APPLICATIONS AND TOOLS

FOR CREATING AND SUSTAINING

HEALTHY TEAMS

GRACE L. DUFFY AND JOHN W. MORAN

Applications and Tools for Creating and Sustaining Healthy Teams is a collection of articles and essays, many of which have been published elsewhere. Together with the Public Health Foundation, Grace L. Duffy and John W. Moran have brought them together in this volume to support the effective creation and work of teams, particularly in the realm of public health.

We are grateful for the authors' permission for the material to be published here, and for their efforts to review the edited and reformatted chapters.

Citations for works published in whole or in part elsewhere are listed below.

Beitsch L, Duffy G, Moran J. Ready, AIM, Problem Solve. *Quality Texas Foundation Update*, October 2009.

Duffy GL, McCoy K, Moran JW, Riley W. The Continuum of Quality Improvement in Public Health, *The Quality Management Forum*, Winter 2010, pp 1, 3-9.

Duffy GL, Moran JW, Riley W. Rapid Cycle PDCA. *Quality Texas Foundation Update*. August 2009.

Duffy GL, Moran JW, Riley W. TAPP into the PDCA Cycle to Make Improvements in Public Health. *Quality Texas Foundation Update*, June 2009

Gorenflo G, Moran JW. The ABCs of PDCA for Public Health Agencies. *ASQ Healthcare Update*, June 2010.

Kuras T, Moran JW. 20 Questions to Ask Your Teams. *The Quality Management Forum*, Winter 1997, pp. 4-5.

Moran JW, Duffy GL. Team Chartering. *The Quality Management Forum*, Spring 2011, pp. 11-16.

Moran JW, Duffy GL, Pierson E. Using QI Skills in Daily Work. *The Quality Management Forum*, Winter 2011, pp. 6-10.

Applications and Tools

for Creating and Sustaining Healthy Teams

Preface

Applications and Tools for Creating and Sustaining Healthy Teams is designed to be a guide for organizations that have had marginal success with teams or are exploring how to launch successful teams. The authors have been involved with over a thousand teams as sponsors, team leaders, and facilitators. This book is based on what makes teams successful. We invited authors who are actively involved in successfully using problem-solving teams in a healthcare or public health environment to provide their perspective on what works to create high-performing teams.

Teams need to begin in the right direction. A developing team needs the right members and leader. The team then needs regular checkups to ensure that it is performing at its peak potential. Any problems must be diagnosed quickly and the right intervention prescribed to get back on track. The coaching and facilitation process takes a regular pulse of the team to make sure it is healthy. Then teams need a deliberate and defined planning and problem-solving process such as Plan-Do-Check-Act (PDCA) to achieve measurable improvements in the efficiency, effectiveness, performance, and outcomes of the process under investigation.

The three integrated phases to a robust teaming process are shown in Figure 1:[1]

1. Teaming Process
2. Coaching and Facilitation Process
3. Planning and Problem-Solving Process

Figure 1: The Integrated Phases

Details of each process are shown in Figure 2. Each process phase details the steps that most teams follow to ensure team health and reach a successful conclusion to their assigned problem. These steps for a healthy teaming process provide a guide to the sponsor who is chartering a team. A new team must follow a defined sequence to be successful in their problem-solving effort. Each section of this text contains an integrated set of articles that develop and support the creation of healthy teams.

[1] Burton T and Moran J. *The Future-Focused Organization*. Englewood Cliffs, NJ: Prentice Hall PTR; 1995.

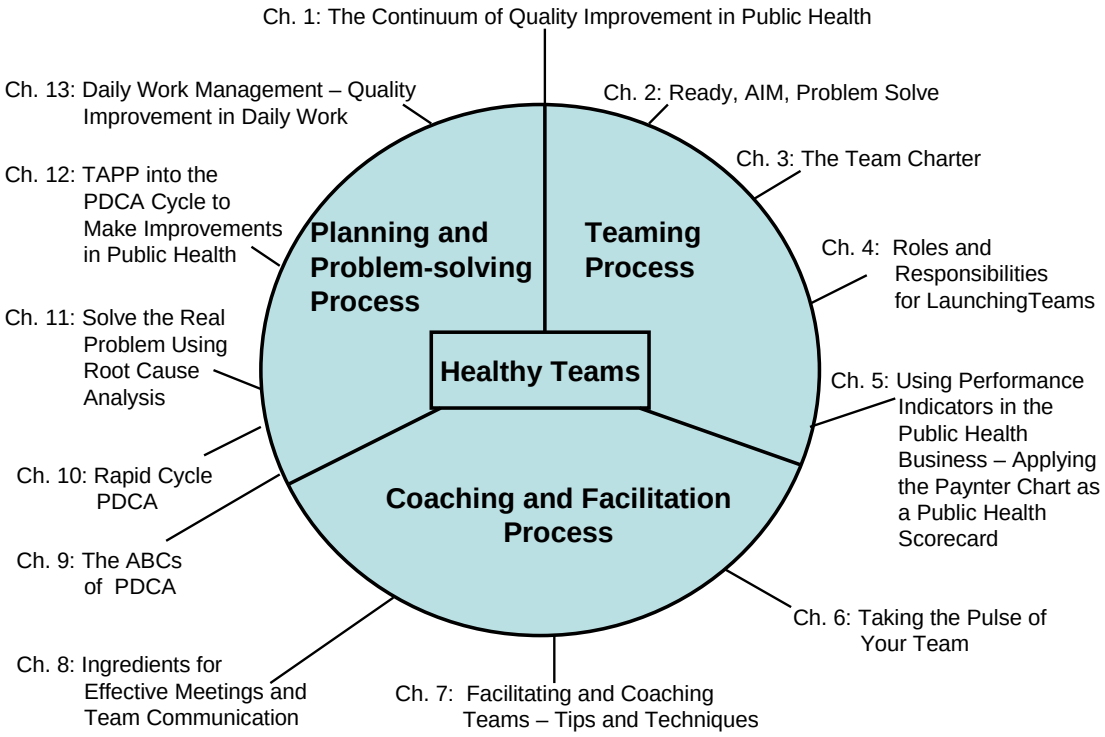


Figure 2: Text Chapters Mapped to the Integrated Process for Healthy Teams

The Teaming Process starts with the team sponsor developing an aim statement describing the current and future state and what needs to be achieved by the team. A detailed explanation of how to develop an aim statement is introduced in Chapter 2. Once the aim statement is developed, the team sponsor develops the first draft of a team charter as detailed in Chapter 3 and provides the documentation that gives a team the authority to act, make decisions, and implement approved recommendations.

Chapter 4 introduces the roles and responsibilities that make a successful team function well. It is important to make sure that a team has the right members, leader, and coach/facilitator with knowledge of the process to be studied. Providing the team with the appropriate training is a requirement to guide them in the problem-solving process.

The Coaching and Facilitation Process in Chapter 6 discusses ways to take the pulse of a team on a regular basis to make sure that it is healthy. Chapter 7, Facilitation and Coaching, describes a process to help the team develop a set of interpersonal competencies essential for effective communication and planning. Interpersonal competencies that coaches and facilitators need to develop and constantly reinforce are listed below.

- Maintain and enhance self-esteem of team members
- Focus on specific behaviors and outcomes for productivity
- Listen for understanding so everyone's opinions are heard and processed
- Communicate benefits of how solving the assigned problem benefits everyone
- Set goals and follow-up dates to keep the team focused on the finish line
- Establish milestones and monitor what must be achieved when

Chapter 8, Ingredients of Effective Meetings and Team Communication, provides a series of templates to support planning and facilitation of team meetings, setting agendas, taking minutes, and evaluating the effectiveness of team meetings and communication.

The Planning and Problem-Solving Process provides the team with a quality improvement model such as PDCA to guide them in a systematic way. The elements of the Plan-Do-Check-Act cycle are detailed in Chapter 9 and in the references at the end of this chapter. Chapter 10 advances the basic PDCA cycle into a more focused, reduced cycle time format for teams seeking targeted outcomes. Rapid Cycle PDCA stresses advanced planning to assure that resources are available to expedite team action once the implementation begins.

Chapter 11, Solve the Real Problem Using Root Cause Analysis, describes an effective problem-solving process that gets to the true cause of an issue, thus facilitating a solution that truly keeps the situation from recurring. Finally, Chapter 12: TAPP into the PDCA Cycle to Make Improvements in Public Health shows how TAPP "targets action for process performance." This TAPP model for measuring process performance is a critical step toward data-driven problem-solving and decision-making. Too often, teams default to using intuition and guessing rather than gathering accurate data to identify the true facts of a situation. TAPP is a proven model to support effective measures for problem-solving.

The last chapter, Daily Work Management – Quality Improvement in Daily Work, focuses on a process to apply Quality Improvement tools and techniques that teams learned in training. Teams must have the chance to apply QI tools during the teaming experience and in their daily work to make continuous improvement.

In addition to *Applications and Tools for Creating and Sustaining Healthy Teams*, the following references provide more details on the concepts introduced in this text:

Beecroft G, Duffy G, Moran J. *The Executive Guide to Improvement and Change*. Milwaukee, WI: Quality Press; 2003.

Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

Duffy G, Moran J, Riley W. *Quality Function Deployment and Lean Six Sigma Applications in Public Health*. Milwaukee, WI: Quality Press; 2010.

In addition, all of the blank forms or checklists shown in the various chapters are included in Appendix B and are available on the ASQ Quality Management Division's web site at http://www.asq-qm.org./. All forms are also available on www.PHF.org from the Public Health Foundation.

Chapter 1: The Continuum of Quality Improvement in Public Health

Grace L. Duffy, Kim McCoy, John W. Moran, and William Riley

As the public health community expands its use of quality improvement (QI), confusion often occurs about how all of the tools, techniques, methodologies, models, and approaches fit together. Understanding quality improvement models, the basic and advanced tools of quality improvement, Quality Function Deployment, Lean Six Sigma, Daily Management, Mobilizing for Action through Planning and Partnerships (MAPP),[2] Turning Point,[3] Baldrige,[4] and state quality award models and how they fit into the daily life of public health processes can seem daunting. At times, these models are introduced as competing techniques and processes. The models are not tied together into a system by which they complement each other. The public health community would benefit from an overall approach to building an improvement culture.

