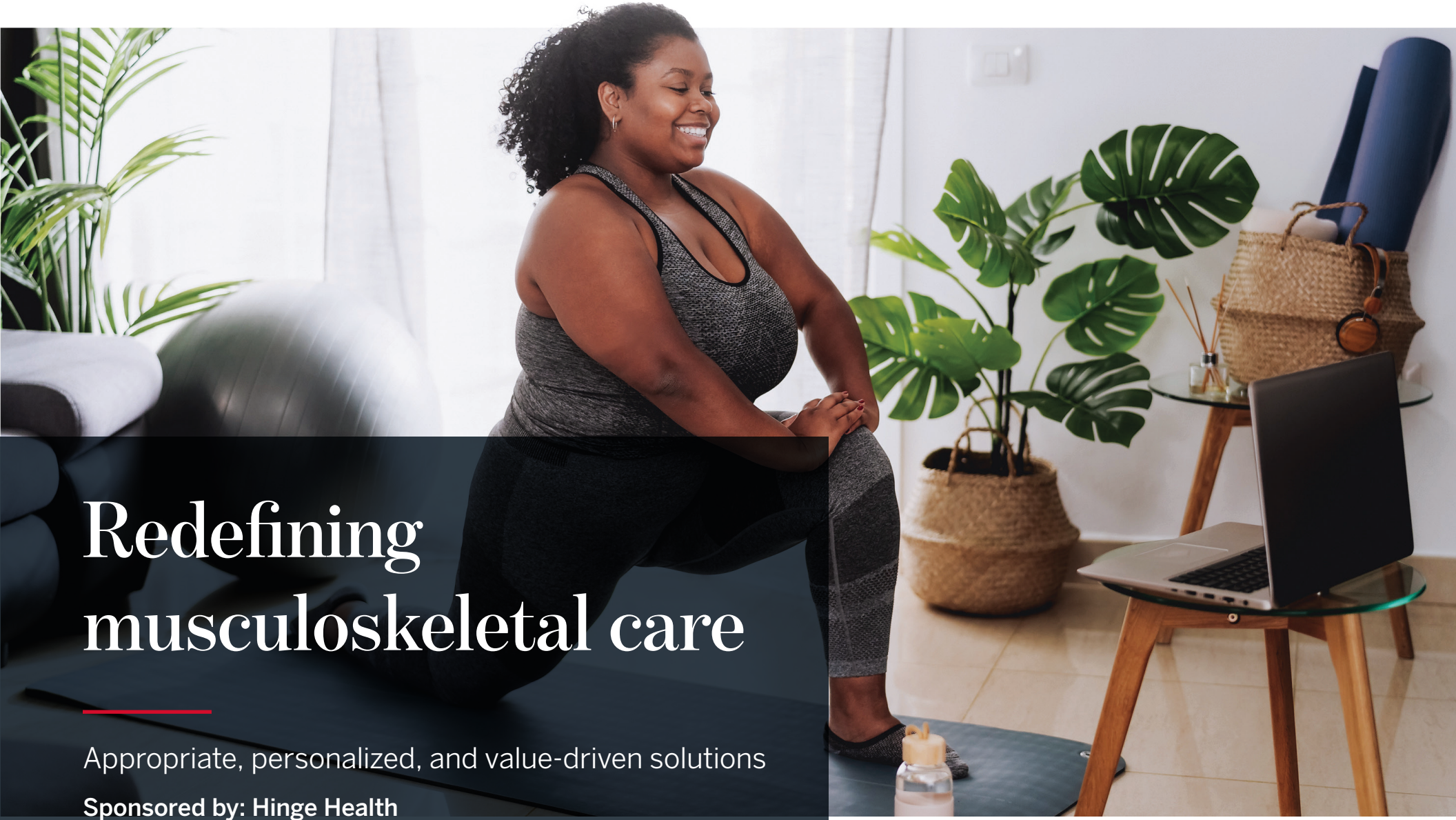
Advisory Board



Redefining musculoskeletal care

Appropriate, personalized, and value-driven solutions

Sponsored by: Hinge Health

Musculoskeletal (MSK) conditions carry a heavy burden of disease for patients and the healthcare system. Current approaches to MSK care are fragmented and overly reliant on imaging and surgical interventions, hindering optimal patient outcomes and contributing to financial strain on the system. There is a clear need for more accessible, value-driven MSK care.

Competing stakeholder priorities complicate MSK care delivery: Payers are managing the high cost of many treatments, providers are navigating evolving payment models while delivering care, and patients face fragmented care pathways that can lead to unnecessary treatment. The healthcare industry must find a path forward that balances the needs of payers, providers, and patients by delivering high-value care (HVC).

