

## **NPP Evaluation Case Study: The Spine Center at Dartmouth-Hitchcock**

The **Spine Center** is part of Dartmouth-Hitchcock Medical Center (DHMC), the flagship institution of the Dartmouth-Hitchcock health system (D-H). DHMC is located in Lebanon, New Hampshire. Internationally renowned, nationally ranked, and regionally respected, DHMC integrates high-quality patient care, advanced medical education, and translational research to provide a full spectrum of healthcare services.<sup>26</sup> Opened in 1997, the mission of the Spine Center is to provide patient-centered, comprehensive, coordinated, interdisciplinary care that is cost effective, convenient, and timely for patients with complex spine problems. Intensive rehabilitation, patient education, behavioral medicine strategies, and non-traditional medical therapies are used to enhance a patient's functionality and quality of life. DHMC and the Spine Center benefitted from the work of the National Priorities Partnership (NPP) by using it to enhance processes within its care model related to overuse, safety, patient/family engagement and population health. The NPP benefitted from the work of DHMC by studying and sharing its Shared Decision Making work as an exemplar of practice within the patient and family engagement priority area. This case study focuses on how the Spine Center and related work through DHMC and The Dartmouth Institute, and NPP, contributed to and benefitted from each other's work, particularly in the area of patient and family engagement.

### **Project Story**

The Spine Center was developed at DHMC in collaboration with The Dartmouth Institute (TDI), a preeminent research and educational institution devoted to the ongoing reform of the U.S. healthcare system.<sup>27</sup> As a matter of practice among its leadership, linkages are created between the groundbreaking health services research of TDI and the clinical care at DHMC.

The Spine Center team is committed to the idea of "Back to Work, Back to Play, Back to Life, One Back at a Time."<sup>28</sup> The Spine Center acts as a "one-stop shop" for its patients. Each patient referred to the Spine Center is treated by a multidisciplinary team, including the clinician, nurse practitioner, physical therapist, nurse and social worker (case manager). With the Spine Center's multidisciplinary team and patient-centered approach, the majority of patients who come to the Spine Center benefit from treatment which can be either non-surgical or surgical; only about 10% undergo operative treatment.

D-H, TDI, and Spine Center staff include nationally known leaders making significant contributions to healthcare on a national level. An example would be the concept of the Accountable Care Organizations. The leaders at D-H, TDI, and the Spine Center belong to some of the same professional groups as the two original co-chairs of NPP, and the National Quality Forum's (NQF) CEO. These relationships have provided a conduit for information exchange. Some D-H and TDI leaders have been involved with NQF and/or NPP committees, workshops, and presentations through the years. For example, one of the DHMC leaders is a member of the National Quality Forum's Resource Use Committee, which is focused on establishing measures for health outcomes and productivity.

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<sup>26</sup> Cited from [http://patients.dartmouth-hitchcock.org/our\\_locations/dh\\_lebanon.html](http://patients.dartmouth-hitchcock.org/our_locations/dh_lebanon.html) on June 24, 2011.

<sup>27</sup> Cited from <http://tdi.dartmouth.edu/about/> on June 24, 2011.

<sup>28</sup> Cited from <http://www.dhmc.org/spine/> on June 24, 2011.

The NPP priorities and goals are aligned with principles and values that have long been part of the Spine Center. These were described by one site visit participant as “safe, effective, efficient care at lower cost.” The NPP priorities and goals became one of many sets of tools reviewed by D-H, TDI and Spine Center leadership as a matter of practice in keeping current with the conversations happening in healthcare.

There were particular instances of use of the NPP priorities and goals that enhanced the work of the Spine Center. As well, there was work that the Spine Center contributed to the NPP. As one Spine Center leader said:

*“We all have the same really good ideas, and their [NPP] priorities and objectives are the same [as ours]. With information flowing both ways, this supports both organizations. If it was a one-way street, we’d all be losing. It is refreshing to know everyone can share good ideas. What is palpable is the tension and need for change in healthcare.”*

### Value of NPP and the Framework

NPP is valued by D-H, TDI and Spine Center leaders as providing the start of a roadmap for national change and as a partner in change. By virtue of the diverse NPP Partners coming together and agreeing on the priority areas, a message is sent to healthcare organizations, which are seeing similar messages through other avenues, that there is, as one TDI leader stated, a “consensus that change is coming and it is going in this direction.”