As shown in Figure 1.1, QI in public health is a never-ending process that pervades the organization when fully implemented. Top organizational leaders address the quality of the system at a Macro level with *Big "QI"* In the middle, professional staff attack problems in programs or service areas by improving particular processes with *Little "qi."* At the individual level, staff seek ways of improving their own behaviors and environments with *Individual "qi."*

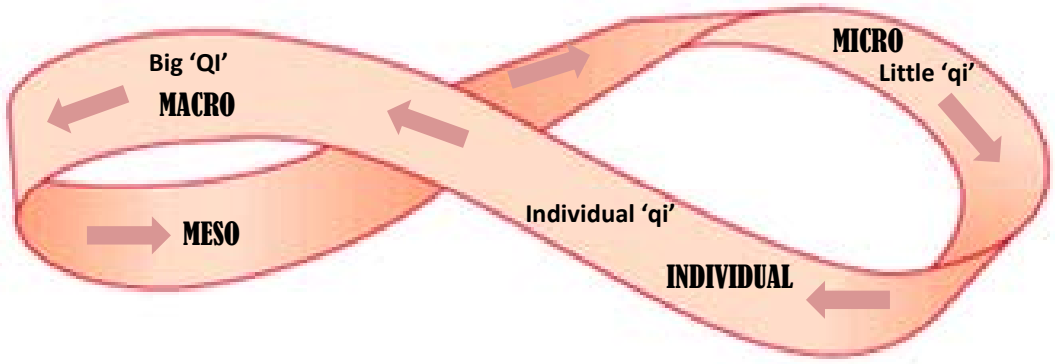


Figure 1.1: Continuous Quality Improvement System in Public Health

[2] NACCHO. Mobilizing for Action through Planning and Partnerships (MAPP). http://www.naccho.org/topics/infrastructure/MAPP/index.cfm. Copyright 2011. Accessed July 12, 2009. Mobilizing for Action through Planning and Partnerships (MAPP) is a community-driven strategic planning tool for improving community health.

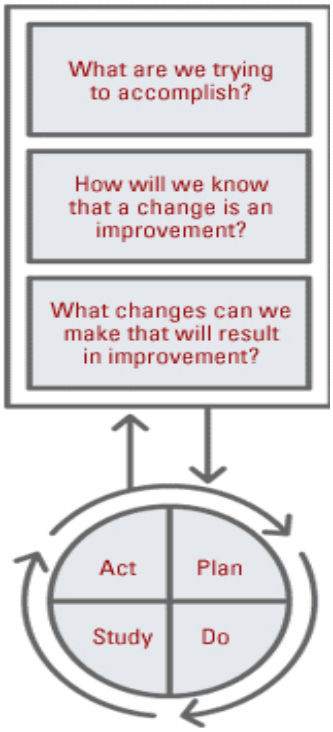
[3] The Turning Point Performance Management National Excellence Collaborative. *From Silos to Systems: Using Performance Management to Improve the Public's Health.* Washington, DC: Public Health Foundation; 2002. Turning Point is a strategic model for the use of performance standards, measures, progress reports, and ongoing quality improvement efforts to ensure that a public health agency achieves desired results.

[4] Baldrige Performance Excellence Program. Criteria for Performance Excellence. http://www.nist.gov/baldrige/publications/criteria.cfm Updated January 19, 2011. Accessed July 5, 2009.

When starting their quality journey, public health organizations tend to embrace *Little "qi*," which means striving for quality in a limited or specific improvement project or area. The key steps for *Little "qi*" include utilizing an integrated set of QI methods and techniques that create a value map; identifying the key quality characteristics; analyzing process performance; reengineering the process if Micro is needed; and locking in improvements. They can be viewed as a tactical or systems approach to implementing quality and beginning to generate a culture of QI within the organization.[5]

Process Improvement in a Public Health Department

The Model for Improvement[6] is one of several useful approaches for public health departments. As shown in Figure 1.2, The Model for Improvement consists of several components, including: setting an aim statement, developing measures, implementing tests of change, and using the Plan-Do-Study-Act (PDSA) cycle.



1. Define the problem
2. Set an aim
3. Establish measures of progress
4. Develop an action plan
5. Test interventions
6. Monitor progress and evaluate results
7. Implement changes

Figure 1.2: Minnesota Public Health Continuous Quality Improvement Model for Improvement[7]

[5] Beitsch L, Bialek R, Cofsky A, Corso L, Moran J, Riley W. Defining Quality Improvement in Public Health. *Journal of Public Health Management and Practice*. 2010; 16: 5–7.
[6] Clifford LN, Langley JG, Nolan KM, Nolan TW, Provost LP. *The Improvement Guide: A practical approach to enhancing organizational performance*. Sadbury, MA: Jossey-Bass; 1996.
[7] Institute for Healthcare Improvement. Testing Changes. http://www.ihi.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/HowToImprove/testingchanges.htm. Accessed March 30, 2011.

Little qi

Thingstad, Boe, Riley, and Parsons[8] recently reported an example of using the Model for Improvement to demonstrate the application of *Little "qi"* in a Women, Infants, and Children (WIC) Program of a county public health department in Minnesota. The WIC Program is an important nutrition program created in 1966 by the federal government to address concerns about the impact of inadequate nutrition during critical periods of fetal infant and child growth and development.[9] The QI project was conducted in the third largest population in the state with an annual WIC caseload of more than 70,000 clients.

The study was carried out using the Model for Improvement. Table 1.1 shows how the four components were used: setting the AIM in specific terms, establishing measures to indicate whether a change actually would lead to program improvements, developing general ideas for change that could stimulate specific changes leading to improvements, and applying a Plan-Do-Study-Act (PDSA) cycle to test and implement changes. The research team initiated this study by establishing a QI team; the team then collected initial data regarding the clinic's baseline process performance and client satisfaction. The team created a value stream map to illustrate the current process and used a control chart to analyze current process performance levels. Upon determining that the process was stable but not capable of meeting clients' expectations, the team applied statistical process control analysis to re-engineer the process. Follow-up data demonstrated that the re-engineered process led to improved performance, so the team locked in the new process based on these data.

AIM Statement	Improve client satisfaction in county health department WIC program in six months.
Measures of Change	Decrease lobby wait time by 20%; Increase client satisfaction scale by 25%.
Change Concept	Re-engineer the WIC service process.
PDSA Cycle	Analyze process, create value stream map, eliminate non-value-added steps, pilot new process, document process shift, and lock in change.

Table 1.1: Dakota County Public Health Department WIC Program Process Improvement Project Overview

In the absence of "special cause" in lobby wait time in the process analysis phase of the study, the improvement team focused on process re-engineering rather than process improvement. The intervention consisted of creating revised floor travel patterns, redeploying personnel, and conducting staff training to achieve client goals.

[8] Parsons H, Riley W, Thingstad-Boe D. (2009) Improving Service Delivery in a County Health Department WIC Clinic: An Application of Statistical Process Control Techniques. *American Journal of Public Health.* 2009; 9 (9): 1619-1625.

[9] United States Department of Agriculture, Food and Nutrition Service. Women, Infants, and Children. http://www.fns.usda.gov/wic/ Updated February 25, 2011. Accessed July 8, 2009.

The results of the *Little "qi"* project are shown in the X-bar Chart in Figure 1.3. Not shown here, a Moving Range (MR) chart analysis was done which shows the initial process performance for 10 consecutive clinic days at the beginning of the study and 14 consecutive days after the process was redesigned. The break in the center line reflects the process shift that occurred between the pre-intervention and post-intervention process performance. The control chart shows a reduction in mean wait time from 15.1 minutes to 10.9 minutes, a 28% decrease. The study also found that client satisfaction increased 20 percent as a result of reduced lobby wait time.

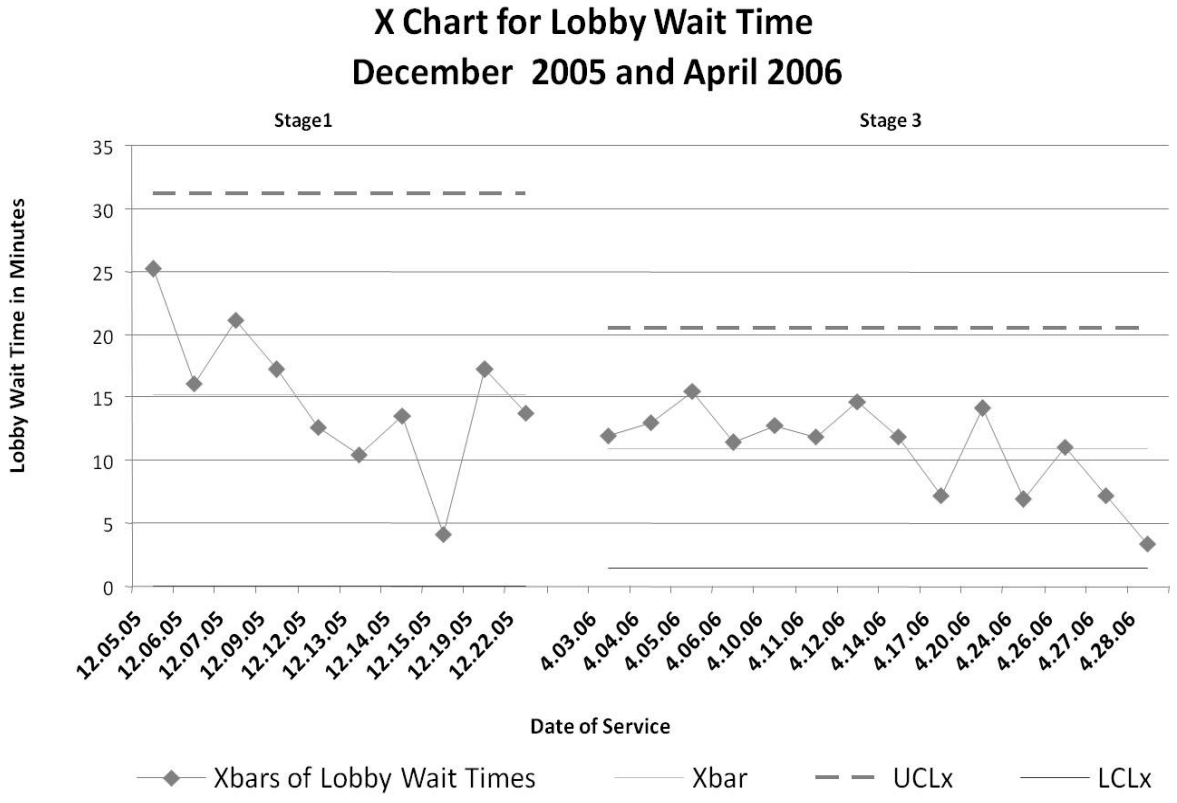


Figure 1.3: Chart for Lobby Wait Time, Dakota County HD WIC Program

Big QI

Long wait times in WIC clinics have been shown to be a significant barrier to picking up food vouchers while shorter wait times in WIC programs have been shown to enhance clients' overall experience.[10] This example demonstrates the importance of designing processes that minimize or eliminate client service barriers. It also emphasizes the pressure in public health departments to increase efficiency and seek ways to use program resources more effectively to reduce wait times, creating improved access.

[10] Green CG, Harrison M, Henderson K, Lenihan A. Total Quality Management in the Delivery of Public Health Services: A Focus on North Carolina WIC Programs. *Journal of Public Health Management and Practice*. 1998; 4:(5): 72-81.

The Dakota County Public Health Department example also highlights the movement toward Big QI in public health departments. The health department senior management gave initial approval to start the process improvement project and supported all phases of the undertaking.[11] As organizations become knowledgeable and more experienced with QI and as leaders and staff witness the results of *Little "qi"* efforts, they are likely to seek ways to expand the impact of QI to various parts of the organization.

