

WHITE PAPER

The Provider Data Problem

Nobody Owns It. Everybody Pays for It.

How inaccurate provider data silently constrains access, revenue, and growth

The Problem Nobody Owns

Your health system is losing money today because of provider data. You just can't see exactly where, and that's precisely what makes it so expensive. Provider data failures show up as hard-to-move KPIs: access, growth, referral leakage, and clinician experience. By the time the root cause is visible, the cost has already compounded across a dozen initiatives.

Provider data—licenses, credentials, privileges, practice locations, payer enrollment, specialty designations—is the foundational dataset that powers scheduling, referrals, claims, credentialing, network adequacy, and patient navigation. Yet in most health systems, this data is fragmented across 5–15 systems, maintained by teams that don't communicate with each other, and decays at a rate that renders it unreliable within months of manual verification.

The result is a hidden tax on virtually every major initiative executives are already being held accountable for:

- **Access & Growth:** Patients can't be scheduled to providers whose directory records are wrong—wrong location, wrong specialty, wrong availability. They leave the system.
- **Revenue Cycle:** Claims are denied because payer enrollment data doesn't match what's on file. Results route to the wrong provider. Referrals leak to competitors.
- **Credentialing & Onboarding:** New providers sit idle for weeks while manual verification processes catch up, costing \$1,827 in lost contribution margin per provider per day.
- **Technology ROI:** Health systems have invested millions in EHR, CRM, and referral management platforms, whose effectiveness is undermined by poor provider data flowing through them.
- **Compliance & Risk:** Stale credentialing data creates regulatory exposure. Network adequacy filings rely on directories that are materially inaccurate.

No single department owns provider data. Credentialing owns a piece. Medical staff services owns a piece. IT, revenue cycle, network development, and marketing all maintain their own versions. The result: no single leader has visibility into the full scope of the problem—or accountability for solving it.

The Inescapable Truth: AI Makes Bad Provider Data Loud

Health systems are racing to deploy AI across clinical and operational workflows—scheduling optimization, care navigation, referral routing, capacity prediction, and clinical decision support. What most organizations have not yet confronted: every one of those AI applications depends on accurate provider data to function. Wrong specialty designations, stale practice locations, outdated payer enrollment—the same data quality problems that have been silently degrading operations for years will now be amplified at machine speed.

AI doesn't fix bad data. It operationalizes it. A scheduling algorithm built on an inaccurate provider directory doesn't just make the same mistakes your staff makes today—it makes them faster, at scale, and with a confidence score attached. The provider data problem that has been hiding in spreadsheets and workarounds is about to become visible in every AI-powered workflow your organization deploys.

Organizations that solve the provider data problem now are not just fixing today's operational drag—they are building the foundational data layer that every future AI investment will depend on. Those who don't will spend more on AI and get less from it.

What We’re Hearing from Health System Executives

Across deployments with large integrated delivery networks and multi-state regional systems, a consistent pattern emerges. The following insights are drawn from active engagements with health systems ranging from 5,000 to 50,000+ providers:

Top-10 Integrated Health System

Discovered that their Epic SER (provider directory) contained thousands of records with stale or conflicting data—wrong practice locations, missing specialty designations, and outdated payer enrollment. This was silently breaking scheduling accuracy, results routing, and referral workflows. After deploying continuous provider data synchronization, they identified and corrected critical discrepancies that had been invisibly degrading system performance for years.

Multi-State Regional System (10+ Hospitals)

Found that credentialing backlogs were the single largest bottleneck in their provider onboarding pipeline—not recruitment. Providers were accepting offers but sitting idle for 30–90 days waiting for privileges. By automating primary source verification and digitizing the credentialing workflow, they reduced average time-to-privilege by weeks, materially cutting locums dependency and candidate defection.

The Revenue Imperative: What Every Provider Day Is Worth

The financial case for solving the provider data problem begins with a clear-eyed view of what providers contribute to a health system’s bottom line. According to the 2023 AMN Merritt Hawkins Physician Billing Report, the average provider generates approximately \$1.9M in annual billings (assuming a 50% collection rate across physicians and APPs combined), translating to a \$475,000 average contribution margin at 25% or \$1,827 per workday.



These figures vary by specialty—from \$11.7M in annual billings for General Surgery to \$3.4M for Cardiology and \$5.5M for Gastroenterology—reinforcing that every day lost in the provider supply chain converts directly to lost revenue.

For a large health system onboarding 1,000 providers per year, the math compounds rapidly across every stage of the provider lifecycle, where data quality and process speed matter.

Four Problem Areas, Four Capabilities, One Integrated ROI

1. Workforce Blind Spots → Provider Market Intelligence

The problem: Health systems invest in recruitment without understanding the actual supply landscape—which specialties face shortages in their markets, where qualified providers are practicing, and which geographies offer a realistic pipeline for growth. The result is misdirected recruitment spend, over-reliance on costly locums, and workforce planning decisions made on incomplete data.

The capability: Axual’s **Provider Super Record** delivers real-time intelligence on millions of active U.S. providers, enabling organizations to identify supply gaps by specialty and geography, benchmark workforce composition against regional norms, anticipate affiliate network expansion opportunities, and reduce misdirected recruitment spend by targeting candidates most likely to convert.

The impact: Organizations that start with accurate market data pursue fewer dead-end searches, reduce time-to-fill, and make more defensible workforce planning decisions at the executive and board level.

