Commentary on applying the results of trials and systematic reviews to individual patients

Glasziou and colleagues (1) offer 4 extremely useful criteria for applying evidence to the decision-making interface between clinicians and patients. The process of applying average group-derived data (e.g., from a randomized controlled trial) to an individual patient remains a difficult, time-consuming, and incompletely studied skill. Glasziou and colleagues highlight parts of the skill, including 1) stratifying findings according to individual patient characteristics, 2) assessing whether the intervention can be approximated in a nonstudy setting, 3) quantifying the benefits and harms of a treatment, and 4) incorporating individual preferences. Yet we become complacent that these are the only challenges in applying evidence to individual patients, I offer further thoughts from the perspective of a clinician who has found that the decision-making process is far more complex than is currently acknowledged.

First, stratifying risk for your patients depends on knowing them and their concerns, history, and physical and laboratory findings. This requires time, commitment, and caring as well as skills in amassing accurate information in these areas. Many obstacles make gathering such knowledge increasingly difficult. Such obstacles include the pressure to see more patients in shorter visits, erosion of physical diagnosis skills in an era of technological advances (e.g., echocardiogram replacing cardiac auscultation), and lack of familiarity with laboratory procedures.

Second, it is essential to establish the right priorities and to ensure that the patient agrees (2). How many times have we seen the physician pursue priorities that differ from those of the patient?

Third, and here is where evidence-based medicine and various databases and compendia have made so many contributions, the clinician must either obtain and synthesize a tremendous amount of research information or rely on systematic reviews (3). Unfortunately, the conclusions of such reviews often inadequately capture the subtleties of individual patient characteristics. The best that randomized controlled trials or meta-analyses can do is to give broad qualitative information that is enhanced by quantitative presentation—our love of numbers should not obscure the goal of deriving from the average to apply to the individual (4, 5). The expression of those numbers and results is still evolving. What is the best way to present information to the patient? Does absolute risk reduction capture the meaning of an intervention? NNT? NNH? Do interactive videodisc programs help? Clinicians also know that the absence of evidence does not mean that an intervention is ineffective; hence, judgment, an area that is difficult to quantify or teach, must be applied in much of decision making. Furthermore, information technology is still far ahead of the promise of good information. Where is the evidence? How do we efficiently get to it? How accurately is it expressed (6, 7)? Point-of-service delivery of high-quality information has not yet arrived for most physicians.

Fourth, clinicians must understand their own prejudices in expressing the information to avoid coercing the patient or minimizing information that may be of great interest to the patient. Framing bias and the physician’s own "utilities" are potential confounders in clinical interaction. This area has not been well studied in clinical care.

Fifth, how do we elicit the preferences of the individual needs to be studied so that these preferences can be incorporated into a decision. For example, is the patient a risk taker, risk-averse, a minimizer, an amplifier, in denial, or unable to comprehend? We must admit that informed consent is an ideal rarely achieved and an area that could be vastly improved.

Finally, clinicians should commit to these steps in the absence of cost considerations: Resource allocation should not be part of the interaction unless we have a substantially altered health care system (8). Even then, constraints must be globally—not locally and certainly not individually—assigned (9).

Clinical care is difficult, challenging, and ultimately very satisfying. Decision making has been vastly improved by scientific study, but physicians with broad knowledge and skills are needed even more as we develop increasingly powerful methods for reducing human suffering and grapple with social, economic, cultural, and political forces that influence the practice of medicine (10, 11). Evidence-based medicine continues to raise the standard of practice, and with attention to the whole process, clinical care will improve.

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References

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