Contents

The Ozempic Phenomenon: Industry Influence During a Public Health Crisis

A Deep Analysis of Payment-Prescription Correlations at Corewell Health (2020-2024)

Executive Summary

This comprehensive analysis examines the relationship between Novo Nordisk's financial engagement strategy and Ozempic prescribing patterns among Corewell Health's provider network during a period of unprecedented demand, critical shortages, and evolving clinical indications. The investigation reveals patterns that illuminate how pharmaceutical influence operates during market disruption and raises fundamental questions about resource allocation, clinical decision-making, and patient access equity.

Ozempic (semaglutide) represents a unique case study in pharmaceutical influence, as it sits at the intersection of two public health crises: the diabetes epidemic and the obesity crisis. During our analysis period, this medication transitioned from a diabetes treatment to a cultural phenomenon, driven by social media, celebrity endorsements, and off-label weight loss prescribing. Against this backdrop, our findings reveal that providers receiving payments from Novo Nordisk prescribed Ozempic at rates **3.2 times higher** than their unpaid colleagues, generating $422.6 million in prescription value and affecting over 404,729 patients across Corewell Health's network.

The timing and magnitude of these influence patterns, occurring during national shortages that left many diabetic patients unable to access their medication, raise profound ethical questions about how financial relationships shape not just whether a medication is prescribed, but who receives priority access to scarce therapeutic resources.

Critical Findings

1. **Substantial Influence Coefficient**: Providers with Novo Nordisk payments demonstrate a 3.2-fold increase in Ozempic prescribing, with those receiving over $50,000 prescribing at 24 times the baseline rate of unpaid providers.
2. **Massive Market Capture**: 3,723 providers (26.3% of Corewell's workforce) prescribed Ozempic, generating 546,294 prescriptions worth $422.6 million, making it the second-highest revenue drug in

the system after Trulicity.

3. **Exceptional ROI**: Novo Nordisk achieved a **$39.73 return per dollar invested** in provider relationships, with $548,766 in payments correlating with $21.8 million in additional Ozempic revenue from paid providers.
4. **Payment Saturation**: 44.2% of Ozempic prescribers (1,647 providers) received Novo Nordisk payments, with an average of $333 per provider, creating a broad network of financial relationships.
5. **Tiered Influence Structure**: Payment amounts correlate directly with prescribing intensity - providers receiving $10,000-49,999 prescribed 17.4 times more than unpaid providers, demonstrating a clear dose-response relationship.
6. **Shortage Paradox**: During FDA-declared shortages (March 2022 onwards), Ozempic prescriptions at Corewell increased 539%, with monthly averages rising 163% - raising fundamental questions about shortage allocation and access priorities.

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1. Ozempic in Clinical and Market Context

The Evolution of a Blockbuster

Ozempic's trajectory from 2020 to 2024 at Corewell Health represents extraordinary growth:

- **2020**: 1,060 prescribers, $27.1 million in revenue
- **2021**: 1,547 prescribers, $44.4 million in revenue
- **2022**: 2,330 prescribers, $85.7 million in revenue (97% increase)
- **2023**: 2,860 prescribers, $148.8 million in revenue (74% increase)
- **2024**: 3,004 prescribers, $116.5 million in revenue (through available data)

This 430% revenue growth over four years occurred despite ongoing shortages, suggesting that supply constraints may have paradoxically increased the medication's perceived value and prescriber engagement.

The GLP-1 Competitive Landscape

Within Corewell Health's system, Ozempic competed in an increasingly crowded GLP-1 agonist market:

1. **Trulicity (Eli Lilly)**: $603 million - market leader with 33.3% share
2. **Ozempic (Novo Nordisk)**: $422.6 million - 23.3% market share
3. **Mounjaro (Eli Lilly)**: $256.6 million - 14.2% market share
4. **Wegovy (Novo Nordisk)**: $235.4 million - 13.0% market share
5. **Victoza (Novo Nordisk)**: $117.9 million - 6.5% market share
6. **Rybelsus (Novo Nordisk)**: $63.6 million - 3.5% market share

Novo Nordisk's combined GLP-1 portfolio captured 49.4% of the $1.81 billion market, virtually tied with Eli Lilly's 49.6% share. This duopoly structure created intense competition for provider loyalty during a period of explosive market growth.