Big "QI" can be viewed as a strategic or macro systems approach to implementing quality. Integration of QI processes into daily work and agency-wide performance management is often driven by implementation of frameworks such as MAPP, the Baldrige Criteria, Lean, or Turning Point. Leaders must be deliberate and persistent in their efforts to push QI throughout the organization until it becomes part of the culture and practice. *Big "QI"* refers to the practice of striving for excellence in all of an organization's services, products, processes, and overall operations, making it a top management philosophy resulting in complete organizational involvement in quality.

Large-Scale Public Health System Quality Improvement

Building a QI capacity in public health needs to be done at both the large scale *system level* as well as the *organizational level*. At the large scale public health system level, the authors are involved in integrating the Macro, Meso, Micro, and Individual models of Continuous QI within a number of public health organizations at the local, state, and regional levels. For example, the Minnesota Public Health Collaborative for Quality Improvement (MPHCQI)[12] provides a framework for beginning to build a QI culture in a state public health system.

The Macro level of the Continuous Quality Improvement (CQI) System shown in Figure 1.1 is the strategic integration of long-term approaches to meet priority outcomes at the national, regional, or state level for public health. The Meso level contains the planning and deployment of programs that translate strategic vision and long-range outcomes into state, county, city, and other local projects or activities to meet specific community needs. The Micro level encompasses the health department projects and programs instituted at the functional unit level.

Table 1.2 shows how the Macro, Meso, Micro, and Individual levels of the CQI System model relate to *Big "QI," Little "qi,"* and *Individual "qi."* The Meso level of the CQI System model overlays both the Macro and Micro level as a transition for deployment from organizational to unit-specific projects. Table 1.2 also suggests the use of basic and advanced tools of quality within the scope of organization versus unit activities. Although flexibility is required in using tools based on project need, the basic tools of quality, such as flowcharts and histograms, address more quantitative and tangible issues of immediate problem solving. The advanced tools of

[11] Parsons H, Riley W, Thingstad-Boe D. (2009) Improving Service Delivery in a County Health Department WIC Clinic: An Application of Statistical Process Control Techniques. *American Journal of Public Health.* 2009; 9 (9): 1619-1625.
[12] McCoy K, Riley W. QI Collaboratives for a Healthier Minnesota. (2009) World Conference on Quality and Improvement, Session W06. Minneapolis, MN.

quality use more behavioral and decision-making tools such as force field analysis and interrelationship digraphs. The Meso CQI System level uses even more flexible tools such as Quality Function Deployment and Lean Six Sigma to provide structure for translating customer needs into specific actions and tasks for problem solving and improvement. The Individual system level uses any tools that support the specific task, although the basic tools are most often employed.

Topic	Big 'QI' – organization-wide	Little 'qi' – program/unit	Individual 'qi'
System level ⟶	*Macro* *Meso*	*Micro*	*Individual*
Quality Tools ⟶	Advanced QFD/Lean	Six Sigma	Basic
Improvement Quality Improvement Planning Evaluation of Quality Processes Analysis of Processes Quality Improvement Goals	System focus Tied to the Strategic Plan Responsiveness to a community need Cut across all programs and activities Strategic Plan	Specific project focus Program/unit level Performance of a process over time Delivery of a service Individual program/unit level plans	Daily work level focus Tied to yearly individual performance Performance of daily work Daily work Individual performance plans

Table 1.2: Macro, Meso, Micro, and Individual Levels Mapped to Big, Little and Individual QI

Minnesota has 87 counties and includes 11 Native American tribal entities. Seventy-five local health departments and 53 community health boards serve the public health needs of local communities across the state. The State Community Health Services Advisory Committee includes representatives of each community health board and advises the Commissioner of Health.

In partnership with local health departments, the Minnesota Department of Health established 40 Essential Local Activities that define what every resident of Minnesota should be able to expect from his or her local health department. These activities are organized into six areas of public health responsibility. These Micro-level local activities are monitored at the Macro (senior management) level, according to the continuous improvement model in Figure 1.1, through annual reporting through the Planning and Performance Measurement Reporting System. The reporting system includes data that describe local public health programs and functions, budgets, staffing, and capacity.

At the Macro level, the Minnesota Department of Health coordinates a 5-year local assessment and planning process that is mandated by statute to facilitate achievement of the desired statewide outcomes for each of the six areas of public health responsibility.

The Minnesota Department of Health joined 15 other state programs at a national level through the Multi-State Learning Collaborative (MLC), funded by the Robert Wood Johnson Foundation. The MLC was established in 2006 and is targeted to end in 2011 with the kickoff of a nation-wide system of performance management and public health system accreditation. The goals of the MLC are to advance accreditation and quality improvement strategies in public health departments. In 2009, 16 states were involved in the collaborative.[13] The goal of the Robert Wood Johnson Foundation and the Public Health Accreditation Board[14] is for 60% of the U.S. population to be served by an accredited health department by 2015.

Minnesota joined the MLC during the second phase of activities in 2007. The Minnesota Public Health Collaborative for Quality Improvement (MPHCQI) was established as a partnership among the Minnesota Department of Health, the Local Public Health Association, and the University of Minnesota School of Public Health. The goals of the MPHCQI are:

- To build public health workforce capacity to use quality improvement tools and methods
- To establish a performance management system that is aligned with the national accreditation standards.

The MPHCQI organized 8 projects that involved 34 local health departments to test a systematic integration of quality tools and techniques based on the Model for Improvement,[15] shown in Figure 1.2. The Model for Improvement is a data-based approach with a repeatable process for improvement and a strategic foundation for benchmarking and accreditation, which is the overall goal of the MPHCQI and the national MLC.

Once an organization understands the priority areas of focus for improvement, it would migrate to a Meso system-level model of improvement which is usually described as PDSA or Plan-Do-Check-Act (PDCA).[16] At the Meso system level, clear problem statements are necessary so that those people assigned to work on the priority issues understand the importance and scope of their assignment. The problem statement should clearly indicate whether the project and problem to be solved are specific to a program/unit or are organization-wide.

The Meso system model of PDCA or PDSA links together two general approaches on how to use the basic and advanced tools of quality. Normally the program- or unit-specific problems start with the basic tools of quality to determine the root cause of the problem, as seen in Figure 1.4. Organization-wide problems generally require the advanced tools of quality, as shown in Figure 1.5, to solve the problem.

[13] National Network of Public Health Institutes. Multi-State Learning Collaborative: Lead States in Public Health Quality Improvement. http://www.nnphi.org/mlc. Copyright 2010. Accessed July 13, 2009.
[14] Public Health Accreditation Board. http://www.phaboard.org/ Copyright 2010. Accessed July 13, 2009.
[15] Clifford LN, Langley JG, Nolan KM, Nolan TW, Provost LP. *The Improvement Guide: A practical approach to enhancing organizational performance*. Sudbury, MA: Jossey-Bass; 1996.
[16] Deming WE. *Out of the Crisis*. Cambridge, MA: MIT; 1982.

Once the type of problem to solve is identified, the tools to use are described in a general flow of application. Clear articulation of the problem statement is the first step in the MPHCQI framework in Figure 1.2.

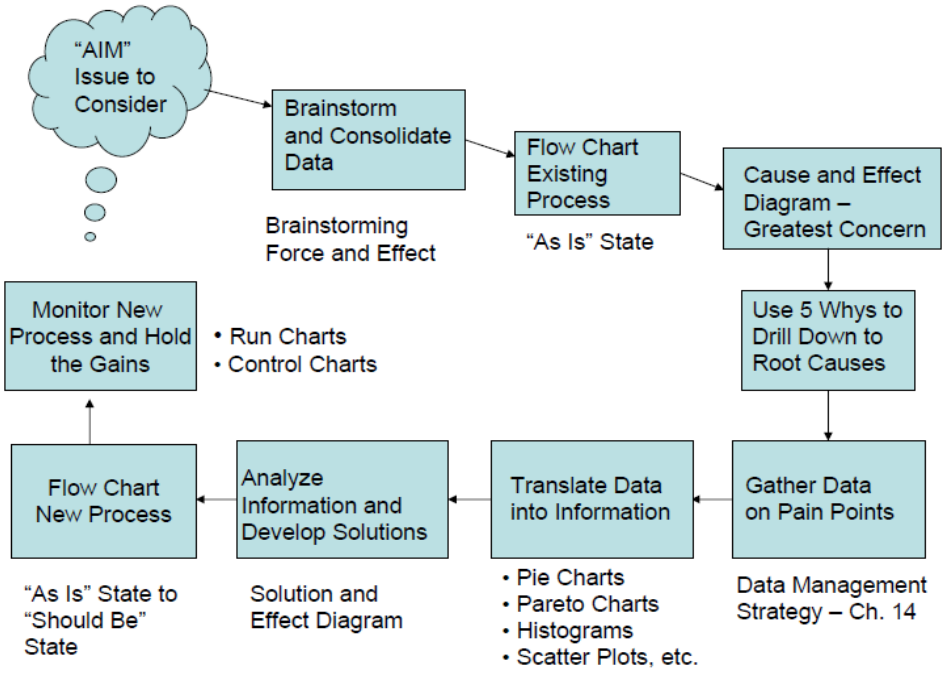


Figure 1.4: General Approach to Using the Basic Tools of Quality Improvement[17]

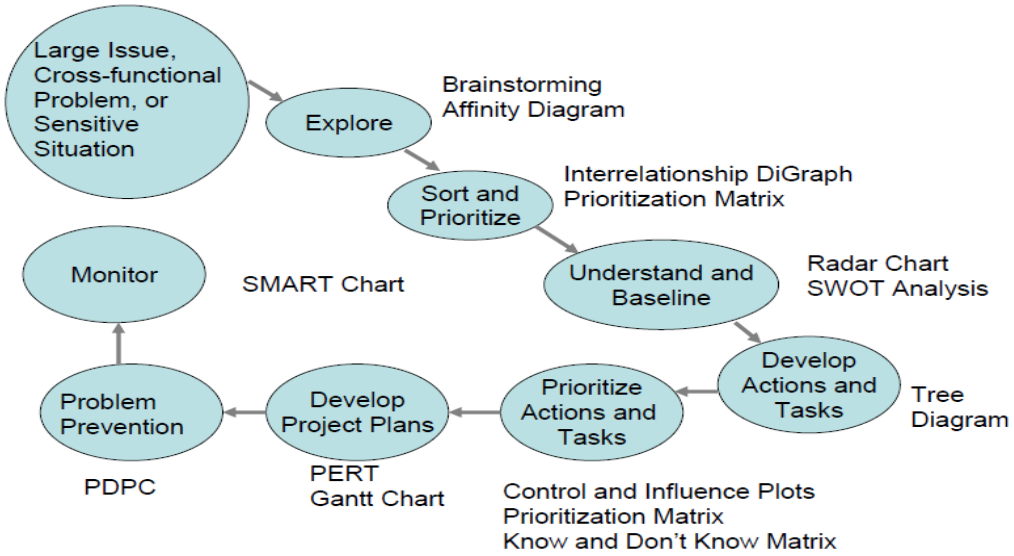


Figure 1.5: General Approach to Using the Advanced Tools of Quality Improvement[18]

[17] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

Continuous improvement is accomplished by utilizing an integrated set of QI methods and techniques that create a value map, identify the key quality characteristics, analyze process performance, reengineer the process if needed, and lock in improvements. Figure 1.6 is an example from Carver County, Minnesota of an initial flowchart to identify the current state of a process supporting the local Health Alert Network (HAN). What began at the Micro level as a *Little* "*qi*" opportunity to reduce cycle time and rework at the local level quickly became a Meso level project by considering the impact of the Local Alert Confirmation Test shared across all of the health departments within the state. This common process was more standardized rather than performed in different ways across the Minnesota Health Alert Network.

