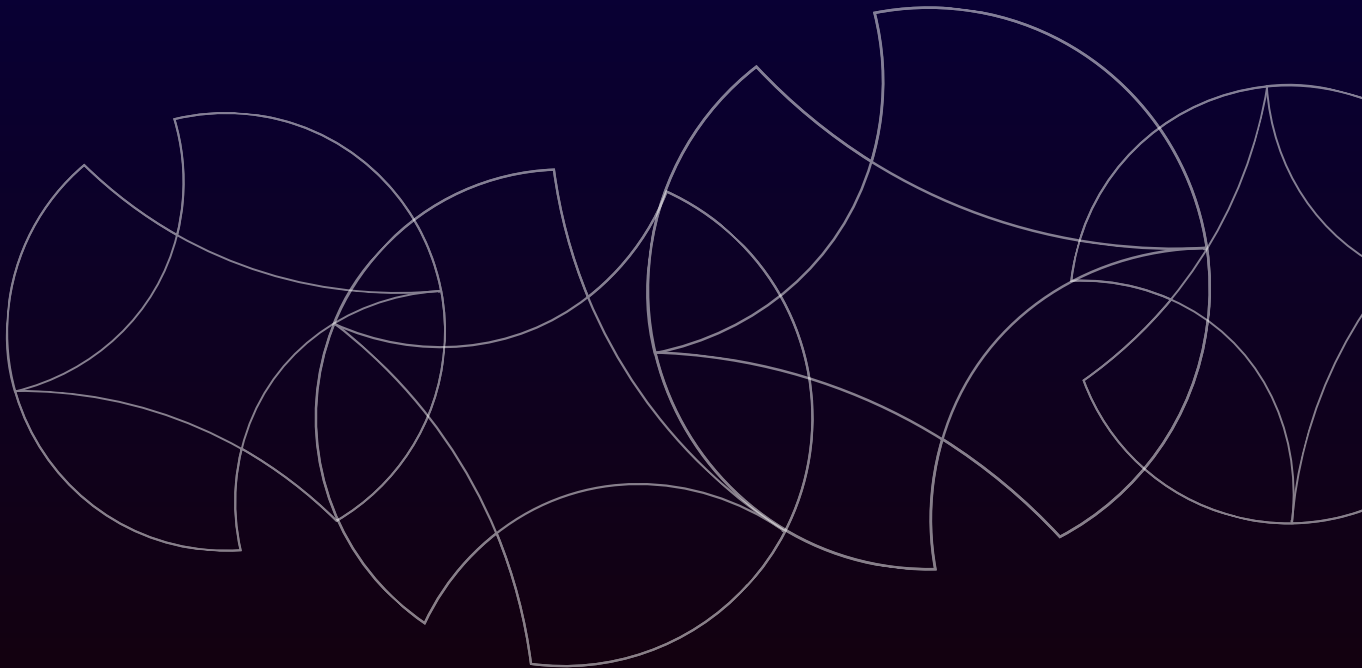




Connecting the Signals Behind the Patient Journey

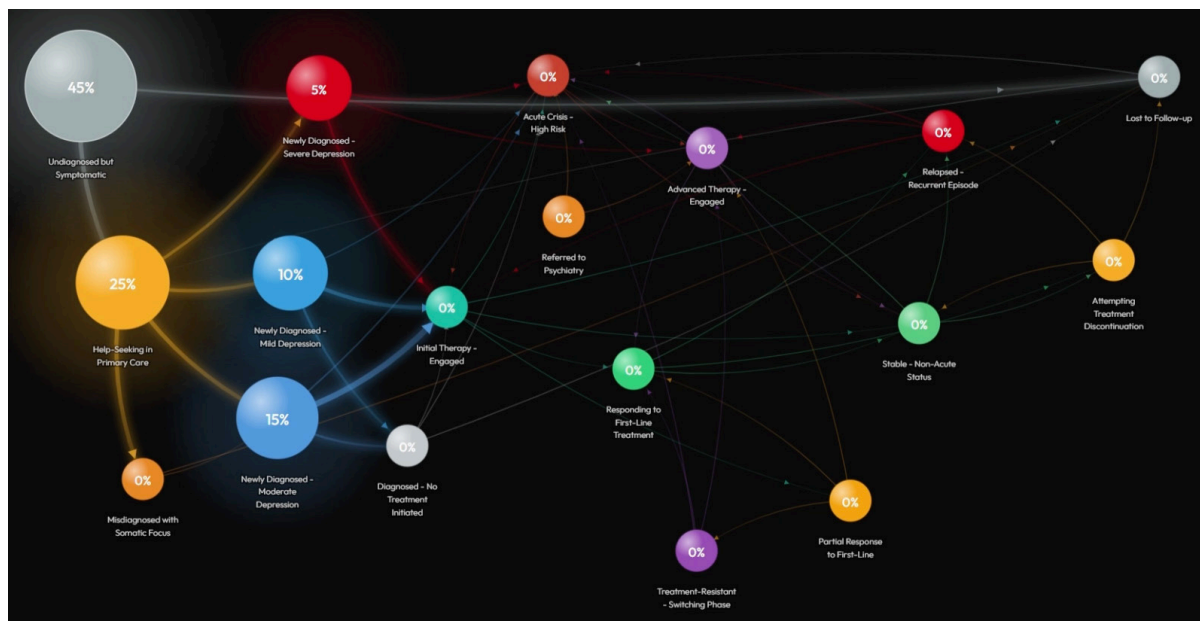
Leveraging data to reveal where access and behavior collide



