Luna

The $40 Billion Impact of Orthopedic Patient Leakage to Community Physical Therapy Clinics

Hospitals lose up to an estimated $39.6 billion in orthopedic surgery revenue over three years as patients leak to community physical therapy providers.

Introduction

Patient referral leakage occurs when patients leave a health system's care pathway and obtain services elsewhere. In orthopedic care, a critical leakage point is physical therapy (PT): patients often choose community clinics or independent PT providers over hospital-affiliated facilities.

This seemingly small decision has large downstream consequences. Hospitals not only lose therapy revenue, but also risk losing high-value services - notably surgeries like joint replacements, ACL repairs, and spine procedures. The financial impact is significant, affecting surgical case volumes and overall hospital revenue.

Protecting therapy access is now a critical priority for orthopedic service line sustainability. As margins tighten and orthopedic care shifts rapidly into outpatient settings, the battle for patient loyalty increasingly starts with physical therapy. Health systems that fail to capture and coordinate therapy access not only lose downstream surgical revenue - they lose the ability to successfully compete in the growing outpatient musculoskeletal (MSK) market.

Managing therapy access successfully is now the necessary step to protecting future surgical volumes and dominating the full MSK care continuum.

To address this risk, hospitals are turning to ***standardized, in-home outpatient PT models*** to keep therapy in-system and protect surgical pipelines.

Scope of Orthopedic Referral Leakage

Studies indicate that a majority of orthopedic patients referred to PT do not stay within the hospital system. A 2022 Luna national analysis of 3.9 million commercially insured patients found that 60% of patients referred to physical therapy by their health system went to out-of-network PT providers. In fact, even health systems with the best retention still see leakage rates well above 50%, and some organizations experience PT referral leakage exceeding 80%.

60%
of patients seek out-of-network PT providers

This means most hospitals - academic medical centers and community hospitals alike - are losing well over half of their referred PT patients to outside providers. The primary reasons are convenience and access: patients tend to choose PT locations close to home or work, and with over 38,000 PT clinics nationwide to choose from, convenient options abound. Patients are often unwilling to drive more than a few miles for therapy, so if the health

The best systems still leak over
50%

system's rehab facilities are too distant or booking is difficult, patients seek care elsewhere. In short, roughly 1 in 2 (or more) orthopedic patients "leak" out to community PT, creating a major patient retention challenge.

Downstream Loss of Orthopedic Surgeries and Revenue

While losing physical therapy visits is problematic, the real financial consequence is the loss of downstream orthopedic procedures and ancillary services that those patients might have generated had they stayed in-network with the hospital. Orthopedic service lines are among the most lucrative for hospitals - for context, a single orthopedic surgeon brings in $3.3 million in hospital revenue per year on average, reflecting the high value of surgeries like joint replacements and spine operations.

One healthcare survey found that executives attributed up to 17% of overall revenue reduction directly to patient leakage, underscoring that the downstream loss - largely from expensive procedures not captured - far eclipses the initial lost therapy charges. But equally important, patients themselves are less likely to complete the full continuum of care if fragmented across multiple unaffiliated providers.

Patients who exit the health system's care pathway often face delays in receiving appropriate imaging, consults, or surgical evaluations. In-network continuity allows for better care coordination - patients are more likely to receive timely diagnostics, consistent follow-up, and faster escalation when needed. This not only enhances outcomes but reduces the risk of condition progression, redundant services, or fragmented care experiences.

The scale of this problem is enormous:

2.4 million

orthopedic patients leaked out of health system PT referrals annually.

$16,500

in estimated lost downstream revenue per leaked patient.

$39.6 billion

in total lost downstream orthopedic, imaging, and ancillary revenue over 3 years.

Industry data confirms that no hospital is immune from this problem. As one industry report noted, "even those health systems most successful at patient retention are losing substantial amounts of patients and revenue to rehab leakage." Whether it is a large academic medical center with world-class orthopedic surgeons or a smaller community hospital, both are vulnerable to losing downstream surgical cases if patients seek therapy outside the system after consultation.

