

Designing, Deploying and Using an Organizational Performance Management System in Public Health: Cultural Transformation Using the PDCA Approach

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Organizations have long struggled with developing a performance management (PM) system to help understand and guide operations on a timely basis. While many local governments now use some form of performance measurement, far fewer have successfully completed the transition to a performance management system — integrating performance measurement into the ongoing management of the organization. This transition is much more difficult than the initial development of performance measures.²

One of the hallmarks of leading-edge organizations—be they public or private—has been the successful application of performance measurement to gain insight into, and make judgments about, the organization and the effectiveness and efficiency of its programs, processes, and people. However, leading organizations do not stop at the gathering and analysis of performance data; rather, these organizations use performance measurement to drive improvements and successfully translate strategy into action. In other words, they use performance measurement for managing their organizations.³

A good PM system is the central nervous system of the organization since it is providing operational intelligence on a real time basis, indicating performance relative to goals, effectiveness and efficiency of programs and services, performance of processes, and customer

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² <http://www.gfoaconsulting.org/downloads/GFR-Aug06-FiveCriticalFactors.pdf>, accessed 11/16/12

³ <http://energy.gov/sites/prod/files/maprod/documents/BalancedScorecardPerfAndMeth.pdf>, accessed 11/16/12

satisfaction levels. Ultimately, the PM system should provide the knowledge leadership requires to manage the overall enterprise, and to aide in prioritizing which areas need improvements.

Choose or Adapt a PM System Model to Fit the Public Health Organization

A variety of performance management models have been used in the public and private sectors. The necessary characteristic that makes any PM model a PM “system” (sometimes called a “managing for results process”) is that it can be articulated as a *cycle* in which measured results are regularly fed back into decision making to continually improve future performance.⁴ For illustration, this paper uses three PM system models that have been used successfully in the public sector:

1. The “Plan-Do-Check-Act” (PDCA) model⁵ adapted from Quality Improvement by some entire local governments (e.g., City of Austin, TX; King County, WA)
2. The balanced scorecard strategic management approach⁶, which was adapted from the private sector for many public sector applications, including “Community Balanced Scorecards” used by health departments and community health partnerships
3. The “Stat” model⁷ of high frequency review of operating data to make rapid performance improvements

An interesting feature of these three PM system models is that they are not mutually exclusive. For example, a Stat system of high-frequency operational improvement can be used on a PDCA basis, and included within a larger PDCA system with lower-frequency cycles (e.g., annual performance plans and budgets with quarterly performance reviews). Similarly, some or all of the measurement models within the larger PDCA cycle could be based on balanced scorecard strategies.

Whether a health department draws on any or all of the three system models used in this paper, or on other approaches to performance management⁸ will depend on the specific needs of

⁴ Epstein, Paul D., Paul M. Coates, Lyle D. Wray, & David Swain (2006). *Results That Matter*. (San Francisco: Jossey-Bass/Wiley), pp. 51-71.

⁵ Moran, John, & Duffy, Grace (2012). *The Quality Improvement Tools Encyclopedia and Glossary*, Public Health Foundation,

⁶ Kaplan, Robert S. & David P. Norton (1996). *The Balanced Scorecard: Translating Strategy in Action*. (Boston: Harvard Business School Press) and Kaplan, Robert S. and David P. Norton (2001). *The Strategy-Focused Organization*. (Boston: Harvard Business School Press)

⁷ Ammons, David, editor (2008). *Leading Performance Management in Local Government*. (Washington, DC: ICMA Press), “Section III: The ‘Stat’ Approach: Compstat, CitiStat, and Others” pp. 141-193.

⁸ For example, see Ammons, David N. ed. (2006). *Leading Performance Management in Local Government*. (Washington, DC: ICMA Press).

the department. The design of a PM system should be reflective of the organization itself. Aspects for careful consideration include: an organization's current and desired future culture, preferred leadership style, current capacities, work force capability, budget limitations, and other resource constraints. Every health department will emphasize different organizational variables in designing its optimal PM. Although there are tried and proven models, one size does not fit all in designing a PM system. Nonetheless, each version shares the same common purpose of providing operational intelligence on a timely basis to help make informed decisions at all levels of the organization. Those informed decisions should facilitate efficient and effective delivery of the products and services public health customers seek and make the health department and its partners more effective in their efforts to improve population health

The Turning Point Model⁹, shown in Figure 1, was originally developed specifically for public health and is a good conceptual model describing essential elements of a PM system.

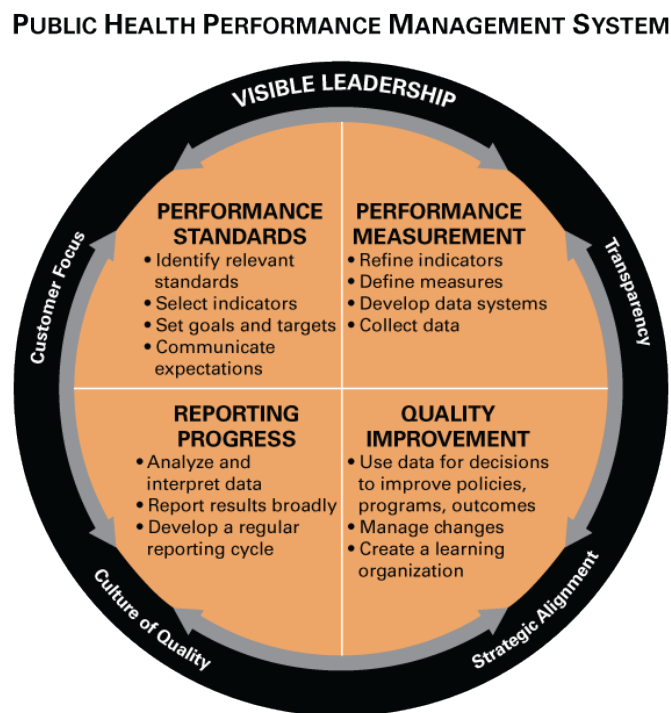


Figure 1: Turning Point Model

⁹ Public Health Foundation
 ("http://www.phf.org/focusareas/performance/Pages/Performance_Management.aspx")

However, the Turning Point Model offers limited guidance about what makes these elements a usable “system” or about “how” to develop an organization-wide PM system. Questions this model leaves unanswered include the following:

- How do we select standards?
- How do we measure against standards?
- How do we report data for the measures compared with targets?
- What process do we use to prioritize which areas need improvement?
- How do we make this a “system” to manage our organization effectively and not just give us more things to do?

