

How accurate and reliable are medical predictions?

Sir,

When referring to a person's objective to increase their life expectancy and improve the quality of their health, there is great unpredictability and huge uncertainty that medicine will help them in achieving such an objective for the following reasons, among many others:

- There is a major controversy regarding the value of preventive medicine with ample evidence, indicating that the harm is greater than its benefits^[1]
- Singh,^[2] a foremost expert in diagnostic errors and their prevention, concluded that around 5% of the US population, close to 12 million, is misdiagnosed each year, with the resulting errors killing close to 100,000 people
- Research has shown^[3] that the chance of a correct diagnosis in difficult cases is 5.8% and worse and that the doctors involved are 64% certain that they were right
- A realistic estimate is that in the US hospitals, there are more than 400,000 patients each year who suffer some kind of preventable harm contributing to their death.^[4] Likewise, the study states that serious harm seems to be 10–20 times greater than the lethal one. In addition, CDC reports that in 2011, approximately 722,000 patients were infected during their hospital care. To the above, errors of prescribing the wrong medication dosage, harmful side effects from medication, “never events” during operations, and infections by superbugs while in hospitals are added further, thus increasing the risk and uncertainty that something can go wrong while receiving medical care
- Finally, vested interests increasing medical harm must also be included:
 - Cesareans (being the most flagrant example) well above the 10–15% rates recommended by WHO, resulting in higher infant mortality and providing no benefits for the mother or child
 - The undue influence of pharmaceutical firms and their goal to increase revenues and profits
 - Widespread overdiagnosis and overtreatment

augmenting the revenues of doctors and hospitals while causing unnecessary damage.

- Ioannidis,^[5] an expert on medical research, is quoted saying “that as much as 90% of the published medical information that doctors rely on is flawed and that he/she worries that the field of medical research is so pervasively flawed, and so riddled with conflicts of interest, that it might be chronically resistant to change—or even to publicly admitting that there's a problem.” The obvious question is if medical research is so flawed, how can treatment based on such research be successful?

Doctors must accept Renée Fox's words that the “great twentieth-century progress in medical science and technology has helped to reveal how ignorant, bewildered, and mistaken we still are in many ways about health and illness, life and death” and provide their patients with a realistic assessment of their conditions, including the uncertainty involved, and their chances of a successful therapy. Most importantly, they must accept the serious problems affecting their profession and act urgently to correct them to reduce medical errors, cope with misleading or contradictory research findings, and minimize vested interests along with their serious, iatrogenic effects.

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Conflicts of interest

There are no conflicts of interest.

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