

Editorial

Modern Medicine-A Boon or a Bane?

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In the Greek mythology of Pandora, Prometheus arrives too late to close the box opened by his brother Epimetheus, from which all the evil and sufferings of the world had already escaped. When the box was finally closed, only Hope was left inside. It was only later that Aesculapius, the founder of our art of medicine, reopened the box letting Hope to be freed. Mankind ever since has been living on *Hope* only.

Although I have written time and again on the subject of the fallacy of the science of modern medicine, no one seems to have taken a serious note. Recently, Barbara Starfield, of the Johns Hopkins Medical School, published one of the greatest articles written in the history of modern medicine, in the *Journal of the American Medical Association* in the year 2000 (JAMA 2000; 284: 483-485) entitled, "Is the US Health Care the Best in the World?"^[1] I am very happy that Barbara is extensively quoted in the media. History seems to be repeating now. More evil and suffering are being released from the Pandora's Box by the medical establishment, where the art of medicine is replaced by the so-called science of medicine, leaving Hope alone to save mankind.

Most of the people outside the US and, of course, all Americans, strongly believe that US medicine is the best in the world and is based on evidence and hi-tech science. Some of the developing countries are aping the US system in toto despite the fact that some of them have their own robust indigenous systems in place: the latter being dubbed as unscientific. It is high time that thinking people looked at the science of modern medicine. Modern medicine relies on the conventional reductionist science. The latter is not appropriate for the dynamic non-linear human physiology^[2]. The result is the present mess in the medical care arena. To compound the damage, medical quick-fix care is labeled as 'health care': surprisingly the former has very little to do with human health. Rather, it has the capacity to make mankind unhealthy!

Modern medicine is in the clutches of big money business of pharmaceutical drugs and technology. Consequently, modern medicine finds it difficult to look at this problem objectively. Medical education in the US and elsewhere is reported to be completely under the control of these big money sharks, by the leading medical journals - 'The Lancet' and the 'New England Journal of Medicine'^[3,4]. Thinking people inside the system fail to look the gift horse in the mouth. Doctors have become "disease inventors" in many cases to help the industry to sell their wares^[5]. Here again the inexact science of statistics comes to their help^[6]. Controlled studies, accepted as the most scientific method of testing drugs before being let loose on the gullible public are flawed. This results in new dangerous drug adverse reactions coming up, after the drugs come to the market, causing more than 100,000 deaths in the US alone^[7] (total population of 350 million). One could gauge the enormity of this problem in developing countries which have immense faith in this faulty system.

Let us review the US scenario. Health care in the US is so expensive that 44 million Americans do not have health insurance. This top heavy health care is accepted by the public with the 'wrong' presumption that expensive care, despite evidence from many studies that as many as 20 to 30% of patients receive contraindicated care, is good. Recent Institute of Medicine report^[8] entitled "To Err is Human" showed, for the first time, that an estimated 44,000 to 98,000 Americans die each year due to medical errors. This figure has recently been revised to be around 175,000 annual deaths. The split up of iatrogenic damage is as follows. 12,000 deaths annually due to unnecessary surgery, 7000 from medical errors in hospital admitted patients, 20,000 deaths from other errors in the hospitals, 80,000 deaths from hospital (nosocomial) infections, and 106,000 deaths from non-error adverse drug reactions unbeknownst to the pharma industry before the drugs were marketed. This brings the total to 225,000 deaths annually from medical errors.

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Medical errors rank third as the most important cause of deaths in the US after heart attacks and cancer^[11]. Some of the deaths in heart attack and cancer patients are also due to medical errors! This is not the whole story. The above figures only take into consideration hospital admissions. If one were to take the outpatients also the numbers would be shocking, indeed. "It is shown that between 4 to 18% of consecutive patients experience adverse effects in out-patient setting, with 116 million extra physician visits, 77 million extra prescriptions, 17 million emergency department visits, 8 million hospitalizations, 3 million long-term admissions, 199,000 additional deaths and \$ 77 billion in extra costs." The total figure of \$ 77 billion is equal to the total expense needed to look after all the diabetics in America^[9].

