



# findings brief

## Evaluating the Cost Efficiency of Specialist Physicians

With the growth of consumer-directed health plans, pay for performance programs, and provider tiering, it is important that the tools used to rank physicians provide consumers and payers with an accurate representation of physician treatment behavior. In particular, accurate measures of physician cost efficiency allow consumers to make more informed decisions while helping health plans make better choices about which physicians to include in their networks. However, a recent HCFO-funded study by J. William Thomas, PhD, of the University of Southern Maine and Kyle L. Grazier, DrPH, of the University of Michigan assessed the feasibility of using episode-based physician profiling and identified a number of methodological issues that can influence the validity of cost efficiency rankings for some specialties. Based on the findings, and the indication that health plans currently have little guidance on how to deal with these issues, Thomas and Grazier urged caution when relying on profiling to rank physicians. These findings provide important information about the use of these tools based on the experience of a single payer. However, given the increasing importance of ranking tools to consumers and payers, the researchers stress the need for additional research and are currently using the findings from this

HCFO-supported project as the foundation for additional research using a larger database, as well as for a collaborative effort to develop a set of national standards for physician profiling.

### Background

At the time that Thomas and Grazier began their work, most of the literature surrounding profiling of physicians focused largely on the definition of profiling and its usefulness in providing feedback for practice management. In contrast, the objective of Thomas and Grazier's project was to assess the feasibility of episode-based physician profiling methodologies for evaluating the cost efficiency of specialist physicians. In the study, Thomas and Grazier considered factors that would potentially alter the accuracy of the cost efficiency measure, such as excluding pharmacy claims data, adjusting sample size, or controlling for differences in patients' health risk.<sup>1</sup>

"At the time we started the project, virtually nothing was known regarding the methodology of profiling physicians, only that health insurance companies were doing it," says Thomas.

According to Thomas, even users of profiling systems were unable to compare products based on the accuracy of their



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results; rather, they based their decisions on cost, the type of report the system produced, and the hardware requirements.<sup>2</sup>

Because health plans use profiling data to evaluate the quality and cost efficiency of a practice, it is important that the measures are accurate and consistent. If not, physicians might be included in a high-performance tier by one health plan but not in another. Inaccurate or unreliable measures may also provide incentives for physicians to avoid treating patients who previously resulted in high costs, poor adherence, or poor response to treatment.<sup>3</sup>

### Methods

To examine the feasibility of physician profiling systems, Thomas and Grazier processed four years of claims data (professional, outpatient, inpatient, and pharmacy) from a university-owned, mixed-model HMO using two episode grouper software systems: Episode Treatment Groups (ETG) by Symmetry Health Data; and MedStat Episode Groups (MEGs version 2.1) from the MedStat Group. They also examined two risk-adjustment systems. Plan members included in this study were enrolled for a full 12 months during the period from 1999 to 2002.<sup>4</sup>

Nine specialties (family practice, cardiology, foot surgery, general internal medicine, general surgery, gynecology, neurology, orthopedic surgery, and urology) were selected for this study, and responsibility for episode costs were assigned to those specialties based on three attribution rules that represented the physicians' percentage of the total professional and pharmacy costs associated with the episode.<sup>5</sup> The researchers used actual costs as recorded by the plan and standard costs, as calculated by taking the average of the actual costs, to calculate the "standardized cost difference," their proposed measure of physicians' cost efficiency performance.<sup>6</sup> Using the two episode groupers, several different methods for controlling for the distorting influence of cost outlier episodes, and several different rules for attributing episode responsibility to individual physicians, they created multiple rankings and tested pairs of the rankings for agreement.

### Findings

The researchers found that minimum episode sample size — the minimum number of episodes that qualifies a physician for profiling — can greatly influence the accuracy of physician profiles. And, while the analyses raise questions about the consistency of year-to-year rankings for primary care physicians — family practice, general internal medicine, gynecology, and pediatrics — agreement between consecutive year rankings was substantial for other specialties, such as cardiology, general surgery, and neurology.<sup>7</sup>

Because pharmacy claims data are sometimes unavailable, Thomas investigated whether or not excluding pharmacy claims data would alter physician cost-efficiency rankings. Findings suggest that the absence of pharmacy claims in the total claims picture (inpatient, out-patient, and professional) may still permit feasible rankings for cardiology, neurology, and general surgery, but not for family practice.<sup>8</sup>

### Implications

The researcher's findings suggest that, if appropriate methodologies are used, consumers can be confident of relative cost efficiency scores for some specialists, such as cardiologists, general surgeons, and neurologists. However, there was little agreement between ETG-based and MEG-based rankings for some other specialists — e.g., family practitioners, gynecologists, internists, and foot surgeons — that suggests a need for caution when interpreting cost efficiency rankings.<sup>9</sup>

Cost efficiency scores that are inaccurate could cause health plans to misclassify physicians and could mislead consumers. Although they might still be useful when used as feedback information to physicians and for improving practice management, using inaccurate scores to reward or penalize physicians should be avoided.<sup>10</sup> Due to the increase in health plans requiring consumer choice, it becomes evident that more users are going to look at physicians in cost and quality terms, highlighting the need to further study such methodologies.

While results of this study are limited to one plan and one market, they raise general questions regarding physician profiling methodologies.<sup>11</sup> Building on these seminal findings supported by his HCFO grant, Dr. Thomas is partnering with Massachusetts Health Quality Partners ([www.mhqp.org](http://www.mhqp.org)) and will utilize a much larger claims database to repeat the initial study questions and test additional questions.

In addition, the concerns raised by this study about using current profiling methodologies to reward and penalize physicians led the National Committee for Quality Assurance (NCQA), in collaboration with Dr. Thomas and others and with support of the Commonwealth Fund, to examine physician profiling methodologies to develop a set of national standards in this area. NCQA is also collaborating with the Ambulatory Quality Alliance (AQA) to seek input on potential national standards in physician profiling. To date NCQA has engaged leading episode grouper/risk adjustment profiling vendors in an effort to identify a national standard for the application of these tools addressing multiple issues including sample size and attribution of care to physicians. NCQA anticipates releasing a compendium of proposed national standards for measur-

ing physician performance in the area of care effectiveness and resource use, enabling accurate physician profiling, perhaps as early as late 2006.<sup>12</sup>

### About the Author

Bianca A. Grimaldi is an Associate at AcademyHealth ([www.academyhealth.org](http://www.academyhealth.org)). She can be reached at 202.292.6700 or [bianca.grimaldi@academyhealth.org](mailto:bianca.grimaldi@academyhealth.org).

### Endnotes

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