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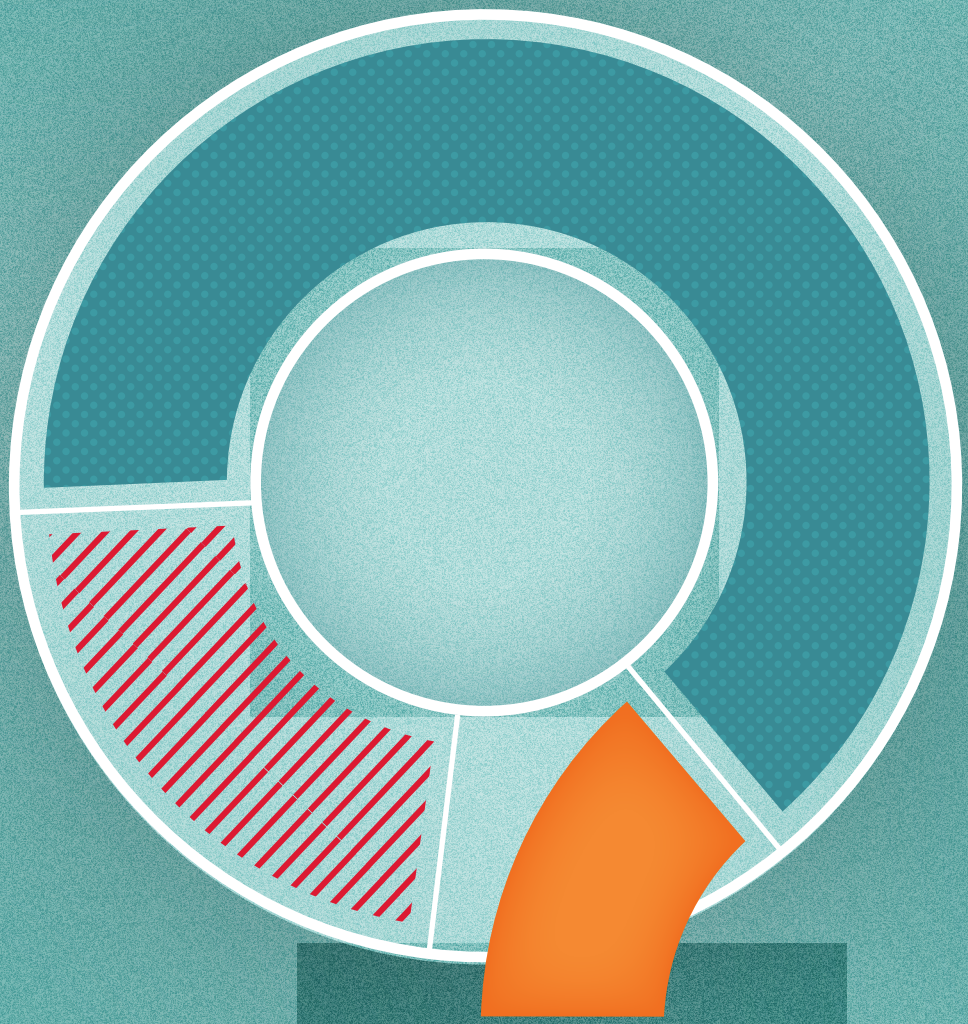