What is high-value care?

HVC is understood as the use of holistic, evidence-based care to meet patient needs without using unnecessary resources, leading to better clinical outcomes and cost efficiency. In practice, this means accurately assessing a patient's unique needs and facilitating access to a range of treatment options to ensure they receive their best, first line of treatment.

In contrast, low-value care (LVC) is characterized by higher cost, often invasive, treatments that provide little to no benefit to the patient, potentially cause harm, and waste resources. Despite the efforts of healthcare leaders across sectors, LVC remains common — often the result of care pathways that focus on driving volumes, formed by the misaligned incentives in a mainly fee-for-service (FFS) world.

For MSK patients, HVC doesn't necessarily mean avoiding surgery or specialists. Nor is it forced steerage toward conservative treatments. When a delay would result in poor outcomes, HVC may mean early surgical intervention. For other patients, HVC may mean addressing pain without surgery or medication by using movement and lifestyle changes. Simply put, HVC uses only the right tests and treatment to prevent clinical and financial waste and improve clinical outcomes.

Delivering HVC requires enhanced care coordination, collaboration across industries, and integrated digital solutions that expand access to personalized care. The best path to HVC involves creating a more unified care experience that gives patients integrated access to the right care at the right time.

> "True high-value care enables member outcomes by aligning care delivery with provider incentives. By creating a supporting structure where providers are empowered to succeed, we reduce systemic burden and establish a clear, sustainable pathway to better health."
>
> **Paul Hendley**
> Assistant vice president of value-based care, Blue Cross NC

About this report

This report is intended to help advance HVC in MSK and other specialty care spaces. In writing this report, Advisory Board researchers conducted an extensive literature review, in-depth consultation with healthcare industry experts, and gathered insights from leaders at accountable care organizations (ACOs), progressive health plans, and clinical practices nationwide.

Advancing high-value MSK care: Challenges and solutions

The current state of MSK care

Exploring the strategies to advance HVC

All the related resources listed in this guide can be accessed by searching for the titles on **advisory.com**.

Growing MSK burden combined with LVC contributes to escalating costs

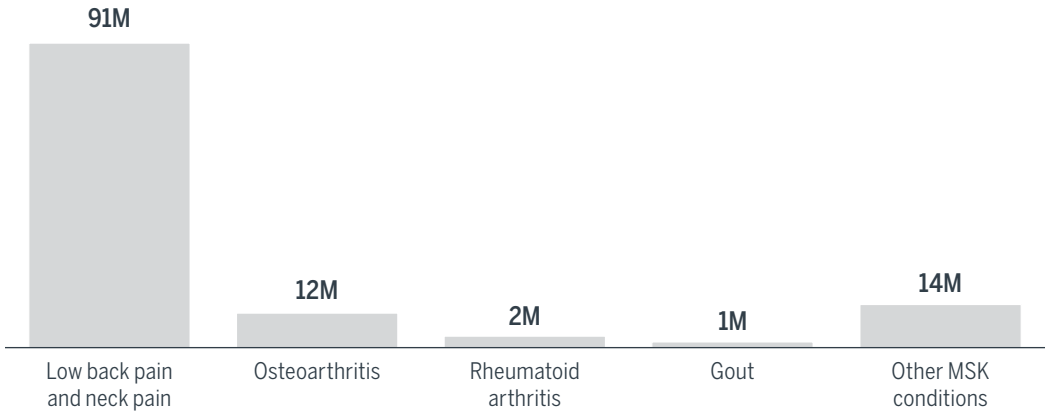
About half of all U.S. adults are affected by an MSK condition — costing payers and patients approximately $661 billion annually. This surge in MSK spending is fueled by an aging population, increasing rates of comorbidities, rising cost of surgical procedures, and frequent LVC. These influences pose substantial financial pressure, especially for payers.

$661B

annual cost to payers and patients as a result of MSK conditions

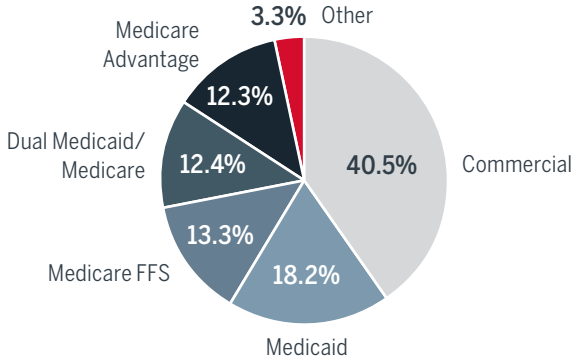
An aging population and lifestyle factors contribute to the growing prevalence of MSK conditions, highlighting the need for a care delivery approach that better addresses the clinical and financial burdens of low-value MSK treatment.

