A Public Health Performance Excellence Improvement Strategy: Diffusion and Adoption of the Baldrige Framework Within Tennessee Department of Health

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ABSTRACT

In 2011, Tennessee was faced with poor state health rankings with newly elected officials promoting customer-focused government. To refocus, the Tennessee Department of Health chose a multiyear plan to adopt, diffuse, and integrate the Malcolm Baldrige Performance Excellence framework. Senior leaders changed the organizational culture using participatory strategic planning coupled with introduction of performance improvement initially led by departmental staff who volunteered for training by the state Baldrige affiliate. New tools and processes were diffused across the department’s central and regional offices and county health departments. Departmental units documented performance improvement through hundreds of internal projects and more than 100 innovation-driven Baldrige achievement awards. Over time, performance improvement approaches were integrated into existing departmental programs and new initiatives, leading to additional successful process changes and population health improvements. The department’s approach included multiple steps: adopt Baldrige Performance Excellence as a means to promote culture change with a goal of improved organizational and population health performance; use the visual Baldrige framework and its categories to underscore inclusiveness, comprehensiveness, and synergies of desired change; choose, invest in, and implement multiple evidence-based management strategies to support culture change toward improvement; and continuously evaluate outcomes, linked to required reports to suppliers (governor and legislators) and customers (public, patients, and partners). The Baldrige Performance Excellence framework was found to be an effective approach to promote culture change through emphasizing improvement in a public health organization.

KEYWORDS: Baldrige Performance Excellence, evidence-based management strategies, public health performance improvement

Initiating organizational change within state government charged with promoting efficiency and effectiveness is a challenge faced by many public health department administrations. Finding new, while protecting existing, state resources in this highly competitive environment is contingent on communicating mission, issues, and approaches unique to public health, all weighed within the context of many competing state priorities. Choosing a framework to guide change using tools trusted by elected leaders is critical. The choice is strategic—either to target specific departmental units, services, and issues, or to adopt a more systemic, integrated approach. Being seen as part of a statewide team using recognized improvement approaches is important rather than pursuing separate, isolated improvements.

Multiple reports from public health departments describe frameworks focused on quality assurance and quality improvement (QI), statewide quality centers and training programs,1,2 domains of a QI culture,3 and accreditation as drivers for the adoption of a quality culture.4 In addition, literature reports on use of specific QI tools in public health, including Lean and Kaizen events, are also effective drivers.5

Another approach, the Baldrige Performance Excellence Program,6 has multisector recognition and places improvement tools into a broader scope of organizational improvement malleable for any work...
system. The Tennessee Department of Health (TDH) chose this approach for multiple reasons. The Baldrige framework is displayed in an understandable graphic with 7 interconnected categories easily adapted to public health (see Figure 1). The framework was seen as scalable across the organization’s diverse central and regional offices and local county health departments. The Baldrige philosophy represents a performance improvement (PI)-based method rather than a compliance-based method to promote culture change. This approach focused more on voluntary learning, improvement, and outcomes and less on a more prescriptive, compliance-based management approaches. The goal was to encourage discretionary effort by local and statewide public health units to proactively identify and act on opportunities leading to operational and meaningful population well-being and health improvements. For more than 7 years, employees became increasingly engaged with the Baldrige framework as in a comprehensive organizational improvement approach. The department diffused the use of PI tools coupled with implementation of multiple complementary evidence-based management strategies.

This description and findings from the Tennessee experience add to the limited literature that describes use of the Baldrige framework by public health agencies, documenting the department’s 7-year Baldrige journey through a systematic, 3-phase process of adoption, diffusion, and integration that led to desired culture change and a collective public health performance excellence learning laboratory.

The TDH Institutional Review Board determined that this study did not meet the definition of human subject research.

