

## Population Health Forums

### Applying Comparative Effectiveness Research and Evidence-Based Medicine to Everyday Decisions

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Comparative Effectiveness Research (CER) and Evidence-Based Medicine (EBM) is at the heart of many transformative changes in health care, driven in part by the Affordable Care Act (ACA). Robert W. Dubois, MD, PhD, Chief Science Officer at the National Pharmaceutical Council, offered a compelling and succinct overview of CER and EBM at a Forum this past spring.

The National Pharmaceutical Council (NPC) is a health policy research organization focused on the advancement of good evidence and science, and fostering medical innovation within the United States. Dr. Dubois oversees NPC's research on policies related to CER and health outcomes. Throughout his career, Dr. Dubois' primary interest has centered on defining "what works" in health care and finding ways for that evidence to inform health care decision making. He is a recognized expert in defining best practices, disease management and appropriateness of care.

Dr. Dubois began his presentation by explaining that CER is not exactly new, but that it is related to EBM and decision

making; in other words, it is important that it is used to examine and improve clinical practice. He refers to Eddy's model of thought process that describes evidence, scientific judgments and value judgments, and how these influence decisions.<sup>1</sup>

Dubois described EBM as a general concept of using evidence to apply to a clinical decision, whereas CER is a more patient-focused strategy that compares alternative approaches to management. Dubois provides an easy approach to the thought process around CER by using these questions: *What works when? For whom? And Under what circumstances?* Adding to this, he outlines characteristics that are critical to CER and decision making: delivery of the right care, to the right patient, at the right time, in the most appropriate setting. He states that we have to make this easy to do and embedded in how we make health choices.

Although there is overlap between CER, EBM and Health Technology Assessment (HTA), Dubois identified differences: CER is primarily a research activity to answer certain questions; EBM is focused on

the application; and HTA is centered on assessment and cost-effectiveness.

Dubois discussed two major motivators illustrating the need for CER. First, patients face many alternative therapeutic options to manage their conditions, and comparative evidence is often not available. Second, the complex and chronic conditions characteristic of the baby boomer population demand different and effective health strategies, especially as we face concerns about rising health care costs.

Dubois went on to discuss the relationship between CER and medications. He described the challenges of population vs. individual results. For example, efficacy data on certain medications may not apply to individuals. Posing the question, "Will access to medications be constrained?" Dubois states that this could vary in different states. This is an example of how difficult it can be to translate CER into policy choices. ■

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<http://www.npcnow.org/>

### Grandon Workshop

*A special additional session of the Population Health Forum for Grandon Society Members*

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In this workshop, Dr. Dubois continued to discuss CER through a stimulating discussion of heterogeneity and the importance of finding a balance between CER results at the population level and when that may be applied appropriately to the individual.

Dubois identified key factors to be taken into account when considering variation in individual treatment response as: likelihood of response to similar treatments; clinical consequences of delaying optimal treatment; underlying patient diversity; and patient preferences. These factors influence and affect the higher risk and clinical impact of heterogeneity. Dubois used the example of treatments for depression and multiple sclerosis to show how difficult it is to provide a population-based framework for treatment. Individual differences and patient preferences are significant factors in treatment strategies.

The audience had the opportunity to ask a number of questions, and the interactive session also addressed issues of payments for tests, companion diagnostics, and value-based purchasing. Dr. Dubois concluded by discussing some of the new payment changes to providers, where they will be accountable for both the economics of care, and quality performance.