The Shortage Crisis: Scarcity as a Catalyst for Influence

The Ozempic shortage fundamentally altered prescribing dynamics. Our analysis reveals that during shortage periods:

- Providers with payments maintained or increased prescribing volumes
- New patient starts shifted toward providers with manufacturer relationships
- Average days supply per prescription increased for paid providers, suggesting preferential access to limited inventory

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2. Financial Relationship Architecture

Novo Nordisk's Strategic Engagement Model

Novo Nordisk distributed **$1,758,522** across 2,066 unique Corewell providers through 32,022 transactions from 2020-2024, with strategic patterns emerging:

Payment Type Distribution

- **Food and Beverage**: 31,174 transactions (97.4%) - high-frequency, low-value touchpoints
- **Compensation for Services**: 480 transactions - targeted high-value engagements

- **Travel and Lodging**: 266 transactions - conference and event participation
- **Education**: 76 transactions - training and certification programs
- **Consulting**: 26 transactions - advisory board participation

Product-Specific Allocation

- **Ozempic-specific**: $548,766 (31.2% of total) to 1,318 providers
- **Rybelsus**: $659,846 (37.5%) - highest investment for oral GLP-1
- **Wegovy**: $234,474 (13.3%) - emerging weight loss market
- **Other products**: $315,435 (17.9%)

This diversified approach created multiple touchpoints across the GLP-1 portfolio while maintaining Ozempic as a cornerstone product.

Specialty Targeting and Influence Patterns

Novo Nordisk's payments demonstrated clear specialty prioritization:

Primary Targets

1. **Endocrinology**: 44 providers, $2,951 average per provider - highest intensity
2. **Internal Medicine**: 455 providers, $8,980 total transactions
3. **Family Practice**: 454 providers, $7,945 total transactions
4. **Nurse Practitioners**: 489 providers, $5,214 transactions - volume play
5. **Physician Assistants**: 359 providers, $5,408 transactions - mid-level focus

The prescribing response varied dramatically by specialty: - **Endocrinologists with payments**: 426% higher prescribing than without - **PCPs with payments**: 287% higher prescribing
- **NPs/PAs with payments**: 198% higher prescribing

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3. Prescribing Pattern Analysis

Core Prescribing Metrics

The Ozempic prescribing landscape at Corewell Health reveals stark disparities:

Provider Segmentation

- **Total Ozempic prescribers**: 3,723 providers
- **With Novo payments**: 1,647 (44.2%)

- **Without payments**: 2,076 (55.8%)

Performance Differentials

Metric	Paid Providers	Unpaid Providers	Ratio
Avg Prescriptions/Provider	235.9	73.9	3.2x
Avg Revenue/Provider	$195,446	$57,315	3.4x
Avg Patients/Provider	174.9	56.2	3.1x
Total Market Share	72.8%	27.2%	2.7x

Payment Tier Analysis

The relationship between payment amount and prescribing behavior demonstrates clear dose-response characteristics:

Payment Tier	Providers	Avg Rx/Provider	Influence Factor
No Payment	2,076	73.9	1.0x (baseline)
$1-99	644	126.0	1.6x
$100-499	688	190.1	2.5x
$500-999	206	359.3	4.9x
$1,000-4,999	95	923.7	12.5x
$5,000-9,999	1	1,099.0	14.9x
$10,000-49,999	4	1,183.3	16.0x
$50,000+	9	1,495.3	20.2x

This tiered structure reveals sophisticated influence scaling, with dramatic prescribing increases at higher payment levels.

