

# Population Health *Matters*

## The Jefferson Longitudinal Study of Medical Education: Five Decades of Outcomes Assessment

The year 2013 marks the matriculation of the 50<sup>th</sup> cohort of medical students whose careers are followed in the Jefferson Longitudinal Study of Medical Education. Over 11,000 individuals have been tracked since the first group entered in 1964, accumulating hundreds of pieces of data on each as medical students, house officers and medical professionals throughout their careers. Conceived based on a belief that medical schools have a professional and social obligation to monitor the quality of their educational products, the Longitudinal Study is a resource for faculty development, professionalism, academic management and institutional research to support accreditation requirements.

The Study supports faculty development by enabling faculty members to evaluate educational efforts scientifically, and to produce peer-reviewed publications and presentations to foster their scholarship and careers. After nearly five decades the Study, which now comprises millions of pieces of data, has produced more than 185 peer-reviewed publications. The majority of these studies involved Jefferson faculty outside the Center for Research in Medical Education and Health Care.

The Study has established Jefferson's leadership in monitoring important professional career outcomes not routinely tracked by national organizations. New, psychometrically sound tools have been developed to measure lifelong learning and other aspects of professionalism through periodic follow-up surveys of graduates. For example, in a recent study supported by an invitational grant from the Edward J. Stemmler, MD Medical Education

Research Fund of the National Board of Medical Examiners, we developed the *Jefferson Scale of Physician Lifelong Learning* to assess physicians from the classes of 1975 through 2000.<sup>1</sup> The responses of these 3,195 physicians, whose ages at follow-up ranged from 29 to 66 years, indicated that lifelong learning in medicine is a function of three factors: personal motivation, information-seeking skills and attention to learning opportunities. High scores on lifelong learning were associated with career satisfaction and indicators of valued professional accomplishments such as research, publication, participation in professional groups and appearing in the media and appearing before community groups. As expected, the academic clinicians scored higher on measures of lifelong learning than full-time clinicians. Examples of other professionalism tools that we have developed for the Study include the *Jefferson Scale of Empathy*, the *Jefferson Scale of Attitudes toward Physician-Nurse Collaboration*, and the *Jefferson Scale of Attitudes toward Physician-Pharmacist Collaboration*.<sup>2</sup>

The Longitudinal Study provides systematic empirical data on the short-term and long-term outcomes of admissions policies, curricular innovations and complex decisions on students' academic progress. For example, the Admissions Committee has used data from the Study to review the predictive relationships between admissions criteria and academic performance. The Curriculum Committee has used data to study the impact of options such as the Penn State Accelerated Program and Physician

Shortage Area Program on graduate outcomes. Formal outcome reports drawn from the Study provide solid evidence and remind students of the highly successful track record and diverse career paths of their predecessors.

The Study provides a solid foundation for institutional research on educational outcomes, enabling the faculty and administration to provide information required by accrediting bodies such as the Liaison Committee on Medical Education (LCME) and the Middle States Commission on Higher Education.

The confidential electronic database includes students' demographics, personal characteristics and academic qualifications before medical school, and extends through their undergraduate and graduate medical education. It includes comprehensive measures of academic and clinical performance at Jefferson based on objective tests, faculty ratings of clinical performance in core clerkships, scores on licensing examination, and clinical performance involving simulated patients and various simulation devices. Several aspects of the Study's database distinguish it from other attempts reported in the literature.<sup>3</sup> First, it includes competence ratings provided over the decades by thousands of residency program directors throughout the country that have observed the performance of Jefferson graduates in their first year after earning their MD degree. Second, throughout every graduate's career the Study tracks their key professional outcomes, which are continuously monitored and reported by national professional groups. These outcomes include faculty appointments

at all LCME-accredited medical schools available from the Association of American Medical Colleges, board certification awarded by the member boards of the American Board of Medical Specialties, and individual career attributes such as employment, practice setting and geographic location surveyed by the American Medical Association. ■

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*Readers interested in learning more about the structure and function of the Study can refer to a succinct one-page outline published recently in Academic Medicine: [http://journals.lww.com/academicmedicine/Fulltext/2011/03000/AM\\_Last\\_Page\\_The\\_Jefferson\\_Longitudinal\\_Study\\_of.34.aspx](http://journals.lww.com/academicmedicine/Fulltext/2011/03000/AM_Last_Page_The_Jefferson_Longitudinal_Study_of.34.aspx)*

## REFERENCES

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3. Cook DA, Andriole DA, Durning SJ, Roberts NK, Triola MM. Longitudinal research databases in medical education: Facilitating the study of educational outcomes over time and across institutions. *Acad Med.* 2012;85(8):1340-1346.