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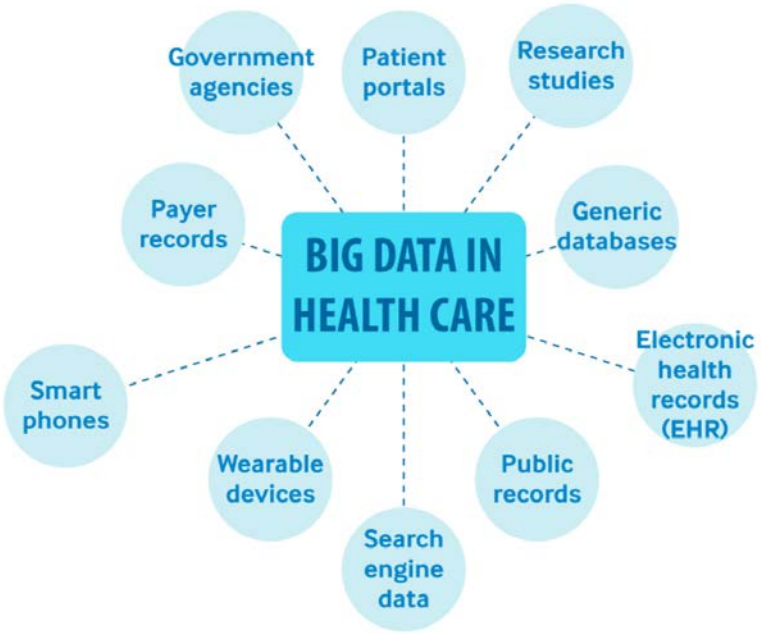
Valuing Healthcare Data

By Todd Zigrang, MBA, MHA, FACHE, CVA, ASA, ABV, and Jessica Bailey-Wheaton, Esq.

As the healthcare industry continues its efforts to permanently shift payment for services from a volume-based to a value-based system (which rewards providers based on the health of their patient population), providers have turned to technology to help them deliver care that results in better outcomes at a lower cost. The goal of such technology (e.g., wearables, predictive analytics, population health management) is to provide patients with tools to be more accountable for their own health and to help providers monitor patients (especially those with chronic conditions) and reach them before they become truly sick. Treating patients in the early stages of a worsening condition can lower emergency department utilization and hospital admissions rates. The use of this technology also captures a tremendous amount of data from patients, healthcare providers, and payors—termed "big data"—across a variety of sources. Big data is characterized by its high volume, its movement at high velocity across the healthcare digital universe, and its high variability in structure and nature.[1]



NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

1 "Healthcare Big Data and the Promise of Value-Based Care," NEJM Catalyst, January 1, 2018, https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0290.

Healthcare organizations are now exploring ways not only to use data in their possession, but also to acquire data from others to complement or supplement their data and to monetize that aggregated data. However, the relative newness of healthcare big data (and transactions involving that data), in addition to the various laws and regulations that restrict the dissemination of patient information, makes it difficult to value. Nevertheless, the valuation of healthcare data will likely grow in the future as healthcare organizations explore how the aggregation and use of this data can augment current patient care.

Purchasers and Uses of Healthcare Data

Providers, software firms, and other companies are increasingly seeking to acquire clinical patient data from healthcare organizations. Transactions involving healthcare data are increasing in both number and complexity. Transaction arrangements may include:

- Outright acquisition
- Partial acquisition
- Options to acquire
- Equity sharing
- Licensing of information
- Joint venture or codevelopment arrangements
- Contingent consideration (milestone payments, royalties, contingent value rights)

As discussed further below, so long as providers de-identify data, they are allowed to sell it. However, healthcare organizations that purchase or sell such data should ensure it is priced at fair market value to mitigate any regulatory risk—that is, to show that the organization is proactively guarding against allegations of overpayment or kickbacks—particularly if the parties are in a position to refer patients to one another. Given the dearth of on-target industry normative benchmark data to consult for pricing guidance in selling or buying data, healthcare organizations often consult with valuation professionals to help determine what the market might pay. As a result, the need for fair market value opinions related to healthcare data will likely continue to increase.

Table 1 provides several examples of companies that acquire clinical data and the ways they use that data.

Table 1: Uses of Clinical Data

Clinical Data Acquirers	Uses of Acquired Data
Pharmaceutical companies	• Empower salesforce to market drugs more effectively • Understand the competition and breakdown of market share • Understand patient behaviors—large pharma companies pay $10–$40 million per year for data, consulting, and services from firms such as IQVIA (https://www.iqvia.com)
Financial traders	• Use medical data to inform their trading decisions—for instance, information about which drugs are or are not popular can influence which stocks will rise and fall
Researchers	• Study outcomes of different treatments
Employers	• Study patient and spend data to determine how to reduce costs; benchmark their costs against other employers
Healthcare providers	• Compare cost and quality with competition to improve care internally
Payers	• Uncover billing fraud
Attorneys	• Contact patients for class action lawsuits
Advertising platforms	• Sell data to Google or Facebook to allow more precise ad targeting
Data brokers	• Resell data to the above • Resell for controversial or illegal uses (e.g., blackmail)

Source: Elizabeth Whitworth, "Selling Your Healthcare Data: Who Buys It & Why," Shortform, July 2, 2021, https://www.shortform.com/blog/healthcare-data.