One comprehensive health system improved patient keepage by just 2.4% and saw an annualized $33 million increase in revenue. Another system projected that reducing PT leakage by 25% - for

example, by keeping an additional 2,500 of 10,000 referred patients in-network - would recapture approximately $41 million in downstream revenue over three years. Even small improvements in patient retention translate into tens of millions of dollars recovered per hospital.

The clinical impact is just as serious. Many orthopedic conditions for which PT is prescribed - such as degenerative joint disease, ACL tears, and chronic back pain - have a significant likelihood of eventually requiring surgical intervention. If those interventions occur, they often happen outside the original hospital's system once the patient has leaked. Even patients who forgo surgery entirely still represent lost opportunities for imaging, injections, or pain management services that would have been otherwise captured.

Although an exact count of lost surgeries is difficult to pin down, if even 10% of the 2.4 million leaked PT patients in 2022 would have been surgical candidates, it equates to 120,000-240,000 orthopedic surgeries not performed by the referring hospitals - corresponding to approximately $18 billion in lost orthopedic surgical revenue over just three years.

In short, without intervention, every leaked patient represents a missed surgical opportunity, costing individual hospitals millions and the healthcare industry billions.

10%
ortho surgery leakage rate from 2.4 million leaked PT patients

240,000
ortho surgeries nationally lost by hospital systems due to PT leakage

$18 billion
in lost ortho surgery revenue over 3 years alone

Where Do Leaked Patients End Up for Surgery?

In many orthopedic cases, physical therapy is the first step in the care continuum - initiated before any decisions are made about imaging or surgical intervention. This makes the PT referral a pivotal moment in the patient journey. When patients receive therapy outside the hospital network, the health system loses early visibility and clinical oversight. If the patient's condition progresses, and surgery becomes necessary, they are far more likely to continue along the new, disconnected pathway - often completing the surgical episode elsewhere. In effect, the hospital loses the patient before the full opportunity for downstream care has even developed.

Patients who leak out for PT often do not return, even if they eventually need surgery. This has implications not only for lost surgical revenue, but also for missed opportunities to coordinate timely imaging, pain management, and follow-up care. Once patients have left the system, especially early in their rehab, hospitals face an uphill battle to re-engage them for advanced interventions. When these patients ultimately undergo orthopedic surgery, they typically pursue treatment in alternative settings unaffiliated with the original hospital.

> Controlling therapy access is no longer just about patient convenience — it is the foundation for protecting surgical volumes, market share, and orthopedic service line growth.
>
> **Palak Shah, Chief Clinical Officer at Luna**

Common destinations include:

- **Independent Orthopedic Practices (Private Surgeons):** Many patients ultimately come under the care of private orthopedic groups or independent community surgeons not employed by the hospital. These orthopedic specialists often have their own preferred facilities for surgery and are not obligated to refer cases back to the hospital's operating rooms. As a result, a patient who starts rehab at an independent PT clinic may later consult with a private orthopedic surgeon and undergo surgery at a standalone surgical center or specialized orthopedic facility.

- **Physician-Owned Ambulatory Surgery Centers (ASCs):** A significant share of leaked patients have their procedures performed at ambulatory surgery centers, which are often owned or co-owned by orthopedic surgeons themselves. The migration of orthopedic surgeries to ASCs has been dramatic: in 2021, ASCs performed 16.5% of all knee replacements and 12.1% of all hip replacements in the U.S. Industry reports in 2024 noted that high-acuity orthopedic procedures are increasingly shifting to ASCs, with some surgery center networks seeing double-digit growth in orthopedic case volumes. Because surgeons have ownership stakes, there is strong incentive to steer surgical cases toward these outpatient centers rather than hospital systems - further deepening the revenue leakage hospitals experience.