**Methods**

The TDH used a 3-step process to implement organization-wide performance excellence. The Baldrige Performance Excellence framework (Figure 1) was introduced during the adoption phase in 2012. The framework’s emphasis on customers and suppliers aligned well with the new governor’s customer-focused government initiative. Performance improvement training was offered to employees who volunteered to become Baldrige examiners through a robust alliance with the Tennessee Center for Performance Excellence (TNCPE). During the diffusion phase that began in 2013, the trained staff responded to requests from the TDH programming and support units and local health departments (LHDs) to observe existing processes, lead tests of small changes, and identify results and benefits based on needs identified at the unit level. Units shared learning from PI efforts statewide through a dedicated SharePoint Web site. Senior leaders led by example, supporting PI processes and summarizing results for the total public health department enterprise using the Baldrige framework to consensually develop applications through the 4-stepped TNCPE award process from 2012 to 2018: (level 1 [interest award] in 2012, level 2 [commitment award] in 2014, level 3 [achievement award] in 2016, and level 4 [excellence award] application in 2018).

The 7 Baldrige categories were used as a method to frame improvements in existing, and to develop new, statewide public health initiatives since 2013. Examples are provided in Supplemental Digital Content 1, available at http://links.lww.com/JPHMP/A546.

Data regarding diffusion, adoption, and integration were collected regularly. Adoption was tracked through records of training conducted by the office of performance management (OPM) as well as subsequent unit participation in the internal rapid improvement events challenge and completion of the external Baldrige Performance Excellence awards applications. Integration of PI principles into larger TDH programs and change efforts was documented in program process reports. Longitudinal change in employee satisfaction was measured through participation in national surveys. Departmental and supplier’s satisfaction was measured by changes in financial sustainability through changes in departmental budget investments. Finally, examples of external recognitions of PI efforts and outcomes were collected over time.

**Results**

Results include 5 findings: internal adoption and diffusion of PI skills across the TDH units; integration
of the Baldrige framework into major public health improvement efforts; department staff satisfaction with management approaches; evidences of financial sustainability; and external recognition of performance excellence results.

**Internal adoption and diffusion of PI skills across the TDH units**

The TDH focused on retooling a workforce to promote innovation. The Baldrige Advisory Group organized by OPM and consisting of an increasing number of the TDH staff trained as Baldrige examiners became a catalyst for innovation through assistance provided to units. A rapid improvement events challenge was begun in 2015 to recognize use of PI tools in 3 categories: reduced service cycle time, reduced space allocation (carbon footprint), and dollars saved. Challenge projects focused on unit work process efficiencies (work smarter not harder, beyond meeting production quotas) and customer convenience. The LHDs submitted descriptions of use of Lean and Plan-Do-Check-Act (PDCA) cycles of learning tools and other PI events. Steady and dramatic growth of submissions to the rapid improvement events challenge (Figure 2) documents discretionary local initiative demonstrating the employee empowerment crucial for culture change emphasizing performance excellence. The QI division shifted from a focus on county health department operations to become a total organization-wide resource under the chief medical officer. Traditional work and support processes were revised including electronic health record implementation with clinical quality assurance reporting that resulted in greater unit-level efficiency and sharing population health data with key customers. Staff training strategically blended information technology and operations teams to create iterative cycles of learning and Lean projects to support large projects. These teams supported design and rollout of several large-scale information technology projects including new electronic licensure renewal system for Tennessee’s 275,000 health professionals, new statewide electronic vital records system, and deployment of a new electronic health record at LHDs that had public health content.

**Integration of Baldrige framework into major public health improvement efforts**

Descriptions of multiple large statewide projects that integrated the Baldrige framework are described in Supplemental Digital Content 1, available at [http://links.lww.com/JPHMP/A546](http://links.lww.com/JPHMP/A546). Two highly visible statewide population health improvement efforts that explicitly used the principles of Baldrige framework in their design and involved all 95 LHDs were the Primary Prevention Initiative (from 2013) and the Tennessee Tobacco Settlement Program (2014-2017). These major programs integrated plans and actions that successfully demonstrated the interactive nature

![FIGURE 2](image-url)  
**FIGURE 2** Submissions for Rapid Improvement Events Challenge Awards by Category, 2016-2018  
Abbreviation: RIE, rapid improvement events.
of the framework’s 7 categories. PI processes and tools were used throughout these larger efforts to ensure broader department-wide awareness and engagement in the desired culture change.