Executive Summary

US healthcare is being shaped by 2 forces that have historically been addressed in isolation: rising patient access friction and increasingly consumer-driven expectations of care. Prior authorization requirements, step edits, coverage variability, and affordability pressures are intensifying while patients expect healthcare to be convenient, transparent, responsive, and fast. All of this is changing how patients move through the healthcare system. That movement is rarely a straight line. Patients don't simply go from diagnosis to treatment to follow-up without interruption.

Using a systems-based “journey as flow” framework with examples of MDD patients and prostate cancer patients, we show that access and consumer experience are not side-by-side issues added onto a clinical pathway. They are built-in forces that shape the journey itself. Access friction, such as delays from prior authorizations, coverage denials, or demographic barriers, creates real pauses and slowdowns in care. Consumer factors, including trust, motivation, income level, digital comfort, living in rural or remote areas, and tolerance for hassle, influence how easily patients move forward.





Framing the Core Question

Rather than asking “Where are patients dropping off?” or “Which consumers are dissatisfied?”, we propose a more actionable question:

Where in the journey does access friction interact with consumer sensitivity to fundamentally change the rate and direction of patient movement?

Why This Topic Matters in 2026

Patients and providers increasingly face impediments to access such as

- Prior authorization requirements
- Step therapy protocols
- High out-of-pocket costs
- Administrative complexity
- Limited provider capacity
- Systematic barriers for specific demographics
- Patients’ prior experiences affecting their willingness to navigate current and/or future challenges

All of these barriers contain **significant variability across payers**, leading to inconsistencies for providers to manage. At the same time, healthcare expectations are becoming increasingly consumer driven.

Access complexity and consumer expectations are converging, and that intersection requires a new level of insight into the patient’s journey.

The Data Landscape

Healthcare Datasets

Healthcare datasets provide detailed insights into clinical treatment and payer interactions. These data sources typically include

- Medical and pharmacy claims
- Electronic medical records (EMRs)
- Prescription initiation and refill activity
- Treatment switching and discontinuation



These datasets also capture access proxies, including

- Approvals
- Rejections
- Abandonment and reversals
- Therapy adherence

These signals allow analysts to reconstruct a patient's treatment journey from diagnosis through therapy initiation and long-term management. However, healthcare datasets alone cannot explain why patients behave the way they do.

Consumer Datasets

Consumer datasets provide a broader social and economic context that shapes patient decision-making.

These datasets may include



Household income bands



Household composition



Education levels



Transportation access



Employment status



Digital engagement behaviors

They may also include social determinants of health (SDOH) indicators such as

- Geographic access to care
- Economic stability indicators
- Urban vs rural residence
- Healthcare resource availability

When viewed independently, consumer datasets describe lifestyle and purchasing behaviors. When paired with healthcare signals, they reveal the broader realities influencing healthcare access.

Why These Data Can Now Be Intersected

Historically, healthcare and consumer datasets were difficult to connect due to privacy concerns and technical limitations. Direct patient-level matching was often restricted, and many datasets lacked the resolution needed to produce meaningful insights.

New methods allow datasets to be intersected in a HIPAA-compliant clean room that does not expose personal identities, enabling powerful new analyses while maintaining strict privacy protections.

Data in Action: Mapping the 5 States of the MDD Journey

A Dataset-Driven View of Diagnosis and Treatment Progression

Major Depressive Disorder (MDD) is often discussed as a linear care pathway, but real world data shows that patient experience is better understood as a set of distinct states, each defined by specific behaviors, risks, and intervention needs.

Based on observed treatment initiation and outcome patterns, the MDD journey can be modeled across 5 core states, spanning initial diagnosis through post treatment outcomes.

Dataset: 5 States of the MDD Journey

Treatment Initiation States (States 1–3)

State 1

Diagnosed, No Therapy Initiated

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients with an MDD diagnosis who do not begin pharmacologic or structured therapy.	Low engagement, high uncertainty, limited activation, reliance on informal coping.	Delayed care, symptom worsening, disengagement from the healthcare system.	Diagnosis codes without treatment claims, care gaps after diagnosis.	This state represents a missed activation opportunity and a critical leverage point for early intervention.