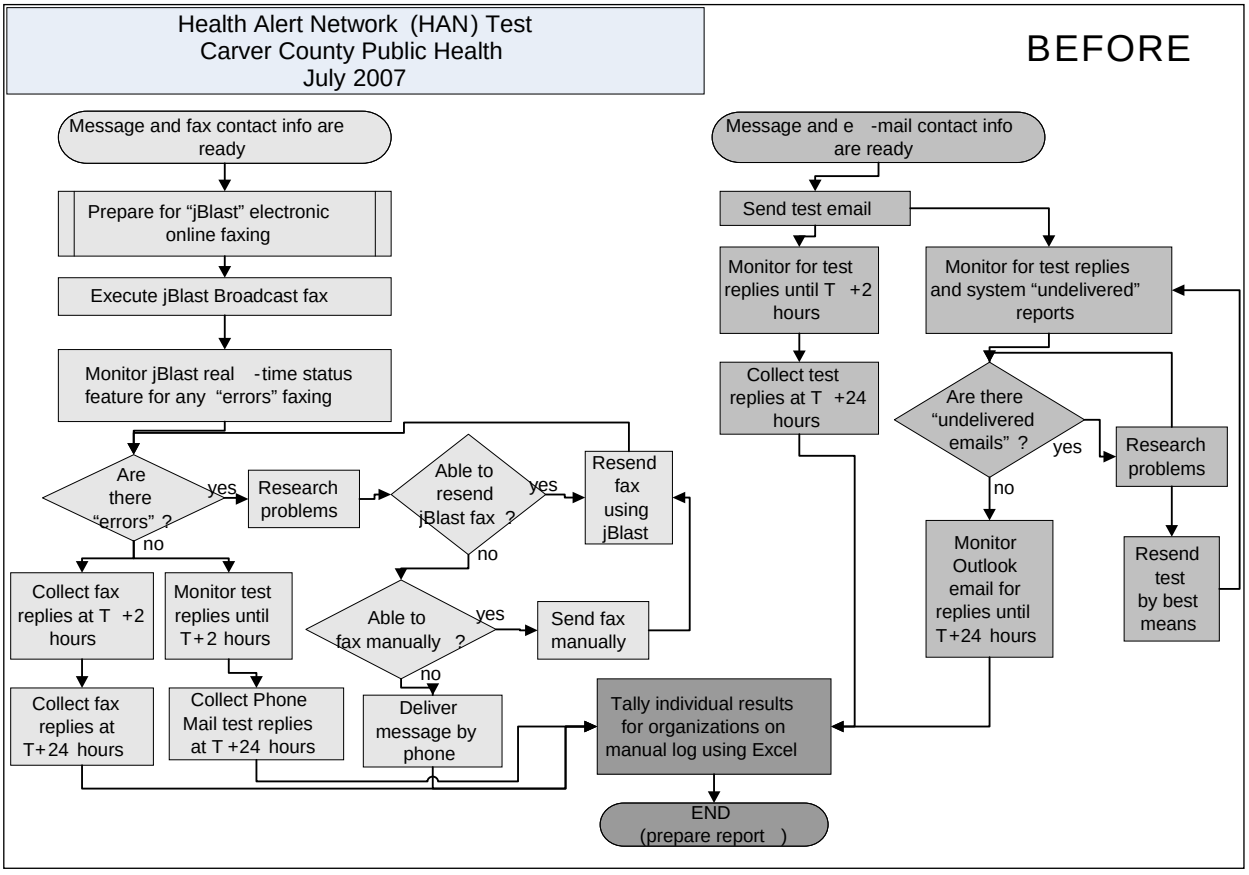


Figure 1.6: Carver County Local Alert Confirmation Test Flow Chart

The current state map (flowchart) in Figure 1.6 provided the base of team discovery for the problem statement and development of a Cause and Effect Diagram shown in Figure 1.7.

[18] Bialek R, Duffy G, Moran J. The Public Health Quality Improvement Handbook. Milwaukee, WI: Quality Press; 2009.

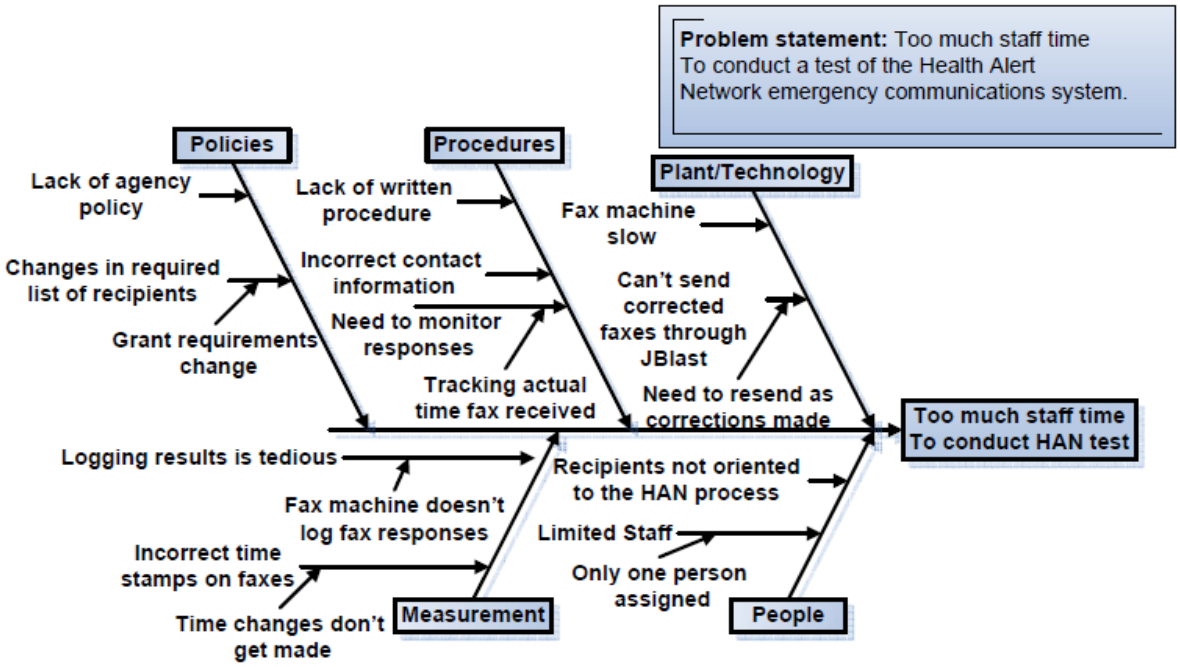


Figure 1.7: Carver County Local Alert Confirmation Test Cause and Effect

The brainstorming of issues involved with conducting the HAN test led to an affinity exercise to identify five symptom categories related to the problem statement of: "Too much staff time to conduct HAN test:"

- Policies
- Procedures
- Plant/Technology
- Measurement
- People

Analysis of the symptoms listed in the Cause and Effect Diagram shown in Figure 1.7 led to the selection of three priority opportunities for improvement. Table 1.3 identifies the three interventions chosen by the Carver County improvement team and the resulting changes to the Alert Test process.

INTERVENTION	RESULT
Two people logging replies	No change in staff time
Streamlined Excel spreadsheet	Decrease of 2 hours
Revised reply form (email and fax) and decreased monitoring of faxes	Decrease of 5 hours

Table 1.3: PDSA – Carver County HAN Alert System Tests of Change

As noted in Table 1.3, the intervention of assigning two people to log replies from the locations receiving the test alert made no change in the cycle time of the activity. The two other interventions listed in the PDSA table decreased the cycle time of the test process by 2 and 5 hours, respectively. Figure 1.8 is a representation of a process redesign netting a 70% decrease in staff time devoted to conducting a HAN test.

QI in an organization can start top down, bottom up, or both simultaneously. As QI becomes the norm in an organization, *Individual "qi"* begins to appear in daily work. Daily Management is the use of *Individual "qi"* to make improvements to daily work; it becomes a habit. Daily Management is the overarching philosophy of incremental change in the daily work completed to meet the needs of the client and the community. It is a cornerstone of the Continuum of Quality Improvement in Public Health described in Figure 1.1. People doing the work have to make daily incremental improvements to accommodate shifting public health needs.[19]

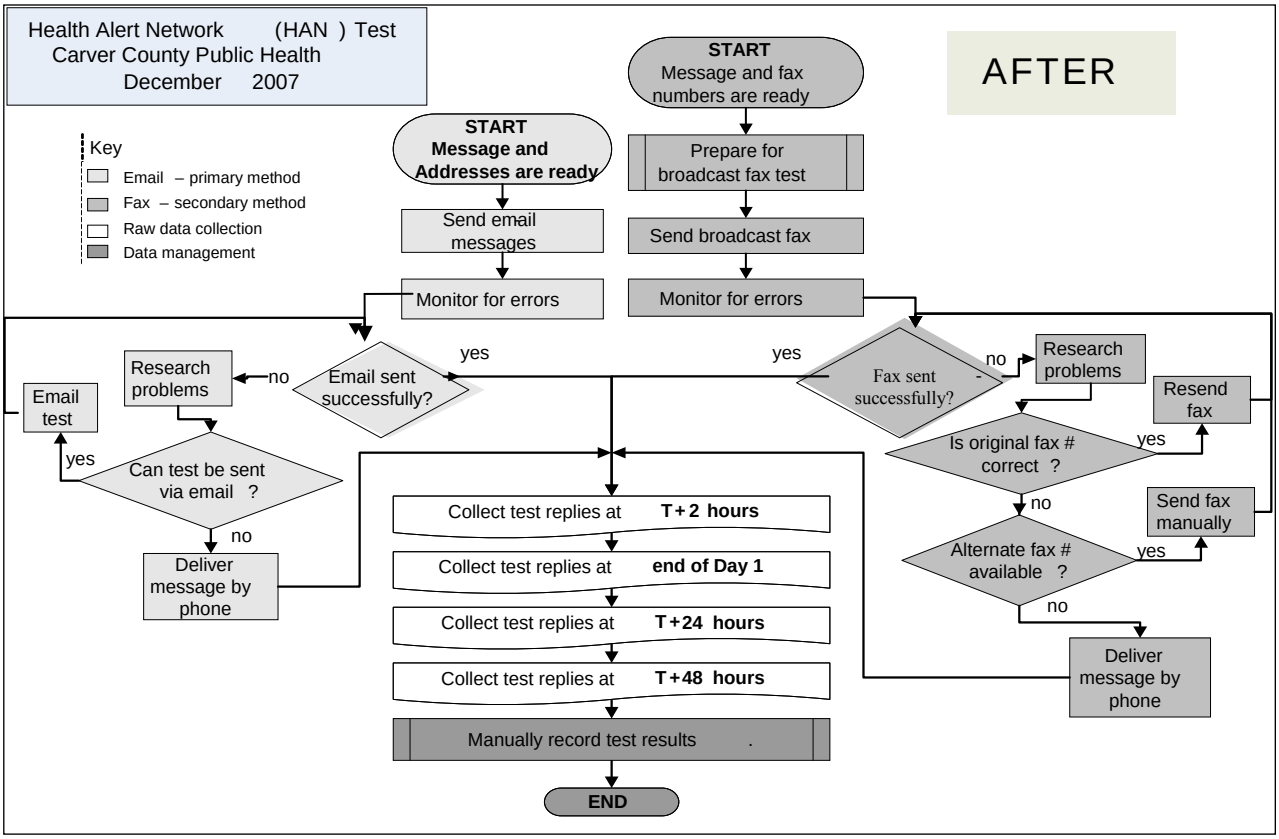


Figure 1.8: Future State Flow Chart of Optimized HAN Test Notification

Big "QI," Little "qi," and Individual "qi"