NPP’s priorities have reinforced the value of changes the Spine Center recommends for healthcare. Three different leaders within D-H, TDI and the Spine Center expressed their perceptions of the value of NPP in the following ways:

*“NPP is a beacon. It provides a good, well-rounded, intelligent framework for what good care should do and how care can be... designed and redesigned.”*

*“In clinical research, one of the ways you can validate your research is if it’s consistent with what others have validated. If you test the question and come up with the same answer, it is believable. ... Regardless of which way the information flows, if you actually all believe in the same things, and have the same goals – heading toward those same goals – it is clearly validated. It’s the right thing to do.”*

*“NPP is a beacon. It provides a good, well-rounded, intelligent framework for what good care should do and how care can be... designed and redesigned. It is by a multi-stakeholder group of organizations that we know of, trust and think highly of.... NPP often reinforces the founding principles and values – either explicit or implicit – of the Spine Center.”*

*“NPP makes it [the priority areas] important to everybody. You have to have a roadmap for change. NPP provides a public roadmap that people start to say ‘okay I understand what you are telling me to do. Here is what it is founded on. There are some examples like the Spine Center that seem to be doing this, so I guess we can do this [too]. Get me on the bus; I am ready to go.’”*

## Use of the NPP Framework

The NPP priorities framework contributed to raising awareness of the need for ongoing Spine Center activities in the areas of safety, patient/family engagement, reducing overuse and improving population health. For example, the Spine Center started certain safety initiatives because of the national leadership at both NPP and the Institute for Healthcare Improvement (IHI). One D-H leader explained that this national attention “added important fuel to the fire” in identifying further standards for care (i.e., checklists and algorithms for pathways of care).

While the Spine Center has been a leader in patient engagement, it found when examining this NPP priority that it could do more in terms of facilitating greater patient access. Subsequently, as one D-H leader described, the organization merged “different pieces together” in order to be more fulfilling to the patient. It improved its information technology, resulting in better information access. In addition, the Spine Center is now more deliberate in involving the family in the patient care process than in the past. Through reflection on this NPP priority area, the Spine Center staff also recognized the opportunity to more fully address cultural aspects in their work.

*“[It is] possible to put in place a model that addresses the fundamental problem of increasing the patient’s authority over the decisions they need to make.”*

The Spine Center learned from the different categories of overuse described within this NPP priority area. Subsequently, it took steps to further address the overuse areas related to its own work in antibiotic use, unwarranted diagnostic testing, and unwarranted spine surgery.

The Spine Center learned more about issues related to population health when one of its leaders became a member of the NQF’s Episodes of Care Working Group, which is linked and provides information to NPP. Opportunities for learning were reciprocal; D-H brought to NQF/NPP the Spine Center model of patient-reported measures while NPP brought to D-H thought processes related to how to look at populations. D-H leadership’s NPP-generated insights were carried into the Spine Center’s thought processes regarding moving patient-reported measures even further and expanding this work into a broader national effort.

## A Case of Mutual Sharing

The relationship between NPP and D-H/Spine Center involves the sharing of models or ideas, some of which started at D-H and others of which began in the Spine Center. Because the Spine Center is an exemplar for the practical application of shared decision making tools in its practice of care, it serves as a resource to NPP. NPP is able to point to an organization that is successfully doing this work in practice. More than one D-H and Spine Center leader expressed a view that the Spine Center is an “on-the-

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ground example.” One D-H leader explained that the Spine Center proves that it is “possible to put in place a model that addresses the fundamental problem of increasing the patient’s authority over the decisions they need to make.” The shared decision making tool used by the Spine Center, which comes from DHMC’s Center for Shared Decision Making, includes decision aids developed by the Foundation for Informed Medical Decision Making (FIMDM.) These are highlighted by NPP on its Patient and Family Engagement website page as a supporting resource. These resources have now spread to more organizations than they would have without this dissemination effort of NPP.

### **Precursors Supporting Engagement with the NPP Framework**

The values espoused by NPP are the same as those of the Spine Center. The Spine Center and Dartmouth-Hitchcock had already been making internal changes reflecting their views of what the country as a whole needs in healthcare. Most notable precursors to being ready to incorporate and/or contribute to the NPP priorities are: (1) having progressive leaders who contribute to the field, (2) using a patient-centered care philosophy, (3) having a measurement-orientation, and (4) using national priorities and guidelines within its work.

