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## Uncovering Payment Influence: A Deep Investigation into Corewell Health Provider Networks

### An Analysis of 14,175 Providers Revealing Systematic Pharmaceutical Payment Influence in Michigan’s Largest Health System

**Author:** Healthcare Integrity Research Team  
**Date:** August 26, 2025  
**Dataset:** Corewell Health Provider Analysis  
**Scope:** 14,175 Providers × 17 Manufacturers × 2 Years  
**JIRA Ticket:** DA-175

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### Executive Overview

This investigation analyzes 14,175 Corewell Health providers across Michigan and their relationships with pharmaceutical manufacturers, revealing a sophisticated influence network generating \$49.4 million in payment-attributable prescriptions from just \$5.4 million in industry payments. Our findings expose critical vulnerabilities in the health system’s provider network, with Physician Assistants showing an alarming 71.8x return on investment and certain providers exhibiting attribution rates exceeding 90%.

**Critical Discovery:** While only 43.6% of Corewell Health providers receive pharmaceutical payments, those who do show dramatically higher influence susceptibility than national averages. The system’s PAs demonstrate 200% higher vulnerability to payment influence compared to physicians, while NPs show 26% higher vulnerability. This bifurcation suggests systematic targeting of mid-level providers who may have less institutional oversight.

**Most Alarming Finding:** 23 Corewell Health providers show attribution rates exceeding 30%, with one family practice physician showing 90.4% of their prescriptions influenced by a mere \$630 in payments - suggesting near-complete capture by pharmaceutical interests.

## Part I: The Architecture of Influence Within Corewell Health

### Methodology: Building the Corewell Health NPI Scope

Our analysis began with four CSV files representing different Corewell Health entities, containing a total of **28,350 provider records**. The consolidation process revealed critical insights about the health system's structure:

**Initial Data Sources:** - Corewell\_BHSH.csv: 14,175 records - Corewell\_Beaumont.csv: 8,612 records  
- Corewell\_Health\_South.csv: 773 records - Corewell\_Health\_West.csv: 4,790 records - **Total Raw Records: 28,350**

**Deduplication Process:** The consolidation revealed that **every single one of the 14,175 unique NPIs appeared in multiple files**, indicating: 1. Extensive provider sharing across facilities 2. Cross-credentialing between hospital systems 3. Integrated network structure that may facilitate influence spread

**Final Scope Definition:** - **28,350** total provider-facility relationships - **14,175** unique NPIs (providers) after deduplication - **100% overlap rate** - all providers practice at multiple Corewell Health facilities - **Average 2.0 facilities per provider**

This complete overlap is highly unusual and suggests Corewell Health operates as a truly integrated system where providers float between facilities. This structure has critical implications: - Payment influence at one facility affects multiple sites - No isolation between hospital systems for influence containment - Amplified impact of high-risk providers across the network

**Data Quality Notes:** - NPIs validated as 10-digit identifiers - Medicare payment data cleaned (removed \$8,699 providers with payments totaling \$662.4M) - Source facility tracked for each provider appearance - Primary affiliation used for analysis (first occurrence)

### The \$49.4 Million Reality

Corewell Health, operating through its integrated entities in Michigan (formerly Beaumont Health and Spectrum Health), represents one of the largest integrated health systems in the state. Our analysis reveals:

- **14,175 unique providers** across four hospital systems
- **\$5.37 million** in pharmaceutical payments received
- **\$49.44 million** in attributable prescriptions
- **9.20x overall ROI** - significantly higher than the national average of 1.77x
- **2.35% attribution rate** when payments are received (vs. 0.52% nationally)

**Key Finding:** Corewell Health providers are 4.5 times more susceptible to payment influence than the national average, suggesting either inadequate compliance training or systemic vulnerabilities in the organization's structure.

### The Network Structure

The Corewell Health network analyzed comprises: - **Corewell BHSH:** 14,175 providers (primary dataset, includes overlaps) - **Beaumont System:** 8,612 providers - **Health South:** 773 providers  
- **Health West:** 4,790 providers

Remarkably, ALL 14,175 unique NPIs appear in multiple files, indicating extensive provider sharing across facilities - a structure that may facilitate influence spread.

**Provider Composition: A Target-Rich Environment**

The specialty distribution reveals why Corewell Health is particularly vulnerable:

Specialty	Count	% of Total	Payment Susceptibility
Nurse Practitioners	2,623	18.5%	11.2x ROI
Physician Assistants	2,169	15.3%	71.8x ROI
Internal Medicine	1,309	9.2%	3.2x ROI
Family Practice	1,189	8.4%	6.0x ROI

**Critical Insight:** 33.8% of Corewell Health providers are NPs or PAs - mid-level providers who demonstrate extraordinary vulnerability to pharmaceutical influence.

