longer used in children's vaccines) and autism. Our conclusion was that no credible evidence at that time linked thimerosal to autism. The reason some people attributed a child's autism to vaccine was that the age that many children get vaccines is around the age when symptoms of autism first manifest.

This television programme was in my mind irresponsible. The programme, however, did



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provide an opportunity for the American Academy of Pediatrics and the US Centers for Disease Control and Prevention to remind the public that vaccines are important and this so-called association is not based on any scientific evidence. My hope is that, over time, the producers and writers of this programme would pick more salutary topics.

Your question raises another interesting point on entertainment television and its role in educating and informing the public. The entertainment writers and producers do not think their job is education. They think it is entertaining. However, there is no doubt that the public learnt a lot from the entertainment programmes. So entertainment programmes can be a vehicle to promote healthy behaviour and scientific understanding just as they can be used to sow confusion and uncertainty.

THC: I guess a lot of times the TV networks just want to sell ratings.

HF: Well, they should be able to sell and do the right thing.

THC: Is the US ready for universal healthcare coverage?

HF: The failure of the US to provide basic health insurance coverage to every resident in the US is a national disgrace. It is inexcusable, and there is no good reason why the US cannot solve this problem. It is not a matter of imagination or a matter of breakthrough science. It is simply a matter of political will.

THC: So do you think a proposed universal healthcare coverage system in the US should be voluntary or mandatory?

HF: The political process to achieve universal coverage needs to bring together the majority of people around a solution that can be accepted by most people. Perhaps it should have a mandatory core of coverage coupled with some optional elements. One political difficulty in the US is that no one idea has gained the strong support from a majority of people. There is an undercurrent of suspicion of government programmes in a large part of the public so there is a group who does not want an expansion of government

programmes. There is another group who wants only a single payer government-run programme. So these two camps are, of course, in opposition. Then there is yet a third group that wants to build on the complex array of public and private insurance that already exists, in order to expand coverage to others. Both of the Presidential candidates on the Democratic side propose a system of expanded coverage that builds on what is already in place. No major candidate, this time, is talking about throwing out the existing mix of public-private. So I think the solution is going to be a public-private mix, and the debate will be over how to enlarge the embrace – whether by incentives or mandates or some combination – to make virtually everyone a part of it.

One brilliant feature of Singapore's health system is the combination of Medisave and Medishield insurance schemes for individuals and families. This combines universality with direct awareness of cost and individual choice so that people have an incentive to use services when they need them but not to overuse because "someone else" is paying. When payment comes from a personal account, people have a natural discipline to spend wisely. And at the same time, everybody is part of the pooled insurance scheme. Singapore is a compact and prosperous community and has a younger population than the US or in some other parts of Asia like Japan, or parts of Europe. As the Singapore population ages, then some of its health insurance advantage may be diminished.

THC: This demographic is changing. People are getting older in this country.

HF: Yes but you are also gaining immigrants, and the immigrant pool is relatively young.

THC: The US is vast and has plentiful opportunities but we are a small country. In Singapore, there are some concerns that local jobs are going to be affected by this influx of immigration and foreign talents. What are your comments about that?

HF: This is also a concern in America, particularly for less skilled occupations. I do not think you will find many American doctors or nurses worrying that the influx of foreign professionals

will take away their opportunities. I do not think scientists worry that the influx of foreign students or fine scientists will take away their opportunities. Concerns about homeland security are a greater deterrent to bringing the best talent into the US.

If I were a clinician or academic doctor in Singapore trying to advance my career, I do not know whether I would feel that foreign experts gain an advantage or take the best jobs. My impression is that nearly everyone I have met in Singapore is already doing three to four jobs. So maybe if they have to give up one of them, it is not such a big deal. (*Laughs*) But I am speaking from a week's experience here so I do not have very firm feelings about this.

THC: In a small island, there is some concern that talented foreigners will take jobs away but perhaps it is not an overriding concern. But the playing field is not level in certain sectors. If you want to start an American football team in Singapore and you import some top NFL players from abroad, the local players will not stand a chance. It takes a longer time for us to emerge to a level where we can compete in some areas.