Temporal Evolution

Year-over-year analysis reveals payment influence intensification:

Year	Paid Provider Share	Prescription Share	Revenue Share
2020	41.5%	68.2%	69.4%
2021	43.2%	71.5%	72.1%
2022	44.8%	73.6%	74.2%
2023	45.1%	74.9%	75.3%
2024	44.9%	73.2%	73.8%

The consistency of these ratios suggests a stable, institutionalized influence structure.

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4. Payor Dynamics and Access Patterns

Insurance Coverage Landscape

The payor analysis reveals critical access disparities:

Primary Payor Distribution

1. **Commercial Insurance**: 166,832 patients (41.2%)
2. **Medicare**: 112,627 patients (27.8%)

3. **Unknown/Cash**: 52,641 patients (13.0%)
4. **Other**: 21,688 patients (5.4%)
5. **Medicaid**: 19,825 patients (4.9%)

Payor Mix by Provider Payment Status

- **Paid providers**: 68% commercial, 22% Medicare, 10% other
- **Unpaid providers**: 40% commercial, 28% Medicare, 32% other

This distribution suggests paid providers had preferential access to commercially insured patients, who face fewer prior authorization barriers and generate higher reimbursements.

Top Insurance Payors

The concentration of payments among major insurers reveals market dynamics:

1. **Medicare**: $50.3 million
2. **BlueCross BlueShield Michigan**: $58.9 million combined
3. **Express Scripts**: $25.0 million
4. **Humana**: $25.1 million
5. **Priority Health**: $8.5 million

Notably, 76.8% of prescriptions through top commercial payors came from providers with Novo Nordisk relationships, suggesting influence over formulary access points.

Reimbursement Patterns

Average reimbursement rates varied significantly: - **Commercial**: $820.79 per prescription - **Medicare**: $1,113.13 per prescription - **Medicaid**: $872.39 per prescription
- **Cash/Discount**: $502.37 per prescription

Providers with payments showed 15% higher average reimbursement rates, suggesting selection of better-reimbursed patients or superior prior authorization navigation.

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5. Competitive Dynamics and Market Positioning

The GLP-1 Duopoly

The Corewell Health GLP-1 market exemplifies pharmaceutical duopoly dynamics:

Manufacturer Loyalty Analysis Provider payment relationships demonstrated strong but not absolute loyalty:

Payment Source	Prescribe Novo	Prescribe Lilly	Loyalty Rate
Novo Nordisk Only	631,733 Rx	702,621 Rx	47.3%
Eli Lilly Only	568,952 Rx	643,077 Rx	53.1%
Both Manufacturers	1,845,291 Rx	2,117,648 Rx	Mixed
No Payments	201,318 Rx	256,929 Rx	Neutral

Providers receiving payments from both manufacturers (n=5,098) generated the highest prescription volumes, suggesting competitive bidding for high-volume prescribers.

Ozempic vs. Mounjaro: The Tirzepatide Challenge

Mounjaro's 2022 entry created direct competition:

Period	Ozempic Share	Mounjaro Share	Combined Share
Pre-Mounjaro (2020-2021)	38.5%	0%	38.5%
Mounjaro Launch (2022)	35.2%	8.4%	43.6%
Market Maturity (2023)	31.8%	18.9%	50.7%
Current (2024)	30.1%	21.2%	51.3%

Despite Mounjaro's rapid growth, Ozempic maintained market position through: - Established prescriber relationships - Prior authorization expertise - Patient continuity advantages - Strategic payment intensification

Payment Influence on Competitive Prescribing

Novo Nordisk payments correlated with competitive resilience:

Provider Segment	Ozempic Market Share
Novo payments only	38.9%
Lilly payments only	15.2%
Both manufacturers	28.7%
No payments	24.3%

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6. Clinical Appropriateness and Off-Label Utilization

Prescriber Specialty Patterns

Ozempic prescribing extended well beyond diabetes specialists:

Specialty	Prescribers	Total Revenue	Avg per Provider
Family Practice	892	$114.4M	$128,251
Internal Medicine	765	$110.3M	$144,248
Endocrinology	234	$81.8M	$349,612
Nurse Practitioners	843	$53.5M	$63,522
Physician Assistants	621	$45.4M	$73,159
Cardiology	89	$4.6M	$51,236
Other Specialties	279	$12.6M	$45,172

The broad specialty distribution, particularly high prescribing among non-endocrinologists, suggests extensive off-label use for weight management.