State 2

Diagnosed, Initiates Initial Therapy

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients who begin first-line treatment after diagnosis.	Willingness to engage, high expectation for improvement, early sensitivity to side effects or delays.	Early discontinuation, non adherence, loss of confidence.	New prescription fills, early refill behavior, follow-up visits.	Support at this stage influences persistence and trajectory of care.

State 3

Diagnosed, Advances to Advanced Therapy

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients who move beyond initial treatment, often due to partial response or complexity.	Higher clinical need, increased healthcare touchpoints, more informed decision-making.	Treatment fatigue, access complexity, cumulative burden.	Therapy switches, augmentation, specialist involvement.	Indicates clinical escalation and the importance of coordinated support.

Treatment Outcome States (States 4–5)

State 4

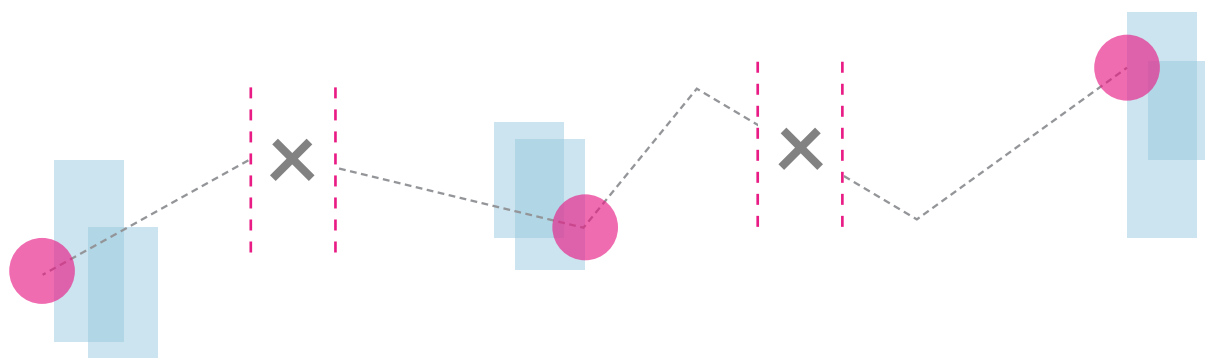
Treatment Without Acute Crisis

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients receiving treatment who do not experience an acute mental health crisis.	Relative stability, ongoing management, functional improvement, or maintenance.	Gradual disengagement, relapse risk, insufficient follow-up.	Stable treatment patterns, routine outpatient care.	Represents the desired steady state, where long-term management strategies matter most.

State 5

Treatment With Acute Crisis

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients who experience an acute mental health crisis during the course of MDD treatment.	High acuity, emergency intervention, disruption of continuity of care.	Hospital readmission, poor transitions, safety risks.	Inpatient admissions, ED visits, crisis intervention claims.	Highlights gaps in support systems and discharge continuity.



Interpreting the Dataset: Where the Journey Breaks Down

Analysis of these states reveals that outcomes are driven less by diagnosis alone and more by how patients move or fail to move between states. The following 2 transition points are particularly consequential:

- 1 From diagnosis to treatment initiation**, where many patients never activate into care
- 2 From treatment to postdischarge management**, where insufficient support can lead to acute crisis



Supporting Patients Who Do Not Initiate Therapy (State 1)

Patients who are diagnosed, but do not start therapy, often face nonclinical barriers. Data suggests this population may be better supported by

- Low burden engagement models rather than sophisticated digital tools that assume high activation
- Community and provider led outreach, anchoring trust and continuity
- Educational approaches that reflect lived context, addressing stigma, uncertainty, and perceived relevance

These patients represent a structurally underserved cohort whose needs are not solved by traditional adherence programs.

Supporting Patients Experiencing an Acute Crisis (State 5)

For patients who enter an acute crisis, the data highlights breakdowns not only in treatment, but also support infrastructure. A recurring theme is the lack of adequate household or environmental support during transitions of care.

Key considerations include

- Strengthening discharge protocols that account for real-world living conditions
- Ensuring follow-up systems extend beyond clinical settings
- Recognizing that acute events often signal unmet nonmedical needs as much as clinical severity

Data in Action: Mapping the 5 States of the Prostate Cancer Journey

A Dataset-Driven View of Diagnosis and Treatment Progression

Prostate cancer presents a uniquely fragmented journey, shaped by variation in screening behavior, method of diagnosis, and treatment progression. While clinical staging remains essential, real-world data shows that outcomes are equally influenced by how patients enter the system and where they are routed once diagnosed.