A transformational change occurs when QI is based on a comprehensive approach starting at the Macro level, or *Big "QI,"* using a model like Turning Point or the Baldrige Model that describes

[19] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

an overall method to manage a public health department. Table 1.2 illustrates three different levels of QI—*Big "QI," Little "qi,"* and *Individual "qi"*—and lists five QI characteristics: Improvement Focus, Quality Improvement Planning, Evaluation of Quality, Analysis of Processes, and Quality Improvement Goals.

Big "QI" characteristics are focused on the organization as a whole, which translates in the public health environment into the department, state, regional, or national scope. *Little "qi"* is viewed as the project or program level within a specific local public health department or occasionally across local departments serving a large metropolitan area which overlaps several county and city borders. *Individual "qi,"* as shown in Table 1.2, reflects the earlier concept of Daily Management as practiced by the QI professional within the scope of a work assignment.

Quality Function Deployment (QFD)[20] and Lean Six Sigma (LSS)[21] are two additional QI methodologies introduced to this model. Positioning them between the Meso and Micro system levels helps to expand the problem-solving ability of QI teams. QFD assists in capturing the Voice of the Community (VOC) and the community needs as determined through a needs assessment. It then translates into programs and services that address the community or internal user needs. Lean Six Sigma is a methodology which integrates concepts and tools from Lean Enterprise and Six Sigma methodologies.

QFD identifies what is important to the community served by the health department, and Lean Six Sigma ensures that all available resources are directly engaged in the fulfillment of community needs. Lean activities maximize use of resources and minimize waste within all processes. This elimination of waste is a critical success factor in a resource-constrained environment. Lessons from competitive industry suggest that faster or better ways to do the same function for less, given the same use of resources, will always be possible. Six Sigma activities seek to reduce variation in delivery of products and services to meet customer expectations and needs.

Conclusion

Figure 1.9 shows the entire Continuous Macro-Meso-Micro-Individual Quality Improvement System in Public Health and how tools, techniques, methodologies, and approaches fit together and support each other. A health department can start anywhere on this model, but as the QI capacity expands, the department can move to a technique more appropriate for its needs.

[20] Cox CA, Moran JW, ReVelle JB. *The Quality Function Deployment Handbook.* New York. NY: John Wiley & Sons; 1998.
[21] George ML. *Lean Six Sigma for Service*. New York, NY: McGraw Hill; 2003.

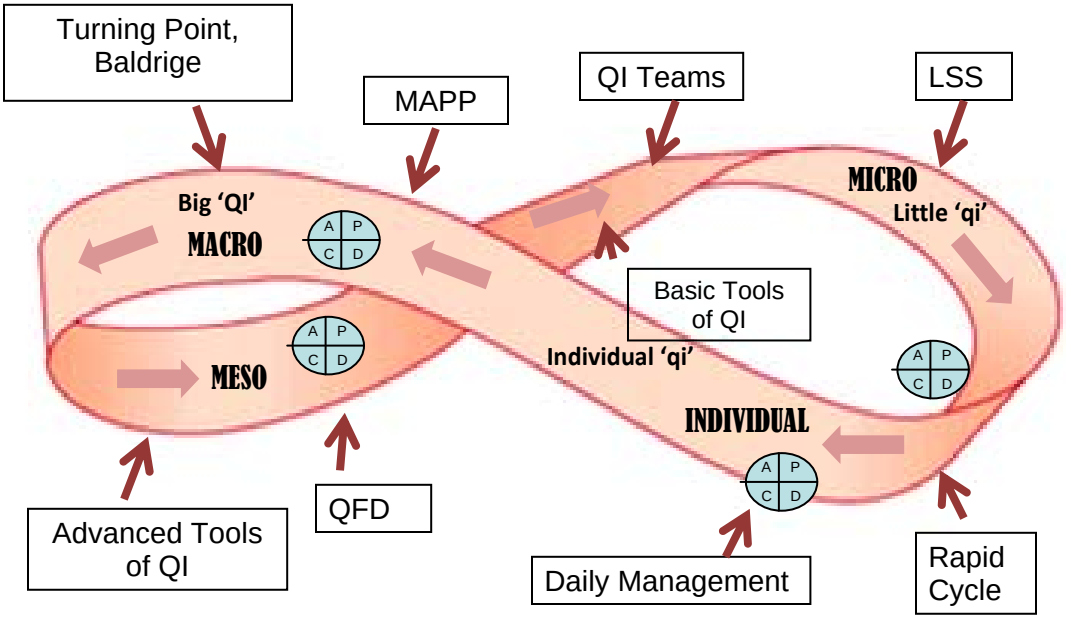


Figure 1.9: Continuous Quality Improvement System in Public Health

The Minnesota Public Health Collaborative for Quality Improvement (MPHCQI) has limited the scope of its efforts to the Model for Improvement described in Figure 1.2. Although this chapter reflects only one example of the projects undertaken by the MPHCQI as part of the Multi-state Learning Collaborative, the total endeavor consisted of 8 projects. To date, the results of the MPHCQI include:

- Approximately 250 state, local, and university public health professionals have been trained in 10 QI methods
- 34 local public health agencies across the state of Minnesota have implemented QI projects

Improvement was achieved in seven out of eight projects and shared with local public health departments across the state; one of the eight projects made no improvement. Of the seven projects that made improvement, five achieved breakthrough improvement:

- 70% reduction in staff time devoted to Health Alert Network testing (the example offered in this paper)
- Over 100% increase in leadership understanding of public health workforce competencies
- Over 100 children enrolled in a dental varnish treatment program
- 60% increase in timely completion of Personal Care Assistant reassessments
- 169 children screened for behavioral health issues

2 of the 8 projects achieved incremental improvement:

- 3% increase in immunizations for WIC (Women, Infants, and Children) clients, 6% increase for non-WIC clients
- Reduced number of forms for recording treatment of latent TB infection from thirteen to six

These projects are the target of continued evaluation for sustainability. Examples of this monitoring and control are:

1) Self-administered surveys after each learning session
2) Self-administered online survey of 65 team members at conclusion of projects
3) One-year follow-up interview of team leaders

Minnesota public health quality professionals, as well as public health quality professionals in other states, are working with the authors of this chapter to incorporate the CQI System, including projects at the Macro, Meso, and Micro level into their normal operating processes. Another series of Minnesota public health projects was started in 2009 with 130 QI teams across the state.

The Continuous Quality Improvement System in Public Health model is showing health department professionals that QI methods can produce measurable change in delivery of local public health services. Slight adaptations to the traditional basic and advanced tools of quality make the model more amenable to public service settings by using the language of the public health professional. The successes realized in the projects presented in this chapter may not relate directly to all public health systems. The evidence base will be expanded as more public health departments conduct QI initiatives.

Chapter 2: Ready, AIM, Problem Solve[22]

Les Beitsch, Grace L. Duffy and John W. Moran[23]

"To solve a problem or to reach a goal, you don't need to know all the answers in advance. But you must have a clear idea of the problem or the goal you want to reach."

W. Clement Stone

Public health quality improvement (QI) problem-solving teams often flounder from the lack of an initial clear and concise problem statement. Once teams narrow their problem statement down to a discrete issue, they are able to focus on and effectively apply QI tools. When teams lack focus on the real issue, they lose valuable problem-solving time. Team members become disenfranchised from the process since they seem to be going in circles without making progress.

When developing the AIM of the problem-solving team, thinking in terms of concentric circles, as shown in Figure 2.1, is helpful. The concentric circles represent layers of decreasing control from the center where the problem-solving team is in complete control to the outside layer where the team has little or no control over events or resources. The outer layers of the circle represent global rather than discrete issues. The farther away from the center, the more difficult it becomes to influence the outcomes of an issue. Starting at the innermost circle helps the problem-solving team develop issues that are discrete, measurable, and time-bound. It is likely that as the team gains experience and confidence, it will want to tackle issues in the more distant concentric circles where the larger payoffs in terms of community health improvement are.

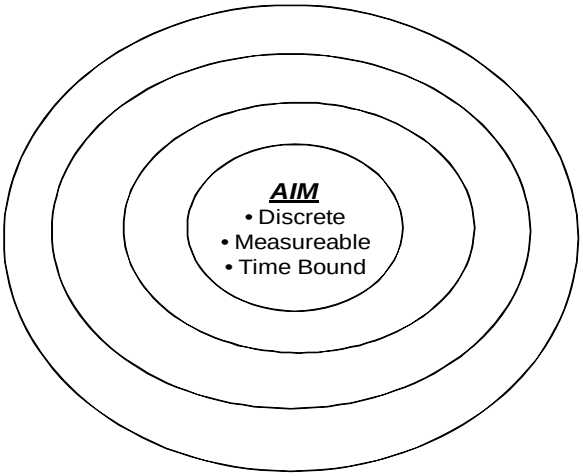


Figure 2.1: AIM Statement Characteristics

[22] Beitsch L, Duffy G, Moran J. Ready, AIM, Problem Solve. Quality Texas Foundation Update. October 2009.
[23] Les Beitsch, MD, JD; Grace L. Duffy, CMOQ/OE, CQIA, CLSSMBB; and John W. Moran, PhD, CMOQ/OE, CQIA.

Defining discrete issues helps a problem-solving team complete the PDCA/PDSA cycle quickly. This early success allows the team to gain experience and knowledge with the QI process. Once the teams experience success, they can begin another project. Rapid Cycle PDCA[24] allows problem-solving teams to tackle increasingly difficult projects. This Rapid Cycle PDCA is shown in Figure 2.2.

PDCA/PDSA should be repeated in spirals of increasing knowledge of the system that converge on the ultimate goal, each cycle closer than the previous.