**Department staff satisfaction with management approaches**

The public health workforce interests and needs survey conducted by the Association of State and Territorial Health Officials\(^4\) compared workforce satisfaction in state health departments nationwide in 2014 and again in 2017. Tennessee’s improvements documented in Table 1 reflect growing staff satisfaction during the period when culture change and management strategies were implemented. Tennessee exceeded national comparisons in multiple survey questions related to leadership, communication, QI, and the department as a good place to work. Eighty-six percent of employees are satisfied with their jobs and 78% are satisfied with the organization. Employees reported the agency rewards creativity and innovation, increasing 10% over 3 years and 10% above national survey results. Workforce salary satisfaction improved 10% with the new pay-for-performance system in place.

**Evidences of financial sustainability**

A $1.2-million 5-year SPHII\(^5\) grant from Centers for Disease Control and Prevention initially supported OPM and multiple PI demonstration projects. Over time, OPM costs were internalized by the TDH, averaging $150,000 per year by 2017, and $200,000 for staff training, travel, application fees, and site visit fees associated with TNCPE in the 2017 fiscal year. Budget expenses are viewed as investments that have produced several types of returns: space reductions and process improvement savings ($53,000 in their first year); significant new managed care organization reimbursements to LHDs for new pregnancy smoking cessation services (> $300,000 for 9 months of its first year); and avoidance of expensive clinical costs resulting from changing retrospective negative findings into real-time “good catches” that prevent negative outcomes.

**External recognition of performance excellence results**

A leading indicator of adoption was the continued growth in the number of TDH employees who volunteered for Baldrige training. These employees

| TABLE 1 | Tennessee (TN) Results From Public Health Workforce Interests and Needs Survey, 2014-2017 |
| --- | --- |
| **WINS 2017 Survey Questions** | **2017 TN %** | **2014 TN %** | **Improve Rank** | **2017 National %** | **TN to National** |
| Percentage of staff somewhat/very satisfied with their job. | 86 | 86 | Same | 81 | >5% |
| Percentage of staff who agree/strongly agree that I Know How My Work Relates to the Agency’s Goals and Priorities. | 91 | 89 | Improve 2% | 88 | >3% |
| Describe your agency’s strategic priorities, mission, and vision. | 74 Non 57 Supervisory | 74 National 57 Supervisory | >7% |
| Percentage of staff who agree/strongly agree that Communication Between Senior Leadership and Employees is Good in my Organization. | 57 | 55 | Improve 2% | 49 | TN over US 8% |
| Percentage of staff who agree/strongly agree that Creativity and Innovation are Rewarded. | 54 | 44 | Improve 10% | 44 | >10% |
| Participate in quality improvement processes for agency programs and services. | 62 Non 69 Supervisory | 59 Non 570 Supervisory | >3% |
| Describe the value of community strategic planning that results in a community health assessment or community health improvement plan—high importance/high skill. | 55 Non 49 Supervisory | 49 Non 56 Supervisory | >6% |
| Percentage of staff who agree/strongly agree that I Recommend My Organization as a Good Place to Work. | 79 | 74 | Improve 5% | 68 | >11% |

Abbreviation: WINS, workforce interests and needs survey.
collectively became the TDH examiner corps who were instrumental in strengthening and diffusing PI expertise across the organization within multiple job classifications. They became internal change agents who generated use of PI tools across many initiatives, promoted discretionary participation in the rapid improvement events challenge, and assisted in the preparation of TNCPE applications. The TNCPE applications and state awards documented levels of achievement commensurate with use of PI tools and documented intentional systematic approaches defined by the Baldrige framework. The progression toward higher award levels demonstrates consistent reinfusion and greater sophistication of performance excellence approaches. Figure 3 documents the growth in the TDH staff trained as Baldrige examiners and TNCPE applications for more than 7 years. A second major external acknowledgment of Tennessee’s success is national recognition by the Association of State and Territorial Health Officials VISION Awards for 4 consecutive years for TDH projects: ABCs of Safe Sleep Campaign (2015), Baldrige Implementation (2016), Tennessee Tobacco Settlement Program (2017), and the Tennessee Livability Collaborative (2018).