2. Slow, Expensive Recruiting → AI-Directed Precision Recruiting

The problem: Traditional provider recruiting is slow, manual, and heavily dependent on external agencies that charge premium fees. For a health system hiring 1,000 providers per year, every unnecessary day in the recruiting cycle represents lost contribution margin.

The capability: The **Axual Explore** module applies AI-assisted sourcing, scoring, and outreach to accelerate candidate identification and engagement. For a large organization, Axual can meaningfully accelerate up to 50% of searches.



Additional hard-dollar cost savings from recruiting automation:

- \$600K reduction in external recruiting fees (reducing outside-recruiter-placed hires by 20%)
- \$150K in capacity recovery for recruiting staff via workflow automation and AI-assisted outreach—hours recaptured can be redirected to increase team-wide capacity, reduce workload and burnout, or support headcount cost avoidance
- \$150K reduction in recruiting subscription spend through vendor rationalization

Total projected value from Explore: \$10.0M annually (margin recovery + cost savings).

Provider experience matters here too: providers who encounter AI-assisted applications with autofill, automated resume parsing, and streamlined workflows have a measurably better first impression of the organization. This is the digital front door for every incoming provider.

3. Credentialing Bottlenecks → Credentialing & Privileging Acceleration

The problem: Even after a provider accepts an offer, the clock keeps ticking. Credentialing and privileging delays are among the most consequential—and most overlooked—drivers of lost contribution margin. Every day a credentialed provider cannot yet see patients or bill independently represents a direct revenue gap, often covered at high cost by locums or left unfilled entirely.

The capability: The **Axual Confirm** module digitizes and automates primary source verification (PSV), reducing the administrative burden on medical staff services teams and compressing the credentialing timeline.



Additional direct cost savings:

- \$95K in direct primary source verification fee savings (\$95 per provider × 1,000 providers)
- \$300K in medical staff services capacity recovery (20% team efficiency gain, redeployable to higher-value work or cost avoidance)

Total projected value from Confirm: \$26.0M annually (margin recovery + cost savings).

This is the single largest ROI line item and the one most consistently underestimated by health system leadership. Credentialing acceleration is not an administrative efficiency play—it is a revenue acceleration strategy.

4. Stale Provider Data → Continuous Provider Data Integrity

The problem: When a health system’s provider directory contains outdated information—wrong specialty listings, missing practice locations, incorrect payer rosters—the downstream effects cascade: referral leakage, claims denials, patient frustration, scheduling errors, and avoidable care fragmentation. Many health systems have made significant investments in EHR, CRM, and referral management platforms whose ROI is undermined by the inaccurate provider data flowing through them.

The capability: Axual Sync continuously cleanses and augments provider profile data across the enterprise, functioning as the integrity layer for the provider directory. This is not a one-time data cleanse—it is continuous, automated synchronization that keeps provider records accurate as credentials, locations, and enrollments change.

- Confident in-network referrals that keep patients within the system rather than routing them to competitors
- Accurate payer enrollment data that reduces claims denials attributable to provider directory errors
- Current, verified provider information that powers patient-facing directories and care navigation tools
- Real-time provider status updates that support precise attribution and panel management
- Enterprise-level data layer that amplifies the ROI of existing EHR, CRM, and referral management investments

Projected cost savings from Sync: \$450K annually in provider data vendor and directory maintenance savings, by replacing manual data acquisition and maintenance processes with Axual’s automated, continuously refreshed data layer.

More strategically, Sync addresses a core CIO priority: protecting the ROI of existing technology investments. The most expensive EHR implementation in the world is only as good as the provider data running through it.

Combined ROI Summary

Across all four platform capabilities and the underlying workforce intelligence infrastructure, the total quantifiable annual ROI for a large health system onboarding 1,000 providers per year:

ROI Driver	Module	Annual Value
Contribution margin recovery (credentialing acceleration)	Confirm	\$25,578,000
Contribution margin recovery (recruiting acceleration)	Explore	\$9,135,000
Reduction in external recruiting fees & subscriptions	Explore	\$900,000
Capacity recovery: medical staff services	Confirm	\$300,000
Primary source verification fee elimination	Confirm	\$95,000
Provider data vendor & directory maintenance savings	Sync	\$450,000
Total Quantifiable Annual Value		\$36,458,000

Note: These estimates are based on a system that onboards 1,000 providers annually. Contribution margin figures use the conservative \$1,827/day average across physicians and APPs. Actual returns for high-acuity specialties would be substantially higher.

Beyond the Spreadsheet: Strategic ROI

Financial ROI captures only part of the value equation. Three categories of strategic ROI have proven equally significant in executive buying decisions:

Provider Experience & Satisfaction	Administrator Efficiency & Morale	Enterprise Infrastructure Amplification
Axual serves as the digital front door for every incoming provider. AI-powered applications, automated resume parsing, and streamlined credentialing signal a modern practice environment from day one.	Recruiting and credentialing staff are execution-risk holders whose satisfaction directly affects outcomes. Younger generations in the workforce seek AI-empowered roles, not manual data entry.	Axual augments the ROI of existing EHR, CRM, and referral management investments. Creates enterprise stickiness as a shared data layer across departments. Directly supports CIO vendor rationalization priorities.

The Bottom Line

The provider data problem is not a credentialing problem, a recruiting problem, or an IT problem. It is an enterprise problem that silently constrains access, revenue, and growth. The question is not whether you will invest in solving it—it is whether you will do so deliberately, or keep paying the tax inside every other initiative.