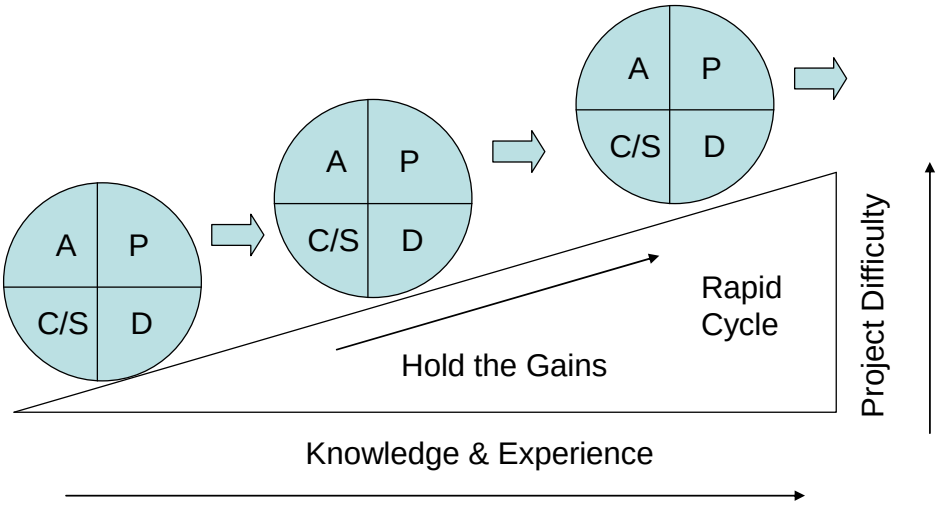


Figure 2.2: Rapid Cycle PDCA

One tool that the authors have found useful is a Focusing and Issue Statement,[25] which consists of seven steps:

1. Defining the current state
2. Moving to the future state
3. Describing the components of the focusing/issue statement
4. Writing the problem statement
5. Developing measures
6. Setting the timeframe for implementation
7. Establishing a communication plan

1. ***Defining the current state:*** In this step, it is important to describe the background of the issue or problem that has been selected. Defining the current state is usually completed for

[24]Duffy G, Moran J, Riley W. Rapid Cycle PDCA. Quality Texas Foundation Update. August 2009.
[25] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

those working on the issue/problem by the team sponsor or team leader. Some of the questions to answer are:

- What is the current state?
- Why is this important?
- What is it costing – time/dollars/staff/etc?
- What is the impact on clients?
- What is the impact on the division/agency?
- Other questions specific to the particular situation

Example of current state:
XYZ Health Department has not been collecting or using health outcome or health status data in a systematic way. Anecdotal evidence of increasing economic need is in the form of complains regarding overgrown lawns at vacant houses, increased food pantry usage, feedback from Rotary and Ministries, but there are no comprehensive profiles of at-risk populations.

Why this is important:
The community enjoys high social and economic standing and has perceived itself as immune from needing social and health services for many years. However, declining real estate values, while not causing abject destitution, have caused many people to be "upside down" in their mortgages so that they cannot pay for other things (like dentistry or glasses).

Foreclosures are resulting in property maintenance issues. Also, in a search for affordability in a high-cost area, more people are crowding into available apartments, causing rental property maintenance issues. In the past, residents in need have been drifting to the next town's outpatient clinics, so they have not been "counted" as residents. This neighboring clinic is scheduled to relocate to XYZ in 3 to 5 years, creating access issues for residents who have been traveling to that location for services.

What it is costing*:*
Since data are unavailable, the best response is unknown beyond an educated guess. Grants might be a possibility, but no data are available to support a grant request. Requesting funding as a budget line item is possible; however, no data are available to justify the request.

Shifting the cost of providing services to ABC Health Care Systems and other service providers that are not fully acknowledged results in under-reporting what is being provided by others and under-assuring that the services are being provided to those in need.

2. ***Moving to the future state:*** In this step, the team leader or sponsor describes what is seen as the future state of the problem or issue once a solution has been implemented. This ideal state will be the team's goal. In this step, the sponsor or team leader should give the participants who are working on the issue some perspective, in broad terms, of what the future state should look like. This vision should include an overview of what needs to improve, change,

or be created. When developing the future state, remaining at a strategic level in the explanation is optimal. It is important not to get too operational. Allowing the participants to move to the details as they develop the problem statement is advisable. Also, it is crucial not to suggest or imply any solutions. In short, the move to the future state describes the "what." The team will develop the "how."

In the future state description, it is important to describe:

- the important aspects of the future state
- the impetus leading to the future state
- the consequences of not moving to the future state
- possible changes
- the proposed timeline

The important aspects of the future state:
In the future state, data will be received from all community partners on service utilization and unmet needs/problem identification. Identification of people in need of services will facilitate linking them to those services. Identification of the real costs of the needed services and means required to cover the costs of providing those services will be possible.

The impetus leading to the future state:
Examples could be:

- *The poor economy which impacts budgets and creates more people in need*
- *Practice Standards which require evidence-based programs*
- *The moral aspect of caring for the most vulnerable of a community*

The consequences of not moving to the future state:
Not taking actions to improve the way in which business is conducted could cause the business to become irrelevant and disappear. Others will drive the agenda. When others drive the agenda, the people in need will continue to struggle.

Possible changes:
Today the main item is the economic uncertainty. We know that a strengthening economy will reduce the pressure and a weak economy will increase the pressure for services. Universal healthcare would alleviate most of this specific problem but should not be assumed to be forthcoming.

3. ***Describing the components of the Focusing and Issue Statement:*** In this step, the team leader or sponsor describes major components that comprise the current and future state of the issue statement in discrete high-level elements. When an organization has more control over a situation, it is more likely to have a discrete problem statement. Figure 2.3 shows the level of control that the team has on defining a discrete, measureable, and time-bound problem statement decreasing as the issue under consideration moves farther from the immediate function. The less control the team has over events and decisions related to the issue, the more the team must rely on influencing others to assist in reaching the future state.

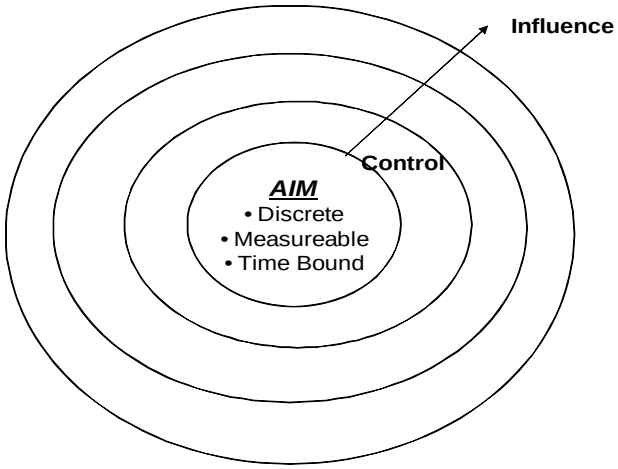


Figure 2.3: Layers of Team Control and Influence

During this step, it is important to answer the questions listed below and record the responses in the appropriate column of the table shown in Figure 2.4.

- Does the group have complete *control* over the element?
- Can a solution to this element be *implemented* when one is developed?
- Is it necessary to *involve and influence* others in order to resolve the element?
- Is this element *outside the team's ability to control and/or influence*?

The answers these questions will help to guide the team in developing a workable problem statement. For example, as shown Figure 2.4, education, the first element related to reducing the inconsistency in the health department approach to mosquito trapping, is considered within the control of the team that is completing the table. The team is empowered to implement education about mosquito trapping and sees the implementation of education to be within their purview. The team does not need to involve or influence others to perform the educational activity. Educating on the subject of mosquito trapping is within the team's control and influence. Other elements listed in the far left column of the table have varying levels of external requirements for which the team must involve others.

Choosing the elements that are totally within the control of the team may not be the best option, however. The Issue Statement Components Table provides a summary view of elements to be prioritized for overall impact to reach solution of the issue. Education may not be the element that will make the most difference to the future state. If "Same Water" is identified as a stronger root cause of inconsistencies in mosquito trapping, the team has identified in the fourth column that they will need to secure assistance from other parties who have stronger control or influence to assist them in their efforts. The fifth column answer to the "Same Water" element indicates that this influence is likely to be secured, should the team choose to pursue it.[26]

[26] Used with permission: Tulsa City-County Health Department. Reduce Inconsistency Mosquito Trapping QI Project. September 2008.

Example: Reduce Inconsistency in Mosquito Trapping

Element	Control	Implement	Involve & Influence	Outside Our Control & Influence
Education	Within	Within	Within	In
Same water	Within	Within	Need influence	In
Batteries	Out	Within	Need influence	In
1 night trapping	Within	Out	Need influence	In
Motivation	Out	Out	Need influence	Outside

For each element, check which column(s) apply.
Select the area(s) of focus, rank the elements to on which to focus, and write the problem statement for the Quality Improvement project to be started.

Figure 2.4: Issue Statement Compenents Table

4. ***Writing the Problem Statement:*** In this step, the team uses the information from Steps 1-3 to develop a problem statement that is discrete, measureable, and time-bound. An issue involving a single department, project, or operational unit is generally easier to control than one that has cross-functional impact or involves many different groups. The more internal the issue, the more discrete the problem statement tends to be, as shown in Figure 2.5. In addition, the more discrete problem statements are operational rather than strategic, as shown in Figure 2.6. An example of such a statement is:

   How does the team identify who has immediate needs in the community that the health department is chartered to address, what those needs are, and a possible program to respond to those needs within the next 30 days?

   The focus of the above statement is internal to the health department and within their control or influence to address. If the problem statement encompassed long-term trends for broad community services beyond the mandate of the health department, the focus would be more strategic, involving external partners such as other municipal agencies and extending the timeline well beyond the concise, thirty-day deadline.

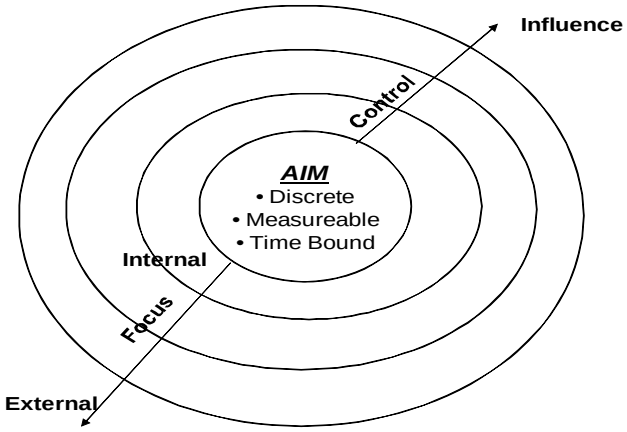


Figure 2.5: Internal vs. External Focus

Figure 2.6 adds the dimension of Operational to Strategic related to the issue under consideration. An internal issue totally under the control of a single business unit is generally more short-term or operational. As an issue encompasses more cross-functional processes, outside suppliers, or community partners, the scope tends toward a longer term resolution or a strategic approach for problem solving.