This paper addresses these questions first by looking at how a PM system operates that is based on the PDCA model, and then by examining how to achieve a responsive and continually improving PM system by using the PDCA cycle for system development.

A PDCA-BASED PERFORMANCE MANAGEMENT SYSTEM

A model that has all the elements of Turning Point, but is displayed as a systemic cycle, is a PM system based on the Plan-Do-Check-Act (PDCA) cycle of Quality Improvement (QI) (or as it is sometimes called, a Plan-Do-Study-Act cycle) shown in Figure 2.

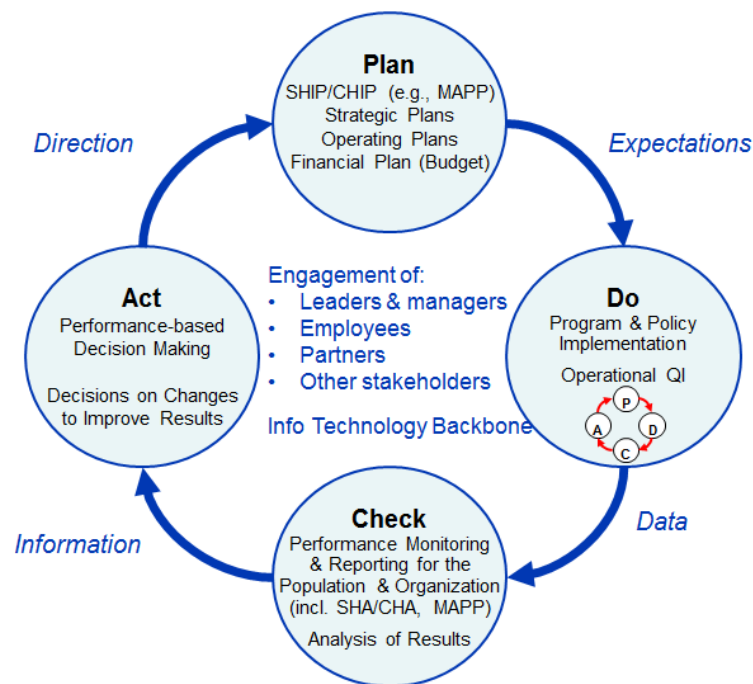


Figure 2: A PDCA-based Performance Management System

PLAN: Create Several Levels of Expectations

The Public Health Accreditation Board (PHAB) requires a public health agency that wants to be accredited to have a State or Community Health Improvement Plan (SHIP or CHIP) and a strategic plan, both of which usually look three to five years into the future. However, to translate the goals and objectives of those plans into a performance management system, the agency needs annual operating plans for all its programs, services, and projects. And those plans need to be realistic given the agency's financial plan or budget. So a SHIP or CHIP, strategic plan, operating plans, and budget are all part of the "Plan" stage of the PM cycle.

Performance measures and performance standards including goals and targets (as in Turning Point) are reflected in both the multi-year and annual plans. To assure plans lead to real performance, and don't just sit on the shelf, the goals, measures, and targets are transmitted to everyone in the organization as "Expectations" to be met in the "Do" stage, as in Figure 2.

DO: Implement Programs, Policies, and Operational QI

Expectations reflected in program performance measures and targets and new or revised policies (e.g., as may be driven by a SHIP or CHIP) determine what a health agency implements and tries to achieve at the program or project level during the course of each year. Many targets may be set for about the same level of performance as the previous year, or for incremental changes, up or down, depending upon budgeted resources available in the current year. Typically a few new programs may be started and old ones ended, based on plans and budgets. However, a few existing programs or services may be considered particularly important or "strategic" to improve, for example, because they are highlighted for major improvement in the strategic plan, perhaps because they are crucial to achieving the goals of the SHIP or CHIP. Sometimes additional funds may be budgeted or sought (e.g., through grant applications) to increase performance of the most strategic programs. Whether or not additional funds are available, those strategic programs or services can be considered likely candidates for focused quality improvement efforts. Thus, "Operational QI" is shown as part of the "Do" stage in Figure 2.

In addition, managers and staff of all programs can be challenged to apply QI techniques to their operations to improve measurable performance beyond the targets in their operating plan.

So, conceivably, Operational QI can be applied to many programs at any given time, with a strategic few especially targeted for focused QI efforts.

As shown in Figure 2, “Operational QI” is literally a PDCA cycle within a PDCA cycle. The difference is that the outer QI cycle, representing the organization-wide QI system, works at frequencies of from one to five years, though there may be higher frequency monitoring (e.g., quarterly). But the Operational QI cycle, shown within the “Do” stage, can work at higher frequencies, depending on how frequently data can be captured, analyzed, and used for performance improvement. Some programs may generate enough data to use for improvement on a weekly or monthly basis, while other programs (e.g., a high-volume clinic) may generate enough data daily to make very frequent adjustments to keep improving operations. Both the “Operational QI” cycle in the “Do” stage, and the overall PDCA cycle of the entire PM system, represents the Turning Point’s “Quality Improvement.”

Implementation against performance targets and budgets and Operational QI both generate “Data” to be used in the “Check” stage, as in Figure 2.

CHECK: Monitor Performance and Analyze Results, Including Health Assessments

Data generated and collected on program and policy implementation and Operational QI are monitored, reported, and analyzed in the “Check” stage of the PM system. This stage represents Turning Point’s “Reporting of Progress.” In addition to organizational data from operations, data on changes in the communities and population served are also monitored and analyzed. Every three to five years the population data can include a State or Community Health Assessment (SHA or CHA) and additional assessments (e.g., in communities using NACCHO’s MAPP program). But in most states and local regions, some population data (e.g., on health status and determinants of health) are gathered or become available more frequently (e.g., from annual or biennial BRFSS surveys). The population data (which may be disaggregated geographically or demographically) can be viewed along with the operational data to determine if mid-course corrections are needed between major changes to a SHIP, CHIP, or strategic plan.

