Barriers to System Quality Improvement in Health Care

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Process improvement in any industry sector aims to increase the efficiency of resource utilization and delivery methods (cost) and the quality of the product (outcomes), with the goal of ultimately achieving continuous development.[1] In the health care industry, variation in processes and outcomes along with inefficiency in resource use that result in changes in value (the product of outcomes/costs) are the general targets of quality improvement (QI) efforts employing various implementation methodologies.[2] When the ultimate aim is to serve the patient (customer), best clinical practice includes both maintaining high quality (individual care delivery) and controlling costs (efficient care system delivery), leading to optimal delivery (value-based care). High-quality individual care and efficient care delivery are not competing concepts, but when working to improve both health care outcomes and cost, traditional and nontraditional barriers to system QI often arise.[3]

The possible scenarios after a QI intervention include backsliding (regression to the mean over time), steady-state (minimal fixed improvement that could sustain), and continuous improvement (tangible enhancement after completing the intervention with legacy effect).[4] The scalability of results can be considered during the process measurement and the intervention design phases of all QI projects; however, the complex nature of barriers in the health care environment during each level of implementation should be accounted for to prevent failure in the scalability phase.[5]

The barriers to optimal QI outcomes leading to continuous improvement are multifactorial and are related to intrinsic and extrinsic factors.[6] These factors include 3 fundamental levels: (1) individual level inertia/beliefs, prior personal knowledge, and team-related factors[7,8]; (2) intervention-related and process-specific barriers and clinical practice obstacles; and (3) organizational level challenges and macro-level and population-level barriers (**Figure**). The obstacles faced during the implementation phase will likely include 2 of these levels simultaneously, which could add complexity and hinder or prevent the implementation of a tangible successful QI process and eventually lead to backsliding or minimal fixed improvement rather than continuous improvement. Furthermore, a patient-centered approach to QI would contribute to further complexity in design and execution, given the importance of reaching sustainable, meaningful improvement by adding elements of patient's preferences, caregiver engagement, and the shared decision-making processes.[9]

Overcoming these multidomain barriers and reaching resilience and sustainability requires thoughtful planning and execution through a multifaceted approach.[10] A meaningful start could include addressing the clinical inertia for the individual and the team by promoting open innovation and allowing outside institutional collaborations and ideas through networks.[11] On the individual level, encouraging participation and motivating health care workers in QI to reach a multidisciplinary operation approach will lead to harmony in collaboration. Concurrently, the organization should support the QI capability and scalability by

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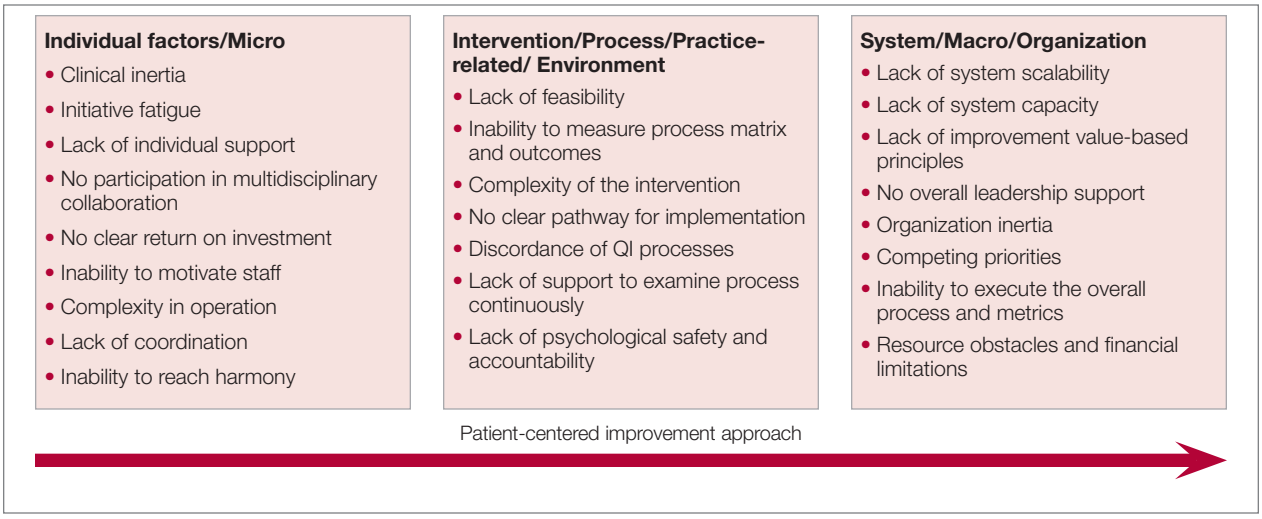

Figure. Barriers to progress in quality improvement.

removing competing priorities and establishing effective leadership that ensures resource allocation, communicates clear value-based principles, and engenders a psychological safety environment.

A continuous improvement state is the optimal QI target, a target that can be attained by removing obstacles and paving a clear pathway to implementation. Focusing on the 3 levels of barriers will position the organization for meaningful and successful QI phases to achieve continuous improvement.

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