RESEARCH LETTERS

Providing Primary Care in the United States: The Work No One Sees

Practice redesign efforts to improve the efficiency of primary care practice and increase the volume of patients primary care providers are able to care for must take into account all tasks associated with the provision of care, including those outside the face-to-face encounter that often go unrecognized. In the present study, we empirically measured a wide breadth of outpatient care tasks associated with the provision of primary care over the course of an entire year in a large group of academic general internists, adjusted for actual number of work days and number of patients seen, to accurately assess the total work associated with provision of primary care in the outpatient setting.

Methods. The sample included general internists in the divisions of primary care internal medicine and general internal medicine at a large academic medical center who spent at least 2 half-days per week or more in the outpatient practice. Workload variables were obtained from electronic databases for the 2010 calendar year, including: (1) number of prescriptions electronically written and signed; (2) number of orders placed; (3) number and type of electronic clinical notes authored, edited, and signed; (4) number of patient care messages received; (5) number of electronic patient care messages reviewed, edited, and signed; and (6) number of electronic medical record documents reviewed, edited, and signed. To obtain an estimate of the average work effort per patient visit and per clinic day we divided each outcome variable by the number of clinic days and individual patient visits during 2010 for each physician and then calculated a mean and standard deviation for the entire group. The Mayo Clinic institutional review board approved this study.

Results. Of the 82 internists studied, 50 (61%) were male, and the mean (SD) age was 50.4 (10.2) years. Participants had worked in their current position for an average of 13.4 (8.8) years. Collectively, these 82 internists completed 89,697 outpatient office visits in 2010 and billed, on average, 3,816 work relative value units per full-time physician. The Table shows the mean numbers of tests and/or consultations ordered; prescriptions written and signed; patient care–oriented messages received; electronic medical record (EMR) documents reviewed, edited, and signed; and numbers and minutes of dictation by each physician over the course of 1 year as well as on a per clinic day and per outpatient visit basis.

Comment. To our knowledge, this is the first study to empirically document the actual work associated with the provision of primary care by a large cohort of general internists. In a typical clinic day in this study, the general internist ordered 70 laboratory tests, images, and consultations; wrote and signed 31 prescriptions; responded to 7 patient care–oriented messages; and reviewed, edited, and signed 19 EMR documents. Most of these tasks occur outside the face-to-face episode of care and consume a substantial proportion of the work day of general internists. Although we performed a comprehensive assessment of workload performed by general internists outside the office visit, we did not capture all tasks completed by general internists, and thus our estimate of clinical care tasks performed outside the office visit is conservative.

Table. Work Associated With the Provision of Primary Care Provided by Academic General Internal Medicine Physicians, 2010

<table>
<thead>
<tr>
<th>Task</th>
<th>Total, Mean (SD)</th>
<th>Per Clinic Day, Mean (SD)</th>
<th>Per Patient Visit, Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orders placed</td>
<td>7627.3 (4724.0)</td>
<td>69.9 (36.1)</td>
<td>7.4 (5.1)</td>
</tr>
<tr>
<td>Prescriptions written and signed</td>
<td>3113.1 (1731.8)</td>
<td>30.8 (16.7)</td>
<td>2.8 (1.2)</td>
</tr>
<tr>
<td>Electronic patient care messages</td>
<td>681.0 (428.4)</td>
<td>6.6 (4.0)</td>
<td>0.6 (0.3)</td>
</tr>
<tr>
<td>EMR clinical notes reviewed, edited, and signed</td>
<td>1966.6 (763.3)</td>
<td>19.1 (8.1)</td>
<td>1.9 (0.6)</td>
</tr>
<tr>
<td>Dictations, total No.</td>
<td>1535.7 (698.5)</td>
<td>14.4 (6.2)</td>
<td>1.4 (0.5)</td>
</tr>
<tr>
<td>Direct patient care dictations</td>
<td>995.9 (427.0)</td>
<td>9.2 (3.2)</td>
<td>0.9 (0.2)</td>
</tr>
<tr>
<td>Nondirect patient care–related dictations</td>
<td>316.6 (326.8)</td>
<td>2.8 (2.9)</td>
<td>0.3 (0.3)</td>
</tr>
<tr>
<td>Dictation, total minutes</td>
<td>5319.5 (2542.2)</td>
<td>48.1 (15.8)</td>
<td>5.0 (2.2)</td>
</tr>
<tr>
<td>Direct patient care–related dictations, minutes</td>
<td>4556.5 (2231.2)</td>
<td>40.0 (14.9)</td>
<td>4.3 (1.9)</td>
</tr>
<tr>
<td>Nondirect patient care–related dictations, minutes</td>
<td>515.9 (546.9)</td>
<td>4.4 (4.5)</td>
<td>0.5 (0.5)</td>
</tr>
</tbody>
</table>