A State or Community Health Assessment (SHA or CHA) is shown in the “Check” stage in Figure 2 even though it is intended to inform health improvement planning. So the SHA or CHA is generally done *before* the SHIP or CHIP. However, Figure 2 shows a PM system as a continuous *cycle*, there is no definitive start or end point. So the SHA or CHA can be done in the

“Check” stage which leads to decisions in the “Act” stage and then to creation or revision of a SHIP or CHIP as the cycle comes back around to the “Plan” stage.

Analyses of operational performance and population data generate “Information” to be used for decision making in the “Act” stage of the PM system, as shown in Figure 2.

ACT: Decide on Changes to Improve Results

Data collection and analysis do not improve performance on their own. People must act on the information—they must use it to make decisions that will lead to better performance. In the “Act” stage, program managers and policy makers need to consider a full range of data, such as on population outcomes, geographic conditions, and service performance to decide on changes in program operations, policies, plans, and budgets. For example, if population and geographic data show disappointing or mixed smoking cessation outcomes, before deciding to spend more money on smoking cessation programs it is important to examine existing programs aimed at cessation. Are they inefficient and need their internal processes improved so they can achieve more at the same cost? Are they ineffective and need to be replaced by different kinds of programs? Are they effective for a segment of the population that responds to them, but need to be augmented by other types of programs (e.g., which may use cultural or language differences) that other population groups will respond to? Are they effective in some geographic areas but need more or different kinds of outreach in some parts of the community? Are they effective for the number of people they reach, but have too few resources to reach enough smokers in the community to make much of a difference? Answers to these kinds of questions for different types of outcomes and programs can be used to make a wide range of policy, resource allocation, programmatic, and operational decisions.

Decisions made in the “Act” stage then provide “Direction” for the “Plan” stage as the PM system cycles around again for a new round of planning and budgeting or for revisions to existing plans and budgets.

The Importance of Robust Engagement

As noted in the center of Figure 2, a PM system is not meant just for planning and analytic staff, and not just for decisions makers. For a PM system to be most effective in driving change to improve performance, everyone in the organization should be engaged. It should

become an integral part of the way everyone does their jobs and not just another thing they have to do. To the extent possible, their engagement should be as *users* of the system, so it's important that everyone in the organization understands how they can use the information in the system to do their jobs better, improve program performance, and ultimately be more effective in improving population health. Because improving population health requires efforts by people and organizations besides the public health agency, it is also important to engage the agency's partners and other external stakeholders who may be providers or users of data to improve public health.

Inevitably, some people's role will be more as generators, collectors, or reporters of data, and less as decision makers. If they do not know the importance of the data they provide for improving program performance and population health, they may not take the care needed to provide reliable data. We have seen this phenomenon with some existing public health PM systems. So be sure to engage them to make sure they know why they're collecting the data they've been asked for, and how that data will be used. Even better, where possible, from time to time ask for their interpretations of changes in the data, which may both provide useful insights to decision makers and help staff understand that their data collection efforts are valued. This is just as important for external data providers as it is for internal staff. Both sets of users are also customers, and their views are critical to success of the entire PM enterprise.

Technology Backbone

The middle of Figure 2 also refers to a "Technology Backbone," which acknowledges the need for an appropriate information technology (IT) system to keep the PM system running smoothly without inordinate staff effort. Some public health agencies may be part of a government that already has its own jurisdiction-wide performance management IT system, and can use that for its technology backbone. But sometimes a jurisdiction-wide system does not provide all the functionality the agency needs for its own performance management. For example, it may not be updated frequently enough for all the operational QI the agency wants to apply to its day-to-day program operations. In those cases the public health agency may need to augment the jurisdiction-wide system with some of its own internal IT support. Whether augmenting jurisdiction-wide systems or developing systems of their own, public health agencies do not have to start from scratch, but can procure and adapt existing systems, which now include

low- and moderately-priced systems that range from simple spreadsheet templates designed for internal reporting to web-based performance management and strategy management systems.

The Importance of Alignment

It is not enough for a public health agency to have SHIP or CHIP, strategic plan, program operating plans, and financial plan (budget). For the PM system to work properly, all those plans must be aligned with each other and with the day-to-day operations of the agencies' programs, services, and projects—and often also with the programs and initiatives of agency partners. As shown in Figure 3, consistent and related performance measures across all these plans and operations provide a “line of sight” from the agency’s vision and mission down to ground-level operational performance.