Over 100M patients received care for MSK conditions in 2023



Representing 8% of payers' annual medical expenditure, MSK conditions remain a significant financial concern. A recent Business Group on Health survey found that 74% of large employers listed MSK as one of the top two conditions driving their healthcare spending in 2024. Additional research shows that MSK spending significantly exceeds the cost of other chronic conditions, including cardiovascular disease, cancer, and diabetes.

MSK patients by payer type



RELATED RESOURCE ON ADVISORY.COM: Musculoskeletal health market trends ready-to-use slides

Diagnostic imaging, medication, and surgical interventions can negatively impact outcomes when used preemptively or inappropriately.

UNNECESSARY IMAGING

Although imaging tests are among MSK care's primary tools, there is growing evidence that these tests are often overused or misinterpreted. Imaging often picks up "abnormalities" that are attributed to pain but are actually harmless, normal changes. For example, one study found that most pain-free and asymptomatic adults, starting in their 30s, are likely to have image indicators of spine degeneration due to normal aging. Another study determined that the frequency of abnormal MRI results for shoulders was similar, whether patients were experiencing symptoms or not.

OPIOID OVERPRESCRIPTION

While clinicians now prioritize nonpharmacological treatments as frontline MSK care, opioid misuse and abuse remains one of the most pressing public health issues in the United States. In recent years, opioids still account for 18.8% of prescriptions for chronic low-back pain (LBP), and 76.9% of those prescriptions were for long-term use.

SURGERY OVERUSE

Surgery is frequently recommended to patients as the definitive solution to their MSK pain, even though 77% of patients in pain prefer nonsurgical options. Many patients may not need surgery, since many procedures deliver the same long-term results as non-surgical interventions, like PT or placebo surgeries — including arthroscopic partial meniscectomy for degenerative meniscus tear, subacromial decompression for shoulder impingement, and labral repair/bicep tenodesis for SLAP II lesions. In spite of this, U.S. hospitals performed more than 200,000 unnecessary back surgeries on Medicare beneficiaries from 2019 to 2021.

Improved access to other evidence-based treatment options prevents potential LVC.

Other evidence-based MSK treatment options include physical therapy (PT), lifestyle modifications, behavioral health support, and non-pharmaceutical pain relief. Research shows that a multidisciplinary approach with a combination of noninvasive, complementary interventions effectively reduces pain and prevents surgery in 95% of MSK patients who complete treatment. And, when patients use PT within three months of diagnosis, they are less likely to use opioids long term.

One tool that has proven effective in supporting the uptake of evidence-based treatments for chronic MSK pain is digital health. Digital health tools have the ability to expand access to care, identify high-risk patients, educate them on diverse treatment pathways, and provide ongoing clinical support. Increasingly, health plans and plan sponsors are incorporating digital solutions into their benefit designs, while providers are leveraging these tools to guide at-home exercise programs and embed them directly into patient portals.

Recent studies have shown that digital tools can facilitate early intervention by using predictive AI analytics to flag individuals at risk of chronic musculoskeletal pain, enabling targeted outreach and preventive care strategies. Also, tools such as mobile apps and telehealth platforms deliver education on biopsychosocial approaches to pain, helping patients understand the role of physical, psychological, and social factors on their specific condition. These tools promote treatment plan adherence by providing consistent remote monitoring, virtual PT sessions, pain tracking, and behavioral health support. By eliminating geographical, transportation, and scheduling barriers to care, digital tools expand access to MSK care for underserved populations. Thus, as digital health solutions proliferate in both number and type, they continue to help patients access HVC.

High-value MSK care can be hard to come by

Prioritizing the most appropriate treatments is neither new nor controversial. HVC zeroes in on underused care options within existing standard of care models. The healthcare industry now places more emphasis on outcome-based care and innovations that enhance the ability to deliver HVC, but leaders note that there are still barriers to ensuring equitable and consistent access to high-value MSK care.

RESEARCH INSIGHT

Across all levels, stakeholders must be bought into the efficacy and promotion of non-surgical options **and** have the systems in place to engage patients when they are ready.

CHALLENGE 1

Industry-level barriers

At the industry level, financial forces keep MSK stakeholders misaligned, preventing them from achieving HVC at scale. Misaligned payment incentives lead health plans, providers, and employers to prioritize cost and quality differently, which can cause clashing approaches to care.

