VALUE & OUTCOMES
SPOTLIGHT

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LETTER FROM THE EDITOR

Imagine a scenario in which you're in your doctor's office discussing your gastrointestinal complaints. She records the symptoms carefully into her tablet-based electronic medical records system, taps an icon marked "Send" and looks up from the screen. (A feeling of warmth comes over you during this brief moment of eye contact.) Just as quickly, though, she turns back to her screen and says, "Hmmm, I almost always prescribe the same drug as first-line therapy but we're now using a new treatment optimization tool and it's telling me that another drug is a more cost-effective choice for you."

What just happened? The answer is a *lot*. Not just for your GI symptoms but for the work we do in the field of health economics & outcomes research.

A common complaint among practitioners of HEOR is that our research is underused for health care decision making, so the scenario described above is something like the holy grail of our field, as what just happened is the following. Your demographic and clinical characteristics were pulled from the EMR to a cloud-based model of disease progression, treatment, outcomes and costs. The model was run to predict how you would fare on different therapeutic options, highlighting the one that offers the greatest bang for the buck. That prediction was then sent back to your physician in real time to help inform her prescribing decision.

With predictive analytics (used to specify the prediction model), Big Data (used to estimate the model parameters), machine-learning techniques (used to mine the Big Data to find those parameters), and cloud-based computing (used to crunch the data really fast), the building blocks are in place for data-driven insights to inform personalized treatment decisions at the point of care. Whether or not this is a good thing depends on your perspective, but there are already software installations that do at least some of this being used in selected care settings.

At the center of all this are algorithms. This issue of *Value & Outcomes Spotlight* features two articles that highlight algorithmic advances in our field, one focusing on data visualization techniques in analyses of claims data and the other on computerized adaptive testing in clinical outcomes assessment.

Also featured in this issue is an overview of two recently released reports from ISPOR Task Forces. The first is about clinician-reported outcomes assessment of treatment benefit and the second examines mapping to estimate health-state utility from non-preference based outcome measures. Both include a brief Q&A with a Task Force Co-Chair.

Finally, the ISPOR Events section highlights the 2017 conferences we can look forward to attending, including the 22nd International Meeting in Boston in May, the 6th Latin America Conference in São Paulo in September, and the 20th European Congress this November in Glasgow.

It doesn't take an algorithm to determine that attending these meetings is a good idea. So mark your calendars and book your travel!

Sincerely,

David Thompson, PhD
Editor-in-Chief, *Value & Outcomes Spotlight*

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