

Connecting the Dots:

Using “Big Data” To Build Efficient, Integrated Musculoskeletal Care

You’ve heard it before: “Big Data” is transforming healthcare. But “Big Data” is still in its early stages, and few hospitals or health systems have either the time or resources to make sense of the data they already have, let alone craft forward-thinking strategies.

Right now, healthcare is experiencing its most turbulent time in decades. There’s an increasing demand to combine new measures with what’s already been “proven to work.” But how do you know the right steps to take, when the ground is shifting beneath your feet? If strategic decisions are based solely on your own experience – without a clear understanding of larger market forces – how can you be sure if you’re even asking the right questions? Building a turnkey musculoskeletal service line may seem to be the way to go, but this approach can be based on a lot of assumptions that may or may not be true. So how do you “connect the dots” and build a more efficient, integrated continuum of musculoskeletal care that will help you adapt to a changing healthcare market? We’ll show you how the proper use of “Big Data” can help.

Making “Big Data” work for you.

This white paper will introduce you to how using data, right now, can help you build, restructure, grow and operate a more effective and profitable musculoskeletal program. This paper will also describe how to use data to re-engineer your service line strategy, so you can straddle the difficult world of fee-for-service, now, then easily transition to value-based care delivery in the future. We’ll break down an integrated care model into major activities and show you how using data can positively impact value and outcomes, as well as patient and physician satisfaction. Lastly, we’ll show you how a data-driven, patient-centric and integrated musculoskeletal service line is possible, then offer some steps to help you get there.

Step One

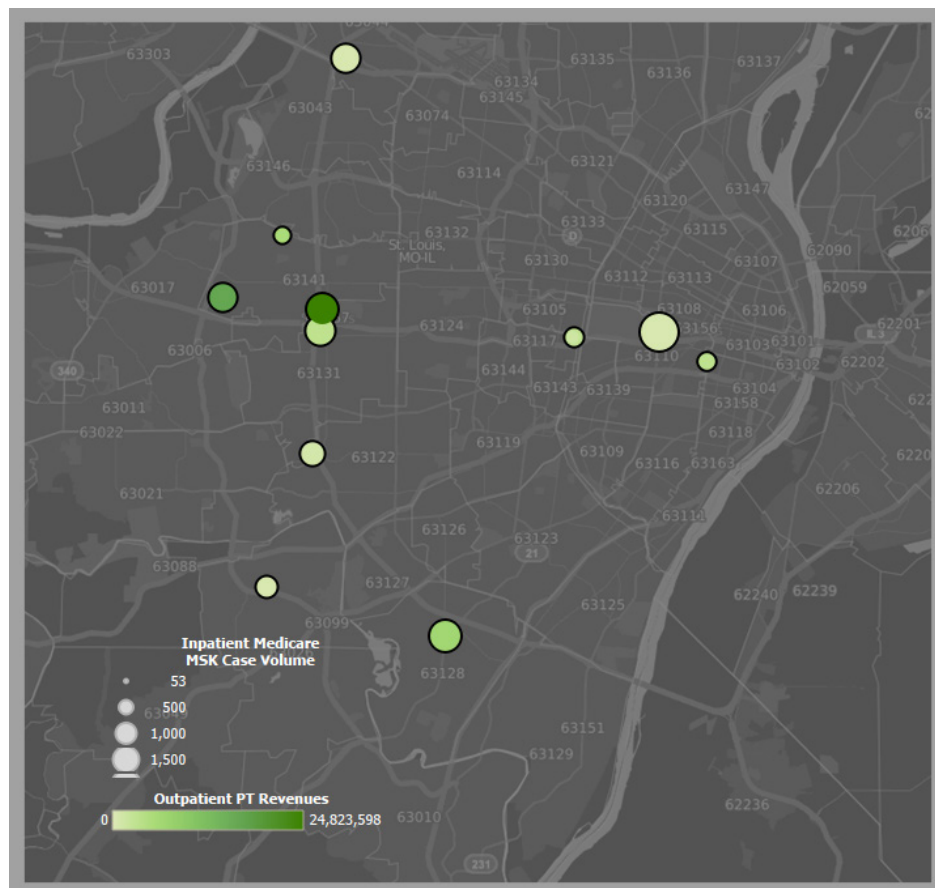
Use Data to Understand Your Market's Demand for Musculoskeletal Services

The first step in planning a winning strategy is to understand your market for musculoskeletal services. Hospitals typically have plenty of data. In fact, you probably have more data than you know what to do with. But do you have the right data? Data you can use to answer questions such as ...

