

### **Making Evidence-Based Medical Practice a Reality**

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What is so special about Andorra? This small country in Western Europe is just half the size of Manhattan and is the healthiest place in the world.<sup>1</sup> But why does Andorra have the longest life expectancy? One suggestion is that Andorra applies the best evidence to its health care delivery, studies its own statistics and pays only for what is known to work.<sup>2</sup>

Why doesn't everyone apply the best evidence to their health care delivery? Financial interests, emotional factors, religious beliefs or academic ideology may all play a role.

How do we put evidence-based medicine into practice in the United States? We need to adopt a culture that values research evidence and makes policy and practice decisions based on what the research really shows. We need to summarize the totality of the research and then use this synthesis to make treatment decisions, focusing on patient outcomes rather than intermediate end points.

We need to train new doctors to incorporate evidence into patient care. Apprenticeship training forms the basis of clinical education. We learn by watching our superiors in the clinical setting—they make “n of one” decisions, and patients seem to do well. The “case I cared for a few years back” often directs the course of treatment. Quoting the most recent publication in *Nature* or *The New England Journal of Medicine* has esteem in the clinical arena. One can just imagine Sir William Osler standing at the bedside quoting a recent case study. But much of the medical literature is biased, often unintentionally so. Other times, research that doesn't produce the intended result does not get published.

How can a busy practicing physician critically appraise the ever-expanding medical literature? Thankfully, we have resources that sift through all of the research and summarize its conclusions for easy clinical application. *BMJ Clinical Evidence* is an excellent example of an information source that helps inform us at the bedside about the very best evidence. And by applying the best evidence, we are able to provide safe, quality care to our patients.

Having *BMJ Clinical Evidence* on your PDA and bookmarked on your browser will give you fast access to what is known. It takes less than a minute to determine that:<sup>3</sup>

- Aggressive lowering of blood pressure in type 2 diabetes is important for reducing cardiovascular and overall mortality
- Antibiotic therapy of acute otitis media in children involves tradeoffs between benefits and harms
- Vitamin E and diuretics have unknown effectiveness for non-malignant breast pain
- Wrist splinting after carpal tunnel release surgery is likely to be ineffective or harmful.

In those many circumstances where data are missing, you can still move forward in treating your patient, as long as you do no harm and make the patient aware of the lack of good quality evidence. In fact, using *BMJ Clinical Evidence* as your reference for counseling patients may reassure them when they request treatments of little proven benefit.

Applying the best evidence on the patient level requires three simple changes:

- First, challenge your assumptions. For example, we once avoided beta-blockers in people with congestive heart failure, and made countless other clinical decisions based on presumed knowledge.
- Second, use resources such as *BMJ Clinical Evidence* to find reliable, truly evidence-based information to aid clinical decision-making at the point of patient care.

- Finally, make decisions based on the existing evidence, while addressing your patients' needs and doing the least harm.

With these simple steps, we can move forward to put evidence into practice.

When it comes to pay for performance and other quality measures, clinicians should insist that their evaluators define quality based upon the best available evidence, and their governments assist them to reach this goal. Patient outcomes are the guiding principle to providing and measuring care.

### References

1. Central Intelligence Agency. *The World Factbook 2007*. Available at <https://www.cia.gov/cia/publications/factbook/rankorder/2102rank.html> (accessed on March 14, 2007).
2. Dubois HFW, Martinez F, Cetani T, et al. *Healthcare systems in transition: Andorra*. Copenhagen, Denmark: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies; 2004.
3. *BMJ Clinical Evidence*. 2007. Available at [www.clinicalevidence.com](http://www.clinicalevidence.com) (accessed on March 14, 2007).