PROVIDERS

- **FEE-FOR-SERVICE (FFS) INCENTIVIZED** → Make money by providing care; incentivized to increase volumes — especially for procedural care
- **VALUE-BASED CARE (VBC) INCENTIVIZED** → Make money by meeting performance targets for cost and quality; incentivized to provide effective and efficient care to improve outcomes and lower costs

MEDICARE ADVANTAGE HEALTH PLANS

→ Make money by documenting patient risk and improving outcomes; incentivized to promote lower cost, upstream care without restricting benefits or reimbursements

COMMERCIAL HEALTH PLANS

- **SELF-FUNDED EMPLOYERS** → Achieve savings by lowering total cost of care; incentivized to manage utilization, but must do so in way that's palatable to employees
- **FULLY INSURED EMPLOYER** → Make money by spending less on premiums; incentivized to manage benefits, but must do so in way that's palatable to employees

Most specialty providers are still paid on an FFS basis. The episodic and complex nature of specialty care makes it challenging to establish consistent quality metrics and track outcomes necessary for value-based payments. Additionally, including specialists in attribution models further complicates how care is paid for.

However, the MSK field has made more progress toward VBC than other specialties by adopting bundled payments.* While bundled payments encourage coordinated and cost-effective care, they still incentivize procedural volumes. As a result, procedural-based payment models in MSK lead to linear care pathways that often direct patients toward surgery.

CHALLENGE 2

Health plan and plan sponsor barriers

Health plans and plan sponsors are motivated to direct patients to high-value, lower-cost care options, but may struggle to do so in a way that doesn't feel restrictive to providers and patients.

Traditional strategies, such as prior authorization and patient steerage, aim to manage utilization of expensive treatments and guide patients to more appropriate, cost-effective alternatives. For specialty care, payers often encourage providers to follow evidence-based clinical pathways and restrict services outside those guidelines. However, these traditional methods have significant limitations and often fail to achieve their intended goals. Instead of improving care delivery, traditional strategies frequently exacerbate challenges like administrative burden, delays in care, and dissatisfaction among patients and providers. These inefficiencies highlight the need for a more effective path to HVC that focuses on building trust and collaboration between payers, providers, and patients.

CHALLENGE 3

Provider-level barriers

Traditional MSK care models favor surgery or medication because other evidence-based options are seen as less accessible or effective. And, even though research supports the efficacy of PT and other non-surgical options, greater education and engagement are needed for physician buy-in and behavior change.

> "The more steerage you put in place, the more times team members may defer care. So, I'm never going to say don't go where you want to go for care. But that said, I think it's just regularly informing them of the options available to help them make good, informed decisions for themselves."
>
> **Drew Driggars**
> Director of Benefits & Team Member Services, Builders FirstSource

* A single payment covering all services for a specific episode of care.

Surgery-focused care models can enforce inaccurate, incomplete understandings of chronic MSK pain. There are times when surgery is helpful and necessary for certain conditions. However, the focus on a physical cause of pain overlooks the impact that common, less-regarded factors have on chronic pain — factors such as movement, nutrition, substance use, stress management, social connection, sleep, and mindset. Limited clinician education on the neuroscience of MSK pain impacts diagnoses and care plans. Consequently, doctors frequently rely solely on low-value imaging practices to explain MSK pain, which is costly, risks false positives, and contributes to unnecessary treatment.

Data also shows that despite clinical guidelines prioritizing non-surgical management and selective imaging practices, there is still poor alignment between guidelines and clinical practice. One study shows that only 29.3% of MSK patients are referred to PT in the first 90 days after initial diagnosis. And despite the availability of self-referral to PT, utilization remains low at 6% among privately insured populations.

CHALLENGE 4

Patient-level barriers

Patient perceptions and social drivers of health are also significant barriers to HVC. Evidence-based alternatives, like PT or lifestyle interventions, are frequently seen as barriers that prolong time to surgery. Patients often view surgery, injections, or medications as an option that will provide quicker relief than attending multiple physical therapy sessions and committing to an exercise program.

Disparities in MSK care access are influenced by geography, socioeconomic status, gender, and race/ethnicity. Women, low-income individuals, and people of color experience MSK pain at disproportionately higher rates but receive quality care far less often than their counterparts. Social drivers of health such as limited health literacy, transportation restrictions, language barriers, and inadequate health insurance coverage further exacerbate these inequities. Due to these inequities, many patients cannot access PT or pain management programs. This problem is further compounded by long wait times and significant workforce attrition among physical therapists, particularly in outpatient settings.