There are several ways to price this data. For example, access to records may be provided and compensated via a licensing/access fee; one price may be set for data/information about a specific condition/ailment across a set number of individuals; or data may be sold on a per-medical-record basis.

Valuation Considerations

Valuators of healthcare data may employ one or more of the generally accepted valuation approaches: the income approach, the market approach, and the asset (or "cost") approach. The applicability of each approach is based on economics, markets, and the value drivers specific to the subject data. Value drivers include:

- Data type: clinical/claims, administrative, trials data
- Legal rights to use: exclusivity, licensing rights versus ownership rights, other limitations
- Quality of data: complete raw claims data; aggregated, structured, and filtered for a specific use; format of the data for manipulation, breadth, and depth of the fields included
- Usefulness: patient sample size, patient identification information included or de-identified

Income Approach

When employing the income approach for the valuation of data (or any other asset), the valuator analyzes the future benefits that a buyer is expected to receive after its acquisition. A key aspect of the income approach, therefore, is that it is forward-looking. It involves forecasts and projections relative to the economics of the acquired asset.

The fair market value standard must consider the benefits to be accrued by a universe of hypothetical willing buyers, not just a specific buyer or class of buyers. As discussed previously, there are many types of buyers and uses of data. Thus, one must take into account the ability to generate economic benefits based on the data's highest and best use, or by selling it to another market participant that would put the data to its highest and best use. Determining the "highest and best use" assumes that use of the asset is physically possible, legally permissible, and financially feasible. Therefore, the income approach may involve developing more than one financial model—similar to forecasts performed for the valuation of start-up companies—to reflect the uncertainty and risk involved in the monetization of healthcare data.

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Market Approach

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Intangible asset databases, such as RoyaltySource and KTMine, may provide comparables for the sale of data or, as a proxy, data licensing agreements. Additionally, public filings—including Securities and Exchange Commission (SEC) transaction filings disclosed by public companies, company valuations, proprietary databases, and even the dark web—can provide indications of the types of data being sold, and at what price. While the market for clinical data is very strong, it has a wide range of value indications, depending primarily on the completeness of the data record.

Using the market approach to determine the fair market value of clinical data may involve the following considerations:

- Healthcare data brokers charge between $0.05 and $50 per medical record, depending on the information contained in the record. These brokers may also charge upwards of $75,000 to $100,000 per year for subscription/licensing access to data that includes information on individuals' health conditions.
- Prices paid for clinical data records range from $0.05 to over $125 per medical record, and an entire electronic health record (EHR) database can sell for up to $500,000.[2]
- Limits imposed by the Health Information Technology for Economic and Clinical Health (HITECH) Act on the fees covered entities can charge for providing EHR to a patient can constitute a market comparable transaction. Under the HITECH Act, a fee "shall not be greater than the entity's labor costs" in responding to a patient's request for data.[3] The regulations make clear that the costs are limited to labor, the cost of supplies, and postage. The Department of Health & Human Services (HHS) permits practices to charge a flat rate of $6.50 or calculate the average or actual cost of providing patients with their EHR, whichever is most appropriate for the circumstances.[4] However, there may be limited rights associated with these transactions that may reduce their comparability to the subject data.
- One of the tenets of fair market value is that the transaction itself is legal. This prohibits consideration of comparables that include the illegal dissemination of data.

The market approach, when used to value healthcare data, poses similar challenges as it does for the valuation of healthcare businesses and services. The valuator must find reliable comparable transactions with sufficient and relevant facts to assess the homogeneous badges of comparability to the subject data.