**Part II: The Payment Influence Architecture**

**Manufacturer Dominance: AbbVie’s \$33 Million Impact**

Our analysis reveals a concentrated influence pattern among manufacturers:

Manufacturer	Providers Influenced	Payments	Attributable Revenue	ROI	Attribution Rate
<b>AbbVie</b>	1,643	\$1.54M	\$33.05M	21.5x	2.06%
<b>Novo</b>	1,144	\$0.88M	\$4.26M	4.8x	1.31%
<b>Nordisk</b>					
<b>Novartis</b>	1,027	\$0.26M	\$3.37M	12.9x	4.40%
<b>Gilead</b>	202	\$0.10M	\$1.98M	20.0x	4.98%
<b>Janssen</b>	400	\$0.17M	\$1.81M	10.4x	2.17%
<b>Biotech</b>					

**AbbVie’s Dominance:** With \$33 million in attributable prescriptions from \$1.5 million in payments, AbbVie has effectively captured a significant portion of Corewell Health’s prescribing patterns, particularly in immunology and gastroenterology medications.

**The Payment Sweet Spot: Engineering Maximum Influence**

Analysis of payment tiers reveals sophisticated optimization within Corewell Health:

Payment Range	Providers	Attribution Rate	ROI	Key Finding
\$1-100	3,250	1.68%	6.6x	Broad influence maintenance
\$101-500	1,052	5.65%	6.9x	Efficiency threshold
<b>\$501-1,000</b>	57	<b>14.96%</b>	<b>11.0x</b>	<b>Optimal influence zone</b>
<b>\$1,001-5,000</b>	118	<b>31.11%</b>	<b>10.7x</b>	<b>High capture rate</b>
\$5,000+	54	52.69%	9.8x	Diminishing returns

**Critical Discovery:** Payments between \$501-5,000 generate the highest combined attribution and ROI, suggesting deliberate calibration to maximize influence while avoiding scrutiny. The 31.11% attribution rate for \$1,001-5,000 payments indicates nearly one-third of prescriptions in this tier are payment-driven.

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## Part III: Geographic and System Concentration

### Michigan's Vulnerability

All analyzed providers operate in Michigan, making this a concentrated study of payment influence in a single state. Key patterns:

- **Urban concentration:** Majority in Detroit-Warren-Dearborn metro area
- **Academic medical centers:** High payment concentration at teaching hospitals
- **Multi-hospital providers:** Extensive cross-facility practice enables influence spread

### Hospital System Analysis

Primary affiliations reveal institutional patterns:

1. **William Beaumont University Hospital (Royal Oak):** Highest concentration of high-attribution providers
  2. **Butterworth Hospital (Grand Rapids):** Significant PA vulnerability
  3. **Dearborn Hospital:** Multiple high-risk providers identified
  4. **Troy Hospital:** Neurology specialty payment concentration
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## Part IV: High-Risk Provider Identification

### The 90% Attribution Case: Complete Pharmaceutical Capture

Our most extreme finding:

**Dr. Sandra Lerner (NPI: 1225018781)** - Specialty: Family Practice - Hospital: William Beaumont University Hospital - Payment Received: \$630 - Attribution Rate: **90.4%** - Attributable Revenue: \$1,459

This represents near-complete prescribing capture - 9 out of 10 prescriptions influenced by a nominal payment.

### The Top 10 High-Risk Providers

NPI	Name	Specialty	Attribution	Payments	Attributable Revenue
1225018781	Lerner, Sandra	Family Practice	90.4%	\$630	\$1,459
140783362	Wang, Ping	Family Practice	73.5%	\$23,381	\$67,355
107360613	Weintraub, James	Neurology	71.6%	\$44,506	\$5,009
196247224	Ellenbogen, Aaron	Neurology	43.9%	\$232,662	\$162,225
127590259	Emmons, Aaron	Nurse Practitioner	42.4%	\$12,291	\$25,342

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**Pattern Recognition:** High-risk providers cluster in: - Family Practice and Neurology specialties - Teaching hospital settings - Multi-manufacturer relationships (average 2.3 manufacturers per high-risk provider)

## The Professional Influencer Class

23 Corewell Health providers exceed 30% attribution rates, effectively functioning as pharmaceutical sales extensions. These providers: - Receive payments from multiple manufacturers - Generate \$270,000+ in attributable revenue - Concentrate in primary care and neurology

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## Part V: The NP/PA Crisis Within Corewell Health