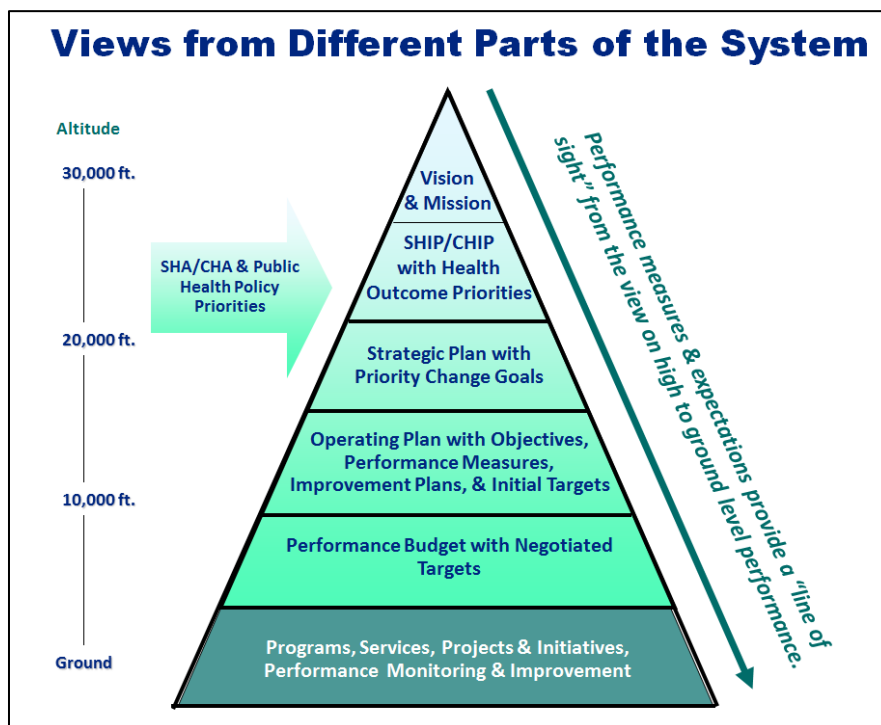


Figure 3. Alignment of Components of the PM System

Alignment of Leading and Lagging Measures from Policy to Operations to Outcomes

Consistent performance measures provide alignment across plans and operations. Related “leading” and “lagging” performance measures provide alignment from what a public health agency and its partners do with the bigger health improvement goals they want to accomplish.

For example, to reduce obesity, a public health agency may determine that it needs to develop and advocate for policies that increase active living and healthy eating. The agency may be able to at least partly implement some of these policies on its own, such as by integrating exercise or nutrition improvement efforts into its maternal and child health programs. In other cases, the agency will need to advocate for others, such as a city planning commission, a parks and recreation department, a YMCA, schools, and private employers to adopt and implement these policies. Measures of policy development, outreach, and advocacy efforts¹⁰ are “leading indicators” of eventual adoption and implementation of these policies as part of organizations’ operational practices. Then, practice changes by partners and measures of health agency program operations are leading indicators of outcomes of increased active living and healthy eating and reduced obesity. Those outcomes are “lagging indicators” of policy and operational progress. An effective PM system will include alignment of these leading and lagging measures, and not have a disconnect between what agencies and their partners do and the outcomes they want to improve. Balanced scorecards, especially “Community Balanced Scorecard” tools being used in public health, described next, are particularly strong in this regard, by helping users map out strategies for public health issues or programs, then aligning their measurement system with those strategies from “performance drivers” (leading indicators) of assets, policies, and operations to “outcomes” organizations and community partnerships want to accomplish.

Community Balanced Scorecards for Strategy and Measurement Alignment

To achieve alignment needed for effective performance management at all levels of an organization, performance measures should be aligned with the organization’s strategy. The “Balanced Scorecard” (BSC) started in the early 1990s as a corporate performance measurement framework and evolved in just a few years to a strategy management system in which an organization’s high-level strategy drives how performance is measured and managed, to achieve *strategic alignment* of what people do with how the organization is trying to achieve its goals.¹¹

¹⁰ For ways to measure policy development, outreach, and advocacy, see “Performance Measurement for Public Health Policy.” American Public Health Association and Public Health Foundation. Aug. 1, 2012.

¹¹ For example, see Kaplan, Robert S. and David P. Norton (1996). *The Balanced Scorecard: Translating Strategy in Action*. (Boston: Harvard Business School Press) and Kaplan, Robert S. and David P. Norton (2001). *The Strategy-Focused Organization*. (Boston: Harvard Business School Press)

Balanced scorecard tools, such as strategy maps, are particularly well suited to graphically depict strategy in a way that facilitates developing strategy-aligned measures.¹²

In public health, which is a population and community-focused endeavor rather than a profit and customer-focused endeavor, a “Community Balanced Scorecard” (CBSC) approach has been evolving to achieve strategic alignment of multiple organizations in the state or community public health system, rather than just alignment of a single organization, and using the ten essential services of public health as a guide to mapping and measuring strategy. Since the first publication of this approach for public health in 2009¹³ CBSC tools have been used by community health partnerships from New Hampshire to Florida and from New Jersey to Illinois for priority health issues. The State of Delaware Division of Public Health has been using CBSC for its strategic planning and at least one county (St. Johns County, FL) has used it in its published CHIP.¹⁴ To help create alignment across all strategies, including strategies for specific programs and cross-cutting strategies involving multiple programs and organizations to address priority health issues (e.g., obesity reduction, access to care), a “top level strategy map” can be used based on the twelve domains of the Public Health Accreditation Board, shown in Figure 4.

¹² Kaplan, Robert S. & Norton, David P. (2004). *Strategy Maps*. (Boston: Harvard Business School Press)

¹³ Epstein, Paul D., Simone, Alina, & Wray, Lyle D. (2009). “Community Balanced Scorecards for Strategic Public Health Improvement” in Bialek, Ron, Grace L. Duffy, and John W. Moran, eds. *The Public Health Quality Improvement Handbook*. (Milwaukee: ASQ Quality Press), pp. 251-270.

¹⁴ St. Johns County Health Leadership Council (Aug. 2011). *St. Johns County – 2011: Community Health Assessment and Community Health Improvement Plan*. (St. Augustine, FL: St. Johns County Health Department).

