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Navigating the Data Challenges of Open Enrollment in US Healthcare

Each fall, millions of Americans enter the annual open enrollment period, a critical window when individuals and employers make choices about health coverage. According to latest data from Centers for Medicare & Medicaid Services (CMS), approximately 24.2 million consumers selected or were automatically re-enrolled in health insurance coverage through the individual marketplaces during the 2025 open enrollment period.

For U.S. health insurers, this period is both an opportunity and a stress test. It represents the single busiest time of year for member acquisition, plan renewals, and data exchange with employers, government marketplaces, and healthcare providers. Behind the scenes, however, success depends on data. Accuracy, integration, speed, and security determine whether insurers deliver a smooth experience or face costly errors, dissatisfied members, and regulatory scrutiny. Outlined below are the top eight data challenges insurers face during open enrollment, recommendations for resolving them, and ways Paradigm can help turn these challenges into long-term strategic advantage.

Challenge 1: Fragmented & Siloed Data Systems

Insurers today often operate across a patchwork of legacy policy administration systems, CRM platforms, employer-benefits portals, and government/ACA marketplace interfaces. Because these systems rarely communicate seamlessly, enrollment data becomes fractured and inconsistent. The result is duplicate member records, conflicting eligibility data, and delays in coverage activation.

In the 2025 open enrollment period for the marketplaces, about 5.36 million plan selections were made, including nearly 988,000 new consumers. That volume of transactions and the multiple entry points (employer file, broker portal, member self-service, etc.) amplifies the risk of misalignment across systems.

The Fix: Carriers should invest in creating a "single source of truth" for member data, either by consolidating platforms or deploying modern data integration and master data management (MDM) solutions that harmonize systems and eliminate fragmentation.

Challenge 2: Data Quality & Completeness

Enrollment data frequently arrives incomplete, outdated, or inconsistent from employers, brokers, and government exchanges. For instance, when members skip or postpone healthcare because of cost uncertainty (36% of adults reported this recently) it indicates broader risks of data blind spots in those populations. Poor-quality data may lead to incorrect plan assignments, delayed ID-card issuance, and increased call-center volumes especially during enrollment windows.

One study of high-cost claimants found that a tiny percentage (0.16% of insured) accounted for 9% of all healthcare costs, underscoring how unseen data gaps can leave huge cost exposures.

The Fix: Insurers must implement robust data quality controls supported by industry-proven data quality and data observability tools to support automated validation rules, standardized enrollment file formats, deliver clean data to machine-learning models that detect anomalies, and establish data governance processes assigning clear data ownership and accountability.

Challenge 3: Data Quality & Completeness

Today's health insurance environment demands integrating external data provider networks, pharmacy benefit managers, employer HR platforms, and even social-determinants-of-health (SDOH) data. Yet integration remains slow and error prone.

Recent industry commentary highlights enrollment growth (e.g., a ~11% increase in the exchange market over six months) is being matched by rising volatility and strains on data-feed integration. Without reliable external-data integration, insurers struggle to personalize the member experience, assess risk accurately, or launch new benefit designs effectively.

The Fix: Carriers must build API-driven integration pipelines, establish vendor-onboarding standards, and monitor data feeds rigorously to ensure new sources are ingested quickly and reliably.

Paradigm helped the leader in healthcare malpractice insurance reduce risk by integrating and retaining historical data across systems.

Challenge 4: Regulatory & Compliance Requirements

The open-enrollment period heightens the importance of compliance with Health Insurance Portability and Accountability Act (HIPAA), Centers for Medicare & Medicaid Services (CMS) requirements, Affordable Care Act (ACA) mandates and various state-level regulations.

Proposed rules to shorten enrollment windows could lead up to 2 million people to lose coverage in 2026, potentially aggravating adverse-selection risks. When enrollment flows come in from multiple channels and systems, missing or mismatched records trigger compliance penalties and reputational harm.

The Fix: Insurers should implement end-to-end data-lineage tracking, audit trails, and embed automated compliance-checks within workflows, with training for operations/IT staff so that regulatory data-risk awareness becomes embedded in the culture.

Challenge 5: Real-Time Scale & Performance

Enrollment seasons generate large transaction volumes: system logins, file uploads, eligibility checks, plan selections, broker uploads, and employer feeds all spike. Systems that perform adequately on average can buckle under peak loads. If the self-service portal slows, premium billing is delayed or plan changes are mis-processed, member trust erodes.

