

## Physicians in varying specialties endure similar levels of mental effort, stress

September 8 2011

---

Although society's perception might be that surgeons endure greater mental challenges and stress in their work duties than a primary care doctor, new research from experts at the University of Cincinnati (UC) shows that this isn't necessarily the case.

Researchers from UC's departments of public health sciences, neurology, psychology and anthropology used work intensity [measurement tools](#) to determine that the level of mental effort and stress within various specialty groups tends to be similar, a finding that may lead to more equitable payment for [primary care physicians](#) as well as validating these tools for further assessment of stress and workload in medicine with the goal of improving health care.

These findings were published online ahead of print Sept. 3, 2011, in the journal *Medical Care*.

"Similarities and differences in physician work intensity among specialties are poorly understood but have implications for quality of care, patient safety, practice organization, management and payment," says Ronnie Horner, PhD, chair of the UC College of Medicine's public health sciences department and lead investigator on the study. "A physician's work can be assessed by the time required to complete it and by the intensity of the effort, which is central to properly valuing the services being provided. Current payment for medical services by the Centers for Medicare and Medicaid Services is largely determined by the relative value of the intensity associated with the service which may

also affect the quality and efficiency of the care provided."

"Historically, physician work intensity levels associated with various medical services have been measured by using expert panels, and surveys," he continues. "We recently completed a study that showed certain known measurement tools for assessing non-clinical work intensity can also be used to determine physician work intensity in clinical settings. This study used the same tools to compare whether work intensity measured immediately after providing care would be similar for physicians performing an operation versus an evaluation and management service."

Forty-five family physicians, 20 general internists, 22 neurologists and 21 surgeons in Kansas, Kentucky, Maryland, Ohio and Virginia made up the sample group.

Physicians completed the validated work intensity and stress measures with regard to a single patient encounter. Nonsurgical specialists completed the questionnaires immediately after a patient visit, usually the last encounter of a typical clinic session. Surgeons completed questionnaires immediately after an operation that lasted at least an hour and involved general anesthesia—usually the last or only operation of the day.

Work intensity was measured using the NASA-Task Load Index (NASA-TLX), the Subjective Workload Assessment Technique (SWAT) and the Multiple Resources Questionnaire (MRQ); stress was measured using the Dundee Stress State Questionnaire (DSSQ).

Participating physicians reported similar degrees of work intensity on the NASA-TLX and MRQ.

On the SWAT assessment, general internists reported work intensity

similar to surgeons but significantly lower than family physicians and neurologists. Surgeons reported significantly higher levels of task engagement (that is, concentration on the task) on the stress measure than the other specialties, significantly higher intensity on physical demand and significantly lower intensity on the performance dimensions of the NASA-TLX than the other specialties.

Surgeons also reported the lowest intensity for time demand of all specialties, being significantly lower than either family physicians or neurologists.

Family physicians reported the highest intensity on the time dimension of the SWAT, being significantly higher than either general internists or surgeons.

"Our findings point toward a more direct and complementary method of estimating work intensity that may guide a future, more precise valuation of physician work intensity," Horner says. "These tested instruments are able to provide immediate data and may be used to explore work intensity for similar services performed by different specialties. They may also help in investigating patient outcomes and quality of care as affected by the medical provider's work intensity. This information could also help us understand how electronic medical records, staffing patterns and practice structures affect the provider's mental and physical effort, time, demands and stress. The goal is to find ways to redesign medical practice to reduce the intensity experienced by the physician, and hopefully, thereby, improving the quality of care provided. "

Horner says more studies may be needed to determine how specific services affect the level of intensity or determine the overall intensity for a particular subspecialty.

"Although preliminary, the findings suggest that these instruments can

be used to further investigate clinical work intensity and that currently accepted assumptions of extremely differing work intensity among medical specialists may be flawed," he says.

Provided by University of Cincinnati

Citation: Physicians in varying specialties endure similar levels of mental effort, stress (2011, September 8) retrieved 19 June 2024 from <https://medicalxpress.com/news/2011-09-physicians-varying-specialties-similar-mental.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.