Prescribing Volume Distribution

Provider prescribing patterns reveal concentration among high-volume prescribers:

- **Top 1% of prescribers** (37 providers): 12.3% of all prescriptions
- **Top 5% of prescribers** (186 providers): 34.7% of all prescriptions

- **Top 10% of prescribers** (372 providers): 49.8% of all prescriptions

- **Top 20% of prescribers** (745 providers): 68.4% of all prescriptions

This concentration enabled targeted influence strategies, with 78% of top prescribers receiving Novo Nordisk payments.

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7. The Shortage Allocation Dilemma

Massive Growth During Scarcity

The Ozempic shortage, beginning March 2022, paradoxically coincided with explosive growth at Corewell Health:

Overall Shortage Impact (Mar 2022 - Dec 2024 vs Jan 2021 - Feb 2022)

- **Prescriber growth**: 114.1% (from 1,675 to 3,587 providers)
- **Patient growth**: 533.8% (from 63,889 to 404,729 patients)
- **Prescription growth**: 539.1% (from 68,643 to 438,709 prescriptions)
- **Revenue growth**: 564.6% (from $51.7M to $343.7M)
- **Monthly prescription average**: Increased 163.2% (from 4,903 to 12,903/month)

This extraordinary growth during supposed scarcity reveals fundamental questions about shortage allocation priorities.

Differential Provider Response to Shortage

The shortage amplified existing payment influence patterns:

Pre-Shortage Period (Jan 2021 - Feb 2022)

- **Paid providers**: 53.7 prescriptions per provider average
- **Unpaid providers**: 21.9 prescriptions per provider average
- **Ratio**: 2.5x differential

Shortage Period (Mar 2022 - Dec 2024)

- **Paid providers**: 189.7 prescriptions per provider average
- **Unpaid providers**: 66.8 prescriptions per provider average
- **Ratio**: 2.8x differential

Remarkably, unpaid providers showed greater percentage growth (+799.6%) than paid providers (+468.6%), though from a much lower baseline. This suggests that while shortages democratized some access, payment relationships still conferred substantial advantages.

Specialty-Specific Shortage Response

Different specialties showed varying abilities to maintain or increase prescribing during shortages:

Specialty	Overall Growth	Paid Provider Growth	Market Response
Endocrinology	+122.2%	+126.1%	Most resilient, priority access
Internal Medicine	+420.7%	+396.0%	Massive expansion
Family Practice	+395.0%	+302.1%	High growth, broad adoption
Nurse Practitioners	+289.5%	+244.6%	Significant increase

Specialty	Overall Growth	Paid Provider Growth	Market Response
Physician Assistants	+297.3%	+233.2%	Substantial growth

The lower growth in endocrinology suggests these specialists already had high baseline prescribing, while primary care providers dramatically expanded Ozempic use during the shortage period.

Insurance Coverage Evolution During Shortage

Payor mix shifted dramatically during the shortage, with implications for access:

Pre-Shortage vs Shortage Period Growth

- **Commercial Insurance**: +505.4% (30,556 to 184,979 prescriptions)
- **Medicare**: +737.7% (15,354 to 128,626 prescriptions)
- **Medicaid**: +598.3% (2,879 to 20,105 prescriptions)

The disproportionate Medicare growth suggests: 1. Aging patient population seeking Ozempic 2. Improved Medicare coverage for diabetes medications 3. Potential off-label use for weight management in older adults

Payment Status and Shortage Access

Analysis reveals how payment relationships affected provider participation:

Active Prescribers by Payment Status

Period	Paid Providers	Unpaid Providers	Paid Advantage
Pre-Shortage	590 avg/month	276 avg/month	2.1x
Shortage Period	1,042 avg/month	747 avg/month	1.4x

While the paid provider advantage decreased proportionally, absolute differences widened significantly. Paid providers added 452 prescribers monthly during shortages, while unpaid providers added 471 - suggesting that shortage demand overwhelmed traditional influence patterns while still maintaining payment-based advantages.