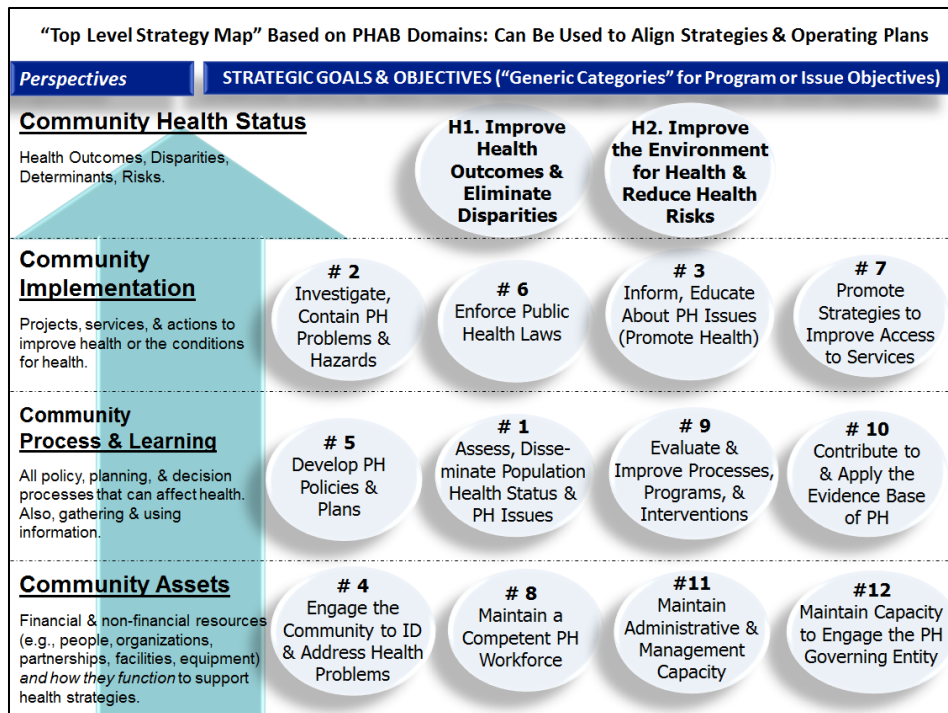


Figure 4. Top Level CBSC Strategy Map Based on the 12 PHAB Domains

Note in Figure 4 that the PHAB domains are not shown in numerical order, but are on the bottom three "perspectives" (rows in Figure 4) based on bottom-up performance driver relationships concerning how they relate to each other, and how, collectively, they drive performance of the top two strategic goals: "H1. Improve Health Outcomes & Eliminate Disparities" and "H2. Improve the Environment for Health & Reduce Health Risks."

More specific strategy maps for public health programs relate back to the top level map, but the strategic goals and objectives (the bubbles) are worded to be specific to that program, and only the PHAB domains relevant to that program are included. For example, a strategy map for an Environmental Health Enforcement and Investigation Program might look like Figure 5, with arrows showing specific performance driver relationships between strategic objectives leading to the strategic outcome goals on top. The numbers in the bubbles relate back to the same numbered goals and objectives in the top level map. When strategy maps are developed for other programs and for cross-cutting strategies involving multiple programs or partners, their alignment with the top level map visually shows how all public health agency strategies are aligned.

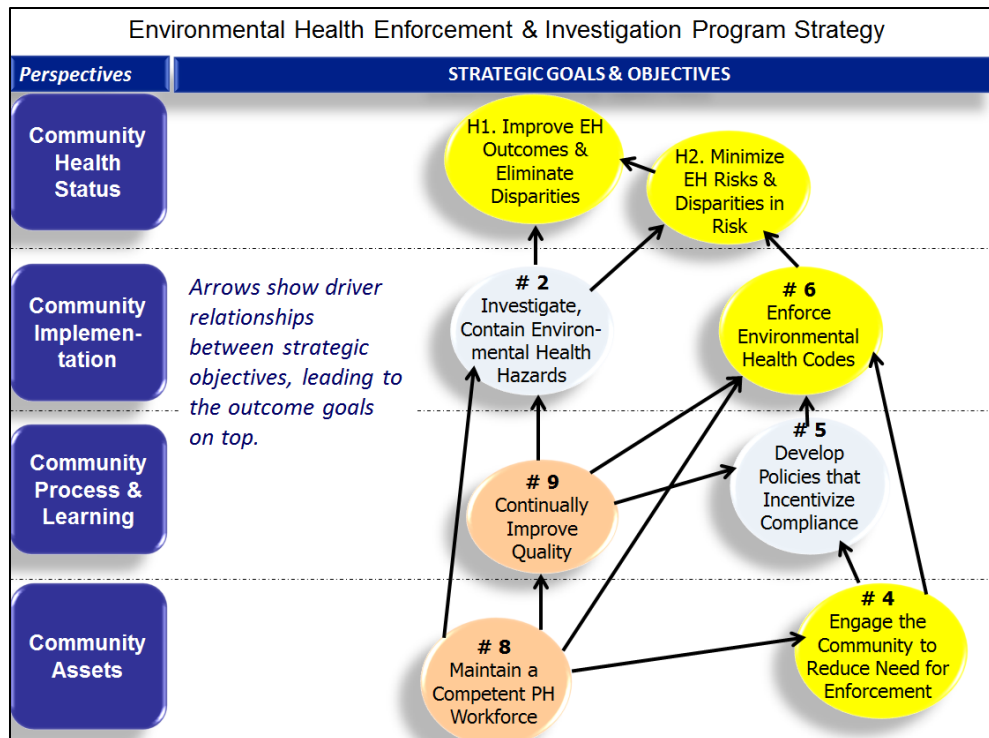


Figure 5. Possible Environmental Health Enforcement & Investigation Strategy Map

The strategic goals and objectives and their driver relationships help build an aligned system of performance measurement. For example, following the performance driver arrows, from bottom-to-top, for the objectives and goals highlighted in yellow (#4, #6, H2, and H1) might produce the following performance measures and driver relationships among them:

- *Measure for Objective 4: Number of businesses subject to inspection that participate in training and outreach activities:* Getting more businesses to participate is expected to help drive success on the following:
- *Measure for Objective 6: Percent of establishments inspected with no violations:* Raising this percentage (assuming a full schedule of inspections and re-inspections is maintained) is expected to help drive success on the following:
- *Measure for Goal H2: Total outstanding environmental health violations.* Reducing this number is expected to help drive success on the following:
- *Measure for Goal H1: Number of environmental health-related illnesses and injuries per 1,000 population* (which may be broken out into more specific measures, e.g., “number of food borne illnesses per 1,000 population”).

Note in Figure 5 that two of the strategic objectives (#9 on Quality Improvement and #8 on a Competent Workforce) are not specific to environmental health. They represent strategic objectives that a public health agency may mandate for *all* of its programs and services. Strategic Objective 9 in particular would represent the Environmental Health Program's responsibility for "Operational QI" in the "Do" stage of the Public Health Agency's overall PDCA performance management System, shown in Figure 2. As environmental health is usually addressed on a geographic basis, it may be a good candidate for using a "Stat System" for QI, described next.

