

Milliman IntelliScript

Claims-driven EHR data acquisition:

A targeted approach
to retrieval and
interpretation in individual
insurance underwriting

BY

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Introduction

Since the early 2000s, the growing availability of identified applicant health data from third-party data suppliers has transformed the underwriting of life insurance and other individual protection products from a slow and costly process to one that can be almost instantaneous. Heavy reliance on physical exams and attending physician statements (APSs) has yielded to digital prescription (Rx) and medical claims (Dx) data. The results are lower costs, faster decisions, and greater coverage.

And now insurers can add electronic health record (EHR) data into underwriting workflows. But challenges with EHR acquisition and quality have disappointed early adopters, who have long anticipated that EHR would be sufficient to supplant many or most other data sources. In this article, we describe a novel approach—claims-driven EHR acquisition—that opportunistically employs the existing use of Rx and Dx data in combination with advanced modeling, interpretation, and automation, to make EHR data acquisition more targeted, transparent, and valuable in the underwriting process.

A brief history of third-party data in underwriting

Individual insurance underwriting initially depended heavily on in-person examinations and APSs.

In-person examinations provide an accurate assessment of vital signs and key lab values—but they only provide a single snapshot in time. Applicants may also find the exams intrusive or inconvenient, leading to customer abandonment. On the other hand, an APS provides an in-depth view of an applicant's health by directly pulling physician records and is considered by many to be the gold standard medical assessment tool—but it only pulls a record from a single provider, lead times are long, and quality is inconsistent. Both in-person exams and APSs increase underwriting costs and touch times, as well as applicant wait times.

The introduction of Rx data in 2003 marked a turning point. Rx data provided near-instant access to prescription histories that reveal health conditions and treatment patterns. This innovation significantly reduced underwriting touch times and opened the door to immediate decisioning and a greatly improved customer experience.

In 2017, Dx data added a new layer of insight with the inclusion of diagnosis and procedure codes. Rx and Dx data reshaped underwriting by delivering medical insights faster and at a fraction of the cost of an APS. Accelerated underwriting and decisioning expanded, extending coverage to even more individuals with an ever-growing range of insurance products.

Claims-driven EHR acquisition ... makes EHR data acquisition more targeted, transparent, and valuable in the underwriting process.

All three data types remain in use, and APSs are frequently required for high-value policies and higher-risk cases where insurers need greater confidence. APSs complement Rx and Dx data, though they add considerable expense, time, and underwriter review.



THE EMERGENCE OF EHR

Today, healthcare interoperability regulations like the HITECH Act and 21st Century Cures Act have fundamentally reshaped the flow of EHR data across systems, making it practical **for insurance underwriting**. Electronic health records can identify risk in greater depth than Rx and/or Dx data, yet faster and cheaper than in-person exams or APSs. EHRs also include a wide variety of data domains—many not found elsewhere—and may include information such as:



Encounters

Tracking vitals related to chronic conditions and prescribed treatment plans help build a longitudinal health record



Lab and test results

Offering meaningful metrics and insight into an applicant's overall health



Provider notes

Including detailed observations and assessments from healthcare providers, shedding light on procedures performed and qualitative measures related to patient engagement and progress

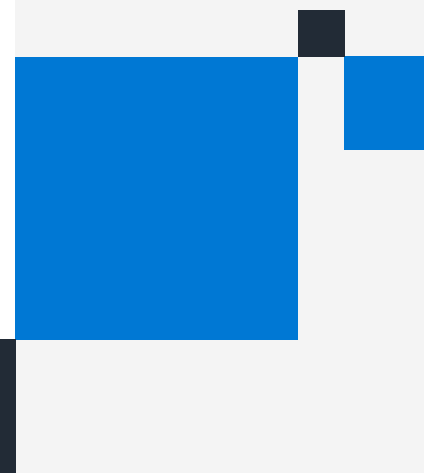


Early solutions delivered unmanageable volumes of data, with minimally helpful and potentially unreliable summarization.

But after an initial flush of excitement, insurers realized that obtaining relevant EHR data was more challenging than they had anticipated. Fragmented networks, messy data, high up-front costs with no guarantee of clinical relevance and relatively low coverage diminished the value of EHRs in underwriting workflows. Some early solutions delivered unmanageable volumes of data, with minimally helpful and potentially unreliable summarization. Addressing these obstacles requires a new combined approach: casting a wide net with Rx and Dx data, while simultaneously using algorithmic targeting to identify the specific sites likely to return the most relevant EHR data.