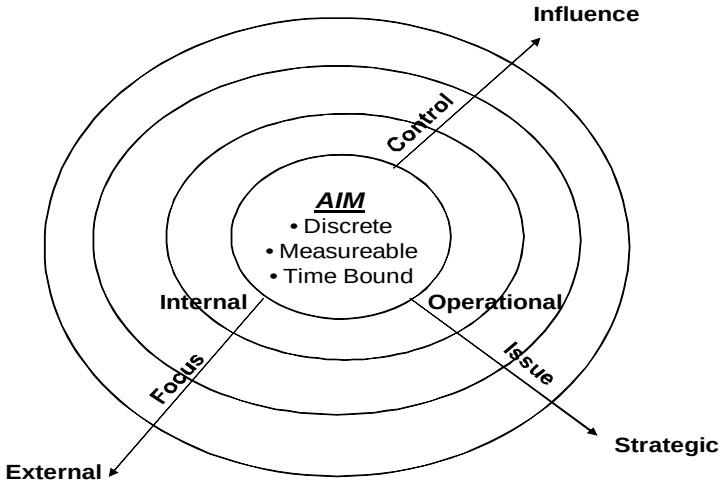


Figure 2.6: Operational vs. Strategic

5. ***Developing Measures:*** In this step, the team develops measures for the elements of the problem statement that will help the team know and share with others that the changes proposed and implemented have had a positive impact. The most common measures are process, capacity, and outcome, as shown in Figure 2.7.

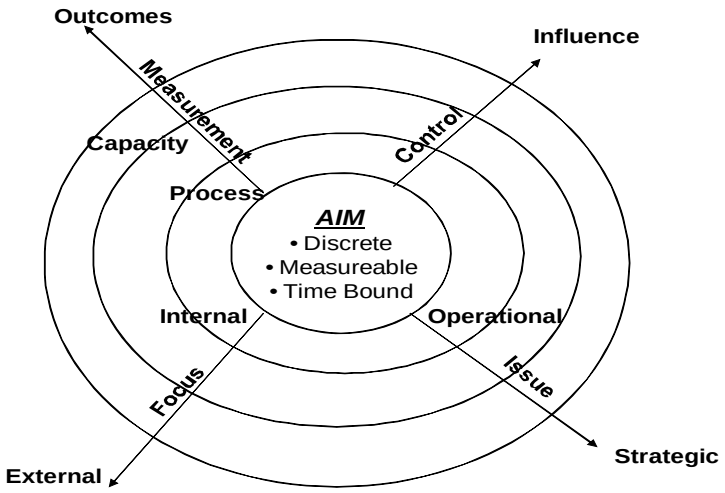


Figure 2.7: Process, Capacity, Outcomes Measurement

Process measures are the most operational. They are taken as work is performed. Capacity measures have a longer window for gathering data. The net effect of several processes may be required to assess the capacity of a program to provide services to the community. Finally, outcome measures are the most strategic. Figure 2.8 offers examples of common measures in a public health department for each of the three categories.

PROCESS	CAPACITY	OUTCOME
▪ No-show WIC appointments	▪ Health dept. workforce turnover	▪ Influenza deaths
▪ % women who receive adequate prenatal care	▪ Completion of annual health profile by every LHD	▪ Multi-drug resistant tuberculosis cases
▪ Education on consistent mosquito trapping techniques	▪ Lobby wait times for client services	▪ Reduced obesity in target population
		▪ Improved water quality in county reservoirs

Figure 2.8: Measurement Examples for Short-term and Long-term Performance Targets

In the mosquito trapping example in Figure 2.4, the process of educating the public on the need for mosquito trapping may take one hour to perform. The capacity of the health department to set traps for the mosquitoes may involve a number of different processes over a period of time. Achieving the outcome of reducing the inconsistency of mosquito trapping with the final goal of controlling the mosquito population may take months and the involvement of multiple departments within the county.

When developing measures, the team should make sure that they are easy to calculate/collect, aligned to the change wanted at all levels, promote accountability, and hopefully change behavior to what is desired. Examples of some currently used measures at health departments with which the authors have worked are shown in Figure 2.8. Each measure can be tied directly to a function within the health department. They are discrete, measurable and can be bound by an appropriate timeframe for the scope of the issue that the team is addressing.[27]

6. ***Setting the time frame for implementation:*** In this step, the team should begin to develop some best estimates of what an implementation timeline would look like in broad terms. The timeline will become more specific as the team identifies alternative solutions and implements the best option to solve the problem. Initially, the team may establish an end date for the project, time for team meetings, problem-solving training, meetings with team sponsor, etc. Once the problem-solving is complete and the solution approved, they can then schedule specific implementation tasks. Figure 2.9 is a timeline or Gantt chart developed by the Saginaw County Department of Public Health for an improvement project undertaken in 2008.[28] The chart can be as simple as a calendar on a white board in the office or a fully developed Microsoft Project workbook with links to backup data.

7. ***Establishing a communication plan:*** In this step, the team, sponsor, and champion come together to identify the people who will be involved in or affected by the project as participants, subject matter resources, advisors, or customers of the future state process. The team must consider what these stakeholders' concerns may be around the activities or results of the project. Team members must make some preliminary decisions about how to keep these individuals and groups informed throughout the project. Actions should be included within the project to address stakeholder concerns and resolve these issues to the satisfaction of the individuals impacted. The communication plan should include standard updates as well as special information on issues that may arise affecting short or long-term outcomes related to the project.

[27] Duffy G. Presentation to the Florida Public Health Association. Palm Beach Gardens, Florida. August 6, 2009.
[28] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

SAGINAW COUNTY DEPARTMENT OF PUBLIC HEALTH GANTT CHART

NACCHO ACCREDITATION PILOT GRANT 2008

Task: Saginaw County HD	29-Feb	7-Mar	14-Mar	21-Mar	28-Mar	1-Apr	10-Apr	15-Apr	21-Apr	1-May	8-May	13-May	19-May	27-May	28-May	6-Jun	13-Jun
Finalize self assessment analysis	x																
Align with SCPHD Mod Squad	x																
Identify priority project	x																
Plan PHF consultant visit		x															
Set agenda and travel schedule		x															
Saginaw/PHF PI meeting			x														
Plan pilot PI project & milestones			x	x													
Validate PHF hours remaining			x		x		x			x		x	x		x		
Teleconference consultant update							x	x	x		x	x	x		x		
Decide team meeting schedule					x	1:30	2:30	1:30	10:00	10:30	10:00	10:00	9:00	9:00	10:00		
Hold formal team meetings					x	x	x	x	x	TRG.	x	x					
Complete team charter					x												
Flowchart desired staff trg proc							x										
Analyze causes of staff exp issues			x														
Select solutions as appropriate			x														
Design training			x	x	x	x	x	x	x								
Establish measures and outcomes								x	x			x	x				
Conduct training										x							
Gather measures and analyze										x	x					x	x
Analyze and modify process as needed											x	x	x	x	x		
Monitor competency levels (6 wk eval)																x	x
Measure pilot										x	x						
Create report of improved outcomes												x	x	x	x		
Final Report & Storyboard														x	x	x	x
Final NACCHO/PHF report by 5/31/08															x		

Figure 2.9: Gantt Chart for Implementation Timeline

When people are involved in decisions that affect them, they are more likely to support change because they feel more in control, and are more likely to understand the reasons for the change and/or what they have to do differently to be successful. A communication plan is often part of the overall project plan.[29] Figure 2.10 is an example of the communication plan included in the project charter for the Saginaw County Public Health Department in a 2008 accreditation preparation project.[30]

Communication plan: MAPP training development

Who	Main Concerns	Communication Notes (when and how you will communicate with them)
E-Team and staff	An introduction to CQI processes	Received training
E-Team and staff	Quality terminology is unfamiliar	Received training
Governing Entities (BOC, BOH, Advisory Boards	Involvement and updates	Receive the report after 05/31/08
Mod Squad	The strategic planning process	Update monthly
NACCHO and the PHF	Receive updates	Via the Health Officers' report
The community	Community health assessment	Is completed after May 2008

Figure 2.10: Sample Communication Plan

Summary

The AIM of the problem-solving team is movement toward the vision of the future. Without a clear picture of the end result, most teams have difficulty clearing a path to move forward. The AIM statement comes from the project sponsor and team leader. Seven steps have been designed to guide the problem-solving team from a Focusing statement to an Issue statement and then to a Problem Statement, which is discrete, measureable, and time-bound. Figure 2.11 provides a summary of the questions to ask about the current state. These questions will help to start a team on the pathway to meeting the requirements of the future state the sponsor envisions. The future state can be described effectively by another set of questions also listed in Figure 2.11. The

[29] Joiner B, Scholtes P, Streibel B. *The Team Handbook*, 3rd Ed. Waunakee, WI: Oriel Incorporated; 2003.
[30] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

pathway from the current state to the future state is through the seven steps and by using either the Basic or Advanced QI tools.

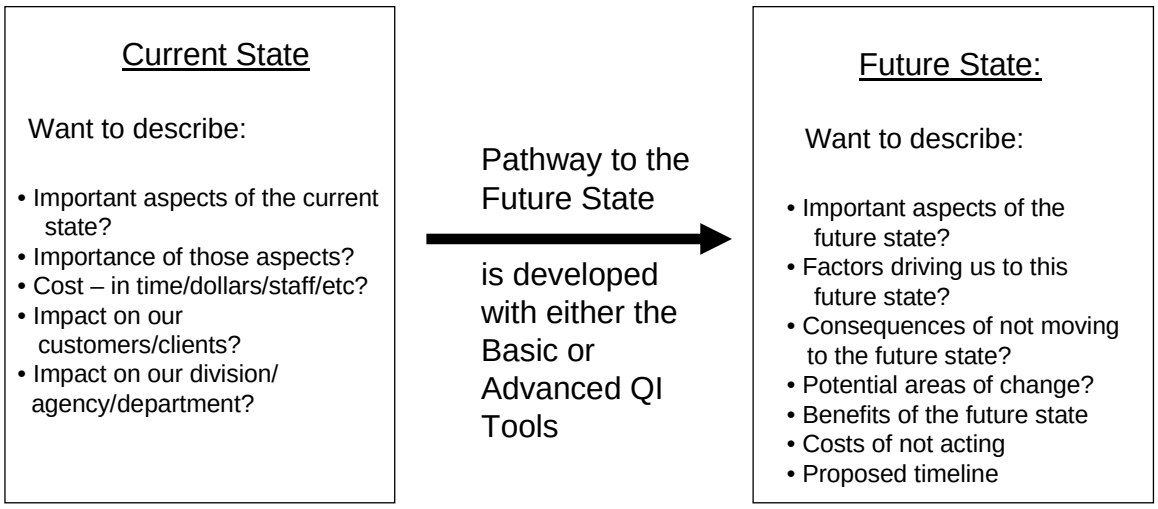


Figure 2.11: Current State to Future State Pathway[31]

Continuous quality improvement is possible through the implementation of a series of projects using the Plan-Do-Check-Act cycle and the Rapid Cycle PDCA concept. By engaging in a series of improvement projects of increasing difficulty, teams will move from the use of basic quality tools for small successes to an integrated quality culture using advanced quality tools. Community and client needs will be met with the best possible service, and the department will expend the least possible amount of resources to meet their goals.