The Potential for a "Stat System" as Part of Operational QI

As described above, the "Operational QI" cycle in the "Do" stage of a PDCA-based QI system represents high-frequency collection and analysis of data to improve performance. In that sense the "Stat" systems being used in Police Departments across the country (as started in New York City with "Compstat" in the 1990s¹⁵), and by some state and local governments for a wide range of services (as started in Baltimore with "CitiStat" in 2000¹⁶) are high-frequency operational QI systems. Stat systems not only use operational information, they use high-frequency geographic data on outcomes or conditions being addressed by programs, displayed on maps for review and action (e.g., maps of crimes, street defects, or environmental problems).¹⁷ As most health agencies are concerned with where outbreaks occur, where there are environmental health issues, where underserved populations live, and other place-based data, a Stat-like geo-based high-frequency system can be a valuable component of a public health agency's performance management system. Figure 6 depicts a Stat-like high-frequency performance improvement cycle. Note in the "Do" Stage in Figure 6, where partners are needed to help address health issues, as is often the case, they can be included in the responses to mapped conditions.

¹⁵ Silverman, Eli (1999). *NYPD Battles Crime: Innovative Strategies in Policing*. (Northeastern Publisher),

¹⁶ Swope, Christopher (2001). "Restless for Results" in *Governing*, April, 2001.

¹⁷ For example, see Ammons, David N. ed. (2006). *Leading Performance Management in Local Government*. (Washington, DC: ICMA Press). pp. 141-193.

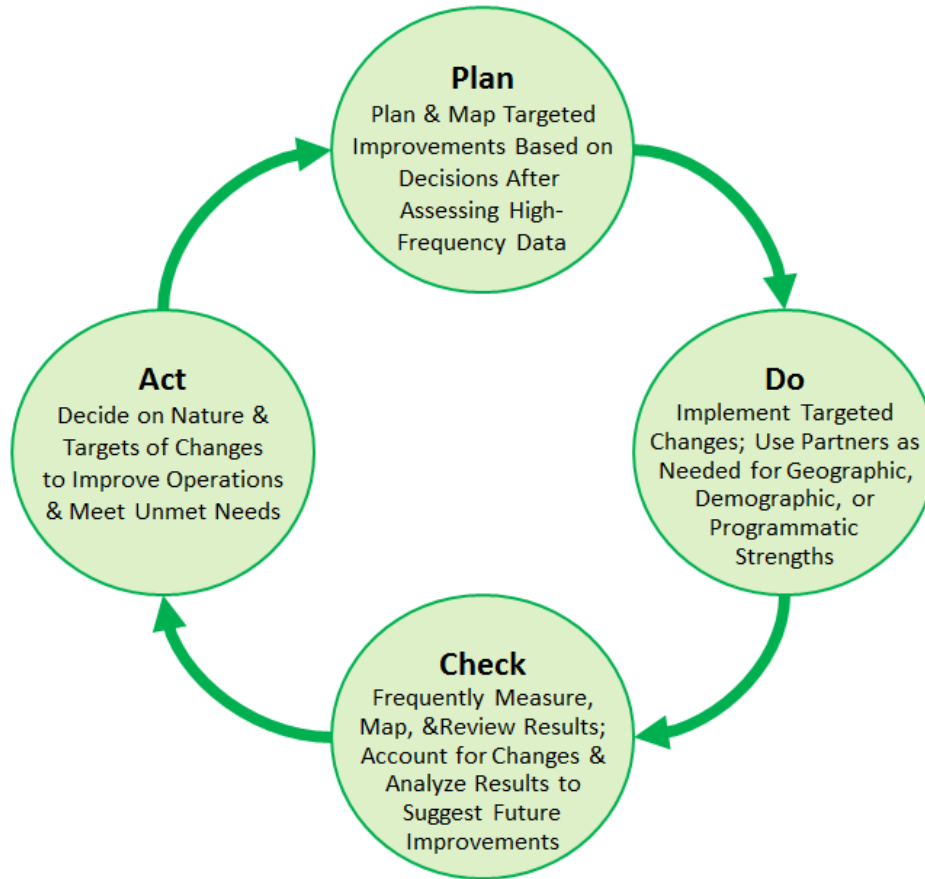


Figure 6. A “Stat” System as a High-frequency PDCA Cycle

Not all useful operational QI need be geo-based as in Stat systems. A public health agency can apply high-frequency operational QI to improve any process for which it obtains data on a more frequent basis than data reported for the overall PM system. For example, if the agency runs a clinic with regularly repeated services, any repeated process within the clinic can be a potential subject of operational QI. Similarly, the agency can apply operational QI to its internal business processes, such as procurement or human resources. Improvements in internal processes, such as reducing the time to purchase goods and services or to hire new staff, can help make many agency programs more effective.

USING A PDCA CYCLE TO DEVELOP AND IMPROVE A PM SYSTEM

PLAN: Design the System

A performance management system needs to be one that the entire organization can value and use to: access for entering data and reviewing critical performance trends; guide day-to-day

operations; develop performance plans, budgets, and longer-term strategic and health improvement plans; and direct attention to areas needing improvement. Whether you are planning a new system, adding on, or retrofitting an existing PM system a complete and well-defined performance management design is essential.

A good place to start is to appoint a Performance Management System Design Team (PMSDT). This team needs to be staffed with expected system users (e.g., program and operations managers, budget staff), IT staffers, and representatives from executive management who ultimately will have to “own” the PM system.

The first task of a PMSDT is to develop a *conceptual* model to help define how the performance management system will work. Too often, systems development efforts fail because they do not reflect the realities of the organization. Rather the system was an off the shelf model, and the expectation was that people’s work would conform to the system, with no opportunities for local adaptation, resulting in most employees becoming resentful and uncooperative with the system. The PMSDT needs to avoid such pitfalls. The design team can build its model from existing models, such as those noted in this paper, experiences with past reporting systems, existing software, and what has been successful at other agencies. But they should be careful to adapt any models to the culture and capacity of the public health agency and how the agency does business. Often part of the purpose of a new PM system is to change the culture to move away from “business as usual” to a data-driven, results-focused approach. Even so, the existing culture and business practices must be considered and staff engaged to be sure they’re part of designing and “owning” the change.