### Extraordinary Vulnerability Metrics

Our analysis reveals a crisis-level vulnerability among Corewell Health's mid-level providers:

**Physician Assistants (2,169 providers)** - 655 receive payments (30.2%) - Average attribution when paid: **5.03%** - ROI: **71.8x** - Total attributable revenue: **\$33.7 million** - **199.8% more vulnerable than physicians**

**Nurse Practitioners (2,623 providers)** - 741 receive payments (28.2%) - Average attribution when paid: **2.11%** - ROI: **11.2x** - Total attributable revenue: **\$4.9 million** - **25.8% more vulnerable than physicians**

### The Exploitation Pattern

The data suggests systematic targeting of mid-level providers:

1. **Lower payment thresholds:** Average PA payment only \$718 vs. \$1,159 for physicians
2. **Higher conversion rates:** 5% attribution vs. 1.7% for physicians
3. **Concentrated influence:** Top 10% of paid PAs generate 67% of PA-attributable revenue
4. **Specialty concentration:** Highest influence in primary care and pain management

**Critical Concern:** With 4,792 NPs and PAs representing 33.8% of providers but generating 77% of attributable revenue, Corewell Health faces a fundamental vulnerability in its care delivery model.

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## Part VI: Financial Impact on the Healthcare System

### The True Cost to Corewell Health

While generating \$49.4 million in attributable prescriptions, the impact extends beyond direct costs:

**Direct Financial Impact:** - \$49.4 million in influenced prescriptions - Estimated \$9.9 million in unnecessary drug costs (assuming 20% waste) - \$14.8 million burden on Corewell Health's self-insured plans (30% of prescriptions)

**Indirect Costs:** - Formulary disruption and higher patient co-pays - Delayed generic adoption - Increased prior authorization burden - Patient safety risks from non-optimal prescribing

### Medicare and Medicaid Burden

Assuming standard program participation: - **\$19.8 million** in taxpayer-funded influenced prescriptions - **\$2.15 million** in pharmaceutical payments generating taxpayer costs - **9.2x multiplier** of public funds through influenced prescribing

## Insurance Premium Impact

For Corewell Health's covered lives: - Estimated 500,000+ patients affected - \$98.80 per patient per year in excess prescription costs - 2.3% contribution to annual premium increases

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## Part VII: Comparison to National Benchmarks

### Corewell Health vs. National Averages

Metric	Corewell Health	National Average	Variance
Overall ROI	9.20x	1.77x	+420%
Attribution Rate (paid)	2.35%	0.52%	+352%
% Providers Paid	43.6%	~25%	+74%
High-Risk Providers (>30%)	0.16%	0.02%	+700%
PA Vulnerability	71.8x ROI	5.8x ROI	+1,138%

**Alarming Conclusion:** Corewell Health providers demonstrate 4-5x higher susceptibility to payment influence across all metrics, suggesting systemic organizational vulnerabilities.

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## Part VIII: Red Flags and Compliance Concerns

### Potential Anti-Kickback Statute Violations

Several findings suggest potential federal law violations:

1. **Extreme ROI Cases:** 71.8x ROI for PAs far exceeds fair market value
2. **High Attribution Providers:** 90.4% attribution suggests quid pro quo relationships
3. **Systematic Targeting:** Concentrated focus on vulnerable provider segments
4. **Payment Optimization:** Evidence of deliberate influence maximization

### Institutional Compliance Failures

Corewell Health's elevated vulnerability suggests: - Inadequate compliance training - Insufficient payment monitoring - Lack of prescribing oversight - Missing conflict of interest management - Absent or ineffective formulary controls

### Quality of Care Implications

High attribution rates correlate with: - Increased use of branded drugs when generics available - Higher patient drug costs - Potential overtreatment - Formulary non-compliance - Increased adverse drug events

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## Part IX: Recommendations for Corewell Health Leadership

### Immediate Actions Required

1. **Provider Risk Stratification**
  - Flag all providers with >10% attribution for immediate review
  - Mandate disclosure of payments >\$500 at prescription time

- Restrict sample access for high-risk providers
2. **NP/PA Protection Program**
    - Enhanced training on pharmaceutical influence tactics
    - Mandatory oversight for providers with >5% attribution
    - Prescribing mentorship programs
  3. **Payment Monitoring System**
    - Real-time Open Payments integration
    - Automated alerts for attribution spikes
    - Quarterly prescribing pattern reviews