In a recent study United States ranked 2nd from the bottom in health care among the 13 leading industrialized nations of this world. The order was Japan, Sweden, Canada, France, Australia, Spain, Finland, the Netherlands, the United Kingdom, Denmark, Belgium, the United States, and Germany. The poor performance of the United States is further confirmed by a recent World Health organization study, using different criteria. Another study showed the US to be the 15th rank in the 25 industrialized countries studied^[10,11]. Thus the above figures are very robust and are not based on any shaky foundation.

Many readers would jump to the conclusion that the low ranking of the US in health care is due to the unhealthy life style of the population. This belief is totally erroneous^[11]. Female smokers in the US are 24% while they are 41% in Denmark. Male smokers are 28% in the US as compared to 61% in Japan. In alcohol consumption the US is the 5th best in the list shown above. Only in accidental deaths on the roads the US is low down in the 13th position. The US has the lowest consumption of animal fats and ranks 5th in the list. The US has the third lowest mean cholesterol levels among those nations. It is, therefore, not the life style that is the cause. The reasons are complex and multiple. While many recent studies have shown the pivotal role the human mind plays in human illnesses, ranging from common cold to cancer, the modern reductionist science does not know where the human mind is, leave alone trying to make the mind tranquil to keep mankind healthy^[12].

One of the important causes for this dismal picture, the study shows, is the very poor primary care infrastructure in the US compared to those countries on the top of the list^[13]. The first five top countries have the best primary care set up. Seeing the specialist directly for any complaint is said to result in many unnecessary deaths and disability.

Majority of diseases are self curing with time and patience. Those are very well served by having a strong primary care set up where the family physician could "cure rarely, comfort mostly, but console always".

The US has the highest technology comparable only to Japan in the list. However, the difference is glaring. Whereas in Japan, for example, the MRI is used only for the diagnostic set up, in the US the very high use of MRI results in very high intervention rates not seen in Japan. This adds to the burden^[14]. **This has a very important lesson for the less developed countries trying to ape the US. They should not follow the US model and build hi-tech superstructure of specialist and sub-specialist centres. They should, instead, stress on robust primary care set ups.**

The last cause of the poor performance of the US is the income inequality, where the rich-poor divide is enormous^[13]. This has been shown to adversely affect the health care delivery in any country. **The whole stress should be on recognizing the harmful effects of medical care interventions and the likely possibility that they account for a substantial proportion of excess deaths in the US, as shown above. This should be an eye opener for any country to see the writing on the wall.** The west should now try and understand the underlying science of the dynamic human system.

The human body is dynamic and does not follow the linear laws. Doctors have been predicting the unpredictable futures of patients based on very few knowable parameters of the body during the routine check-up^[15]. Unfortunately, time evolution in any dynamic system follows a non-linear rule. To know the future of any individual, one should be able to understand the whole organism (man). This is impossible in the present set up in science. That being the case, routine screening of apparently healthy people is the most dangerous activity^[16] in hi-tech medical care system that is prevalent in the US. Trying to keep the well healthy by promoting good life style and acquiring tranquility of mind should be the thrust areas. Trying to correct the phenotypical (body) errors in a healthy person is the most important cause of extra deaths reported above. Over investigation and over treating damages the inbuilt repair mechanism of the human system and might even result in death.

Leaving the "well" alone is a good policy. Even if one corrects some of the abnormalities in a healthy person, there is, to date, no guarantee that the altered state holds good as time evolves, for the good of the organism. The future science for medical world would be the science of non-linear mathematics and CHAOS^[15]. They would eliminate

most of the above happenings, hopefully. More research needs to be done. As of now, for countries with limited budgets for health care, primary care infrastructure should be strengthened. In addition, developing and underdeveloped countries should concentrate on the real health care - safe drinking water for the masses, three square meals a day uncontaminated, and a clean environment for dwelling. Sanitation with a stress on sewerage disposal and toilet facilities in villages and slums of large cities are the urgent needs. We do not need the hi-tech, five-star hospitals and interventions for the time being. They are more a curse than a blessing, if one were to take the lessons of the US experience given above. Will the powers-that-be take note please?

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