Dataset: 5 States of the Prostate Cancer Journey

Diagnosis States (States 1–2)

State 1

Screened and Diagnosed

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients diagnosed with prostate cancer through routine or targeted screening.	Earlier detection, lower symptom burden, wider treatment choice set.	Under engagement after diagnosis, decision delay due to uncertainty.	PSA screening records, referral patterns, early stage diagnosis codes.	This state represents an early intervention opportunity, where navigation support can influence downstream outcomes.

State 2

Diagnosed After Presenting With Symptoms

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients diagnosed following symptomatic presentation.	More advanced disease likelihood, compressed decision timelines.	Limited treatment flexibility, higher acuity at entry.	Diagnostic imaging, biopsy following symptom-driven visits, hospital encounters.	Reflects missed screening opportunity and higher downstream risk.



Treatment Progression States (States 3–5)

State 3

Active Surveillance

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients monitored without immediate therapeutic intervention.	Lower risk disease, preference sensitive decisioning, frequent follow-up.	Loss to follow-up, delayed escalation when disease progresses.	Surveillance codes, routine PSA monitoring, periodic imaging.	Requires structured monitoring and shared decision-making support.

State 4

Androgen Deprivation Therapy (ADT) Only

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients treated with ADT alone.	Disease progression requiring intervention, increased treatment burden.	Non persistence, cost-sensitivity, side effect-driven discontinuation.	ADT claims, refill cadence, specialist encounters.	Highlights the importance of financial and benefit predictability.

State 5

Diagnosed After Presenting With Symptoms

Definition	Key Characteristics	Primary Risks	Data Signals	Strategic Implication
Patients receiving combination therapy with ADT and androgen axis inhibitors.	Highest treatment complexity, long-term management needs.	Financial toxicity, adherence challenges, benefit transitions.	Combination therapy claims, specialty pharmacy utilization.	Represents a high-impact but high-friction state, where support determines continuity.

Interpreting the Dataset: Where Access and Outcomes Diverge

Across the 5 states, the following 2 themes recur:

1 How patients enter the system shapes everything that follows.

Patients identified through screening are structurally advantaged, with more options and time for shared decision-making

2 Treatment progression increases exposure to access complexity.

As patients move from surveillance to combination therapy, the financial, administrative, and adherence risks compound.

This reinforces the importance of addressing nonclinical determinants alongside treatment decisions.

Supporting Patients Diagnosed by Screening (State 1)

For patients diagnosed through screening, engagement is the primary challenge. Data-informed support strategies center on

- **Accelerating digital enrollment for care navigation**, ensuring patients do not fall off after diagnosis
- **Supporting shared decision-making**, particularly around surveillance versus treatment
- **Educating patients on Medicare counseling programs**, addressing early coverage concerns before they become barriers

These patients are positioned for better outcomes, but only if the system sustains momentum after diagnosis.

Supporting Patients Treated With ADT + AAI (State 5)

Patients receiving combination therapy experience the highest degree of access-related friction. Effective support requires

- **Benefits checks** to prevent downstream delays
- **Facilitating copay and coinsurance support enrollment**, particularly as costs accumulate over time
- **Persistence and adherence support**, helping patients stay on therapy especially as treatment becomes more complicated

Case Example: Identifying High-Risk, Low-Screening Populations

Using demographic and behavioral data, populations can be identified that are at high-risk for prostate cancer but have low propensity to screen.

In one such segment

- Approximately 15 million individuals present with elevated cancer risk and low screening likelihood
- These patients are 6 times more likely to already have prostate cancer, yet only 5% have been screened
- Despite high interaction with the healthcare system (eg, primary care visits), specialty screening remains low

AAI, abiraterone acetate

Leveraging Existing Data Today

One of the most powerful aspects of this analytical approach is that it relies on datasets that currently exist. Payer Sciences already has access to, but is not limited to

- Claims and pharmacy transaction data
- EMR-derived treatment markers
- Consumer demographic datasets
- Social determinant indicators

Connecting to the datasets that already exist and analyzing them together to highlight opportunities allows Payer Sciences to be uniquely positioned on the consumer side to improve access outcomes.

Conclusion

Viewing diseases through a state-based dataset reframes the journey from a straight progression to a set of measurable conditions with distinct risks and opportunities. This approach enables

- Better identification of drop-off points
- More precise targeting of support strategies
- Clearer alignment between intervention timing and outcomes
- Testing interventions before implementing them

Access can be an active force, not a frictional one. The intersection of patient access and consumer behavior is already present within today's data environment. The data exist. The methods exist. The intersection is real. It's time for real-world application.

Payer Sciences is ready to
develop unique access strategy
solutions for your brand.

Learn more about us by
[visiting our website](#),
or click below.