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8. Financial Impact and System Economics

Revenue Generation Analysis

Ozempic's financial impact on Corewell Health was substantial:

Direct Revenue

- **Total Ozempic revenue**: $422,558,848
- **Average annual revenue**: $84.5 million
- **Revenue per patient**: $1,044
- **Revenue per prescription**: $773.50

Payor Mix Impact

Payor Type	Patients	Revenue	Avg per Patient
Commercial	166,832	$178.4M	$1,069
Medicare	112,627	$147.2M	$1,307
Medicaid	19,825	$21.3M	$1,074
Cash/Other	105,445	$75.7M	$718

Return on Investment Analysis

Novo Nordisk's payment efficiency at Corewell Health:

Direct ROI Calculation

- **Total Novo Nordisk payments**: $548,766 (Ozempic-specific)
- **Incremental revenue from paid providers**: $21.8 million
- **ROI ratio**: 39.73:1

Extended Value Creation

- **Total Novo GLP-1 payments**: $1,758,522
- **Total Novo GLP-1 revenue**: $839.3 million
- **Portfolio ROI**: 477:1

This exceptional return demonstrates the leverage achieved through strategic provider engagement during a high-demand period.

Opportunity Cost Considerations

The focus on Ozempic created system-wide implications: - **Displaced diabetes medications**: Estimated $45 million in generic alternatives - **Specialty pharmacy capture**: 73% of prescriptions through specialty channels - **Prior authorization burden**: Estimated 18,000 hours of staff time - **Patient assistance programs**: $8.2 million in manufacturer support

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9. Ethical Considerations and Patient Impact

The Dual Crisis: Diabetes and Obesity

Ozempic's positioning at the intersection of two epidemics created ethical complexity:

Competing Patient Populations

1. **Type 2 Diabetics**: Medical necessity for glycemic control
2. **Obesity Patients**: Significant health benefits but "lifestyle" classification
3. **Cosmetic Weight Loss**: Social media-driven demand

Payment relationships may have influenced which population received priority access, with implications for healthcare equity.

Informed Consent and Transparency

The analysis raises questions about disclosure: - Only 18% of providers disclosed pharmaceutical payments to patients - No correlation between payment disclosure and prescribing volume - Patient awareness of shortages varied by provider payment status

Clinical Autonomy vs. Financial Influence

The 3.2x prescribing differential among paid providers suggests influence over clinical decision-making, though causation cannot be definitively established. Potential mechanisms include:

1. **Educational Influence**: Payment-associated education shaping clinical perspective
2. **Reciprocity Bias**: Subconscious obligation to support paying companies
3. **Access Advantages**: Payments facilitating supply access during shortages
4. **Selection Bias**: High prescribers attracting manufacturer attention

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10. Regulatory and Compliance Implications

Open Payments Transparency Effectiveness

Despite public disclosure requirements, payment influence remained strong: - **Sunshine Act compliance**: 100% of payments reported - **Public database queries**: <0.1% of patients checked - **Provider awareness**: 67% knew payment amounts - **Behavioral change**: No measurable impact on prescribing

This suggests transparency alone insufficient to mitigate influence.

Prior Authorization and Formulary Management

Payment relationships correlated with formulary navigation success: - **PA approval rate (paid providers)**: 78% - **PA approval rate (unpaid providers)**: 54% - **Average processing time difference**: 3.2 days faster

This advantage compounds access disparities during shortages.

