



## Orthopedics: How to Strategically Build and Optimize a High-Margin Service Line

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As healthcare continues to shift towards greater value, Centers of Excellence are investing in their orthopedic service lines to drive growth and future-proof their organizations.

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# Executive Summary

Today, health care spending exceeds \$3.5 trillion. Private spending and public subsidiaries have become the norm for treating our aging population - one quarter of the US workforce will be 55+ by 2025<sup>1</sup> – with significant impacts for three key audiences:

## Patients

With an influx of technology, information, and data flooding the market, patients are more empowered than ever before to make educated decisions on their health providers. They're traveling to high-value health systems in order to attain the best outcomes, and conducting extensive research before making elective care decisions. Like any consumer, satisfaction, cost, and quality are primary decision-making factors for patients.

*“When it comes to orthopedic surgery, patients seek a level of service so exemplary that we should have no difficulty making promises on seamless execution and positive outcomes. That’s why providers must be open to changing how we treat patients from start to finish.”*

-MICHAEL SUK, MD, JD, MPH, MBA, Chair, Department of Orthopaedic Surgery, Geisinger Health

## Payers

Since 2009, CMS bundled payment models such as the Acute Care Episode (ACE), Comprehensive Care for Joint Replacement (CJR), and Bundled Payments for Care Improvement (BPCI) have shifted reimbursement models to fee-for-value and total episode outcomes, rather than paying for individual services.

In addition, the nation’s largest self-insured employers are aligning with the highest value centers. For select procedures such as joint replacements, patients are forced to pay a significantly higher copay if they don't receive treatment from one of their employer's 'Center of Excellence' facilities.

Armed with new data and insights, payers and patients are continually demanding more for less, with a greater emphasis on consistent quality.

*“Bundled payments have demonstrated a proven track record in orthopedics for reducing health-care costs while maintaining or improving quality. Future iterations will build upon the lessons learned from each program, and further develop a model that aligns patient, provider, and payer in improving health care.”*

-RICHARD IORIO, MD, Chief, Adult Reconstruction, Brigham & Women's Hospital, et al.<sup>2</sup>

## Providers

In this competitive, value-based environment, it makes sense to identify service lines that are capable of 1) Standardizing care plans to deliver consistent, quality outcomes, and 2) Improving patient and provider experience and satisfaction.

Although the specific care improvement goals may differ among health systems, there is still consensus among providers around reducing post-acute utilization, navigating patients across the episode, and shortening the time spent in the hospital. As a result, 'Super Centers of Excellence' – innovative systems monopolizing regional patient volume – are emerging.

But it takes more than awareness and brand recognition to achieve this. The majority of 'Super Centers of Excellence' are investing in their orthopedic service line as a strategic growth initiative.

# Why Orthopedics?

Healthcare leaders are reinvesting in orthopedics for three key reasons:

## 1 Growth of patient population

Increased health care spend is largely due to America's aging population, growing incidence of Type 2 diabetes and high BMI. These trends all point to an inevitable spike in total joint replacement surgery, where the number of procedures has already risen by approximately 150% in 45- to 64-year-olds since 2004.<sup>3</sup> Between 2010 and 2030, the overall growth rates for total hip and total knee replacements are projected to be 174% and 673%, respectively.<sup>4</sup>

## 2 High profit margins

Business cases differ by organization, but orthopedics generally has a contribution margin of 30% or more.<sup>5</sup> However, cost variation can dilute profitability making it difficult to justify reinvestment. NYU Langone recently showed that, while there was no significant difference in quality outcomes for hip replacement patients receiving home health services versus those being discharged home with an electronic physical rehabilitation application (EPRA), the total spend varied by \$4,000 per procedure. Once they identified the source of variation, NYU Langone effectively reduced costs by the same amount.

## 3 The “halo effect”

In today's age of consumerism, patients hold increasing influence. A satisfied patient is more likely to refer their surgeon or hospital to their peers, and a referred patient is 18% more loyal than a non-referred patient. Improving a key elective service line like orthopedics can drive downstream business to other aspects of the system. Fifteen of the top 20 US News and World Report's Hospitals also appear in the top 20 national ranking for orthopedics.