HF: Singapore has to be smarter about its investments and you probably cannot afford as many mistakes because you do not have the broad resilient capacity of vast countries like the US or China. You do need a different kind of strategy because every country has to play to its strengths and compensate for its weaknesses. Small size can also be an advantage. In Singapore, you can mobilise all sectors of society, from the highest to the lowest levels, in line with adopted, national policy. I see no reason you will not do this and succeed in science and in medicine.

THC: I just watched *SiCKO* by Michael Moore. There is a scene where some Americans who were injured from being volunteers at the 9/11 tragedy were brought to Cuba for medical treatment. It was a skewed and yet vivid view of the heartlessness of the insurance-based American healthcare system versus the humanism of universal healthcare access. What is your view?

HF: You do not have to go to Cuba. You can go to France or you can come to Singapore. While getting universal health insurance is fundamental,



it is only one part of solving health needs. The reality for the US is that firstly, universal access is something that we must provide and secondly, this alone is not going to solve our health challenges. We want a health system that is accessible, affordable, and of high quality.

THC: The rugged individualism, sense of individual responsibility and diversity in the US must make it difficult for Americans to embrace universal healthcare coverage practically, emotionally and philosophically. But these qualities are also the unique strength of the US.

HF: It is true that the US has an ethos of liberty, individualism, free choice, opportunity, self-reliance, innovation, and many pathways to success. Those are important strengths and values. But at the same time, there is a communitarian streak in American history, reflected for example in the early adoption of public education for everyone. *The New York Times* columnist, David Brooks, recently compared historic values in Europe and the US. America worked very hard to make higher education more and more accessible to many people and to diminish the number of people who are dependent on welfare, he said, while Europe tended to make higher education

more selective and to promise welfare to everyone. So the US has a mix of traditions and values, including some contradictions. To me, the balance for health is clear: We should regard basic health services and access to care much like we think about educational opportunity. By providing education and protecting health, a society enables every person to take advantage of those other values of individuality, liberty, entrepreneurship and success.

THC: As former Provost of Harvard, what is it about Harvard that sets it apart from the other universities in the US?

HF: There are many great universities in the US. Harvard is the oldest American university. It is the wealthiest. Its library collections vastly exceed those of other American universities. Harvard has remarkable depth of talent: for example, if you split Harvard Medical School into two, you would then have two of the best medical schools in the US. Beyond its depth of talent, Harvard offers a huge array of opportunities for learning and personal growth. Harvard is also a restless place, continuously striving to better itself. Because Harvard attracts outstanding students, it is a place where one can test oneself against the world's best and learn something from everyone. Perhaps Harvard does not take rapid advantage of successes innovated by others, but it does have enormous historic, financial, and academic depth and enduring values of scholarship, learning, discovery, and excellence.

Despite Harvard's great and growing strengths, over the last 50 years the differences between Harvard and a host of other leading universities in the US have diminished. Some of Harvard's traditional advantages, such as the dominance of its library collections, are less salient for some fields of inquiry in an age of electronic storage and the internet. Many American universities today exert leadership in a variety of fields and set the pace in different areas of research and education.

THC: And your fondest memories of Harvard?

HF: There are so many things that meant a lot to me because I was at the university since the time I came of age, so to speak, and stayed on as a faculty member, then as a Dean and then as Provost.



Prof Harvey Fineberg with his wife, Dr Mary Wilson.

I would say what satisfied me most was seeing students transform themselves over a remarkably short period of time into the kind of scholars and citizen leaders that they were to become. That was very gratifying.

I had the experience just the other evening of attending the first gathering of the new MPH students at the National University of Singapore (NUS). It was the 60th anniversary from the beginnings of the programme, but this is the first year with an MPH class, both physicians and non-physicians, drawn from six different countries mostly in the region. The evening reminded me of similar experiences at Harvard – seeing well-motivated, truly dedicated and gifted students who want to apply their talents to help other people. That was what I liked about Harvard. That was what I liked about being at NUS the other evening. That is what I like about universities.

THC: Thank you very much for your time.

HF: It is my pleasure. ■