Making the Most of EHR Data

Why you should maintain control of your data and capture more of its economic value.

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Health care data is a large and valuable market of which practicing physicians are largely unaware. Traditionally, this market has included aggregated databases of insurance claims, outpatient prescriptions, and pharmaceutical manufacturer and distributor (PMD) information. Although physicians generate the data that populate these valuable databases, they do not receive any of the monetary value created by their work.

The widespread adoption of the electronic health record (EHR) will create a much larger, more granular, and more valuable health care data market. The purpose of this article is to educate physicians about the evolving health care data market, to emphasize the importance of maintaining ownership of their EHR data, and to suggest a mechanism by which physicians might capture some of the economic value of that data.

TRADITIONAL HEALTH CARE DATA SOURCES

Medical insurance claims, outpatient prescription data, and PMDs are the largest traditional sources of health care data. Insurance claims contain detailed physician information and standardized information on provided services including diagnoses, procedures, and drug utilization. Health insurance companies sell these claims to companies such as IMS Health, Inc., that aggregate claims data from multiple payers into large commercial databases.[1] Pharmacy chains and networks sell comprehensive prescription data that contain identifiable physician information,[2] and PMDs sell individual practice sales data.[3] Data from all of these sources are used to create detailed reports on individual physicians that allow tracking of treatment patterns and drug utilization. The pharmaceutical and insurance industries purchase and use these data for market research and physician profiling.[4]

These health care data are valuable. One national pharmacy retailer valued its "purchased prescription files" at $749 million in a 2010 Securities and Exchange Commission filing.[5] IMS Health, which touts itself as the leading global provider of market intelligence to the pharmaceutical and health care industries, had sales of over $2.3 billion in 2008.[6]

AMERICAN MEDICAL ASSOCIATION PHYSICIAN MASTERFILE

The American Medical Association (AMA) "Physician Masterfile" is a database that includes all US physicians. It contains detailed demographic, educational, and practice information that pharmaceutical and data mining companies purchase from the AMA and use to correlate data obtained from other sources with specific physicians.[7] The AMA generates an estimated $45 million in sales annually from the Physician Masterfile.[8]

A physician is automatically opted in to the Masterfile upon entering medical school.[9] One can opt out via the AMA Physician Data Restriction Program (PDRP, located at https://apps.ama-assn.org/PDRP/locate.do), although this does not completely preclude pharmaceutical companies or other industries from purchasing or viewing a physician's data.[10]

HEALTH CARE DATA IN THE ERA OF EHR

The development and widespread application of the EHR will contribute to the creation of a vastly more granular and valuable health care data market. Data from traditional sources, although valuable and widely used, have limited utility because they are frequently incomplete and outdated. In contrast, EHR data are comprehensive and can be accessed for aggregation and analysis in near real time. The health care data market recognizes the value of EHR data. Ken Riff, Vice-President of Medtronic, recently stated, "Data is going to be the currency of the health care future."[11] Indeed, 1 expert estimated that the value of EHR data for all of medicine could grow to $5 billion by 2020.[12]

The gold rush to capture the monetary value of EHR data has already started. Integrated health care systems, such as the Geisinger Health System, already sell aggregated EHR data to industry.[13] The American College of Cardiology

sells information from its EHR data registries for market research.[14] The health care solutions company Cerner is aggregating EHR data in its massive data center and forging industry partnerships.[15] IMS Health, now a private company, continues as a major player in the health care data industry. In anticipation of capturing future value, some EHR vendors retain ownership of data residing in their servers and thus the authority to market and sell data. Other EHR vendors recognize that the clinical data on their servers belong to the physicians who enter it. Dan Montzka, a practicing retina specialist in Tampa, Florida and CEO of EHR company MDIntellesys sums it up nicely: "The clinical data that physicians enter into MDIntellesys is a reflection of their work, and as such, they should benefit from it."

