

## GUEST EDITORIAL

### Population Health and AHEOR at JSPH

Integrated delivery systems (IDS) are systems of care designed to enhance the health status of populations as well as individuals. Health care is evolving toward the IDS and away from the component (i.e. fee-for-service) approach where goods and services were applied and reimbursed individually, usually during a sick care episode. The health care industry is quickly moving to integrate health care delivery, measure the costs and benefits of interventions and strategies, and compare the outcomes across populations at risk. The assessment of value by the application of the evaluative clinical sciences (including data analytics, modeling, and patient-centered outcomes research) is central to achieving and maintaining the Triple Aim – the simultaneous improvement of population health, the patient experiences of care and per capita cost; stated more simply, better care with better outcomes at a reasonable cost.<sup>1,2</sup>

The passage of The Affordable Care Act in 2010 has accelerated the push toward integrated delivery systems and value assessment. Healthcare now accounts for approximately one-fifth of the gross national product, all the goods and services that are bought and sold in the USA. It is not solely the amount of funds invested in healthcare that are of concern, but the lack of tangible outcomes that yield healthier populations. The basic premise of outcomes research is that yields (the return on our investment) can be improved and that choices between alternatives must be made to promote efficiency without compromising quality of care.<sup>3</sup>

The determination of safety and efficacy remain essential to the application of evidence-based medicine, but increasingly

the real-world effects, or effectiveness, of efforts to keep populations healthy are the focus of healthcare institutions, ranging from systems to patients. Applied Health Economics and Outcomes Research (AHEOR) is a discipline that considers the evaluative clinical sciences and the roles they play in the quest for a better value in the *health* system. The tools of AHEOR and IDS are care pathways and heuristics grounded in the convergence of evaluative clinical sciences, such as epidemiology, risk assessment, wellness, eHealth and informatics, evidence-based medicine, healthcare quality and safety, comparative effectiveness, patient-centered research, health-services research, and cost-effectiveness. Practitioners of AHEOR apply the evaluative sciences to actual practice settings by converting structure, process and outcomes systems' variables into strategies for more effective, patient-centered and efficient care. Once an institution commits to restructure for population health, many of the historical foundations of healthcare are challenged and changed.

The scope of outcomes research tends to be broader than classic forms of clinical research and more applied to real world practice issues. Whereas traditional randomized clinical trials (RCTs) emphasize the biomedical perspective – the safety and efficacy of an intervention in a well-controlled experiment – outcomes research evaluates a wider spectrum of health interventions and consequences in usual care settings. Outcomes research-related disciplines (such as economics, epidemiology, and cost-effectiveness research) identify, measure, and compare the costs (resources consumed) and consequences (efficacy, safety, effectiveness, and quality of life) of

health interventions. It may also consider patient-centered outcomes such as satisfaction and real world care outcomes.

A variety of tools and methods are employed in the conduct of outcomes research. Assessments using patient-administered validated questionnaires; patient-reported outcomes assessments; multivariate analysis of non-experimental data from large observational databases; meta-analysis; decision analysis; discrete event simulation; and economic modeling, characterize efforts in outcomes research. It continues to draw on traditional areas of scientific research, including randomization where feasible, while incorporating techniques and methods of researchers in such disciplines as economics, epidemiology, health services research, operations research, pharmacy, psychology, psychometrics, and public health. Outcomes research is a discipline that studies the studies.

Outcomes research can provide decision makers with knowledge necessary to improve the efficiency of health care interventions while providing clinicians with data that can improve patient care. Payers, on the other hand, assess new technologies according to their cost-effectiveness; that is, whether the health benefits are commensurate with the benefits from interventions of equal or lower costs. Thus, AHEOR facilitates the assessment of value to optimize population health consistent with the Triple Aim.

At JSPH, we have developed the AHEOR curriculum to equip health care professionals with the requisite concepts and skills to apply value assessments in real world settings. Many of our students are mid-

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career professionals who already possess advanced degrees, but want to know more about the science and the practice of value assessment. This skill set will be critically important as we work together to create a

sustainable healthcare system with a focus on improving population health outcomes. ■

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**For more information about the AHEOR program visit: <http://bit.ly/1sqDJ9R>**

## REFERENCES

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