

Physician barriers to evidence-based medicine

In the era of new genetic tests and advanced imaging, much is written on the future of precision medicine, the concept of delivering personalized, evidence-based treatment based on patients' individual characteristics. Risk prediction models are an excellent method to evaluate individual patient's risks and benefits of specific treatments. Despite their potential benefits, risk models are not commonly used in clinical medicine. A better understanding of physicians' thoughts about the use of risk models is needed to overcome barriers to their use. Therefore, we conducted interviews with 27 physicians to gain their perspectives on the use of risk models in medicine.

Three major themes emerged from physicians who did not find risk models beneficial. The first theme was, "Experience versus Evidence," the idea that physicians prefer to rely upon their own personal experience rather than risk models. One physician said, "Some physicians think that they've been doing this for years and years and years and years and they don't need someone else's tool ...," while a second physician said, "My feeling is that these numbers are more clung to by the insecure or the inexperienced looking for justification..." The second theme was, "Omission of Therapy," the feeling that the use of risk models might lead to less use of potentially beneficial therapies. One physician said, "At the end of the day, you want to do the best thing you can do for each and every patient, not just the high risk patients," while another said, " So, why wouldn't you put the Cadillac in everybody?" The final theme was, "Unnecessary Information," the opinion that risk models are not needed because physicians' already know the information and make good treatment decisions for patients. One physician said, "the typical phrase you hear from operators is that I already know that information. That information is already in my head. Why do I need that form to tell me what to do?"

The opinions summarized above are concerning, as studies have consistently shown greater overall accuracy when physicians rely on evidence-based risk models, rather than their own experience in making treatment decisions. Furthermore, the criticism of risk models as leading to undertreatment of patients suggests that physicians overestimate the benefits of the treatment they provide while minimizing the potential risks. Perhaps most troubling is the fact that despite numerous reports documenting logical inconsistencies between medical care and the clinical evidence, there does not seem to be a sense by many physicians that improvements are needed.

In conclusion, many physicians prefer to rely upon their experience, rather than risk models, to guide treatment decisions. Barriers to the use of risk models in clinical practice include physicians' beliefs that their own experience is enough to guide treatment, that risk models may lead to less therapy in patients that might benefit, and that they already provide good care based on their current knowledge. Novel strategies are needed to support precision medicine through the use of risk models, and to improve the value of healthcare in the U.S.

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