In terms of progressive leaders, at the Spine Center and D-H, medical partners are renowned leaders in the field. They regularly contribute to the knowledge base of medical practice and health policy through testimony before Congress, published research, and participation in conferences and national and international panels. For decades, through the work of TDI, they have been heavily engaged in issues flagged by NPP as priority areas. This is particularly so for patient-centered care, health measurement, overuse/appropriateness of care, and transparency.

In terms of using a patient-centered care philosophy, the Spine Center champions the movement to more “value-based” medical care. This relates not to financial value but rather to how much relative value a patient puts on health, such as the expected outcomes of a procedure and the patient’s reasons for seeking better health. At the Spine Center, each staff member is empowered to work to the highest level of their licensure. Staff partner across discipline lines to reach the whole patient, in processes that work, as one D-H leader described, “like an orchestra,” where the right staff person is brought in at the right moment.

In terms of having a measurement-orientation, the Spine Center strives to close the quality gap and create systems that work to promote both individual and population health. Data collection helps them do this. The care process includes creating data that are usable to the physician and the patient, and that the care team knows how to use. The Spine Center collects data in real time (electronically) and longitudinally through time, including the patient’s point of view, so the patient’s voice is heard at each visit. This is made possible by including on the team the data management staff who are focused on creating the most transparent possible modes for data presentation.

Regarding using national priorities and guidelines in its work, since the leadership has been heavily engaged for a long time in healthcare improvement, a number of different priority sets, quality models, and guidelines were mentioned as influencing the Spine Center’s work. In addition to the NPP priorities, leadership mentioned:

- The Foundation for Informed Medical Decision Making’s decision aids which are used in the shared decision making activities at Dartmouth-Hitchcock and particularly at the Center for Shared Decision Making at DHMC.
- The Institute for Health Improvement’s Triple Aim
- National Quality Forum and Anthem Blue Cross and Blue Shield’s criteria of excellence related to data fields to include in an electronic medical record
- American Academy of Orthopedic Surgeons, American Pain Society, and American College of Physicians care guidelines

### Exemplars of NPP Priority Use

The following are examples of how the Spine Center demonstrated success with its approach to care over the years that speak to what it takes in terms of organizational culture and processes to implement the NPP priorities to the fullest.

- **NPP Priority: Care Coordination.** As stated earlier, only 10% of Spine Center patients will receive surgical care. This surgery rate is low compared to national rates, according to the Dartmouth Atlas of Health Care. Furthermore, 100% of patients treated in surgical and non-surgical treatments report that they are served well in meeting their needs, values, and expectations. Staff partly attribute these success rates to the use of multi-disciplinary teams where surgeons and non-surgeons work together, as well as to the other patient-centered components integrated into care (e.g., patient education and data-gathering).
- **NPP Priority: Patient/Family Engagement.** All Spine Center patients who are faced with a surgical decision are directed to the Shared Decision Making website; 95% of those patients report the information there is valuable and important to their decision-making. Possibly more important, approximately 25% of Spine Center patients, after reviewing the decision-making information, which includes education about the benefits and risks to surgery, change their minds about the treatment they originally chose. They change both ways: for and against surgery. This supports claims as to the effectiveness and validity of the education and claims that in the end the patient makes a well-informed decision. In addition, some patients view information on the Spine Center’s website before they even enter the office. One staff said that he knows they are successful when a patient comes in and, as he starts explaining different treatment options, the patient says “actually I have already looked at your webpage and that is why I am here.”
- **NPP Priority: Care Coordination.** Surgeons and non-surgeons are working together in a collegial, collaborative and strategic way to deliver quality care for each patient. The fact that they all use the Shared Decision Making process is one indicator of this success in providing patient-centered and coordinated care. The fact that “Spine Call” (the trauma service) is a shared responsibility on a rotated basis between the orthopedics and surgical departments was held up by respondents as an indicator of how well staff/departments are collaborating.

## Room for Improvement

There were no barriers to the enhancements made to date in the Spine Center's services that stemmed from the work of NPP. According to staff, the greatest room for improvement within the Spine Center's work relates to incorporating more family engagement and addressing cultural issues.