In addition to the conceptual model, the design team must define the system’s DNA, in broad terms:

- Purpose - What is the purpose of the performance management system and what do we want it to accomplish with it today and in the future?¹⁸
- Functional requirements – what it is supposed to do? What capabilities must it have?
- Performance requirements - how does the system perform its functions?

¹⁸ Moran, John, & Duffy, Grace (2012). The Quality Improvement Tools Encyclopedia and Glossary, *Public Health Foundation, reference the Purpose Hierarchy, pp. 101 - 102*

- Usability requirements - who are the users and what do they want from the system?
- Data semantics – What are the key business and process terms we will be using, such as types of performance measures and their definitions?
- Environmental requirements - under what conditions does the system have to work and meet its performance goals?
- Budget requirements – what will be the ongoing staffing, licensing, operating and upgrade costs for this system

The planning process identifies the needs of the organization and its users. These needs are translated into business requirements - “what we want.” Translating the needs into requirements can be facilitated by using Quality Function Deployment (QFD) matrices¹⁹. QFD is a process that uses a variety of matrices to help developers of a PM system prioritize functions using the voice of the user. Eventually, the design team can transition into a “Performance Management System Team” (PMST), which will oversee and improve the system in the long-term. Some team members may change in this transition, as the PMST is likely to include people who will spend a higher percentage of their time developing and improving the system. The PMST will make decisions on operational guidance, software, hardware, upgrades, and additions as the system matures. An effective performance management system needs to have adequate ongoing resources, including funding, to run efficiently. It is important that the PMST be an ownership group that has full accountability for the system and makes sure the system is meeting the needs of the organization on an ongoing basis. This group will be a decision making body that will entertain user requests for changes, different reporting modules, additional fields, and any refinements to the system to make it user friendly. The PMST should report to the Health Director and leadership team since the PM system will be used to guide the organization’s critical decision making.

The agency’s IT staff, especially the IT representatives on the PMST, will facilitate how the system will fulfill the requirements by developing the enabling processes. Enabling processes

¹⁹ Duffy, Grace L. Moran, John, & Riley, William (2011). Quality Function Deployment and Lean Six Sigma Applications in Public Health, *ASQ Quality Press*, pp. 173 - 184

are the nuts and bolts of the system, such as how existing systems will be integrated; what systems will no longer be supported; how existing data will be migrated into the new system; how to automate data collection and develop dashboards for each organizational level; what reports will be available at what times; security levels; what new data warehouses or data marts may be needed; how to create supporting policies, procedures, and user tools; and how users will be trained to use the new system. Many planning steps must be completed before the system can be deployed. Lack of a thorough planning process can result in a lot of rework throughout the organization during system deployment, driving skepticism and potential failure. To avoid these pitfalls, some organizations deploy their system in stages, discussed under “Do: Deployment.”

A key planning step that can provide a transition to the “Do: Deployment” stage is the selection of performance measures for all organizational units or programs, and for any cross-cutting strategies to address priority health issues. So the PMST must develop a process to help division and program managers to select, define, and standardize performance and quality measures across the organization and set the targets to be achieved for each measure. In many cases existing measures can be used, but the PMST must make it clear that measures must be chosen that fit the conceptual model of the PM system and that are aligned with the agency’s major strategies to improve population health. This can lead to dropping some existing measures that do not align with agency strategy and adding new measures that do. Adopting a “performance driver-outcome” (or leading-lagging) approach to performance measurement, described earlier in this paper, can help achieve that alignment. Program managers can continue to use data from measures not included in the PM system to manage their operations. But that data will not reported on PM system scorecards or dashboards used by others in the organization.

One problem that emerges with measures that are not well aligned is a disconnect between a strategic goal (e.g., *reduce number of smokers in our service area by 20,000/year*) and operational measures of what agency programs are doing in relation to that goal (e.g., *number of stop smoking clinics held* or *number of pamphlets handed out at a Stop Smoking Fair*). This is where the PMST must help people across the entire organization understand that they need to be able to defend their logic that success in meeting targets for their operational measures will make a strong contribution to achieving strategic goals. Three ways they may do this are:

- Use evidence to show that improving results on their operational measures really does drive outcome results for strategic goals.

- Develop new measures and targets that have an evidence base to make them credible.
- If the evidence base is thin or non-existent for an issue, target population, or desired practice, use measures and data in the PDCA cycle of the PM system to develop their own evidence, including rigorous analysis of “performance driver” and “outcome” data at appropriate time intervals.

DO: Deployment

The deployment of the performance management system should be part of an organizational cultural change that strongly aligns the organization and its employees with the agency’s major strategies to improve population health. The deployment of a PM system is a time to use measures to drive a new culture focused on quality and strategic alignment. The public health agency must focus on developing and advocating for policies and practices to improve priority health outcomes for the population they serve, and, as appropriate, on implementing those policies and practices. For service programs, staff must focus on delivering high-quality value-added services to their customer base. The deployment of the PM system must ensure that all strategic and operational measures align with the major strategies of the organization throughout the value chain, not just during the service delivery process, but also, for example, in how employees are trained and how policies are developed. And there may always be programs that are vital to preserving public health (e.g., vaccinations, preparedness) but are not part of a SHIP, CHIP, or strategic plan because other health issues emerged as more pressing. The continuing importance of those programs should be established through their own budgets and operating plans with measures and targets demonstrating that their staff, as all staff in the organization, is dedicated to results and continual quality improvement. The culture change will be achieved when it is clear to everyone in the agency how everything they do adds value to improving population health—not just in concept, but through clear strategic connections from their work and the work of others to the health outcome goals of the agency.

To make this cultural change a reality the measures, targets, scorecards, and dashboards developed must have participation of those who will be held accountable for reaching the targets and must be available on a timely basis to all employees, demonstrating how they are linked to

the organizational objectives. A culture will change when the new desired behaviors are measured, reacted to, rewarded, reported, and celebrated.

