Understanding the Conceptual Elements of Continuous Quality Improvement

The Office of Program, Research, and Evaluation (OPRE) LEADS study conducted a multidisciplinary review of the literature on the processes, facilitators, and impediments to data use for continuous quality improvement (Derrick-Mills et al. 2014). The key principles that emerged helped to identify the elements that facilitate or impede the process of data use for continuous quality: *leadership, commitment of resources, analytic capacity, professional development, a culture of collaborative inquiry, a cycle of continuous quality improvement, organizational characteristics, and the environment*. The Head Start National Center on Program Management and Fiscal Operations has created **The Continuous Quality Improvement Conceptual Elements graphic** to help program leadership identify and work toward the creation of a culture of continuous quality improvement. The Conceptual Elements graphic also incorporates the requirement for Head Start grantees to establish procedures on data management.

IMPLEMENTATION OF THE CONCEPTUAL ELEMENTS

1. Leaders must be strong, committed, inclusive, and participatory.

The most important element identified was strong leadership. Specifically, leaders must be transformational, change agents, able to communicate expectations around data use, motivate innovation and creativity, and willing and able to distribute responsibilities. Leaders must act as role models and communicate clear expectations around data use. Strong leadership ensures the organization has the required resources, analytic capacity and professional development to use data. The absence of any of these elements is likely to reduce an organization's ability to continuously and successfully use data for continuous quality improvement.

2. Leaders must prioritize and commit time and resources to the data-use effort.

Leaders must not only possess certain characteristics but also demonstrate their commitment to data use for continuous quality improvement by

- channeling resources to support and sustain technology
- devoting their time to these efforts
- allocating staff time to support data collection, analysis, and use

3. Leaders invest in professional development.

Leaders also must invest in professional development for staff to facilitate their capacity to:

- Analyze and understand the meaning of the data
- Understand the data systems in which the data is stored
- Integrate new knowledge to effectively use the information

4. Analytic capacity is necessary and should not be assumed.

Analytic capacity includes the appropriate data, appropriate technology, and staff capacity.

- Appropriate data include quality observations, information, and numbers that may be sorted and aggregated to provide meaningful insights.
- Appropriate technology supports efficient data collection, secure data storage, data sorting and aggregating, and appropriate data analyses.
- Human capacity refers to the extent to which the staff understand (1) what appropriate data are, (2) how to analyze and make meaning from the data, and (3) how to use that information to improve the quality of their work.

5. An organizational culture of learning facilitates continuous data use.

Leadership must foster and support a culture conducive to collaborative inquiry where staff learn together in an environment that fosters joint problem solving, creativity and innovation. A learning culture is evidenced by a safe space where staff can openly discuss whatever the data might reveal about program operations and outcomes—good or bad—without fear of reprisal. Learning cultures also create opportunities for shared learning where staff can discuss data together to determine what the data mean and what to do about it. Learning cultures work to involve both staff and stakeholders, typically clients, in making sense of the data and determining where to focus improvement efforts.

6. The environment matters. It, too, is complex and dynamic.

The processes and foundational factors occur within an organization but are influenced by the surrounding context, which includes both organizational characteristics and an organization's environment. An organization's environmental characteristics refer to all of the factors that influence it, such as governmental mandates and regulations at the federal, state, and local levels; licensing, accreditation, and professional systems; nongovernmental funders (such as Foundations); and time (the continual changing of the regulations, expectations, and other elements of the environment to which the organization must respond). It is important for organizations to recognize and plan for the environmental conditions that can help or hinder their ability to use data.

7. Organizational characteristics influence processes and systems.

Organizational characteristics include size; governance structure; the types of programs the organization operates; and history, including the history of related data, planning, and continuous improvement efforts. The size of the organization and the history of quality improvement efforts are two of the main characteristics affecting efforts to implement or sustain data use for continuous improvement. The literature suggests that the history of previous data-use efforts can have either positive or negative effects on current data use efforts.

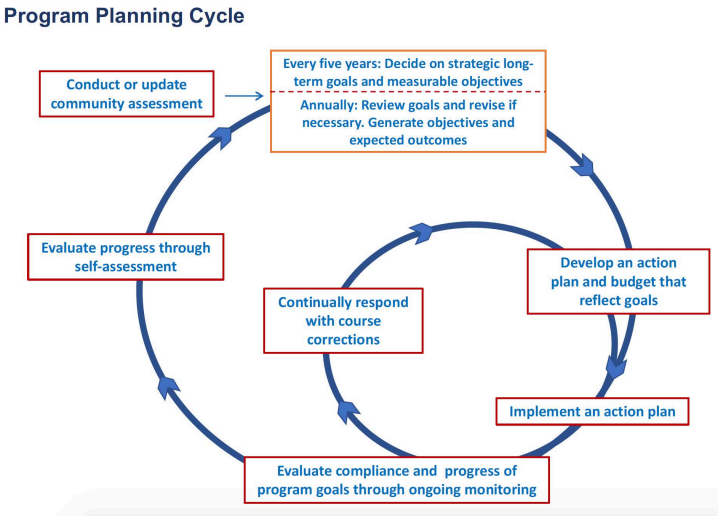
8. Implement sound data management procedures.

In accordance with the HSPPS 1302.101 (b) (4) programs must have data management procedures to effectively support the availability, usability, integrity, and security of data. A program must establish procedures on data management, and have them approved by the governing body and Policy Council, in areas such as quality of data and effective use and sharing of data, while protecting the privacy of child records. (See PMFO resource Guidance for Management of Program Data.)

DATA USE FOR QUALITY IMPROVEMENT IS A CONTINUOUS PROCESS

Effective data use to improve quality involves a continuous, cyclical process of goal-setting, data collection, data examination, and data-informed action. Reflecting on organizational and program goals, data users identify key data elements and the questions they want to address. They collaboratively analyze the data and interpret the findings. Through the expertise and experience of data users, the information becomes knowledge. That knowledge tells users how the program is performing. It identifies areas of strength, enabling the program to replicate these strategies and identifies areas of the program that need improvement. Areas needing improvement are prioritized to create a concrete action. During implementation, observations and data are fed back into the continuous improvement loop so progress toward goals and performance objectives can be monitored. Progress and quality are evaluated against internal goals or external benchmarks. The end of every cycle is the beginning of a new cycle.

The Head Start Program Planning Cycle (depicted below) demonstrates an on-going cycle of planning, implementation and evaluation in Head Start, driven by data that promotes continuous quality improvement and allows programs to work toward the achievement of positive outcomes for children and families. Understanding the conceptual elements that support continuous quality improvement can help programs work toward quality outcomes for children and families.



Source:Derrick-Mills, Teresa,Heather Sandstrom, SarahPettijohn, Saunji Fyffee, and Jeremy Koulish. (2014). Data Use for Continuous Quality Improvement: What the Head Start Field Can Learn from Other Disciplines, A Literature Review and Conceptual Framework. OPRE Report # 2014-77. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families. U.S. Department of Health and Human Services