Rx and Dx data give EHR a head start

Prescription and medical datasets can each be expertly interpreted for significant protective value. Used in combination, the two datasets don't merely identify conditions, they also provide full-spectrum insight into condition severity for optimum risk selection and policy placement.



Getting to “yes,” ASAP

For many insurance products and under many guidelines, the initial tranche of Rx and Dx data gives underwriters enough of the information they need to confidently make a decision on most applicants.

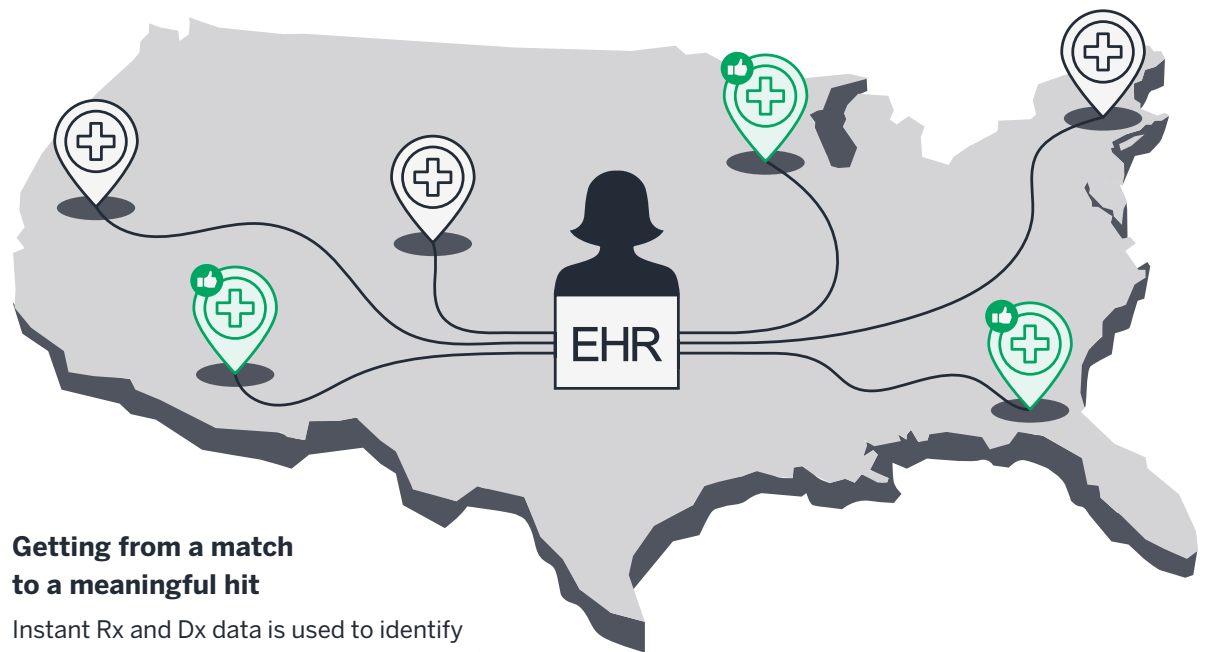
Rather than assuming that the default and sweeping solution to every case is to order one (or several) EHRs, the data-stacking, claims-driven approach allows underwriters to order the right EHR when it's required—and not to order one at all under circumstances when a sound decision can be made without it.

This approach also helps underwriters identify cases in which an APS is still needed and helps to identify the most relevant providers.



Claims-driven EHR acquisition

Claims-driven EHR acquisition provides such a solution. Underwriters can often confidently make an instant decision on the basis of Rx and/or Dx data alone. When cases do require further review, that first layer of data helps to target the most relevant and reliable sites for records. And although reducing the need for APSs is a goal, this approach also helps underwriters identify cases in which an APS is still needed and helps to identify the most relevant providers. By adopting a claims-driven EHR tool, insurers can better balance depth, cost, and speed in order to issue more policies to a broader set of applicants. This process involves several steps and leverages proprietary interpretation models on the back end to enable accuracy, speed, and automation.



Getting from a match to a meaningful hit

Instant Rx and Dx data is used to identify which sites (among thousands nationwide) should have a record matching the applicant. Then, a proprietary algorithm is used to determine the likelihood matching sites will fulfill a request and return meaningful data within an acceptable time frame.

OVERVIEW OF THE CLAIMS-DRIVEN EHR PROCESS

1

Starting point—Rx + Dx as a guide: The process begins by analyzing Rx and Dx claims data. These data sources identify healthcare providers and facilities where relevant medical records may exist. This targeted approach eliminates the need for broad, unfocused searches.