- + What is the demand for total joint replacements in my market?
- + How many patients are taking medication for pain that could benefit from physical therapy?
- + How many individuals in my market have had hip replacements?
- + What's the unmet need among Baby Boomers who'll require knee replacements in order to remain active?

Typically, hospitals and health systems have data that tells them what is happening inside their system. But, they may not have access to what is happening outside in their market. Without knowing the actual volume of your market's musculoskeletal-related procedures (CPT), as well as diagnoses and utilization of therapy, it will be difficult to plan for growing volume in a fee-for-service world. Further, it will be difficult to plan an integrated musculoskeletal care continuum that's focused on getting the right patients to the right care at the right time.

With claims-based data, you can identify market opportunity down to the zip code level, by not only looking at the size of the market, but also understanding the potential value for specific market segments. What do we mean by "identifying market opportunity"? Let's look at an example of how to use data to identify the market opportunity for individuals with knee symptoms.



First, you need to identify your market area Zip Codes. Using this as a starting point, and looking at commercial and Medicare claims data, you can see the volume of patients with knee-related diagnoses and procedures at the Zip Code and county levels. With this data, you can learn about the types of diagnoses, as well as the volume of procedures and number of therapy visits taking place in your market areas, thereby giving you vital information about the overall demand for services.

In most markets, musculoskeletal care is highly fragmented, so looking at volume data is just the first step. You'll also need to understand where patients are going for care. Data can help you see where individuals are seeking inpatient care, as well as what types of outpatient services are being used and where they are being provided. This is essential for designing an integrative approach to care.

Data can give you a much clearer picture of the competitive landscape for existing services, as well as enable you to identify service gaps in your own program. This type of data is available for virtually every body part – every diagnosis and procedure – related to the musculoskeletal service line.

If you are operating in a fee-for-service world, you can now target knee candidates for treatment and build volume. If you are transitioning to a population health world, you can apply pathways and programs to capture patients before they require costly knee surgery, as well as develop high-value opportunities to help keep the population healthy after surgery. By identifying potential patients and their needs, you can begin to build a data-driven, integrated musculoskeletal system of care.

Take Away: Know What You Previously Were Unable To Know About Your Markets

You can use data to discover demand and unmet need. Whether you are trying to grow volume (fee-for-service), build a care continuum, or develop a true population health model (value-based), data will help inform your decisions and improve both your business and patient outcomes. By using market data, you can understand the demand and current need of the musculoskeletal market, as well as the competitive landscape. Now, the challenge is to determine which services to offer and when to offer them, i.e. “the right services to the right patients at the right time.”

Step Two

Use Data Insights to Guide Patients Through Integrated, Patient-Centric Care

Integrated, patient-centric musculoskeletal care should provide a patient population with seamless, appropriate, and effective care that leads to great outcomes.

This goal, however, has traditionally been difficult to achieve in a highly fragmented market. In addition to market competition, patients entering today's healthcare system must navigate a confusing and unguided path, resulting in more costs, less predictable outcomes and lower patient satisfaction.

Let's look at what happens when “typical” patients with musculoskeletal problems visit their PCPs ...

- + Prescribed medication [90%]
- + Sent to diagnostic imaging [80%]
of these, 40% use “advanced” imaging
- + Referred to a specialist [50%]
- + Referred to physical therapy [10%]

As you can see, for most patients the road to recovery begins with many twists and turns. Now imagine a different scenario: You supply your providers with an easy-to-navigate roadmap that helps them guide their patients to the most appropriate sites of care. Using research developed “best practice” pathways and protocols, in addition to patient demographic and clinical data, you can ...

- + Offer better-coordinated care across the musculoskeletal continuum
- + Provide enhanced patient and physician experiences
- + Enhance the probability of better outcomes
- + Control patient leakage and care costs

After identifying the appropriate patients for your musculoskeletal services, you can bring those patients into your program at the appropriate entry point. For some patients, this may be physical therapy. For others, it may be an arthritis screening. And for some, it may be an appointment with one of your orthopedic surgeons. By using diagnosis-specific care coordination, you can determine the best care pathway for each patient. Let's look at a real-life example...

Surgeons are most efficient and effective when caring for “surgically appropriate” patients. Using a neck and back pathway developed by a team of researchers (including orthopedic surgeons), patients were initially managed by therapists who screened them for the most appropriate care setting. It was found that 91% of patients were returned to function, without needing pharmaceutical prescriptions, imaging or surgery. Using the principles of care coordination, once patients were screened only those only those appropriate for surgery were referred to the surgeon. Consequently, the cost of care dramatically decreased, while surgical efficiency dramatically increased. Importantly, physician satisfaction increased as well. (For one hospital system, surgeon efficiency increased by 900% while cost of care decreased by 20%.) In addition to more efficiency and less costly care, demonstrating functional outcomes puts you in a better position to negotiate with payers and employers to create preferred relationships.



