HealthManagement
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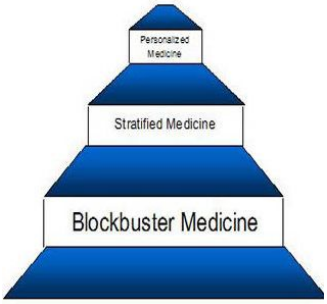
Is Personalised Medicine Really the Answer?



The philosophy behind personalised medicine (also known as precision medicine) is that medical care and public health should be transformed by prevention and treatment programs that are specifically targeted to individual patients. Theoretically, this is to be achieved by sequencing more genomes, creating bigger biobanks, and linking biological information to health data in electronic medical records. The article "Seven Questions for Personalized Medicine", published in *JAMA* poses seven questions for advocates of personalised medicine. These include:

Does the Human Genome Contribute to Disease Risk Reduction?

Personalised medicine is forecasted to revolutionise disease risk prediction through the Human Genome Project with projected relative risks as high as 6 for gene variants linked to specific diseases. One issue however is that the relative risks rarely exceed 1.5 and these variants so far have added very little predictive power to traditional risk prediction models.

Will Gene-Based Drug Targeting and Development Fulfil Its Promise?

Personalised medicine claims that that cancer therapies that target dysregulated "-omic" pathways will be transformative but to date this has not been seen and very little evidence is available that proves that targeted therapy interrupts the expectation and disappointment that is associated with most new approaches to cancer therapy. In addition, the belief that genotype based treatments have fewer adverse effects is also not supported by any findings.

What Will EMRs contribute?

There has been great emphasis on transitioning to EMR but there is no concrete evidence that record-based medical information has improved the quality of the data entered. This accompanied by the fact that each institution has a different EMR system reduces the application and use of this data in medical research.

What Kinds of Studies should be mounted in Personalised Medicine?

The theory behind personalised medicine is that genomically targeted drug therapies will improve patient outcomes. However, the question is that if therapy is to be targeted to the unique genome of an individual, is there any relevance of clinical trials with participants who do not share the genome?

How should Institutional Conflicts of Interest be managed in Personalised Medicine ?

Based on the rapid expansion of personalised medicine initiatives and the speed with which institutions are focusing on funding, support, intellectual property and industry partnerships, there is a risk that the widespread marketing of these initiatives may result in institutional conflicts.

How Will Personalised Medicine Affect the Cost of Medical Care?

Advocates of personalised medicines claim that medical costs will decline because personalised medicine targets prevention rather than therapy. However, since the entire concept of personalised medicine is to use a targeted, specific and personalised approach, isn't it logical to think that these interventions would probably be more expensive than traditional interventions that can be applied broadly to populations? Since the cost of drugs depends on the size of the target population, won't the drug/treatment be costlier if the population is smaller?

These and many other similar questions highlight the need for proponents of personalised medicine to come up with a more realistic set of expectations.

Source: JAMA

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