*“Local and national market forces, including most prominently heightened consumerism and the transition to value-based payment, have necessitated transformation in our care delivery across all service lines.”*

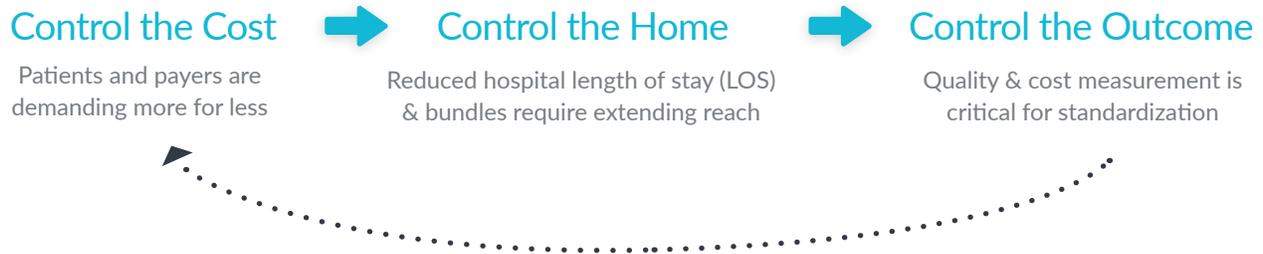
-MATT CANTONIS, AVP, Scripps Health

Leading Centers of Excellence are investing in orthopedic episodic care management to directly engage patients across the entire journey, reduce variation, and ultimately achieve better outcomes for less. In the following pages, we, the Force Therapeutics Team, share our playbook for orthopedic episodic care management, built from more than eight years of experience in supporting 60+ health systems and 125,000+ patients across the country.

# The Playbook for Orthopedic Episodic Care Management

## Flipping your pain points into opportunity

The first step to transforming orthopedic episodic care management is determining why it's necessary. Through our partnerships, we've identified the following three pain points as the most prevalent in orthopedics:



Clinicians that conquer all three pain points will effectively future-proof their service line and gain market share. However, this isn't possible without administrative support. Clinical leaders need to work closely with their administrators to create a progressive culture by demonstrating how evidence-based care improvement will ultimately lead to market differentiation.

### Case Study: How the Connecticut Joint Replacement Institute achieved Super Center of Excellence status

The Connecticut Joint Replacement Institute (CJRI) at Saint Francis Hospital has always been at the forefront of innovation and value-based healthcare. In 2009, they implemented their own proprietary bundled payment models which predated even the earliest CMS models. The program, known as the "Step Ahead Plan" focuses on providing superior quality and patient experience at lower cost.

Their mission to provide better outcomes at lower cost has only intensified over time. In 2017, they formed a Digital Transformation Task Force to find a platform solution that 1) engaged patients before and after surgery, 2) streamlined patient and provider communication, and 3) collected and benchmarked PROMs data. That solution was Force Therapeutics which is now further differentiating CJRI from others in the market.

*"We live and breathe the Center of Excellence model because we're finally trending towards a competitive healthcare market where there are clear winners and losers based on the value of care they provide."*

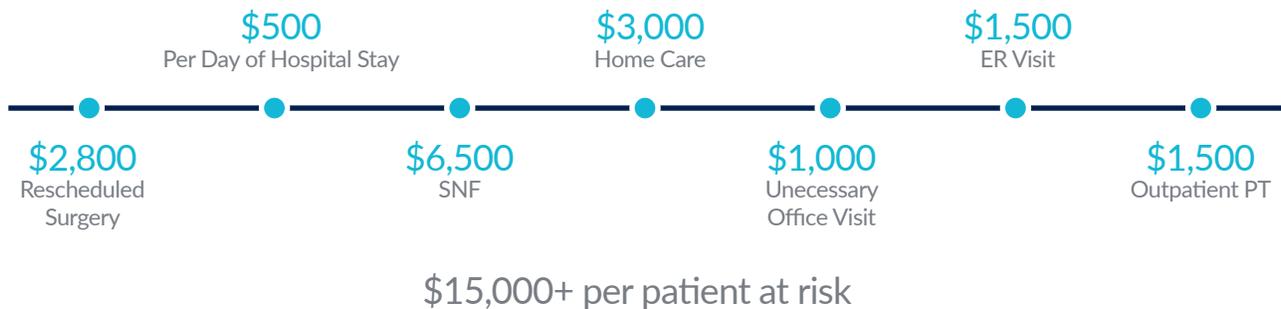
-STEVEN SCHUTZER, MD, Medical Director, CJRI

Here is our three-pronged strategy for flipping pain points into efficient profit generation:

- 1 If you identify and manage patient-generated cost outside the traditional system, you will control the total cost of care.
- 2 By streamlining navigation across the entire episode of care, you will be able to control the home.
- 3 Leveraging data and analytics will enable your team to manage variation and leverage insights for continuous improvement.