29.3%

of MSK patients are referred to PT within 90 days of diagnosis

6%

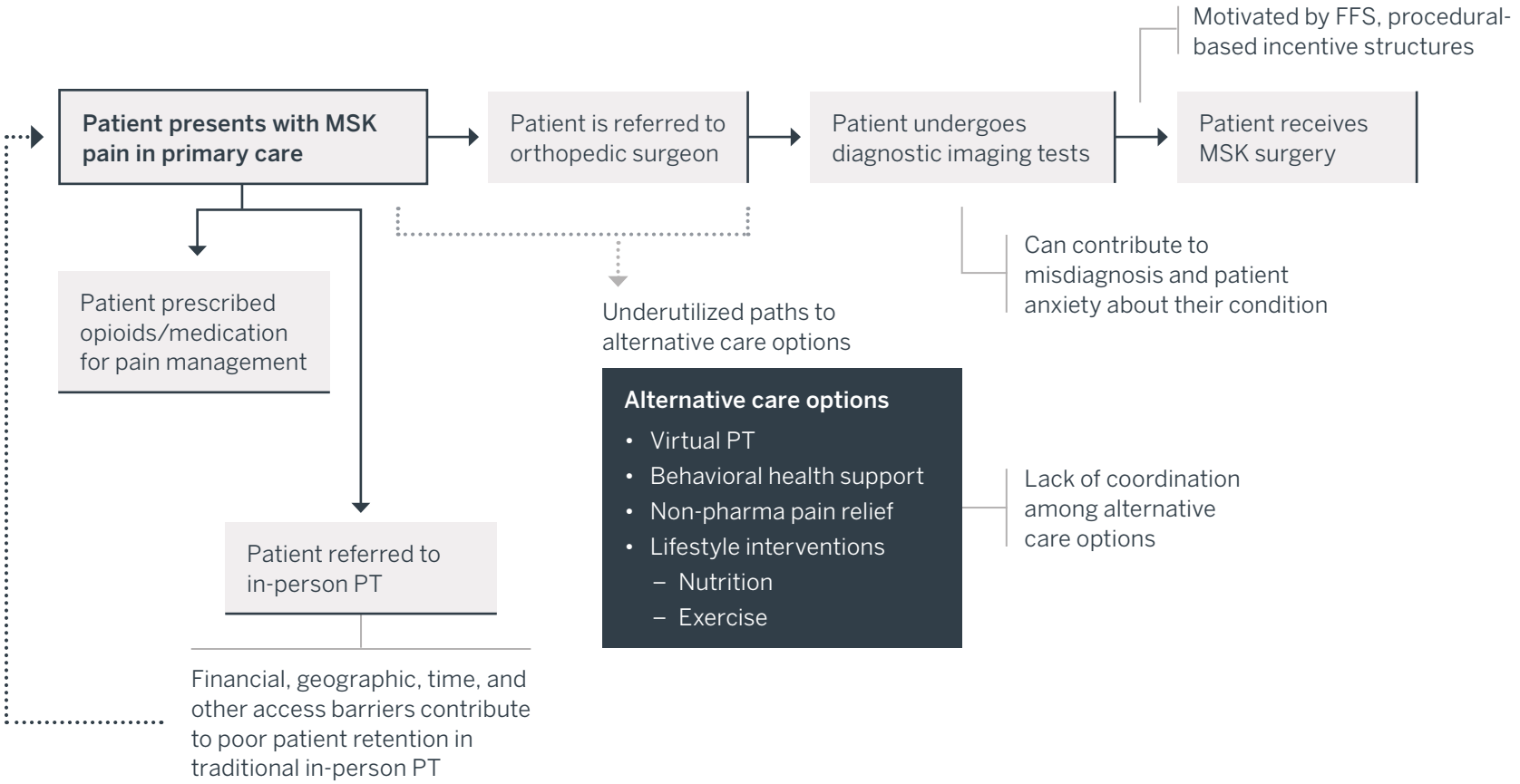
of privately insured patients make use of PT referrals

RELATED RESOURCES ON ADVISORY.COM:

- Transforming Episode Accountability Model (TEAM) cheat sheet
- Musculoskeletal health market trends ready-to-use slides

Traditional care model: A linear pathway toward surgery

This example MSK care pathway demonstrates how the aforementioned challenges continue to put an overemphasis on surgery, increasing the prevalence of LVC. Although in-person physical therapy is an established and effective treatment for many types of MSK pain, various barriers can limit a patient's access and ability to fully benefit from PT. Additionally, pathways to alternative care options are underutilized, preventing access to the full range of evidence-based treatments.