As shown in Figure 7, the PM system should enable the deployment of the goals and objectives of the organization as well as providing a structured framework to allow the relevant information to flow to appropriate points for enabling decision and control processes.²⁰

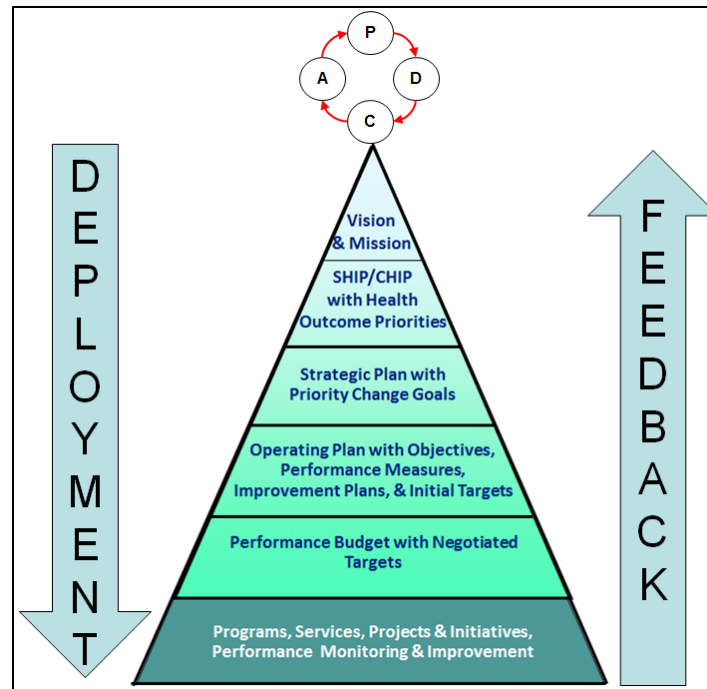


Figure 7 The closed loop deployment and feedback system

In order to avoid user resistance to a new performance management system, the PMST needs to develop an on-line dictionary of terms and acronyms that are used in the PM system to help avoid confusion and misinterpretations. This applies to key types of metrics such as health status outcomes and other basic terminology used in the system. People will resist if they feel they do not understand the new measures, that the measures are not relevant or reliable, or that data from the measures will be used against them. That can drive people to develop their own spreadsheets to prove they are right and the “system” is wrong. Such “data fights” burn a lot of time and energy defending the new system against those who are being measured by it, instead of helping people learn how to use the system to become better contributors to population health.

²⁰ Bititci, Umit S, Carrie, Allan S, & McDevitt, Liam. Integrated Performance Measurement Systems: A Development Guide. *International Journal of Operations and Production Management*, vol. 17, no. 6, May/June 1997, MCB University Press, pp. 522-535.

Staged Deployment:

This is an approach used to work out system issues with a few pilot programs or organizational units before rolling out the PM system to the entire organization. Generally, staff groups are chosen as pilots who are most likely to be cooperative with a new PM system, perhaps because they know their current system is inadequate for their current purposes (e.g., to achieve desired improvements or to meet grant requirements), or they have had a positive experience with QI or other results-focused change process, or because they have demonstrated a willingness to try new things or to be accountable for results. If possible, it is useful to select pilot groups with various types of functions and strategic roles (e.g., one closely connected with an agency strategic priority, one that plays a health preservation role, one that plays a support role such as human resources development) so later, more groups in the agency can identify with their examples.

As the PMST completes planning steps with the pilot groups (e.g., select aligned measures and targets) and helps them work through deployment, PMST members and pilot group staff can identify system bugs and weaknesses in the planning and deployment processes to be corrected before full agency deployment. Then, in the larger roll-out, it will be easier to avoid pitfalls and help people in all programs adapt the new system to meet their performance needs.

CHECK: Review the System

A review of the performance management system should be conducted at least yearly by the PMST to ensure that the system is meeting the needs and expectations of the organization and all system users. The general areas to focus on for review are:

- **Effective Use of Data by Users** – system is being used as a decision making tool and not just compiling data. The PMST should ensure that different levels of the organization are using the data to make informed decisions.
- **Alignment** – system is aligned with organizational goals and helps users support goal achievement.
- **Results-focus** – system delivers timely and accurate information that holds employees accountable for achieving results appropriate to their level of responsibility.

- **Relevant Measures** – system is providing employees with timely data on measures that are most relevant to how they contribute to organization success, which will vary among staff groups and may include, for example, measures of outcomes, quality, quantity, timeliness, efficiency, cost-effectiveness, professional competencies, or customer satisfaction.
- **Reliable Data** – system provides data that are accurate, valid, and consistent, with clear, documented definitions for all measures that are consistently followed in collecting data and compiling and reporting results.
- **Employee Involvement** - employees are continually involved in the design and upgrade of the PM system since this is designed for all in the organization to use.
- **Training** - The PMST reviews the user training programs to ensure they are making the organization more competent in the use of the system.
- **Organizational Assessment and Guidance** - the PMST conducts leadership and user satisfaction surveys to determine if the PM system is meeting the current needs of the organization and its users. Then the PMST uses the survey data to make decisions on any needed changes to the system.

ACT: Improve the System

Based on the results of a regular review of the performance management system the PMST should review the output and decide where improvements are needed. These improvements will require the team to start the PDCA cycle again and review the system requirements to see if they remain relevant. Any time a change to the PM system is made a communication to all users should also be made indicating the change process and what will be changing. The PMST needs to update all documents, policies, procedures, terminology, and training to reflect the upgrades to the system. All changes and their impact on the users of the PM system need to be communicated well in advance of the changes taking place.

Summary:

A well defined and deployed performance management system will ensure that strategic and operational goals and objectives are aligned and reinforce one another. The PM system aligns all

agency measurement frameworks to help executives, managers, and employees make informed decisions at any level of the organization. The PM system should not just supply data but should help users turn data into actionable knowledge to improve performance. To make that happen, the Performance Management System Team should clarify to all users the overarching system policies and functions and actively assist users in learning how to make effective use of system information. Ultimately, the PM system should help all public health agency employees understand how their work contributes to improving population health, and should help them become more effective in doing so.