- **Competing Hospitals or Health Systems:** Some patients are referred to or independently choose orthopedic surgeons affiliated with a different hospital system, resulting in surgeries being performed at competing facilities. For instance, a patient whose therapy was at a community clinic might later opt for a procedure at a well-known orthopedic specialty hospital or whichever provider their physical therapist or primary physician recommends. From the original hospital's perspective, this remains leakage - with the surgical revenue transferring to a rival health system.

- **No Surgery (Delayed or Foregone Care):** Not all leaked patients immediately proceed to surgery elsewhere. A considerable number postpone surgical treatment indefinitely or attempt to manage their conditions conservatively. As one report highlights, many musculoskeletal patients who leave the network are "postponing treatment or not seeking care at all." These patients still represent lost opportunities for surgical intervention, imaging, and ongoing orthopedic management that would otherwise have been captured within the hospital's ecosystem.

Examples: Impact on Common Orthopedic Surgeries

To illustrate the stakes, consider a few high-volume orthopedic surgeries and their typical revenues:

Total Joint Replacements (Hip/Knee):

These are among the most common inpatient orthopedic surgeries. The average facility reimbursement for a knee replacement is $20,000-$30,000 (e.g., ~$30,249 for an inpatient knee arthroplasty). Thus, if a health system loses just 200 joint replacement cases in a year because patients went elsewhere, that represents roughly $6 million in lost revenue.

ACL Reconstructions (Knee Ligament Repair):

ACL surgery is often performed as an outpatient procedure, with reimbursement typically ranging from $15,000-$20,000 per case (some estimates range from $13,000-$25,000 depending on region and setting). Sports medicine referrals are particularly prone to leakage if an injured patient receives therapy at an independent clinic that funnels them to an outside surgeon.

Spine Surgeries:

Spinal procedures such as lumbar decompressions or fusions are among the highest-revenue orthopedic surgeries. A complex lumbar fusion can easily generate $30,000 or more in hospital revenue per case, with multi-level fusions commanding significantly higher reimbursement.

Across all surgery types, the financial exposure adds up quickly. Given the average orthopedic surgeon generates around $3.3 million in hospital revenue annually, even relatively small percentages of patient leakage result in substantial revenue loss. Losing just a handful of surgical cases each year per surgeon - whether from joint replacements, ACL repairs, or spine surgeries - can cause hospitals to forfeit millions of dollars, compounding across the orthopedic service line.

How Luna Helps Hospitals Retain Orthopedic Patients

Hospitals must control both the clinical pathway and patient convenience to retain orthopedic patients - Luna enables both.

Several drivers contribute to patient leakage in orthopedic care - most notably the fragmentation of outpatient physical therapy options. This fragmentation is largely driven by convenience barriers and geographic coverage/accessibility gaps: patients often choose therapy providers based on proximity to home or work and the ability to schedule quickly, rather than loyalty to the hospital network.

PT is highly hyper-local - even patients who trust their surgeon will often defect if therapy is not easy to access or requires significant travel. Once therapy begins outside the system, hospitals lose visibility into patient progress, escalating the risk of losing the surgical episode and downstream revenue.

While hospitals often have a limited outpatient clinic footprint across large metropolitan areas, Luna's in-home physical therapy model eliminates these barriers by integrating convenient, at-home therapy directly into the hospital's care pathways - ensuring patients remain connected to the system throughout their rehabilitation. By solving for geography, convenience, and clinical integration, Luna ensures that patients stay connected to the hospital network across their full continuum of musculoskeletal care.

With Luna:

- ✓ **Therapy remains part of the hospital program:**
  Patients referred to outpatient PT are seamlessly scheduled with Luna, operating under the hospital's branding and partnership structure. This ensures the therapy episode is perceived by patients as part of the same health system - not an external handoff.
- ✓ **Patients are monitored and navigated back to the hospital when escalation is needed:**
  Luna monitors clinical red flags and directly coordinates with hospital-based orthopedic teams when surgical evaluation, imaging, or additional interventions are appropriate. This preserves the hospital's ability to guide patients toward necessary downstream services.