Existing efforts to promote HVC

Healthcare leaders acknowledge financial and clinical barriers to HVC, especially in specialties. Current strategies are often fragmented and only partially address these issues, rather than offering a comprehensive solution that improves care delivery as a whole.

> “We’ve made a conscious effort to consolidate where possible. Instead of having various vendors for chronic care management, virtual care, and so forth, we use one platform with various solutions.”

Kyle Longton
CEO of American Foreign Service Protective Association (AFSPA)

Leaders agree that overcoming industry-level barriers will require broad payment reform and systemic efforts. Currently, there is no shortage of strategies at the payer and provider level that aim to improve care and control spending.

FOR INNOVATIVE HEALTH PLANS AND PLAN SPONSORS

- Designing specialty-specific value-based payment agreements
- Leveraging third-party support to alleviate common administrative burdens
- Enabling extended access to additional out-of-network specialty providers, based on the recommendation on in-network specialists

FOR INNOVATIVE PROVIDER LEADERS

- Utilizing AI to support care coordination and direct patients to appropriate care
- Conducting data-informed market segmentation for personalized care and improved patient engagement
- Prioritizing targeted, team-based care management to support high-risk populations and prevent readmissions

While these strategies can help deliver higher-value care, if not implemented properly they can contribute to operational complexity and care fragmentation. This is because, frequently, strategies that use digital solutions and third-party support are one-off and disjointed. If digital solutions are not properly integrated into existing infrastructure, or if third parties aren’t held accountable for their performance through risk sharing, these approaches may cause more burdens than benefits. One major burden is the feeling of “point solution fatigue” — the idea that having multiple interfaces and fragmented processes frustrates health plans and sponsors that must manage various solutions, providers who must navigate multiple tools within their workflows, and patients as end users.

Thus, there’s a need for a more unified solution that focuses on thoughtful connectivity of existing, proven solutions. Payers, providers, and third parties must collaborate to create a seamless care experience, reduce complexity, and scale to broad populations without compromising health outcomes or costs — remembering that the ultimate goal is to ensure patients receive the right treatment when and where they need it.

Creating and operationalizing a unified care model

Healthcare should emulate other industries like banking and retail by integrating in-person and digital services and providing better access to expert support for a cohesive customer experience. This requires breaking traditional silos and uniting the entire patient journey — from entry points to care to treatment recommendations and delivery methods. The result is a unified care model (UCM) that creates a pathway to seamless, multidisciplinary, evidence-based care, supported by personalized treatment and hybrid delivery options.

There are two key steps for getting patients to their best first line of treatment:

- Decide which treatment options best fit the patient's unique needs.
- Deliver treatments to maximize quality and accessibility.

STEP 1:

Decide which treatment options best fit the patient's unique needs

Advances in treatment and diagnostics offer patients the promise of personalized, tailored care. For example, genetic markers can help predict the onset or progression or certain MSK conditions, and advances in biometric data analysis can help predict a treatment's effectiveness. This ever-expanding universe of treatment options also increases the complexity of care delivery. The treatments chosen should reflect a patient's unique needs — in the MSK space this includes their perception of their pain, their ability to follow through on a particular treatment, and their ability to access treatment.

Education: Determining the best MSK treatment starts with a comprehensive understanding of pain. Growing evidence supports the use of pain neuroscience education (PNE) as a high-value approach to communicating with patients about their MSK pain. PNE helps patients learn how the brain and nervous system process pain signals, shifting their perspective from viewing pain as simply tissue damage to recognizing it as a complex interplay between the nervous system and psychosocial factors. Better understanding one's pain is a proven approach for treating MSK pain, disability, and psychosocial factors. Effectively communicating diagnoses to patients can help build their confidence to participate in their care.

Care options: In addition to a comprehensive understanding of pain, patients need access to comprehensive treatment options. In the traditional, linear care pathway, primary care physicians (PCPs) often play quarterback in directing the MSK care journey. However, studies show that PCP-led triage often results in suboptimal diagnosis, unnecessary imaging, and fragmented treatment. Instead, research indicates better patient outcomes and higher satisfaction when orthopedic specialists or physical therapists manage care, resulting in more timely treatments and fewer instances of LVC.

RESEARCH INSIGHT

A multidisciplinary team is required for specialist-led care model success. The specialist needs a team — including advanced practice providers, physical therapists, social and behavioral therapists, dietitians, and care managers — to successfully manage a patient's MSK needs.