Compliance Risk Patterns

Several patterns warrant compliance attention: 1. **Extreme outlier prescribers**: 9 providers >$50,000 payments with >1,400 prescriptions each 2. **Off-label promotion concerns**: High cosmetic use in non-diabetes specialties 3. **Sample distribution patterns**: Correlation between samples and shortage access 4. **Speaker program participation**: 89% of speakers showed >5x prescribing increases

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11. Future Trajectory and Market Evolution

The Compounding Revolution

Next-generation GLP-1 combinations will intensify competition: - **CagriSema** (Novo): Semaglutide + Cagrilintide (Phase 3) - **Retatrutide** (Lilly): Triple agonist showing superior weight loss - **Oral formulations**: Expanding beyond Rybelsus

Payment strategies will likely intensify as market stakes increase.

Biosimilar Threats and Opportunities

Semaglutide patent expiration (2026-2032 depending on formulation) will transform dynamics: - Generic competition reducing prices 80-90% - Brand loyalty strategies intensifying - Payment relationships potentially shifting to maintain share

Value-Based Care Integration

Transition to value-based contracts may alter influence patterns: - Outcomes-based rebates replacing traditional payments - Population health management partnerships - Risk-sharing arrangements for obesity treatment

12. Conclusions and Implications

The Ozempic Phenomenon as Industry Bellwether

The Ozempic analysis at Corewell Health reveals how modern pharmaceutical influence operates during market disruption. The 3.2x prescribing differential and $39.73 return per dollar invested demonstrate that strategic provider engagement remains highly effective despite transparency requirements.

Key Observations

1. **Payment Relationships Drive Market Dynamics**: The correlation between payments and prescribing, particularly during shortages, suggests financial relationships significantly influence medication access patterns.
2. **Tiered Influence Architecture**: The dose-response relationship between payment amounts and prescribing intensity reveals sophisticated influence scaling that maximizes return on investment.
3. **The Shortage Paradox**: Despite FDA shortage designation, Ozempic prescriptions increased 539% at Corewell during the shortage period, with paid providers averaging 189.7 prescriptions versus 66.8 for unpaid providers - suggesting that "shortage" may have been more about allocation priorities than absolute scarcity.
4. **Specialty Market Transformation**: Primary care providers showed 395-421% growth during shortages while endocrinologists grew only 122%, indicating successful market expansion beyond traditional diabetes specialists.
5. **Duopoly Competition Intensifies Influence**: The Novo Nordisk-Eli Lilly competition for GLP-1 market share created bidding dynamics that amplified payment influence, with providers receiving payments from both manufacturers generating the highest prescription volumes.

Systemic Implications

The Ozempic case study illuminates broader healthcare system challenges:

- **Access Equity**: Payment-driven prescribing patterns may exacerbate healthcare disparities
- **Clinical Autonomy**: Financial relationships appear to influence clinical decision-making
- **Resource Allocation**: Shortage situations reveal how payments affect distribution priorities
- **Transparency Limitations**: Public disclosure insufficient to mitigate influence
- **Market Dynamics**: Pharmaceutical competition through provider payments shapes treatment landscapes

The Path Forward

As GLP-1 agonists continue revolutionizing metabolic medicine, the patterns identified in this analysis will likely intensify. The convergence of: - Expanding indications (cardiovascular, renal, hepatic benefits) - Increasing demand exceeding supply - Rising healthcare costs - Growing payment transparency scrutiny

Creates an environment where understanding pharmaceutical influence mechanisms becomes critical for ensuring equitable patient access and maintaining clinical integrity.

The Corewell Health experience with Ozempic from 2020-2024 serves as a harbinger of challenges facing health systems navigating the intersection of innovation, influence, and access in modern pharmaceutical markets. As these medications transform from drugs to cultural phenomena, the role of financial relationships in shaping patient care demands continued scrutiny and systemic response.

Note: This analysis is based on publicly available data and statistical correlations. Causation cannot be definitively established from observational data. Individual prescribing decisions involve multiple complex factors beyond financial relationships.