

Elevating value-based care beyond claims data with EHR insights

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Value-based care (VBC) plays a pivotal role in driving quality improvement, enhancing patient satisfaction, and ensuring the sustainability of healthcare systems by delivering better outcomes at lower costs. However, the efficacy of VBC initiatives heavily relies on robust data analytics for planning, monitoring, and evaluating healthcare delivery.¹ This blog explores opportunities in such analytics by leveraging electronic health record (EHR) data insights, moving beyond the constraints of claims data.

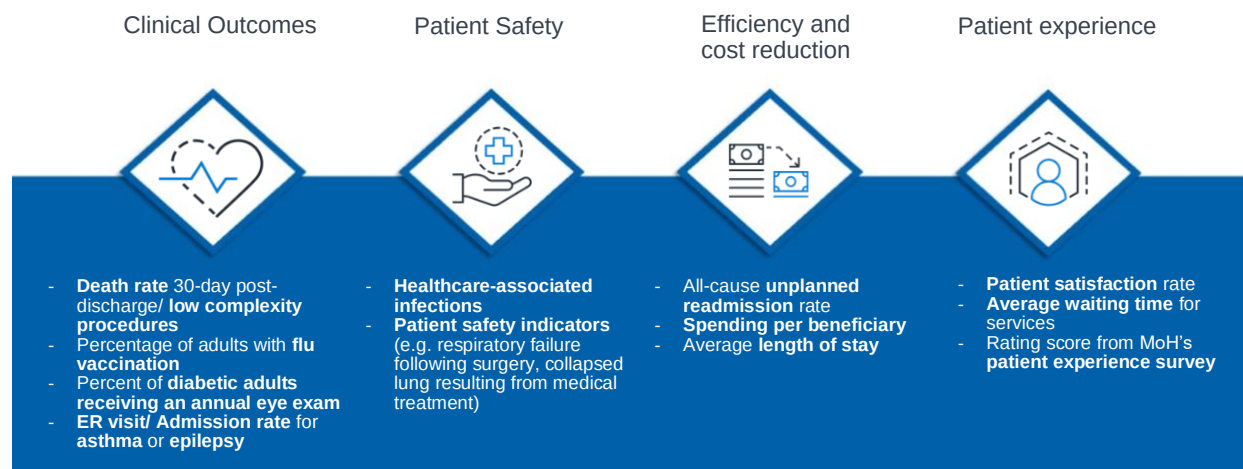
Traditionally, VBC analytics have predominantly relied on claims data, which, while informative, presents limitations in capturing key quality domains such as patient experience or offering granularity in clinical quality outcome metrics. EHRs instead offer a comprehensive perspective on patient care, surpassing the confines of standard clinical activity data in claims to provide a complete view of an individual's health journey.

In recent times, the integration of EHRs has emerged as a linchpin in the landscape of value-based care.² By furnishing healthcare providers with a complete spectrum of patient information, EHRs fortify patient safety and deeper clinical outcome analysis, critical determinants of value-based care principles.

Value-based care is a departure from the traditional fee-for-service (FFS) model, where healthcare providers are paid for each service they provide, regardless of the outcome. In value-based healthcare, providers are incentivized to improve patient outcomes by being rewarded for achieving quality benchmarks, such as reduced hospital readmissions and improved patient satisfaction.² Patient outcomes are measured using a variety of metrics that assess the quality, effectiveness, and efficiency of healthcare delivery.³ Figure 1 illustrates how quality can be measured under each domain of care.

FIGURE 1: EXAMPLES OF QUALITY MEASUREMENT IN EACH DOMAIN OF CARE

Measures to assess the quality of healthcare provided



1 NEJM Catalyst (January 1, 2017). What Is Value-Based Healthcare? Retrieved August 14, 2024, from <https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0558>.

2 HealthIT.gov. FAQs: Electronic medical records, electronic health records, personal health records. Retrieved August 14, 2024 from <https://www.healthit.gov/faq/what-are-differences-between-electronic-medical-records-electronic-health-records-and-personal>.

3 Manca, D.P. (October 2015). Do electronic medical records improve quality of care? Yes. *Can Fam Physician*;61(10):846-7, 850-1. PMID: 26472786; PMCID: PMC4607324. Retrieved August 14, 2024, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4607324/>.

CLAIMS DATA VS. EHR DATA FOR ANALYTICS

Claims data over a long period of time has been leveraged for various value-based care initiatives such as: risk stratification, quality measurement and reporting, population health management, payment reform and fraud, and waste abuse detection to develop clinical support. The information gathered using claims data is just the tip of the iceberg, whereas the depth and breadth of data obtained from EHRs is potentially far greater.