2

Algorithmic targeting: Algorithms assess patterns in the claims data to identify which providers are most likely to have useful EHR information. For example, if claims data indicates repeated visits to a cardiologist, the process focuses on retrieving EHRs from that specialist. Facility response time and typical data types are also highlighted.

3

EHR retrieval: Within the underwriter's workbench, selected EHRs are easily ordered. Data is typically returned in one to two days, compared to the 10 or more days required for an APS.

4

Data processing and standardization: EHRs must undergo processing to standardize formats, deduplicate records, and tag information by condition or category. This step ensures consistency and usability. From there, the next level of interpretation is added, highlighting condition severity and record completeness and recency.

5

Integration with decision-making: EHR data is integrated with existing Rx and Dx information. This layered approach gives underwriters a fuller picture of an applicant's health, enabling faster and more informed decisions.



BENEFITS OF CLAIMS-DRIVEN EHR

Claims-driven EHR acquisition improves underwriting by targeting condition-specific medical data, saving time, and enhancing decisions. Each step serves a clear purpose, improving the value of early EHR solutions.



Precision in data retrieval

Claims data, such as Rx and Dx records, points directly to healthcare providers tied to an applicant's history. This targeted approach prevents ordering records from irrelevant sources. Precision reduces time and effort and enables underwriters to easily review meaningful data.



Faster turnaround

Claims-driven acquisition minimizes wait times for EHRs ordered from sites that don't have relevant records—a problem that can necessitate a new round of EHR ordering. This approach is also obviously faster than falling back on traditional APS records, which can take weeks to arrive and further delay a decision. By delivering relevant records in one to two days, claims-driven EHR keeps applicants engaged and accelerates policy decisions.



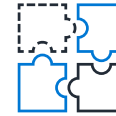
Reduced costs

Carriers have been frustrated by the need to order multiple EHRs without knowing if they will even provide value. Some have pivoted away from EHRs and back to APSs—another expensive solution—because of this.



Deeper insights into risk

Ordering EHR data from the best sites increases the likelihood of getting the relevant diagnostic results, health trends, and provider notes. These details refine risk profiles, helping carriers evaluate complex cases with confidence. For example, lab results reveal current health markers like A1C for diabetes, while longitudinal trends clarify stability or progression.



Expanded coverage with targeted products

Combining EHR data with Rx and Dx insights supports precise risk segmentation, allowing insurers to underwrite applicants with conditions that may have previously been declined. This precision creates opportunities to offer products tailored to specific risk profiles, helping carriers remain competitive while addressing broader coverage needs.



Advancing the value of EHR data in underwriting

Effective underwriting requires more than just summarized EHR data. Systems that incorporate sophisticated interpretation throughout the solution elevate the value of this information, transforming it into a powerful decision-making tool. While Rx data highlights prescription drug use and Dx data confirms diagnoses and condition severity, in some cases more information is needed. Reviewing today's options, raw EHR data lacks structure, and summarization-only solutions don't deliver a full picture or provide adequate severity interpretation.

Underwriters are looking for more information and more interpretation—processing fragmented data into a meaningful profile designed for decision-making. Curated insights, such as tagged records by condition and trends that connect treatments, outcomes, and risks build a more complete picture of health.

Rx and Dx records point directly to healthcare providers tied to an applicant's history.

Into the data-driven future

Claims-driven EHR acquisition is a meaningful step forward in life insurance underwriting. Using Rx and Dx claims data to guide EHR retrieval improves operational efficiency, enhances risk evaluation, and reduces cost. This layered method overcomes the challenges of fragmented EHR systems while creating a next-generation framework for incorporating health data into insurance decision-making.

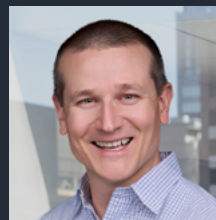


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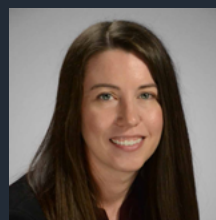
About Irix® EHR

Irix EHR, which uses insights from **Irix Prescription Data** and **Irix Medical Data** to inform EHR acquisition and interpretation, is the only claims-driven SaaS EHR solution currently available to underwriters in the U.S. insurance industry. Carriers wishing to increase the effectiveness of EHR in their underwriting workflows should contact Milliman IntelliScript for a demonstration and a retrospective study of their own data to evaluate the ROI on this novel approach.

About the authors



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