The American Academy of Ophthalmology (AAO) has recently launched a project to bring ophthalmology into the "Big Data" era. The Intelligent Research in Sight (IRIS) data registry allows participating physicians to upload their EHR data into an aggregated database. Benchmarking and quality measurement analyses of this database can be used to help physicians achieve pay-for-performance incentives and maintenance of certification metrics. Participation in IRIS requires that physicians grant the AAO an unlimited license to utilize their de-identified data.

EHR DATA: PROMISE AND PERIL

The EHR revolution holds both promise and peril for physicians. The promise of EHR, yet to be confirmed, is to improve efficiency, enhance accurate record keeping, improve patient care, decrease medical errors, and decrease health care costs. However, EHR databases may also be used to enhance the ability of payers to profile physicians, subdivide physicians and physician networks into "performance" tiers, and create national benchmarks for payment policies. Such data may also be used as a component of future value-based or outcomes-based payment models.[16] EHR data are also likely to be used to facilitate pre- and postpayment audits. It isn't difficult to conceive that future payer audits may require a physician to upload specified EHR records to third-party audit contractors. Finally, both commercial entities and nonprofit organizations are preparing to capture the monetary value stored in EHR databases. It is important to realize that individual physician-generated health care data will continue to populate valuable proprietary commercial databases. Physicians will continue to be excluded from the monetary value stream generated by their EHR data unless they understand the health care data market and take proactive steps to capture some of that value.

EHR DATA: BARRIERS

There are 2 significant barriers to the sale of individual physician EHR data to the health care industry. First, because individual physician data may not be representative of regional or national practice patterns, it is of little interest or value to industry. Second, federal regulations prohibit direct payments to physicians by pharmaceutical and medical device manufacturers that provide products and/or services reimbursable by federal payers, considering such payments improper "inducements" to use their products. Consequently, industry is prohibited from (1) directly paying a physician, or an entity in which a physician has an ownership interest, for their data; (2) knowing the identity of a physician who receives third-party compensation for their data; and (3) paying more than "fair market value" for physician data.

EHR DATA: OPPORTUNITY

With these barriers, how can physicians capture monetary value from the EHR data they generate? The answer lies in data de-identification and aggregation and physician-industry anonymity. It helps to understand 3 facts: (1) Data from an individual physician have monetary value only as a part of an aggregated database in which both patients and the physician are de-identified in compliance with HIPAA and OIG regulations; (2) Federal regulations allow industry to purchase aggregated de-identified data from a third-party company that functions as a legal and regulatory "firewall" between industry and physicians; and (3) Federal regulations allow a third-party company to compensate physicians for their de-identified data, provided that those payments do not exceed "fair market value" and the compensated physicians are not shareholders in the company.

INDUSTRY FIRST: ROYALTIES FOR EHR DATA

Vestrum Health is a new data company that seeks to help physicians capture value from their EHR data. Vestrum Health has developed a proprietary, safe, secure, and regulatory-compliant technology platform that allows participating physicians to securely transmit their EHR data to a proprietary database, without compromising the stability and security of their EHR system. Physician and patient identifiers are removed per regulations, the data are made available to participating physicians for analytics and clinical research, and physicians retain control over how their data are utilized. In an industry first, Vestrum Health shares a significant portion of revenue generated by data sales in the form of royalty payments to participating physicians, thus allowing physicians to finally capture a monetary return on their EHR investment.

SUMMARY

EHR represents a new era in health care data, offering much promise and opportunity. The data industry is

already moving rapidly to capitalize on the unparalleled granularity, timeliness, and value of this new data source, and much of this activity is taking place out of sight and mind of the physicians who do the work to generate the data. Vestrum Health believes that physicians should benefit from the monetary value generated by their EHR data and be hesitant to relinquish ownership of this information to entities that do not share that value with physicians. ■

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The authors disclose that they are co-founders of Vestrum Health, a health care data company based in Knoxville. Vestrum Health was founded in 2012 to provide physicians with the opportunity to unlock the value of their EHR data.

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