Take Away: Identify the right care pathways to improve business and clinical outcomes

Data can help you ensure that patients are utilizing the musculoskeletal system appropriately, leading to better business and clinical outcomes, as well as increased patient and physician satisfaction. Using market and outcomes data, you can align with primary care providers and work collaboratively to identify the most appropriate patient entry points and practice pathways and protocols. By using the principles of care coordination and these pathways, you can be in a great position to impact the overall patient experience and practice value-based care. Now, you need to manage your patients' experiences for their current and future healthcare needs.

Step Three

Take Patient Engagement to the Next Level

While “a magic solution” that cracks the Patient Engagement puzzle is yet to be discovered, meaningful communication and satisfied patients are critical to your continued success. The key is in knowing how to communicate meaningful information at the right level and the right time.

Patient-specific information that’s geared at education, screenings, follow-up care and prevention must all be part of the plan. Using a combination of care coordinators and enabling technology, outcomes-driven timetables can help guide “what comes next.” Whether it’s an invitation to attend a screening, scheduling an appointment for a yearly evaluation, or delivering patient education materials, using data to inform which of these activities is most appropriate will help you meet your patient engagement goals. By keeping patients engaged in both their health and your organization, they’ll be less likely to “leak” to the competition. And, you will be more likely to achieve your population health goals. Here is an example of how this could work ...

Maria Jones, a 14 year old student athlete, attended an ACL screening at her gym, conducted by her local hospital as part of “April is ACL Awareness Month”. During the screening, physical therapists provided her education about ACL injury prevention and handed her an “ACL report card” with a score of 4, indicating she was a high risk. Her PT explained the grading system to Maria and her parents and scheduled a follow up appointment with an orthopedic surgeon. Additionally, based on her screening and the hospital’s established ACL clinical pathway, the care coordination team scheduled her for physical therapy to begin knee motion restoration and joint stabilization exercises.

In Maria’s case, it was determined that surgery was required. She completed her pre-operative rehab visits and later went on to a successful surgery and outcome. Early intervention contributed to her returning to sports healthy and even stronger than before. Four years later, Maria has had subsequent maintenance screens at her gym. With the help of behavioral analytics, digital marketing automation, and outcomes-driven, tailored messaging, the hospital staff remain actively engaged in Maria’s life, keeping her educated and motivated about preserving the health of her knee and most importantly, providing the right care at the right time.



Using behavioral analytics, the hospital’s custom-tailored messages and timely communications were able to keep “Maria” both engaged in her own care and within its system of providers.

Take Away: Engagement is key to meeting both volume and population health value goals

Patient engagement is an important part of a patient-centric musculoskeletal program. Using data and enabling technologies, like CRM systems, patient-centric musculoskeletal programs can accomplish several important goals: keeping patients within your system, helping you achieve your volume goals for today and population health value goals for tomorrow, and strengthening patient engagement, enhancing both physician and patient satisfaction.

Take the First Step in Learning More About Your Market Opportunity

As the popular expression says: "If you don't know where you're going, any road can take you there." We have demonstrated that developing a roadmap for an integrated musculoskeletal program requires a data-driven strategy and execution that's more than just a "one-size-fits-all" turnkey approach. An effective strategy must take into account your market and your providers. And, most importantly, it should be a strategy that can be measured and proven to work.

We have a 20-year history of partnering with hospitals and physicians to create patient-centric musculoskeletal service lines. We are widely recognized for its market opportunity assessments, its nationally published proprietary protocols and pathways, its leadership in collecting and analyzing functional outcomes measures, as well as its patient and physician Customer Relationship Management technology (CRM) for building referrals and engagement. But we do not just provide data and strategy. We can also help you execute your vision. We are ready to share the data you need to develop your market opportunities.

We offer solutions that produce operational, financial and clinical excellence in musculoskeletal programs. We help patients and hospitals grow stronger, faster, by using the right people, processes and technology to improve efficiency, increase volume, create physician satisfaction, and produce superior clinical outcomes. Our services include Communications (MD Liaison, Care Coordination, Marketing/Community Outreach), Operations (Therapy Management, Research, Recruiting), and Innovation Services (Analytics, IT, Research, Residency Program, and Business Development).

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