## Strategy #1: How to control patient-generated cost

Controlling end-to-end cost of care is perhaps the biggest challenge that organizations face. While we micromanage every single piece of the stay when the patient is in the hospital, the majority of avoidable costs are dependent on what patients are doing outside the traditional four walls of the system. Every post-acute service utilized is another cost added to the total episode and creates unnecessary opportunity for clinical variation.



Centers of Excellence have found a solution: improve your patient experience by empowering the patient.

By doing so, they're enabling the patient to take control of their own recovery, as opposed to being a passive recipient of care. Here are a few examples of how you can leverage the patient as the driver of their own health outcomes:

Traditional Methods <sup>7</sup>	New Methods <sup>8</sup>
Lengthy H&P visits and surveys to assess patient risk. Average surgery cancellation rate: <b>7.5%</b>	Virtual assessments to determine the appropriate surgical (or non-surgical) protocol. Average surgery cancellation rate: <b>2.5%</b>
Phone calls, office visits, and in-depth joint class to optimize the patient. Average LOS: <b>2.3 days</b>	Remote check-ins and easily-digestible care instructions to assess and manage pre-op progress. Average LOS: <b>1.9 days</b>
Overutilization of post-acute services. Average Home Care usage: <b>37.6%</b> Average SNF usage: <b>20.7%</b>	Surgeon-prescribed rehab delivered virtually. Average Home Care usage: <b>18%</b> Average SNF usage: <b>9%</b>
Unnecessary ER visits Average 90-day Readmission: <b>4.8%</b>	Telemedicine to address concerns before it's too late. Average 90-day Readmission: <b>2.3%</b>

New methods of care delivery are focused on providing tools for recovery rather than dictating the outcome. By not smothering the patient with services, we're able to improve compliance, quality, and patient satisfaction.

## Case Study: How University Hospitals reduced readmissions by 28%

University Hospitals (UH) - Cleveland Medical Center is an urban academic center that treats a high percentage of complex patients. Due to their complexity, coordination of these patients across the episode of care posed numerous challenges. UH participation in both Medicare and self-insured employer bundled payment programs created considerable financial risk related to readmissions, averaging \$9,500 per event.

After a three month pilot of Force Therapeutics, 90% of enrolled patient completed their prescribed care plans and virtual rehab exercises. Increased engagement and more effective patient navigation and care coordination helped UH reduce readmissions by 28%. As a result, they're expanding use of the program across their 18-hospital system.

*"Technology that empowers the patient allows our care providers to safely extend far beyond traditional geographical borders in a cost-effective manner."*

-MATTHEW KRAAY, MD, Director, Joint Reconstruction and Arthritis Surgery -UH Cleveland Medical Center

## EMPOWER THE PATIENT:

Identifying avoidable, patient-generated costs and innovating care-delivery methods is the first and most important step to future-proofing your service line.

Unfortunately, managing patient interactions outside the hospital tends to create another subset of challenges for providers with increasingly limited resources. Without deploying structure and solutions to extend their reach, it becomes almost impossible to manage the burden of patient navigation.

## Strategy #2: Extending clinician reach into the home

In this section, we'll look at how care teams interact with each other, and associated workflows, to effectively control the home. Most leading organizations are deploying a "navigator" model to prioritize and streamline how patients move across the care continuum. Before looking at how to deploy navigation, let's discuss the market shifts it can impact if managed correctly.

The benefits of scaling care navigation include:

- Shorter hospital length of stay
- Reduced readmissions, complications and ER visits
- Workforce optimization and reduced clinician burnout
- Containing leakage outside the system

It's probable that your organization is already executing elements of navigation – using various members of the care team (e.g. surgery scheduler, MA, PA, nurse, etc.) to complete a set of necessary tasks throughout the episode (e.g. optimizing patients, post-op calls, form collection, etc.). Most likely, they are relying on spreadsheets, sticky notes and unnecessary phone calls. The goal of navigation is to identify low- versus high- value tasks, standardize proactive outreach and task completion, and allocate resources appropriately. The process will be unique to your organization and requires an in-depth look at your service line.

To start, we must identify the importance of each task by tying it back to a key challenge. For example, streamlining and standardizing post-op form collection can help reduce mid-level provider burnout. If that's a recurring issue within your organization, it should be weighted accordingly. Then we can determine value:

$$\text{task value} = \frac{\text{task importance}}{\text{resources used}}$$

**Note:** As "resources used" increases, the associated task value decreases, regardless of the importance of the task.

**Task importance:** the impact a task will have on key challenges listed above (will vary depending on unique weight / prioritization)

**Resources used:** the amount of resources (e.g. FTE hours, service specialization, brick & mortar, etc.) being allocated to the completion of a specific task

Through this methodology, we've determined three standard touchpoints that are typically recognized as low-value, and the steps that you can take to optimize resources, thereby creating value :