Discussion

The Baldrige framework begins with leadership, without which the culture change represented in the upward and downward cascade of organizational planning, communication, and adoption of PI will not work. Achieving desired results is driven by leaders’ ability to work within the strategic plan and reevaluate and re-form the organization around a customer and workforce focus. Outcomes from the process and systems focus (eg, use of PDCAs, strategy maps, Lean, etc) become organizational lessons learned that are reapplied through knowledge management shared across diverse departmental units to underscore expectations of improvements-based results. In Tennessee, the framework became a unifying visual graphic that reinforced comprehensive thinking, encouraged innovation, and made all employees responsible for improvement. The framework encouraged a broader definition of customers and suppliers as stakeholders, to include those who public health serves, and those from whom we get our resources to implement them, including the public, the governor and legislature, professional associations, and federal funders.

TDH annually renewed the organization’s Mission and Vision and Strategic Plan. This represented one of several evidence-based management approaches introduced by leaders to align intent with action. Table 2 describes the relationship between these management strategies and the actions that linked to Baldrige’s cohesive umbrella-like framework. These management strategies were essential complementary steps to support diffusion and adoption of PI principles and practice fundamental to organizational culture change.

Why was adoption of the Baldrige Performance Excellence framework successful within the TDH? The Baldrige framework’s meshed with the intent of state elected leaders’ customer-focused government requirements and enabled the TDH the means to demonstrate the effective value of public health. Using Everett Rogers’ diffusion theory, several factors in adoption of Baldrige as an innovation help explain the TDH success.

Organizational awareness of a performance gap, continuously reflected by national reports citing

![FIGURE 3 Tennessee Department of Health Examiners Trained and Application Level Achieved With Tennessee Center for Performance Excellence From 2012 to 2018
Abbreviation: TDH, Tennessee Department of Health.](image)
Tennessee’s poor health rankings, encouraged trying a new approach. Performance improvement approaches became testable discretionary efforts by units, not mandatory compliance-based requirements. Observable improvements were visually summarized using Baldrige’s framework and categories.

The amount of change required to deploy PI processes and tools including voluntary preparation of TNCPE achievement awards applications was minimized by consistency in management strategies that over time integrated PI language, use of cycles of learning, and reporting results across regular department activities.

Multiple new participatory mechanisms promoted creativity, supported innovation, and identified pockets of excellence as units pursued their perceived vested interests. Senior leaders emphasized the framework’s consistency with new organizational norms of taking reasonable risks, acknowledging that self-assessment findings need not be perfect and accepting failure within the process of examining “what have we learned about our performance?”

Lean and responsive government is an important societal expectation in Tennessee. The Baldrige Performance Excellence Program was already recognized by state government, civic, and business leaders. The framework enabled the TDH to demonstrate accountable positive systems effects: viewing the public and other state departments as customers; integrating the TDH strategic plan with state accountability and reporting requirements; and focusing reports on results that emphasized population health improvement.

Diffusion of Baldrige required extensive communication by internal change agents. Senior leaders communicated about Baldrige through site visits to county health departments, weekly executive meetings, bi-weekly commissioner newsletters, and annual strategic planning processes. Leaders consistently demonstrated openness to feedback and publicly acknowledged input that became important for determining annual operational goals and strategic initiatives.

Taken together, adoption, diffusion, and integration of PI at TDH was a long-term approach chosen by senior leaders confronted with the complications of continuing state budget cuts and poor state health rankings. The Baldrige framework was introduced during an environment of new leadership to help change organizational norms dependent upon employee engagement at all levels. Leaders implemented evidence-based management strategies while integrating PI approaches throughout regular departmental operations. Voluntary pursuit of TNCPE...
recognition awards was encouraged as a means to an end, not as an end in itself. Barriers to adoption were handled incrementally over time by growing skills and support from a network of internal change agents that drew on successful shared central and regional office and LHDs employees’ experiences. The transition from a previous compliance-based to the new improvement-based environment led to successful change that was both internally and externally recognized and linked to important population health improvements.

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