



Making Sense of the Medicare Physician Payment Data Release: Uses, Limitations, and Potential

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Abstract In April 2014, the Centers for Medicare and Medicaid Services released a data file containing information on Medicare payments made to physicians and other providers. Though an important achievement in promoting greater health system transparency, limitations in the data have hindered key users, including consumers, payers, and providers, from discerning meaningful information from the file. This brief outlines the significance of the data release, the limitations of the dataset, the current uses of the information, and proposals for rendering the file more meaningful for public use.

OVERVIEW

In May 2013, an “open data policy” was instituted under U.S. executive order with the intent of strengthening government cooperation, openness, and accountability among all U.S. federal agencies.^{1,2} This mandate has hastened the release of government datasets, including those related to health care. For example, the website HealthData.gov now contains all published federal health data—currently more than 1,000 datasets in all.³ This brief will examine one of these datasets: the Physician Data File, publicly released by the Centers for Medicare and Medicaid Services (CMS) on April 9, 2014 (its official name is [Medicare Provider Utilization and Payment Data: Physicians and Other Supplier Public Use File](#)). The release of the file, which contains never-before-published data on Medicare Part B fee-for-service payments made to physicians and other health care providers in 2012, has not been without controversy.⁴ Policymakers, researchers, and physician groups have all questioned the meaningfulness of the dataset for public use, given that it is not accompanied by user guides and lacks key information about providers and patients.

This brief aims to shed light on how the dataset, even in its current form, is nevertheless useful for certain purposes. Perhaps more important, we show how the release of the Physician Data File can serve as a starting point for improving upon future data releases. We outline the overall significance of the data release; what elements the dataset lacks; the types of analyses permitted by the current data file; and recommendations for making the data more meaningful to consumers, payers, providers and other users.

WHAT IS THE SIGNIFICANCE OF THE PHYSICIAN DATA FILE?

For several reasons, the release of the Physician Data File represents a significant step forward in achieving transparency in health care markets. First, physician payment information has historically been difficult to publish. In addition to significant resistance from provider groups to releasing the data, stemming from privacy concerns and fears of wide-scale misuse and misinterpretation, a 1979 court injunction had actually banned CMS from revealing information on Medicare's physician payments. It was not until May 2013 that the injunction was lifted, after the parent company of the *Wall Street Journal* succeeded in persuading a Florida federal district court judge.^{5,6} Overcoming these barriers is therefore of symbolic importance.

Second, in the current health care market, payers, patients, and even providers have limited access to timely and accurate information on health care utilization and costs. For consumers, the release of these data could eventually facilitate comparison, among individual physicians, of types of services delivered, and payments received.⁷ If presented in user-friendly ways, and paired with information on quality of care, the data could help consumers choose physicians who deliver the highest-quality care.⁸ Others have suggested that payers also could use the file to detect high-spending providers and to construct provider networks and insurance products that help constrain escalating health care costs.^{9,10}

For providers, the newly available information could be a tool for improving care and could facilitate the choice of high-quality, low-cost physician referrals for their patients.¹¹ Greater transparency in the health care sector, achieved by making information on the cost and quality of health services more widely available, ultimately could encourage providers to compete on quality and efficiency and lead to broader improvement in the delivery of care.^{12,13}

WHAT INFORMATION IS NOT IN THE DATASET?

Although signifying the promotion of greater health system transparency, CMS and key stakeholders acknowledge the data are imperfect, owing to a number of administrative complexities:¹⁴

- The data are not representative of a provider's whole practice, given that information in the Physician Data File pertains only to Medicare Part B fee-for-service payments.
- Multiple providers are allowed to bill under the same National Provider Identifier (NPI) in certain situations (in the case of group practices, for instance), thus making it difficult to ascertain how many providers are administering services and whether the physicians that appear to be overbilling are actually doing so.
- The data are not risk-adjusted to account for variation in providers' shares of complex patients or for geographic differences in practice costs.
- No information is available on quality measures for individual providers.
- The dataset does not include facility payments for services provided within the facility, such as a hospital outpatient department. Instead, Medicare payments are split between the facility and the physician visit portion.
- Information on physicians who saw fewer than 11 Medicare patients in a year is excluded. These physicians account for about 40 percent of physician services.¹⁵
- The dataset is technically difficult to operate for many researchers, given that it is extremely large and requires statistical software for manipulation.

CURRENT USES OF THE DATASET

Despite these limitations, the dataset has proven to be useful to some. The majority of research to date has been conducted by the media and has focused on specific high-cost providers and specialties, procedures, and drugs. A media analysis of providers' propensity to use Lucentis and Avastin to treat age-related macular degeneration (AMD) illustrates the potential power and limitations of the dataset. In 2011, the NIH released first-year results from a clinical trial that indicated the drugs were equally effective at treating AMD.¹⁶ Then, in 2012, news outlets reported that Medicare spent \$1 billion on Lucentis, which at \$2,000 per injection, was 40 times as expensive as each Avastin dose. The reports also identified by name a few ophthalmologists who billed for the costly alternative at particularly high rates. These news stories generated conversations about wasteful health care spending, providers' incentives to opt for higher-cost drugs, and the potential for fraud.¹⁷

The data, however, could not provide information on physicians' actual profits, nor could they shed any light on differences in patient outcomes between patient populations with different utilization rates for the two drugs. What the data could tell us is whether the variation in utilization was greater between individual providers or between health care markets and what proportion of providers use the higher-cost drug, as well as the implications for Medicare program costs. Beyond this example, the data could be particularly useful for looking at variations in practice patterns and sites of service for other procedures and conditions, if the Healthcare Common Procedure Coding System (HCPCS) codes were grouped in meaningful ways, such as by procedures commonly used to treat given conditions. The public availability of information on individual providers' Medicare payments and use of services also could facilitate consumer and media involvement in pinpointing instances of fraudulent or abusive billing practices.