While specific industry numbers on outage cost are proprietary, we know that during the 2025 marketplace enrollment 5.36 million selections were processed, which alone is indicative of scale.

The Fix: Insurers should therefore stress-test their environments ahead of enrollment, simulate peak workloads, invest in elastic cloud infrastructure and real-time monitoring tools so performance issues are detected and resolved before they impact members.

Challenge 6: Member Data & Analytics for Experience Optimization

Modern members expect experiences comparable to retail-platform interactions: personalized plan recommendations, proactive alerts, and simplified decision tools. Yet many insurers rely on batch reporting and limited analytics.

In one academic study, predictive modeling over claims data achieved an AUC of 91.2% for identifying very high-cost claimants. This demonstrates the potential of analytics – but in practice many carriers aren't leveraging it during open enrollment. Without this capability insurers cannot anticipate member needs, guide plan choice effectively, or reduce churn.

The Fix: Carriers should invest in advanced analytics platforms, deploy machine-learning models and generative-AI solutions, and embed analytical outputs into member-facing portals and call-center scripts, thereby driving higher satisfaction and retention.

Challenge 7: Legacy Systems & Migration Risks

Many insurers are in the middle of migrating from legacy platforms to modern, cloud-based systems. While necessary, migrations during open enrollment carry significant risk of downtime or data errors.

The Fix: The best approach is to conduct migrations outside of enrollment windows, with parallel testing to ensure accuracy. Where migrations must overlap with enrollment, insurers should deploy rigorous data mapping and validation protocols, maintain fallback procedures, and invest in middleware that bridges legacy and modern platforms to minimize disruption.

Challenge 8: Data Security & Privacy

Open-enrollment periods involve large flows of sensitive personal health information (PHI) and personally identifiable information (PII), exchanged among employers, brokers, carriers and third-party vendors.

The consequences of a breach are severe. For example, the Anthem, Inc. data breach exposed up to 78.8 million records and led to a settlement of $115 million.

The Fix: To protect members and maintain trust, insurers must adopt zero-trust architectures, encrypt data at rest and in transit, enforce multi-factor authentication, conduct regular penetration testing, and ensure vendor-risk assessments and real-time threat monitoring. These safeguards are essential during the high-volume, high-sensitivity open-enrollment timeframe.

Turning Data Challenges into Strategic Advantage

Open enrollment is no longer just an annual administrative cycle – it has become a rigorous data-stress test exposing weaknesses in data quality, system integration, scalability, compliance, analytics and security. Insurers that fail to build strong data foundations risk operational inefficiencies, compliance penalties and dissatisfied members. On the other hand, those that proactively address these foundational issues can use open enrollment not as a crisis but as a catalyst for modernization, improved member experience, and competitive differentiation.

How Paradigm Can Help

Paradigm provides industry leading data management, data governance, and data privacy advisory and delivery services for U.S. health insurers to address these challenges holistically. Our teams design enterprise-wide governance frameworks that ensure enrollment data is accurate, trusted, and compliant. We help insurers modernize their platforms through cloud migrations and real-time integration pipelines, ensuring systems can handle the scale of open enrollment. Paradigm enables advanced analytics and AI-driven solutions that personalize member experiences, improve retention, and guide smarter plan selection.

Embedding robust compliance and security frameworks, including data lineage, audit trails, and HIPAA-aligned controls, protects sensitive member information. By automating enrollment workflows, reconciling errors in real time, and optimizing operations, Paradigm helps insurers transform open enrollment from an operational bottleneck into a catalyst for modernization, loyalty, and growth.

With Paradigm as a trusted partner, health insurers can successfully navigate the data challenges of open enrollment and position themselves for long-term success in an increasingly competitive market.

About the Author

Paradigm is a strategic consulting firm that turns vision into tangible results. For over 30 years, Paradigm has helped Fortune 500 and high-growth organizations design and deliver high-impact solutions across data, cloud, and AI with an unwavering focus on quantifiable outcomes. Paradigm's work spans strategy through execution, empowering clients to make smarter decisions, move faster, and maximize return on their technology investments. By amplifying the intelligence of its clients – their insights, capabilities, and results – Paradigm delivers what others promise.

Contact us to **request a consultation** to navigate common open enrollment data challenges, preparing your data and systems for strategic advantage.

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