Institute *for* Healthcare Improvement

# Building Improvement Capacity and Capability

*A "dosing" approach guides and targets organizationwide learning.*

The journey toward excellence for any healthcare organization is not a singular event but an ongoing course of learning and change. While many hospitals and health systems have willingly embarked on this journey, often, their leaders have not fully developed the foundations necessary for achieving progress: (1) building capacity and capability for improvement and (2) establishing the structures, processes and cultures required to make quality the organization's operating objective. Without these fundamental elements, improvement efforts are unlikely to be effective over the long run.

**Building Improvement Capacity and Capability**

Capacity and capability are not synonymous. As distinctive concepts, they require different strategies to make them operational.

Building capacity refers to the following characteristics:

- The ability to receive, hold or absorb content and new information and knowledge
- The maximum or optimum amount of production or output that can be delivered
- A measure of volume: the maximum amount of new knowledge that can be held
- The power, ability or potential of performing an activity

*The interesting notion about both improvement capacity and capability is that everyone in the organization does not need to know or be able to do the same things in order to contribute to improvement initiatives.*

Building capacity entails providing healthcare staff with the knowledge, methods and skills associated with the science of improvement they will need to make improvements in their work. This is an initial step in creating the *potential* for an organization to improve. By itself, however, the building of capacity offers no guarantee that the organization will produce excellent results over time. This is where building capability comes in—leveraging the knowledge and skills to maximize the potential for effective improvement.

Building capability refers to:

- The power or ability to generate an outcome or results
- The ability to execute a specified course of action
- Knowledge, skill or ability associated with desirable performance on a job (e.g., problem solving, analytical thinking, leadership)
- Motivation, beliefs and values about work and the individual's role in the organization

Capability, like capacity, does not just happen. Organizations need to create the conditions and support required to produce results (improvements)—that is, providing staff with (1) dedicated time to apply their new knowledge and skills, (2) access to structures and processes that support quality and safety improvement initiatives and (3) a learning organization that values continuous learning and improvement, and ongoing development and growth.

**The Dosing Approach: Who Needs to Know What?**

The interesting notion about both improvement capacity and capability is that everyone in the organization does not need to know or be able to do the same things in order to contribute to improvement initiatives. A "dosing" approach, derived from the same principles used to establish the appropriate dose of a medication for treating the ailment of an individual, can better guide and target the necessary learning.

For instance, how much of a dose of knowledge about science of improvement do board members need? What about senior leaders? Middle managers and supervisors? Staff delivering care at the bedside? And what about those who are designated as quality improvement experts in the organization?

The specific doses of science of improvement for each group are not determined by a strict mathematical formula. Instead, individuals are assessed in terms of their current knowledge of science of improvement concepts, methods and tools, and their demonstrated ability to improve a process or problem and produce the desired improvement results. Such analyses enable an organization to develop a dosing strategy specific to its context, goals, assets and needs. A dosing approach typically includes the following steps:

- Assess where the organization is in its quality journey (e.g., just beginning, evolving, mature) and where it wants to be in the next one, three and five years.
- Determine the level of commitment that the board and senior leaders have for making quality the organization's business strategy.
- Identify the total number of individuals in the organization who need to be "dosed" with improvement knowledge and skills, and then stratify this total into appropriate categories by role (e.g., board member, senior leader, clinician, allied health professional, support staff member).
- Establish estimates of current science of improvement knowledge and skills that these individuals have by applying various QI assessment tools.

The chart below provides an example of applying the science of improvement

## Dosing the Science of Improvement to Select Groups in an Organization

| Science of Improvement Topic | Board | Sr. Mgmt. | Sr. Clinicians | Nurse Mgrs. | Admin Mgrs. | QI Team Ldrs. | QI Experts |
|---|---|---|---|---|---|---|---|
| History of QI | | | | | | | |
| Profound Knowledge | | | | | | | |
| Quality as a Business Strategy | | | | | | | |
| Model for Improvement | | | | | | | |
| PDSA Testing | | | | | | | |
| Understanding Variation | | | | | | | |
| Scale-up and Spread | | | | | | | |
| Construction of Control Charts | | | | | | | |

Note that the intensity of the color reflects the "dose" of the science of improvement knowledge and skills that would be administered to each respective group. The mechanisms for administering the allocated dose would range from the IHI Open School to the Improvement Advisor Professional Development Program.

LEGEND
Minimal Dose
Moderate Dose
Maximum Dose

*Source:* Quality Healthcare: A Guide to Developing and Using Indicators *(Jones and Bartlett Learning, 2nd edition, 2017)*

dosing approach to groups organized by roles. The column headings identify the relevant groups of individuals in the organization who require varying doses of science of improvement knowledge and skills. The rows indicate select science of improvement content areas, and the shading within the rows indicates the dose (minimal, moderate or maximum) of content required by each group. For example, in the last row, labeled "Construction of Control Charts," the board, senior leaders and senior clinicians all receive a minimal dose of knowledge related to the selection and construction of control charts; nurse managers and administrative managers need a moderate dose on control chart theory and construction; and QI team leaders and QI experts need a more intense dose of control chart construction knowledge.

The actual science of improvement doses vary depending on several organizational characteristics, including:

- The size of the organization and the number of individuals within each group
- The mix of services provided across the organization
- The geographic region covered by the organization
- Existing QI knowledge and experience
- The resources (e.g., time, money, existing staff training programs) available and committed to learning and employee development
- The level of commitment to QI by the board and senior leaders to make quality the organization's strategic focus

*The dosing approach establishes and deploys targeted levels of science of improvement knowledge and skills throughout an organization to build improvement capacity and capability and to produce results that matter to the patients being served.*

Once the desired science of improvement dose for each group has been determined, the next step is to devise a method for deploying the dosing of knowledge to the individuals in each group. Science of improvement dosing might include establishing internal training for the various science of improvement content areas for each group, either led by internal QI experts or externally resourced, over a defined period. For example, 200 senior clinicians will receive their dose of science of improvement training over the next two years, using internal QI experts to provide this training and ongoing support. The methods for deploying science of improvement dosing might vary by group, the content being dosed, existing knowledge and skills, and preferred learning styles of individuals in a particular group.

With these conditions in mind, the dosing approach will look different for every organization.

**Conclusion**

The dosing approach establishes and deploys targeted levels of science of improvement knowledge and skills throughout an organization to build improvement capacity and capability and to produce results that matter to the patients being served. The dosing approach articulates a progression of learning about QI that begins by building general awareness throughout the organization and culminates with support for a core group of individuals who develop deep expertise aimed at supporting all improvement efforts.

The key point of the dosing approach is that not everyone in the organization needs to have the same depth of knowledge about science of improvement concepts, methods and tools. With this understanding established, leaders need to create sustainable infrastructure that makes quality an organizational priority and the accepted approach to daily work. The organization's strategic aims, its leadership approach and behaviors, and its processes (clinical and operational, as well as human resources and finance) all need to be focused and aligned if the dosing approach is to be effective. ▲

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