Cost Approach

The cost approach estimates value as the cost of reproducing or replacing the subject data. Often, the data subject to a transaction cannot be monetized—that is, it cannot create revenue or reduce costs—for a willing buyer. However, the data may still have economic value. In these cases, the cost approach may reflect the data's highest and best use.

Using the cost approach involves identifying the costs incurred by the seller to develop and aggregate the subject data (costs that may be avoided by a willing buyer), adjusting for inflation, and adding a reasonable return on those inflation-adjusted costs. The cost approach is typically considered a "bottom-up" technique, as it often returns the minimum fee (floor) amount a "willing buyer" may reasonably be expected to pay.

A challenge in using the cost approach is identifying and separating the costs to create the subject data from other costs incurred during patient care or other business operations. Often, industry normative benchmark cost data may be used to assess the reasonableness of identified costs or as the primary source for quantification of the costs to create the subject data.

2 Carol Gibbons, "What Is the Price of a Medical Record?," *Medical Economics* (blog), July 15, 2017, https://www.medicaleconomics.com/view/what-price-medical-record.

3 Restrictions on certain disclosures and sales of health information; accounting of certain protected health information disclosures; access to certain information in electronic format, 42 U.S.C § 17935(e)(3).

4 Individuals' Right under HIPAA to Access their Health Information, 45 C.F.R. § 164.524 (2023).

Other Considerations

Healthcare data specific to patient health is regulated by federal law, specifically the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the HITECH Act. Among other things, the HIPAA Privacy Rule seeks to safeguard individual protected health information (PHI) from unauthorized disclosure by covered entities (e.g., providers, pharmacies, hospitals, nursing homes), without restricting the flow of healthcare information necessary to coordinate care.[5] Additionally, the HIPAA Security Rule governs the treatment of electronic PHI (e-PHI), requiring HIPAA-covered entities to ensure the confidentiality of the data, safeguard against security threats to the data, and "protect against anticipated impermissible uses or disclosures."[6] The HITECH Act expands on HIPAA regulations in part by applying the law to additional entities (i.e., business associates).

As noted above, these healthcare privacy laws effectively require that healthcare data be "de-identified" by wiping the data clean of any identifying information, such as patient names, locations, and contact information. While some business associates have agreements in place with providers to access raw patient data (and pay for that access), to comply with HIPAA and the HITECH Act, business associates would have to de-identify that data prior to selling it to any outside entities. Notably, selling de-identified patient data does not require the company to notify patients or obtain consent.

Conclusion

The aggregation and analysis of healthcare data may result in large-scale benefits, including personalization of healthcare treatments and improvements to overall care. However, there are also potential risks, such as bad actors using data to make fraudulent medical claims or potentially re-identifying the data.[7] Whether the benefits will outweigh the risks remains to be seen, but it likely will not slow down the aggregation of big data in healthcare.

As a result, this growing marketplace of buyers seeking healthcare data, coupled with the numerous applications of the data, presents an opportunity for healthcare valuation professionals. Valuations may be needed to establish the sales price, make strategic determinations, or ensure regulatory compliance. Similar to valuations of healthcare businesses and services, valuations of healthcare data may involve multiple approaches and methods. Regardless of approaches or methods, however, the valuator must consider the type of data, the purpose of the transaction, the specific facts and circumstances, the information available, and the highest and best use of the subject data. VE

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5 "Health Insurance Portability and Accountability Act of 1996 (HIPAA)," Centers for Disease Control and Prevention, accessed June 5, 2023, https://www.cdc.gov/phlp/publications/topic/hipaa.html#:~:text=The%20Health%20Insurance%20Portability%20and,the%20patient's%20consent%20or%20knowledge.

6 Ibid.

7 Nicole Wetsman, "Hospitals Are Selling Treasure Troves of Medical Data—What Could Go Wrong?" *The Verge*, June 23, 2021, https://www.theverge.com/2021/6/23/22547397/medical-records-health-data-hospitals-research.