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Healthcare Consolidation Does Not Mean the Death of Innovation

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Abstract

What is the message?

A strong focus on a single unified management system across institutions can mitigate potential barriers to innovation brought about through consolidation. Virginia Mason is an example of how a unified lean management system supports innovation in the face of institutional growth and consolidation.

What is the evidence:

The literature is limited, and conflicted, on the potential effects of consolidation on innovation in healthcare. The Virginia Mason experience provides a model for the preservation and support of innovation in the face of such consolidation.

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Introduction

Healthcare is undergoing rapid consolidation in the United States, at a pace that has doubled between 2011 and 2015.[1] Large provider groups are fighting for market share and leverage, while smaller providers are struggling to compete. Insurance companies and pharmaceutical benefit management firms are also undergoing similar consolidation. Further, it is becoming apparent that overall, this consolidation has had no measurable impact on improving healthcare quality or access, while contributing to rising prices. [2-3]

As reported in the 2001 Institute of Medicine landmark reports "Crossing the quality chasm: A new health system for the 21st Century," finding ways to improve quality while gaining greater cost and price effectiveness will require innovative ways of organizing, delivering, and paying for healthcare.[4] Indeed, it is in the delivery of healthcare – whether existing goods or new practices – that innovation is most needed. This ranges from basic practices, tools, and standard work to address the challenges of a particular quality or care problem, to sophisticated management systems that support safe care practices, and to larger scale healthcare delivery and payment models.

However, healthcare is a decidedly traditional, highly regulated, and risk-averse environment that holds strong challenges for innovation. A key question is how the ongoing consolidation might affect incentives and ability to innovate – whether the consolidation will exacerbate existing rigidities or, instead, create platforms for experimentation.

Innovation and Institutional Size

The management literature offers mixed predictions about how institutional size affects innovation. The traditional Schumpeterian hypothesis suggests that the larger size of institutions offers potential benefits from higher volume and the ability to maintain gains from innovation due to greater market power.[5, 6, 7] Conversely, some scholars have argued that the bureaucracy that comes with size deters innovation, with transformative change driven by small

organizations with the ability to change rapidly.[5, 7, 8]

Healthcare innovation may be particularly challenging in the face of consolidation. The presence of differing management approaches, silos, sub-cultures and internal constituencies can serve as major barriers to both the development and spread of innovation.[7] When institutions with differing management/improvement models consolidate, there is risk that the union will occur only at the higher levels, leaving innovation blocking fiefdoms in place.

Corporate bureaucracy also plays a role in blocking or supporting innovation. Large companies with a history of market domination and financial success may develop a culture of arrogance that is wedded to the status quo, and fears failure more than desiring future success. In the highly traditional healthcare world, consolidation has become a method to control market share and enable negotiation with similarly consolidated payers and providers.[1-2] Innovation toward higher quality and lower cost often has not been prioritized.

Yet, despite these challenges, there are real opportunities for large health systems to be innovative leaders in healthcare delivery. As we describe next, Virginia Mason Health System in Seattle, Washington, is a striking example.

Innovation at Virginia Mason: The VMPS

Established in 1920 as an 80-bed hospital with six physician offices, Virginia Mason now encompasses two hospitals with more than 550 beds, more than 450 physicians, a network of clinics, and a broad base of complementary services. At Virginia Mason, innovation has been critical to our work to achieve the strategic vision of being a quality leader and transforming healthcare. Starting in 2002, Virginia Mason has been a pioneer in adapting the lean Toyota Production System to healthcare. Widespread skepticism initially, including negative headlines in the local newspaper, has now given way to broadening acceptance of “lean” across U.S. healthcare. Recent surveys suggest that nearly 40% of US hospitals now have experience with some form of lean.[11]

Implementation of Lean: Implementation of lean at Virginia Mason was not a single event, but required incremental change over years and even decades. This change was not simply in the

implementation of a static system, but rather constant innovation to adapt the Toyota approach, highly successful in manufacturing, into the Virginia Mason Production System (VMPS) designed for the more human- and service-focused healthcare setting.[12]

The VMPS innovation was neither haphazard nor passive, but rather intentional and supported. Further, the VMPS is not simply a toolkit to be used for quality improvement activities, but rather, a cohesive management system.[13] Lean as an improvement tool kit only will neither sustain nor spread; it is only as part of a unified management system with dedicated leadership that sustained overall transformation can occur.

Daily management is at the center of the VMPS, providing a common language and approach to management. The management system includes uniform approaches for daily accountability, problem solving, and process monitoring. Managers can and do move between highly diverse clinical and administrative units relatively seamlessly. Transparency and consistency in report-outs to higher level management and the overall institution enhances broad understanding and builds a unified institutional culture.