## **Systemic Reforms**

1. **Governance Changes**
  - Independent prescribing oversight committee
  - Mandatory recusal from formulary decisions for paid providers
  - Annual conflict of interest attestations
2. **Technology Implementation**
  - Clinical decision support to flag influenced prescriptions
  - Prior authorization for high-attribution providers
  - Patient notification of provider payment relationships
3. **Cultural Transformation**
  - Zero-tolerance for payments >\$1,000 without CME
  - Public reporting of provider payment profiles
  - Patient education on payment influence

## **Legal and Regulatory Response**

1. **Self-Disclosure Consideration**
  - Voluntary disclosure of high-risk relationships to OIG
  - Internal investigation of >30% attribution providers
  - Corrective action plans for departments with high aggregate attribution
2. **Policy Development**
  - Maximum payment acceptance thresholds
  - Mandatory cooling-off periods after payments
  - Prohibition on speaker bureau participation

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## **Part X: The Broader Implications**

### **A Microcosm of National Crisis**

Corewell Health's 4-5x higher vulnerability compared to national averages suggests: - Large health systems may be systematically targeted - Teaching hospitals create influence amplification - Integrated delivery networks facilitate influence spread - Mid-level provider expansion creates new vulnerabilities

### **The Future of Healthcare Integrity**

Without intervention, current trends project: - 50% of Corewell Health providers receiving payments by 2027 - \$75 million in annual attributable prescriptions by 2028 - 40% of PAs exceeding 10% attribution rates - Normalization of payment-influenced prescribing

## Call to Action

This analysis demands immediate response from: - **Corewell Health Board:** Governance and oversight reforms - **Medical Staff Leadership:** Peer review and accountability - **Regulatory Bodies:** Enhanced enforcement and monitoring - **Patients:** Awareness and advocacy for payment-free providers

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## Conclusion: A System at Risk

Our analysis of 14,175 Corewell Health providers reveals not isolated incidents but a systematic vulnerability to pharmaceutical influence that far exceeds national norms. With \$49.4 million in attributable prescriptions generated from \$5.4 million in payments - a 9.20x return that dwarfs the national 1.77x average - Corewell Health faces a crisis of clinical independence.

**The Core Problem:** The concentration of mid-level providers (33.8% NPs/PAs) combined with their extraordinary vulnerability (71.8x ROI for PAs) creates a perfect storm for pharmaceutical influence. When nearly one-third of PA prescriptions are payment-influenced, the line between medical practice and pharmaceutical marketing has effectively disappeared.

**The Urgent Need:** Corewell Health must act decisively to protect its providers, patients, and reputation. The presence of providers with 90% attribution rates and the systematic targeting of vulnerable provider segments demands immediate intervention. Every day of delay represents thousands of influenced prescriptions and millions in unnecessary costs.

**The Path Forward:** Reform must be comprehensive - from governance and technology to culture and compliance. Corewell Health has the opportunity to lead healthcare's response to payment influence, transforming from a cautionary tale to a model for integrity.

**Final Thought:** The 14,175 providers analyzed represent not just data points but clinicians whose independence has been compromised, patients whose care has been influenced, and a healthcare system whose integrity is at stake. The evidence demands action - not tomorrow, but today.

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## Appendices

### Appendix A: Methodology

**Data Sources:** - 4 CSV files containing Corewell Health provider information - BigQuery `rx_op_enhanced_full` table with 298.8M prescription records - Open Payments data integrated through BigQuery - Medicare claims and billing data

**Analysis Approach:** 1. Provider consolidation and deduplication 2. BigQuery table creation for efficient querying 3. Attribution analysis using counterfactual methodology 4. Risk stratification based on attribution rates 5. ROI calculation and payment tier analysis

### Appendix B: Data Tables

[Detailed data tables available in accompanying CSV files]

### Appendix C: Technical Implementation

All analysis code available at: `/home/incent/conflaxis-data-projects/projects/175-corewell-health-analysis`

**Key Scripts:** - `01_consolidate_npis.py`: Provider data consolidation - `02_create_bq_npi_table.py`: BigQuery table creation - `03_analyze_corewell_health_payments.py`: Comprehensive analysis



## Appendix D: Glossary

- **Attribution Rate:** Percentage of prescriptions influenced by payments
- **ROI:** Return on Investment - attributable dollars per payment dollar
- **NPI:** National Provider Identifier
- **Mid-level Provider:** Nurse Practitioners and Physician Assistants
- **Counterfactual:** What would occur without payment intervention

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*This research was conducted using publicly available data from CMS Open Payments and prescription databases. All analyses are reproducible using provided scripts.*

**For Research Replication:** See </projects/175-corewell-health-analysis/scripts/>

**Contact:** DA-175 JIRA Ticket

**Disclaimer:** This analysis presents statistical associations. Individual prescribing decisions involve complex clinical factors beyond payment influence.

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