EHRs have the ability to capture and report on vast amounts of clinically relevant data, augmenting administrative-based (claims) data collection. Combining both claims' data and EHR data can provide a more comprehensive perspective, allowing researchers and analysts to examine the relationship between clinical information and healthcare utilization or cost patterns. It is worth noting that privacy and security considerations are crucial when working with EHR data, as they contain sensitive patient information. Proper data de-identification and compliance with relevant regulations are essential to protect patient privacy. Some key differences between claims data and EHR data are shown in the table in Figure 2.

FIGURE 2: CLAIMS DATA VS. EHR DATA

ASPECT	CLAIMS DATA	EHR DATA
Data Source	Generated from healthcare insurance claims submitted by healthcare providers for reimbursement.	Captured during patient encounters within healthcare organizations for clinical documentation and care delivery.
Data Elements	Includes information such as diagnosis codes (ICD-10), Current Procedural Terminology (CPT) codes, service dates, billed amounts, and patient demographics.	Includes comprehensive clinical data such as medical history, medications, allergies, lab results, vital signs, imaging reports, and progress notes.
Data Timeliness	Can have a lag between service delivery and claims submission, resulting in delayed availability for analysis.	Generally available in near real-time or with minimal delay, allowing for timely clinical decision-making and care coordination.
Coverage	Covers services and procedures for which claims are submitted for payment, often reflecting billed services rather than actual clinical activities.	Covers a wide range of clinical encounters, including inpatient stays, outpatient visits, emergency department visits, and specialty consultations.
Scope	Claims data is generally available across all sites of care (facility, professional, pharmacy) for an individual.	EHRs might only include information reflecting one portion of an individual's care experience (e.g., facility only).
Purpose	Primarily used for billing, benchmarking, quality monitoring, utilization analysis, population health, and VBC.	Primarily used for point-of-care clinical decision-making, care coordination, and patient management.
Regulatory Compliance	Governed by regulations such as the Health Insurance Portability and Accountability Act (HIPAA) for privacy and security of patient information.	Subject to regulations such as HIPAA as well as additional requirements for clinical documentation, coding accuracy, and EHR usability.
Use Cases	Used for retrospective analysis, financial performance management, population health management, research, and payer-provider negotiations.	Used for clinical decision support, quality improvement initiatives, population health management, and research.
Reimbursement Alignment	Historically aligned with fee-for-service payment models, focusing on volume and intensity of services provided. Claims data also supports VBC reimbursement.	Supports value-based care models by emphasizing quality, outcomes, and efficiency of care delivery.
Integration	Can be integrated with other data sources for comprehensive analysis.	Can be integrated with other healthcare systems for a unified view of patient information although it has its own challenges with interoperability, data security, technical compatibility, etc.

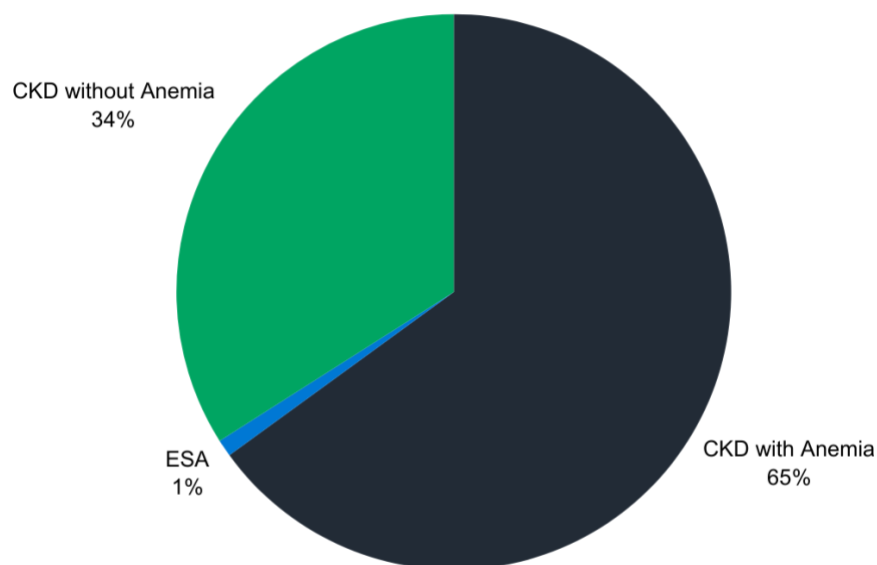
HOW CAN EHRs ENHANCE VALUE-BASED CARE TOOLS AVAILABLE IN MEDINSIGHT?