Offering access to a multidisciplinary team — including physical therapists, physiatrists, behavioral health specialists, lifestyle coaches, and more — empowers patients to choose who oversees their treatment. This choice enhances patients' understanding of comprehensive treatment options and encourages active involvement in care decisions. Additionally, trusted care managers build patients' confidence, motivating them to explore new treatment options and connecting them with a network of high-performing providers.

High-performance network: Access to quality, multidisciplinary care requires action from cross-industry stakeholders to connected patients to the best providers. Provider organizations may create Accountable Care Organizations (ACOs) which incentivize coordinated, HVC through shared savings programs. Health plans and plan sponsors may use curated networks to ensure patients are receiving care only from high-performing providers. Regardless of the approach, directing care to high-value providers and practices can reduce unnecessary procedures and promote appropriate, cost-effective care.

STEP 2:

Deliver treatments to maximize quality and accessibility

In addition to having a choice in who manages their care, patients also benefit from having a choice in how and where they receive care. As previously highlighted, digital health solutions have emerged as a leading strategy to improve personalization and availability of care. Specifically, virtual care options have been highly impactful at making MSK care more accessible, convenient, and affordable for patients. However, patients still value the option for in-person care options when necessary.

Hybrid care: Research supports the importance of both virtual and in-person care options that meet individual patient preference and evolving needs. Hybrid care combines the benefits of in-person and virtual care into a single integrated solution, ensuring a cohesive experience for the patient.

MSK care that can be performed digitally includes:

- App-based exercise therapy
- Physical therapist-guided interventions
- Remote patient monitoring
- Routine follow-up
- Behavioral health support

MSK care that requires in-person care includes:

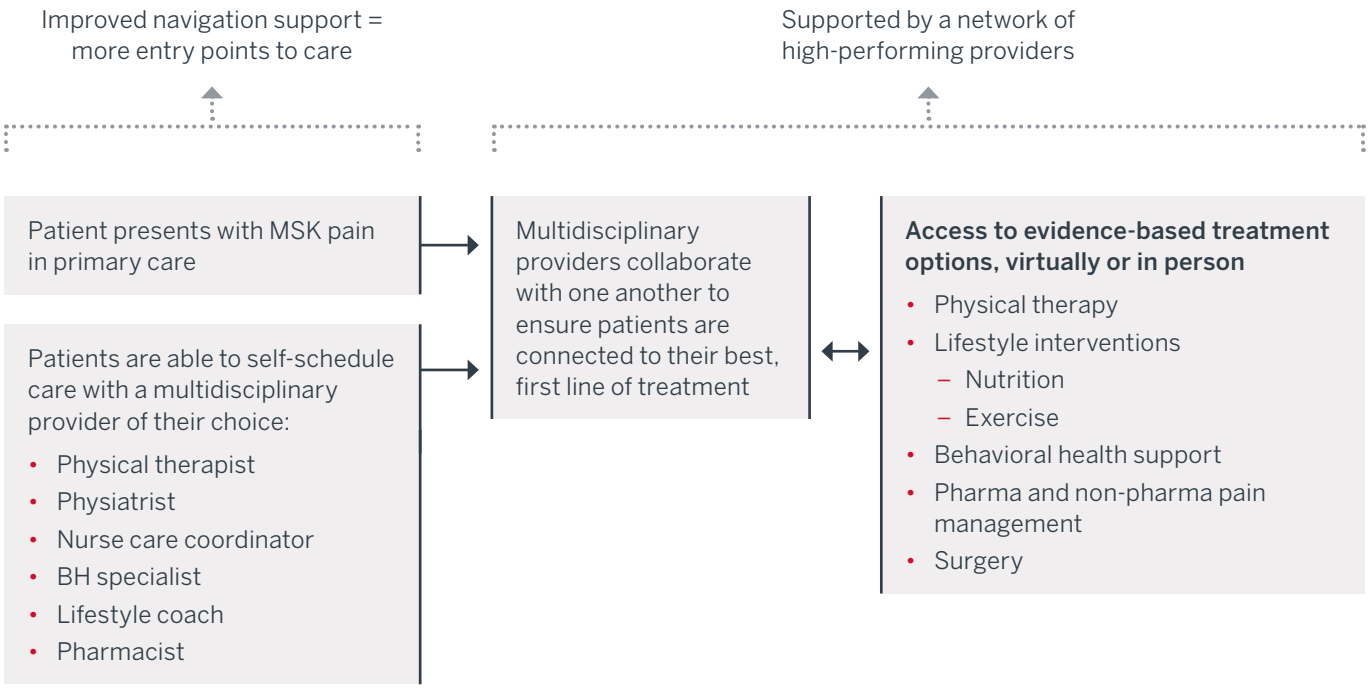
- Necessary diagnostic imaging
- Surgeries, procedures, and injection-based therapies
- Hands-on PT for complex MSK issues
- Casting, splinting, and other orthotics fittings