PROPOSALS FOR IMPROVING THE DATASET

In its current form, the dataset is cumbersome to use in making decisions prior to or at the point of care. There are, however, several ways to improve future data releases for public use. First, just as the current Medicare payment data are adjusted, it would also be useful to standardize cost data to enable meaningful comparisons across health care markets with different underlying costs. Although researchers can make such calculations, producing standardized data for public use—as CMS has done for other datasets—would promote ease of use for everyone.¹⁸

Second, clearer distinctions are needed between provider types. In some cases, specialty categories are ambiguous, as physicians are often listed by the specialty with which they first registered their NPI; for example, a cardiologist might be classified as an internist. There should be an easier path for physicians to update and clarify this information so that specialty categories actually reflect a physician's current practice.

WHAT'S IN THE PHYSICIAN DATA FILE?

The Medicare Physician Data File contains more than 9 million lines of data relating to:

- **Provider information** for more than 880,000 providers who participate in Medicare. Includes provider names, credentials, type of entity (individual or group), gender, address, and provider type.
- **Service information** for 6,000 types of services listed in the Healthcare Common Procedure Coding System. Includes service setting (e.g., doctor's office, hospital), number of times service was provided, number of Medicare beneficiaries served, and number of distinct beneficiaries seen per day.
- **Payment information** on \$77 billion paid out to Medicare providers in 2012 (out of \$572.5 billion in total health care spending on Medicare during that year). Includes the average Medicare-allowed amount per service, average number of submitted charges, and average Medicare payment after subtracting deductibles and coinsurance, as well as standard deviations for each of these amounts.

Third, it is difficult to make useful utilization and cost comparisons across providers, because the health status, demographics, and health outcomes for the patient populations physicians treat are not included in the dataset. While privacy concerns may make the inclusion of patient information controversial, adding patient outcomes and risk adjusters would help account for important differences in the types of patients whom providers treat—something that obviously can have a substantial impact on utilization and cost patterns.

The data also could be paired with other datasets to create a more comprehensive look at health care system spending, prices, utilization, and clinical practices. For example, a cross-sectional dataset combining the Physician Data File with other public use files, such as the recently released [Open Payments data](#), which contains information on the financial relationships between providers and drug companies, would yield more detail on utilization and costs for physician subspecialties, particularly ophthalmologists and oncologists. While in certain instances the frequency with which a provider performs a procedure may be associated with patient outcomes, pairing the data with physician quality measures would better inform consumer choice and help insurers create more efficient provider networks. The foundation for quality measures is in place, as evidenced by the other quality initiatives Medicare is currently implementing. But it will take longer to create meaningful metrics of greatest interest to users of this information.

DISCUSSION

While imperfect, the physician data released this past spring hold promise for greater stakeholder engagement and data-driven decision-making in the future. At present, there is a great deal of emphasis on outliers—namely, physicians who may have exceeded a threshold in charges or used a higher-than-average volume of services. But even in its current form, the dataset is useful for identifying variation in utilization and differences in sites of service as well as offering beneficiaries an additional perspective on the volume of services delivered by a particular physician. As future datasets are released, key users—including beneficiaries, researchers, providers, policymakers, and media—will doubtless require additional guidance. Moreover, with data transparency a common goal for all payers, it will be critical for policymakers to think strategically about creating linkages between these newly available data so the end user has a more complete picture of the overall health care experience.

NOTES

- ¹ The White House, Transparency and Open Government, http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment.
- ² The White House, Executive Order—Making Open and Machine Readable the New Default for Government Information, <http://www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government->.
- ³ E. G. Martin, N. Helbig, and N. R. Shah, “Liberating Data to Transform Health Care: New York’s Open Data Experience,” *Journal of the American Medical Association*, June 25, 2014 311(24):2481–82.
- ⁴ Centers for Medicare and Medicaid Services, “Medicare Provider Utilization and Payment Data: Physician and Other Supplier,” <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Physician-and-Other-Supplier.html>.
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- ⁶ S. Zeller, “Doctors Disagree on Disclosure of Medicare Payment Data,” *CQ HealthBeat*, Sept. 26 2014.
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- ¹⁷ A. Pollack and R. Abelson, “Eye Doctors Say Their Profits Are Smaller Than Data Makes Them Look,” *New York Times*, April 9, 2014, http://www.nytimes.com/2014/04/10/business/eye-doctors-say-their-profits-are-smaller-than-medicare-data-makes-them-look.html?_r=0.
- ¹⁸ Centers for Medicare and Medicaid Services, “Medicare Geographic Variation,” http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.html.

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