With all the additional data points available, EHRs can play a crucial role in improving value across different healthcare aspects. For example, within the VBC framework, a key strategy involves minimizing low-value care and avoiding harmful interventions to optimize cost-effectiveness. Central to this strategy is the continuous monitoring and guidance of physicians and providers to align their practices with evidence-based guidelines, thus enhancing effectiveness. EHRs provide clear pathways for payers and analysts to identify and measure improvements. The following example of a [Health Waste Calculator](#) measure underscores how EHRs can aid in this process.

Chronic kidney disease (CKD) is an expensive chronic condition requiring long-term monitoring and reviews. Many prevailing treatment practices have, over time, been found to be costly but have not impacted clinical outcomes. One such example is the use of erythropoietin stimulating agents (ESAs). Per the American Society of Nephrology,⁵ ESAs should not be administered to CKD patients with hemoglobin levels greater than or equal to 10 g/dL without symptoms of anemia.⁴ In 2022, in a claims data set comprising 80 million members, 889,959 individuals (1%) were diagnosed with CKD. Out of the total allowed cost of \$352 billion for these 80 million members, \$32 billion (9%) was attributed to members with CKD. Among those with CKD, 314,016 members (35%) were also diagnosed with anemia and comprised nearly two-thirds of CKD spending (\$19 billion, 65%). Of those individuals with both CKD and anemia, 3,754 members (1%) were prescribed ESAs (Figure 3). ESAs are high-cost medications, averaging around \$5,000 per patient per year. The total cost for members prescribed ESA was \$224 million, 1% of the overall cost for members with CKD.

What we do not know without EHR data is whether the ESA prescriptions, and thus \$224 million in spending, followed best practice. The absence of hemoglobin-level specifications in the ICD diagnosis codes for anemia limit confirmation of whether ESA prescriptions for CKD and anemia patients corresponded to hemoglobin levels of 10 g/dL or higher. Utilizing lab results from EHR data could have facilitated identifying members for whom ESA prescriptions might have been unnecessary.

FIGURE 3: COST DISTRIBUTION FOR CKD MEMBERS (CKD WITHOUT ANEMIA)



4 American Society of Nephrology. Five Things Physicians and Patients Should Question. Choosing Wisely. Retrieved August 14, 2024, from https://www.asn-online.org/policy/webdocs/fivethingsphysiciansandpatientsshouldquestion_final.pdf.

5 Dahl, N.V., Kaper, R.F., Strauss, W.E., Corvino, F.A., & Zivkovic, M. (September 2017). Cost-effectiveness analysis of intravenous ferumoxytol for the treatment of iron deficiency anemia in adult patients with non-dialysis-dependent chronic kidney disease in the USA. *Clinicoecon Outcomes Res*;9:557-567.PMID: 29033594; PMCID: PMC5614742. Retrieved August 14, 2024, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5614742/>.

Conclusion

EHRs have a prominent role in value-based care progress. This data will provide healthcare providers access to patient-level clinical information that can help maximize VBC. However, there are also several challenges associated with both the availability and integration of EHR data into analytics. Implementing and maintaining EHR systems and associated analytics infrastructure can be costly, especially for smaller healthcare organizations: variations in data formats, terminology, and coding standards across different EHR systems make it difficult to integrate and share data seamlessly, and even upon integration there may be issues with data quality and completeness.

To address these challenges, healthcare providers must take a strategic approach to EHR implementation, considering the needs of their organizations and the resources available. They must also work with other healthcare providers and stakeholders to ensure:

- **Balanced perspective:** Acknowledge the strengths and limitations of both EHR and claims data, emphasizing their complementary roles.
- **Detailed discussion:** Provide a more nuanced discussion of the challenges and practical solutions for integrating and utilizing EHR data.
- **Evidence-based claims:** Support assertions with robust evidence and case studies to enhance credibility.
- **Privacy and security:** Include a more detailed discussion on privacy and security measures to reassure both payers and providers.
- **Future predictions:** Frame future predictions with caution, acknowledging the uncertainties and rapid changes in healthcare technology.

While there are challenges associated with the implementation of EHR data in value-based care, the benefits are significant. EHRs offer an essential tool for healthcare providers looking to improve patient outcomes while reducing costs, and their use will continue to be an important focus of value-based care initiatives in the years to come.

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