	Pre-op risk assessment (comorbidities and social)	Patient-reported outcomes collection	Addressing patient questions / concerns
Traditional approach	<ul style="list-style-type: none"> <li>✓ Manual RAPT / health history evaluation, pre-op phone calls, internal meetings, manual reminders to follow up.</li> <li>✓ Nurses, MAs, surgeon</li> </ul>	<ul style="list-style-type: none"> <li>✓ Pen &amp; paper / other hardware, phone calls, office visits at disparate timeline days</li> <li>✓ Nurses, MAs</li> </ul>	<ul style="list-style-type: none"> <li>✓ Reactive phone calls and voicemails</li> <li>✓ Nurses, MAs, surgeon</li> </ul>
Modern approach to creating value	<ul style="list-style-type: none"> <li>✓ Patient-engagement software, standardized touch points, and automated tasks based on patient responses</li> <li>✓ One navigator</li> </ul>	<ul style="list-style-type: none"> <li>✓ Patient engagement software</li> <li>✓ Automate (no FTEs)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Digital navigation, automated instant messaging</li> <li>✓ Automate (no FTEs)</li> </ul>

Most teams today are structured according to the convenience of a task. By deploying solutions like digital navigation and education, telehealth, and asynchronous communication, you can structure care teams according to value and address variation more efficiently.

## Case study: How Muve Health scaled concierge-level performance with Smart Tasks

Muve Health is a network of Ambulatory Surgical Centers (ASCs) and innovative physicians delivering concierge-level service to total joint procedures. The biggest challenge for a system that prioritizes the patient experience is scalability, particularly with the upcoming opening of two new offices.

Since implementing Force Therapeutics, navigators at their flagship office in Lakeway, TX have saved 7 hours per week in call volume. Smart Tasks, a feature within the Force platform that allows navigators to standardize touchpoints and automate low-value tasks, has enabled Muve to 'draw a dotted line' from each navigator to their clinical management team. By doing so, Muve is one of the first organizations to remotely standardize the exact workflow of a care team to others across the country.

*"We are lucky to have a suite of highly personalized digital tools that allows us to deliver superior experiences and meaningful interactions across multiple sites."*

-KATIE PIERSON, DNP, RN, ONC, VP, Clinical Operations, Muve Health

## CREATING SCALE:

Automating and delegating key provider tasks based on their “value” will extend the care team’s reach, enabling more time and resources for patients prone to causing variation.

By bringing focus to your work flows, you’ve effectively become a more agile service line. This, combined with an engaged patient, is key in addressing the final element for optimizing orthopedics: cost and quality measurement. Without actionable measurement, there’s no system for continuous improvement.

## Strategy #3: How to predict the outcome

Prior to the EHR, providers had one way of collecting outcomes: pen and paper. The process was simple and gave clinicians the essentials for using patient reported outcomes for informed decision-making. However, it was incredibly labor intensive and reactive, and collection rates were an abysmal 10-20%.

EHRs enable a more efficient method for data collection but collection rates remain the same due to lack of patient portal usage. The cost of outcomes collection remains a challenge today, as well as the increasing demand for actionable data. As we move away from siloed collection to fulfill insurance regulations, and towards predictive analytics across the entire episode for care redesign, the importance of actionable data is more critical than ever.

First, what are you looking to solve? Our process for optimizing data collection and analysis starts with two basic questions that can be asked at each point in the process:

### 1 Where is variation in quality and cost coming from?

This allows you to predict outcomes, gather evidence for continuous improvement, and create a culture of accountability.

### 2 How do we compare to like-minded centers?

Asking this question will enable you to sell outcomes to paying stakeholders, share and receive best practices with leading centers, and create a culture of transparency.