Having the management system in place is also critical to support the various multi-day formal lean improvement events as well as to provide the mechanism to translate event-related improvements into daily work. The improvement events themselves are based on assembling cross-functional teams with representatives from all involved areas. This serves to enhance understanding and communication among diverse work units.

Leadership in the VMPS model is not authoritative, top-down, but rather based on engagement and respect for workers throughout the system. The management system also supports scalability as it is fundamentally the VMPS system of daily management which provides the milieu for use of the lean tool kit. Size only becomes a barrier to this implementation when there is insufficient overall leadership and vision to adopt the common management approach.

***Support for innovation*:** Intrinsic to the VMPS is support for innovation at all levels. At Virginia Mason, we define innovation as “directed creativity implemented.”[14] Each word of this definition is important.

- "**Directed**" implies that this is not a random process but rather arises to address some discrete problem or need.
- "**Creativity**" implies harnessing the new ideas of team members without constraints from mental valleys and institutional culture.
- "**Implemented**" indicates that innovation is only successful when it is applied directly and promotes change across the institution.

Each of these terms also speaks to the need for the institutional structure to support innovation. Directed creativity implies that there is a system for identifying problems and assembling appropriate teams to develop novel solutions. Functionally, this takes the form of creativity exercises within lean formal quality improvement events such as rapid process improvement workshops. We also have an innovation leadership team with board level representation to sponsor innovation in institutional strategic planning operations. Implementation requires the management system to translate and correlate the work of quality improvement teams with actual change in daily work.

For us, the VMPS bridges the development and implementation of new healthcare delivery interventions. Even within the management system itself, innovation is encouraged. Our institutional kaizen promotion office has yearly goals around aspects of the VMPS to be improved, and the Center for Health Care Improvement Science performs ongoing internal research into the success and failures of VMPS, helping to inform further management system innovation.

As one of the founders of Toyota's management system, Taiichi Ohno, is commonly quoted as stating, "Without standards, there can be no improvement."[15] We would argue that similarly, without a consistent management method, there can be no innovation in healthcare delivery. It is this standard management system that enables us to direct, recognize, support, and spread innovation at the project as well as at the management level.

VMPS supported innovation has contributed to improved quality across the institution, with over 500 multi-day quality improvement events per year. As examples, targeted patient safety innovations have resulted in medication administration errors decreasing by over 70%,[16] and patient falls related to delirium by over 40%,[17] with medical liability insurance premiums

consequently cut in half. In addition, innovative clinical care pathways have contributed to a 33% decrease in mortality from sepsis,[18] shorter length of stay for targeted surgical patients in orthopedics[19] and neurosurgery,[20] and decreases in unnecessary imaging studies.[21]

Consolidation and Innovation at Virginia Mason

At Virginia Mason, as at other institutions, we have been going through a period of growth and expansion over the past several years, acquiring physician practices and a hospital in our region, along with implementing key strategic partnerships. Recognizing the value of innovation, and the potential threat to innovation that consolidation holds, we have been deliberate in recognizing and supporting innovation throughout out delivery system.

At Virginia Mason, consolidation is always predicated on working toward full implementation of VMPS at all sites. The unified management model then provides a standardized structural foundation for management, improvement and innovation. This commonality enhances the pace and penetration of change. We argue that this focus on the management method helps us avoid the challenges other institutions may face regarding size-limiting innovation.

The commonality of the VMPS helps to break down silos, formalizes and supports innovation, and enables spread. By extension, the challenge is not that consolidation inhibits innovation but rather that lack of a uniform management model limits innovation, and consolidation often leads to disparate models under the same overall institutional umbrella and governance.

As an example, Yakima Valley Memorial Hospital formally merged into the Virginia Mason Health System in 2016. Consolidation of the institutions has focused on rapid adoption of the VMPS at Memorial, with development of local expertise in both the lean toolkit and the management approach.

Innovation is fostered at both sites through the lean process improvement work, with spread enhanced by the common approach and language. Individuals from both institutions seamlessly participate in quality improvement events at the other sites. Though Memorial maintains its local connection to the community, its management approach mirrors that at the other sites. In addition, the enthusiasm of staff and management has helped deploy the management system more broadly.

Conclusion

In summary, the current rapid consolidation in healthcare has the potential to stifle critical innovation work. However, institutional size, and consolidation need not inhibit innovation if there is unification and alignment in a critically important management system. At Virginia Mason, we focus on spread and standardization, and deployment of our management model across sites to insure continued support of innovation.

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