Truth in clinical medicine

Peter E Lipsky

Medicine changes rapidly. The perceived validity of accepted clinical information changes with time and new ideas are incorporated into clinical thinking. The mean half-life of the truth of clinical conclusions was recently estimated to be 45 years (*Ann Int Med* 136: 888–895): 50% of clinical conclusions that formerly were held to be true became either obsolete or untrue during this period of time. This means that a large proportion of the clinical principles that clinicians learn during training and upon which they rely for clinical-care decision making will become wrong or obsolete during the years they practice. Dealing with new information is equally problematic because the survival of truth is not related to the methodologic quality of the initial report. Remarkably, the survival of clinical conclusions is not greater when derived from randomized versus nonrandomized trials. It is therefore difficult to predict that a conclusion from even a well-controlled randomized clinical trial will survive for the duration of a practitioner's career.

These considerations challenge practitioners to find means to assess their fund of information continually so that they can practice contemporary medicine that meets current community standards. Indeed, this requirement is becoming a central element in the maintenance of board certification. From now, all members of the American Board of Medical Specialties will implement a new re-certification program that emphasizes ongoing learning and assessment of practitioners' personal grasp of their field. This new approach shifts the emphasis from testing conducted every 6–10 years to a more continuous process of assessing competence.

How can a practitioner remain up to date? How is it possible for practitioners to sift through all of the pieces of information that they have been and are exposed to, cull those that are now wrong or obsolete, and retain only those that remain relevant and correct, while continuing to expand their fund of new information? There are many possible approaches, but each is flawed.

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Medical meetings and didactic lectures offer the opportunity to be exposed to new material, but learning is difficult at a large meeting, and presentations rarely review previously reported information and grade it for current validity. Similarly, practitioners are encouraged to read the medical literature, but little of this is directed toward reviewing past information for currency, digesting new clinical trial data is difficult, and conscientious self-study is laborious (*Ann Int Med* 126: 84–85). Each of these approaches is also challenged by the consistent observation that retention of facts after a single exposure decreases significantly with time (*Ann Rev Psychol* 47: 143–172).

One approach that might be useful to help rheumatology practitioners remain current is the review of Practice Point articles featured in *Nature Clinical Practice Rheumatology*. Each month the *Nature Clinical Practice Rheumatology* editorial staff search the literature for information that challenges established paradigms or supports new ones. The findings of each clinical research article are summarized and a recognized expert in the field analyzes the information and discusses how the new results can affect clinical practice. This information is then reduced to a single, cogent Practice Point, which is available for analysis, consideration, and comparison with the practitioner's individual viewpoint. In this issue, there are Practice Points on topics as diverse as osteoporosis, gout, osteoarthritis, Wegener's granulomatosis, and ankylosing spondylitis. Some of these challenge established paradigms, whereas others provide new information about specific clinical-care issues. Each Practice Point should be useful in aiding the practitioner in maintaining a contemporary knowledge base for clinical decision making. I encourage readers to review the Practice Points carefully and utilize them as a means to interrogate their personal array of clinical information for accuracy and relevance, as well as to add significant new truths.

PE Lipsky is the Editor-in-Chief of Nature Clinical Practice Rheumatology.

Competing interests

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