	Addressing variation	Comparing and benchmarking
Step 1: Optimizing your Collection Method	<ul style="list-style-type: none"> <li>✓ Leverage patient engagement technology (not a PROMs collection tool) to increase compliance without FTEs</li> <li>✓ Optimize responder workflow and experience to minimize the 'patient burden'</li> <li>✓ Look across the episode and standardize touchpoints</li> <li>✓ Integrate other key metrics (pain, steps, demographics, etc.) to paint the whole picture</li> </ul>	<ul style="list-style-type: none"> <li>✓ Repeat methods from "quality &amp; cost" collection</li> <li>✓ Partner with established research networks (vendors, conveners, etc.)</li> <li>✓ Standardize touchpoints and methods with other leading centers</li> <li>✓ Automate data transfer to established registries</li> </ul>
Step 2: Optimizing your Analysis Process	<ul style="list-style-type: none"> <li>✓ Dashboards – to compare care teams, patient cohorts, and key clinical processes, and identify change over time</li> <li>✓ Customized reports – to identify trends and causes of variation</li> </ul>	<ul style="list-style-type: none"> <li>✓ Repeat processes from "quality &amp; cost" analysis</li> <li>✓ Identify like-minded centers</li> <li>✓ Benchmark high-level performance against ideal-state centers</li> </ul>
Step 3: Observing and Categorizing	<ul style="list-style-type: none"> <li>✓ Patient-generated – the cause is related to inherent risk factors and comorbidities</li> <li>✓ Provider-generated – the cause is related to how our care team is navigating and touching the patient</li> </ul>	<ul style="list-style-type: none"> <li>✓ Positive – the metrics we're outperforming others on</li> <li>✓ Negative – the metrics we need to improve</li> </ul>
Step 4: Asking and Improving	<ul style="list-style-type: none"> <li>✓ Reassess methods for care delivery – standardize how your high-performers are identifying and treating key patient cohorts</li> <li>✓ Reassess provider roles – standardize your most efficient workflows and encourage transparency</li> </ul>	<ul style="list-style-type: none"> <li>✓ Sell your strengths – patients and payers are looking for best-in-class – use your evidence to prove and sell.</li> <li>✓ Understand leaders' best practices – have conversations around what leaders are doing</li> </ul>

At a bare minimum, traditional methods for data collection enable clinicians to react to high-risk patients. But observing variation and trends over time tell a more important story on outcomes before they happen. Managing outliers is critically important, but tools that enable care redesign effectively complete the virtuous cycle of care improvement.

## YOU CAN'T MANAGE WHAT YOU CAN'T MEASURE:

By innovating how we collect and analyze data, we gain the ability to drive evidence-based change and predict outcomes before they happen

### Case study: How Brigham & Women's Hospital plans to reduce post-acute costs with data

One of Brigham and Women's Hospital's (BWH) biggest challenges in orthopedics is patient and provider behavior around home physical therapy. As data-driven centers are relying less on home health for total joint procedures, BWH's post-acute service utilization can be a significant cost to the patient and the system. Without hard evidence from their unique patient population, convincing involved stakeholders to change their workflows is unlikely.

Case data collected through Force Therapeutics allows BWH to integrate traditional PROMs, pain scores, step count, and virtual rehab compliance throughout the 120-day episode. By comparing patient cohorts utilizing traditional post-acute services with those using virtual rehabilitation, BWH looks to identify and scale best practices across the TJA service line.

*"Human behavior is dictated by experience. Experience can only be aggregated with data."*

-ANTONIA CHEN, MD, MBA, Director, Arthroplasty Research, Brigham & Women's Hospital

## Conclusion

Orthopedics will only become more valuable for years to come. Regardless of how you currently rank on a national or regional scale, there's still an opportunity to leverage the service line. In the not-too-distant future, the margin for opportunity will be slim to none as data-driven leaders across the country make the first moves. By controlling patient-generated costs, extending clinician reach into the home, and leveraging actionable data for evidence-based change, organizations have the opportunity to elevate care, reduce variation, and ultimately reach 'Super Center of Excellence' status.

# About Force

Force Therapeutics is a powerful, episode-based digital care platform and research network designed to help clinicians intelligently extend their reach. Our platform leverages video and digital connections to directly engage patients at every step of the care journey – from the point of surgery scheduling, to post-op recovery and beyond. Backed by the insights of more than 60 leading healthcare centers across the country, Force is proven to drive more effective recovery, lower costs, and achieve better patient outcomes.

1 Thompson, Derek. Health Care Just Became the U.S.'s Largest Employer. The Atlantic. 2018.

2 Feng JE, Padilla JA, Gabor JA, et al. Alternative Payment Models in Total Joint Arthroplasty: An Orthopaedic Surgeon's Perspective on Performance and Logistics. JBJS Rev. 2019;7(6):e5.

3 Jiranek, William, et al. 2.5 Million Americans Living with an Artificial Hip, 4.7 Million with an Artificial Knee. AAOS. 2014.

4 Jackson, Douglas. Total joint arthroplasty poised to see incredible growth in the coming decades. Healio. OrthopedicsToday. 2007.

5 Undisclosed Academic Medical Center

6 Greenberg, Brandi, et al. The unexpected impact of patient experience on hospital margins. Advisory Board. 2018.

7 Data based on national baselines (DRG 470)

8 Data based on 100,000 Force-enabled patients (DRG 470)

9 Discovery & research has been conducted by The Force Therapeutics Product Team across 50+ care teams