- ✓ **Solving for convenience and access eliminates the real drivers of patient leakage:** By delivering PT at home, Luna removes the main operational barriers that drive patients away - lack of convenience and poor geographic coverage/accessibility. Patients no longer need to travel to distant clinics, wait for limited appointments, or seek care alternatives in the community.

- ✓ **Clinical integration strengthens hospital care coordination and patient retention:** By using the hospital's protocols and care pathways, hospitals maintain real-time visibility into patient progress. This allows clinical teams to track outcomes, identify when patients are not improving, and intervene early - ensuring that patients stay within the system for advanced care when needed.

Together, these pillars allow hospitals to fully control the orthopedic care pathway - from the initial consultation through definitive surgical intervention - instead of losing patients midstream to external providers. Luna transforms outpatient PT from a risk of leakage into a strategic retention tool, ensuring that orthopedic patients remain within the hospital's ecosystem from start to finish.

Comparison of Typical vs. High-Retention Orthopedic Programs

Physical Therapy (PT) Patient Retention and Leakage Management

Category	Typical Orthopedic Hospital	High-Retention Orthopedic Hospital
Outpatient PT Retention Rate	20-50% (common)	50%+ (best-in-class)
PT Leakage Rate	50-80% of patients leak to community PT	<50% leakage
Geographic Coverage	Limited clinic footprint; centralized facilities	Distributed outpatient PT centers and in-home outpatient PT options
Convenience for Patients	Patients must travel to hospital sites; long wait times common	PT delivered near or at patient homes; fast appointment access
Scheduling Process	Manual referrals; loose handoff to therapy	Embedded PT scheduling during orthopedic consult or surgery booking
Brand Continuity	Patients may not realize therapy is part of the hospital network	Patients experience PT as a direct extension of hospital care services
Clinical Integration	Limited feedback loop from PT to surgical teams	Standardized protocols and clinical escalation pathways
Revenue Impact	Lost downstream imaging, injections, and surgical volumes	Higher surgical conversion rates; protected orthopedic revenue
Technology Support	Minimal tracking of therapy progress or leakage	Integrated therapy tracking and patient navigation back to specialists
Patient Satisfaction	Moderate; high risk of defection to community providers	High; patients remain inside hospital ecosystem longer

Conclusion

Patient leakage to outside physical therapy providers has a cascading financial impact on hospitals' orthopedic service lines. Nationally, roughly half or more of PT referrals "escape" the system, resulting in immediate losses in therapy revenue. More critically, this leakage leads to a downstream loss of orthopedic surgeries - high-margin procedures like total joint replacements, ACL reconstructions, and spine surgeries - that would have generated substantial hospital income.

It's clear that improving patient retention in orthopedic care reclaims significant revenue: each retained patient can yield tens of thousands of dollars in downstream value. When orthopedic patients stray to outside PT, hospitals lose significant surgical income - which is why many executives now rank patient leakage as a critical threat to financial performance in orthopedics.

One compelling way hospitals are addressing this challenge is by embedding outpatient therapy directly into their system through solutions like Luna. By offering in-home therapy fully integrated within hospital care programs, Luna eliminates the two primary causes of leakage - lack of convenience and limited geographic access. Patients remain connected to the hospital's clinical ecosystem, and when escalation is needed, they are seamlessly routed back to hospital specialists for imaging, injections, or surgery.

This model not only improves patient satisfaction but also protects and strengthens the hospital's orthopedic surgical pipeline, ensuring long-term revenue sustainability and service line growth. In a competitive orthopedic market, retaining therapy patients is no longer optional - it is foundational to protecting future surgical volumes and hospital financial health.

Securing therapy access is securing the future of orthopedic care.

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