> "Given where we are in healthcare, we can't continue to use the same methods and expect different results. We have a diversity of personas and people on their health journeys, and people want to engage in different ways and in more nontraditional ways."
>
> **Medical director**
> Department vice president, Blues health plan

> "Telehealth isn't a silver bullet, but it's a critical tool to help ensure members access the right care, at the right time, in a way that works for them."
>
> **Paul Hendley**
> Assistant vice president of value-based care, Blue Cross NC

Unified care model: Improving access to coordinated, high-value care

This example of a unified MSK care pathway demonstrates how a UCM prevents instances of LVC and enables access to options for HVC. Comprehensive pain education primes patients to be more active participants in their care. Multidisciplinary care management, supported by a high-performing provider network and hybrid care delivery, improves access to all evidence-based treatment options.



RESEARCH INSIGHT

Patients need expanded access to appropriate treatments, but they also need guidance to use these options effectively. Health plans and sponsors must ensure that patients understand their benefits and know how to leverage them appropriately.

Stakeholder-specific benefits

In addition to improved care for patients, establishing a UCM for MSK care offers benefits for all stakeholder groups involved.

PROVIDERS

FEE-FOR-SERVICE IINCENTIVIZED ❯

Unified care helps alleviate administrative burdens for providers and enables higher quality referrals. For orthopedic surgeons, this means having more time to see patients who are appropriate surgery candidates.

VALUE-BASED CARE INCENTIVIZED ❯

Unified care helps ensure that patients have access and are referred to the most appropriate care. In MSK care, this means PT, lifestyle interventions, and other less-invasive care options are considered as viable as surgery. VBC providers benefit by avoiding unnecessary, expensive procedures and improving patient outcomes.

MEDICARE ADVANTAGE HEALTH PLANS

❯ Unified care can help retain plan members by improving the member experience via access to personalized, coordinated treatment options. For Medicare Advantage plans, this means they're able to reduce member turnover and improve plan performance in a competitive payer market.

COMMERCIAL HEALTH PLANS

SELF-FUNDED EMPLOYERS ❯

Unified care helps seamlessly connect members to high-value providers and manage utilization by improving access to lower-cost HVC options. In MSK care, this means the potential to significantly reduce healthcare expenses by minimizing reliance on costly surgeries, imaging, and long-term medication use.

FULLY-INSURED EMPLOYER ❯

Unified care helps to improve the employee health experience and satisfaction by expanding access to diversified care options that meet individual employee health needs. In MSK care, this means investing in benefits that meaningfully address employee MSK pain and avoiding downstream expenses. In addition to improving employee outcomes and well-being, these actions can boost workplace productivity and organizational affinity.

CONCLUSION

Conversations you should be having

The journey to advance HVC in the MSK space begins with reflection and collaboration. Stakeholders across healthcare must work together to identify opportunities to transition from often fragmented and rigid care pathways to unified, patient-centered solutions that prioritize outcomes and costs. These new HVC models will deliver comprehensive specialty care by ensuring accurate initial diagnoses, evidence-based conservative treatments, timely access to clinically appropriate procedures, and the ongoing measurement of long-term outcomes.

As you read through and digest these challenges and solutions, we encourage you to ask yourself and your colleagues these questions to guide your future HVC strategy:

1. How does our organization's current care model incentivize LVC, and what steps can we take to transition to an HVC framework?
2. What are our organization's structural barriers to care, and how can we address them to ensure equitable access to HVC?
3. Are we effectively leveraging alternative care options to reduce reliance on costly surgeries and medications? If not, what adjustments can be made?
4. How can we better integrate care delivery across stakeholders to create a unified care model that improves outcomes, reduces costs, and enhances satisfaction?
5. What role does technology play in our efforts to improve patient care coordination with the most appropriate treatment options?
6. How can we foster collaboration and trust among stakeholders to align incentives and operationalize HVC solutions effectively?

SPONSORED BY

Hinge Health unifies digital and in-person MSK care, helping people move beyond pain to avoid costly, invasive treatments. A care team of clinical experts empowered by AI guides people through fully integrated, personalized care all in one app. By making high value care easy to access and stick with, we improve lives and lower costs — for everyone.

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