Abbreviation: EMR, electronic medical record.

*Of the 82 physicians, 4 regularly self-entered notes or used speech recognition technology. We were unable to capture the time these physicians spent documenting their clinical encounter, and thus they are excluded from the dictation analysis. Two physicians were not consistently engaging with the electronic patient care messaging system and were excluded from that analysis. Data are given as numbers except where noted.
While nonvisit care has the potential of improving access to care by reducing office visits and patient outcomes, such nonvisit care leads to a substantial physician workload that is by in large invisible and nonreimbursed. If the non–face-to-face tasks associated with providing primary care are not recognized and accounted for, the workload of primary care physicians will likely become unsustainable as demand for access increases. Higher workloads will inevitably result in longer work hours, which have been shown to be a key driver of physician burnout and career dissatisfaction—both of which have a negative impact on quality of care and access to care.

Although nonvisit care tasks are often invisible to payers and consumers, medical students are acutely aware and believe the paperwork burden of primary care physicians to be substantially higher than that of other specialties, a factor that may have a negative impact on their view of primary care as a specialty choice. To ensure an adequate physician workforce to provide primary care, it will be critical that health care reform adequately compensates physicians for nonvisit care and supports improved efficiency in delivering all aspects of care. Unfortunately, discussions about addressing inefficiencies in nonvisit care have been minimal to date.

Provision of primary care requires a substantial number of tasks beyond face-to-face patient interactions. Although vital to the actualization of health care reform goals (eg, increase preventative care, better manage chronic diseases, improve health care quality, decrease hospital readmissions), much of this work is unrecognized. Efforts to improve practice efficiency and increase access to primary care providers must take into account these important but underappreciated tasks.

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Visits for Primary Care Services to Primary Care and Specialty Care Physicians, 1999 and 2007

With the US health care system rapidly undergoing organizational changes that will have an impact on the delivery of primary care, a better understanding is needed of primary care services provided by generalist and specialist physicians. For this reason, we used the National Ambulatory Medical Care Survey (NAMCS) to examine changes in the frequency with which patients visited generalists and specialists for primary care services between 1997 and 2007.

Methods. We performed a cross-sectional analysis using data from the 1999 and 2007 NAMCS. NAMCS is a survey of outpatient offices of non–federally employed physicians who are principally engaged in patient care activities. The primary variable of interest was whether the physician visit was for a primary care service, as determined using the Reason for Visit (RFV) code. The RFV code represents the patient’s complaint, symptom, or other reason for the visit in the patient’s own words. For analytic purposes, we created 2 categories of visits for primary care services using the RFV variable: (1) common symptoms and diseases, such as fever, nasal congestion, anemia, and asthma and (2) preventive examinations, which included only general medical examinations. Additional details are provided in the technical eAppendix (http://www.archinternmed.com).

We categorized physicians into 4 groups: (1) primary care physicians, (2) internal medicine subspecialists, (3) obstetricians and gynecologists (Ob-Gyns), and (4) all other specialists. We used descriptive statistics to characterize visits for primary care services by physician specialty, overall and stratified by common symptoms and diseases and preventive examinations, in 1999 and 2007. All analyses took into account the complex survey design and weighted sampling probabilities of the data.