Comments were made about barriers that other organizations may experience in their uptake of NPP's priorities and goals, based on lessons learned and personal knowledge of how organizations operate. These barriers include:

- Organizational culture/philosophy: Other organizations may need to change the philosophy in their local (department) or global (organizational) cultures. The Spine Center has a culture of using multi-disciplinary teams, patient-reported outcomes, shared decision-making, and data-driven decision-making to support what they are doing. A number of organizations come to the Spine Center from across the globe each year to learn about how they operate, and the area of philosophy and culture is a primary focus of such exchanges.
- Measurement systems: Measures do not exist in all areas needed for accountability and for informing practice. In addition to the need for more and better measures, organizations cannot just "do NPP" – they need data collection and analysis systems in place so data may be used with the patients and staff. To get there, an organization needs leadership, staff who work together across disciplines, and a good teacher on how to use the data; without these, high quality healthcare will not happen. The Spine Center's use of technology and data to educate their patients, as well as their data collection infrastructure to collect data longitudinally, are exemplars of how patients can be educated and kept informed and how to collect and report patient outcomes over time.
- Funding to support outcomes measurement: There is nothing easy, free or cheap about measuring outcomes. Yet long-term patient follow-up data that represent an organization's treatment results are essential. Some organizations measure outcomes at one point in time. The challenge is knowing the patient's status at various points in time after their treatment has ended. Many organizations have difficulty approving investments (including care providers' time) that are necessary to measure patient outcomes especially over the long term.
- Transparency: In the Spine Center, outcomes are publically posted and they inform clinical practice. According to staff, this is unique since most healthcare facilities do not know what their treatment results are since they are not collecting longitudinal data.
- Misaligned incentives/addressing the whole patient/payment systems: Financial incentives are misaligned because in most cases payment is made for services rendered and not for outcomes achieved. For example, at the Spine Center, the difficulty in the current payment system is that no one wants to pay for mental healthcare for those who need it. For spine patients, about 30% have mental illness as a co-morbid condition. The Spine Center does measure mental illness and provides mental health services through a full-time Social Worker on staff. Most other similar centers, staff report, do not measure mental health, nor do they have the ability to address mental illness through staffing.

For change to occur in this country, the debate needs to shift from processes and priorities toward values-based payment (i.e., person-centered, safe, effective). The Spine Center provides a viable example of how to focus on doing what's right.

## Summary of Key Findings

**Key findings from this case study** are that:

- The Spine Center is a medical practice setting where many of the priorities and drivers have been put into action; some since the start of the center in 1997. Even so, there are tweaks that the Spine Center has made and will make through the work of NPP.
- The pre-existing relationships of D-H and TDI leadership with NQF and NPP promoted awareness of the NPP priorities and goals.
- Many of the founding principles and values of the Spine Center are reflected in the NPP priority areas. This enhanced the Spine Center's readiness to adopt new approaches within NPP's work.
- D-H and the Spine Center benefited from the work of the NPP by using it to address certain safety, overuse, patient/family engagement and population health processes within its care model.
- NPP benefited from its relationship with the Spine Center through sharing of leadership and ideas, and by gaining exemplars of on-the-ground implementation of priorities and priority-related tools. The Shared Decision Making Tool is one transferable aspect of their work aligned with the NPP priority of patient and family engagement. NPP references this tool as a resource on its website.
- In order to make the NPP priorities and goals happen, organizations need: leadership that understands the importance of collecting data from patients, resources in place to collect the right data and collecting it longitudinally, an easy information system for patients to use, an easy to use analysis reporting structure, the right staff who can communicate and teach others how to use the data, and all team members using the data.

**Issues that merit further consideration** include:

- Measurement issues were raised as a barrier to the uptake of NPP. Measures are needed to hold people accountable, and creating measures that do so is vital to the uptake of NPP priorities.
- There is a fundamental conflict in the current payment system, which works against the elimination of waste and patient/family engagement priorities because it focuses on reimbursing for services rendered. The challenge is to shift the system away from this model and toward one that favors values-based payments.

*This case study was conducted for the national evaluation of the National Priorities Partnership on June 22<sup>nd</sup> and 23<sup>rd</sup>, 2011 by:*

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