

Value-Based Medicine® Analyses

Evidence-based medicine is a long-standing phrase well-known to most of us. It has helped us focus on clinical trial results and usage of the data in providing the very best care to our patients. The rising costs of healthcare and the continued assault on reimbursements underscore the need to critically evaluate the value of our therapies, particularly, the most expensive medical therapies. Additionally, the difficulty in translating dissimilar clinical trial data conducted on interventions treating similar diseases has become a problem too important to ignore.

The evolution from evidence-based medicine to Value-Based Medicine® is one of necessity. It forces us to define value and fine-tune our ability to measure quality of life improvement afforded by medical interventions. The clinical trials routinely delineate results and efficacy which, by themselves, tell us one story. How, then, we compare dissimilar trials and put new science into practice becomes a daunting and often impossible task.

Value-Based Medicine is the practice of medicine based upon the utilization of medical interventions, pharmaceuticals and devices that deliver value by improving the length of life and/or increase the quality of life experienced by the patient. Length of life determinations are clearly outlined by clinical trials, however, quality of life data that are comparable across all medical specialties is often not available or complete.

Utility analysis is a methodology that can allow a quantification of quality of life and therefore, can quantify the improvement obtained for a given medical intervention. It is a well used method based upon original theoretical teachings of von Neumann and Morgenstern in 1944. Later Torrance described utility analysis in evaluation of health programs in 1971. Once the quality of life at given health states is identified, those data can be combined with the evidence of the appropriate clinical trials in a decision analysis model.

For years now, decision analysis has been used by our government services to determine the most likely outcome of select circumstances threatening our country and thus, help determine the actions needed to protect us. In medicine we can use the same tried and true analyses to look at the various outcomes possible from the administration of a medical intervention and identify the most likely outcome and its value to our patients. Not only are efficacy data used, but quality of life changes due to adverse effects are included in the analyses.

Once the value of the medical interventions is quantified, cost considerations can and should be considered. The most cost-effective treatments can be identified. Standards of care should now not only include evaluation of efficacy but of value, and lastly, cost. Of

utmost relevance is the fact that while Value-Based Medicine® can reduce the costs of care, even more importantly, it directs healthcare providers to those interventions that give the highest quality of care. In essence, it allows for higher quality care than possible with evidence-based data alone since it integrates all benefits and all adverse effects into the outcome. Value-Based Medicine analyses use standardized methodologies and data sources in the performance of relevant comparative effectiveness and cost-effectiveness analyses allowing for the best outcome data supporting best patient healthcare practices.

Certainly in ophthalmology, the new treatments available for age-related macular degeneration are a clear example of why value-based assessments can help provide guidance to the Academy and all ophthalmologists in the determination of the best, value-based practices. When Medicare asks our medical specialty organizations for suggestions on how they can manage their budget more effectively to provide the best care and stable reimbursements, we want to be able to answer those questions most definitively.

Evidence-based to Value-Based Medicine is a text designed to introduce the concepts of Value-Based Medicine and its application across all of medicine. Not only do ophthalmologists need to be able to document their value to patients within their field, they must be able to show their value to patients as compared to any other medical specialty.

Vision is undeniably of great value to all of us. It is imperative that we strive to best be able to demonstrate to all who are in policy making positions the worth of maintaining and improving vision for our patients. The health and well-being of our patients, our families and ourselves depends upon it.

References

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