[31] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

Chapter 3: The Team Charter

Grace L. Duffy and John W. Moran

Before beginning any type of teaming process, it is important to draft a Team Charter. The sponsor begins the process and then works with the team leader to develop more of the details. A detailed Team Charter provides the initial direction that a team needs to be successful in tackling the task that it has been assigned. Too often teams spend a considerable amount of their valuable resources trying to figure out what they are supposed to do. A well-developed Team Charter helps to move the team to the performing stage since it answers a number of issues that usually arise in the norming and storming phase of a team startup cycle.[32] A detailed Team Charter focuses valuable organizational resources on the task that needs to be accomplished.

The Team Charter is the official document from the team sponsor that empowers the team to act. It describes the mission of the team and how it is to be accomplished. The Team Charter is one of the most under-used and under-valued tools available to sponsors, team leaders, and facilitators for helping a team to succeed. The Team Charter is often overlooked because it is time-consuming to develop. To write a clear, concise, and inclusive Team Charter requires great forethought and effort. Too often the sponsor is in such a rush to start the teaming process that he or she skips the basic step of creating a Team Charter that clearly defines the goals and objectives to be achieved. A sponsor must take the time to create a Team Charter so that the team will clearly understand the why, what, who, when, and where of the process to undertake.

When a team is started without a formal Team Charter, many meetings are often wasted trying to understand the reason for the meeting, the objective to accomplish, and the timeline necessary to accomplish it. The team spends a considerable amount of time and energy trying to second guess what the sponsor really wanted when he or she formed the team. This lack of information causes a loss of valuable time and talent on the part of the team that could be avoided by designing a clear mission statement prior to the team's formation.

The Team Charter is an official work contract. This document delineates the strategic goals, boundaries, measures of success, constraints/limits, and available resources. The Team Charter provides a framework for ongoing discussions between the team and its sponsor with regard to direction and progress.

The Team Charter is an iterative process until a baseline acceptance is established. It must be reviewed on a regular basis by the sponsor, the team leader, facilitator, and team members to ensure that it is reflective of what the team is doing or will do in the future.

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[32] Tuckman B. Developmental sequence in small groups. *Psychological Bulletin*. 1965; 63:(6): 384–399.

The Team Charter

Figure 3.1 introduces a sequential template for developing a Team Charter. The authors have found this type of Team Charter to be a useful tool in working with a sponsor to guide the work of a proposed team. This template can be modified to fit specific needs. However, each section is necessary for providing the direction needed by a team in order to be successful from the beginning.

Figure 3.2 provides more detail about each section of the template and gives details about important information to include, guiding the reader through the process of writing a successful Team Charter. After a few iterations of this charter, a sponsor has a written document that describes in detail what the team is to accomplish, as shown in Figure 3.3. This document becomes the official work contract for the team leader and the facilitator to begin the teaming process.

Figure 3.2 describes the value of each of the nineteen sections of the charter and includes an example of a typical statement that may be written for that section. Some sections include tips for implementation.

The Team Charter benefits the team by providing:

- Contract
- Clarity
- Focus
- Alignment
- Permission
- Protection
- Boundaries
- Metrics

These elements of a team project are the foundation upon which the team builds to attain successful outcomes.

The Charter does not tell the team how to solve the problem or what a solution should look like. The Charter sets the process in motion by establishing key milestones and desired outcomes, but it does not suggest a solution path. The team must use the tools available to them to learn to solve the problem that they have been commissioned to study. The Charter starts the team in the right direction.

Team Name:	Version:	Subject:
Problem/Opportunity Statement:[33]		
Team Sponsor: **Team Members:**		**Team Leader:** **Area(s) of Expertise:**
1.		
2.		
3.		
4.		
5.		
Performance Improvement AIM (Mission):		
Scope (Boundaries):		
Customers (primary and other):		**Customer Needs Addressed:**
Objectives: SMART-Specific, Measurable, Achievable, Realistic, Timeframe		
✓		
✓		
✓		
Success Metrics (Measures):		
Considerations (Assumptions/Constraints/Obstacles/Risks):		
Available Resources:		**Additional Resources Required:**
Key Milestones:		**Date:**
Communication Plan (Who, How, and When):		
Key Stakeholders:		**Area of Concern (as it relates to the Charter):**

Figure 3.1: Team Charter Template

[33] Beitsch L, Duffy G, Moran J. Ready, AIM, Problem Solve. *Quality Texas Foundation Update*. October 2009.

Section 1. Charter: (Project or Task Force)	
What it does:	Establishes the nature of the work.
Why it is important:	Differentiates the team work in the following way: Project : a well-defined system or process change; scope and implementation needs are known up front; project timeline is predictable; outcome is known. Task Force: less prescribed, focusing on a problem or improvement opportunity. The charter is a vehicle by which the team can reach consensus on the AIM, define the boundaries of the process, and identify the means by which the effort will measure its success.
Example:	Project: Implementation of a scheduling system. Task Force: Waits and Delay, Improvement Team.
Section 2. Team Name	
What it does:	Identifies the team.
Why it is important:	Enables the team to distinguish the effort from others. Tip: Keep it simple, unique, and easily stated.
Example:	WIC Waiting Room Time Reduction Team
Section 3. Version (Number/Date)	
What it does:	Tracks and clarifies versions of the charter, identifies current charter.
Why it is important:	Charters if used well will be iterative. Establish the last time the document was edited. Tip: Using only the last edited date is the easiest method.
Example:	December 12, 20XX or Version #5, December 12, 20XX.
Section 4. Subject	
What it does:	Identifies the area of focus.
Why it is important:	Clarifies the intent of the project.
Example:	WIC Intake Department.
Section 5. Problem/Opportunity Statement	
What it does:	States why this effort was initiated and what will be affected by the outcome.
Why it is important:	Orients team and others to the true need for the effort. The source and analysis of the data that identified the problem or opportunity should be included and used as a baseline.
Example:	WIC applicants are complaining about too much time taken to process the in-person application and a lack of privacy while giving information to the clerk.
Section 6. Team Sponsor	
What it does:	Identifies the senior leader that supports and/or initiated this effort.
Why it is important:	Establishes senior leadership overall operational accountability. The Sponsor will be expected to break down barriers and support the team.
Example:	Mary James, Health Officer
Section 7. Team Leader	
What it does:	Identifies one individual who will guide the team to achieve successful outcomes and who will communicate to senior leaders.
Why it is important:	Establishes who will conduct team meetings, provide focus and direction, and ensure productive use of team members' time. This person is not necessarily the

	same individual who will be in charge of the process but should be a person who will be affected by over the outcome.
Example:	Joe Smith, WIC Department Manager
Section 8. Team Members and Area of Expertise	
What it does:	Defines who will be on the team and why.
Why it is important:	Assures that all of the people necessary to effect change will be involved. Tip: People who might be unnecessary on the core team could be key stakeholders and must be consulted regarding changes. These individuals should be identified in the Charter. Referring to the high-level process utilized to define the scope verifies that the team has representation from each major process step.
Example:	Team Member: Bill Bates – WIC Intake supervisor
Section 9. Performance Improvement AIM (Mission)	
What it does:	Describes what the team intends to do, providing the team with a focus and a way to measure progress. The AIM should be derived from a known problem (data) and need for corrective action.
Why it is important:	Clarifies where the team is going and enables them to know when they get there. A well-stated AIM affords a team the opportunity to improve many aspects of the system or process related to the AIM. TIP: Most successful improvement efforts have a succinct AIM with a measurable stretch goal. The measure should be monitored over time and tracked in the form of a statistical process control chart.
Example:	AIM: To reduce the waiting time by 50%.
Section 10. Scope (Boundaries)	
What it does:	Specifies the boundaries of the process in timeframes and/or process steps.
Why it is important:	Sets the stage; provides focus; identifies limits. Tip: Mapping out a 7-9 step high-level process flow for the defined scope will help to facilitate understanding about what is needed in order to be successful, including validating team membership.
Section 11. Customers (primary and other) and Customer Needs Addressed	
What it does:	Identifies the primary (and other) customers of the product or service provided and specifies the ways in which stated needs were met.
Why it is important:	Identifies customers early which helps to determine if they need to be represented on the actual team. The identification of their needs and how well they are being met must be continually assessed during the improvement process.
Example:	Applicant for WIC benefits.
Section 12. Objectives	
What it does:	Lists the specific and measurable objectives for the effort, helping to define the opportunities to improve.
Why it is important:	Enables the team to reach consensus on what will be addressed during the course of the effort. Tip: Grouping similar objectives and giving them a descriptive title is helpful; for example, *Eliminating Waste.* Grouping objectives into change concepts facilitates creative thinking with improvement teams.
Example:	Eliminating Waste - *Eliminate unnecessary waiting time and reduce duplicative*

	data entry
Section 13. Success Metrics (Measures)	
What it does:	Defines how success of the improvement effort or project is measured.
Why it is important:	Helps the team and sponsor to understand when and if an implemented improvement is meeting the desired goal. Tips: Being specific and agreeing to definitions and data sources are important. It is ideal to have a balanced set of measures: satisfaction/costs/ outcome. Identifying one overarching measure that can be an asset for the entire effort, measuring it over time, and using a control chart are effective strategies. Keeping it simple by using sampling is beneficial, as well.
Example:	Overall applicant cycle time to receive service and complete an application will be reduced by 50%.
Section 14. Considerations (Assumptions/Constraints/Obstacles/Risks)	
What it does:	Describes both positive and negative factors to be discussed and understood prior to the beginning of the work. • **Assumptions**: statements of requirements that must be accepted • **Constraints**: an element that might restrict or regulate project actions or outcomes • **Obstacles**: factors that might impede progress • **Risks**: a course that might pose a hazard or cause loss.
Why it is important:	Clarifies expectations; requires people to reflect on the effort in a thoughtful way; can redefine the work; may facilitate the removal of known obstructions in advance; gives credibility to teams for considering possible issues.
Example:	**Assumption:** The WIC intake area can be rearranged to create private booths. **Constraints:** Information Technology solutions will not be entertained at this time; a system upgrade is planned in 2 years. **Obstacles:** Departmental practices related to scheduling applicants differ widely. **Risks**: Changes may not conform to legal requirements.
Section 15. Available Resources	
What it does:	Articulates who and what is available to support the team, possibly including a facilitator, trainers, or funds.
Why it is important:	Provides both the team and senior leadership with an opportunity to negotiate what the team needs to be successful.
Example:	Facilitator: Cathy Lee. On-campus team workshops. Up to $5,000 is available for teaching assistant.
Section 16. Additional Resources Required	
What it does:	Articulates what else will be needed to make this project successful (e.g., a subject matter expert (SME)).
Why it is important:	Provides both the team and senior leadership with an opportunity to negotiate what the team needs to be successful.
Example:	SME: Ginger Mercy, SME for Value Stream Analysis. Up to $5,000 is available for additional support personnel.
Section 17. Key Milestones	**Date:**
What it does:	Marks significant expectations and/or deliverables that the team can expect.
Why it is	Holds the team accountable. Maps progress.

important:	
Example:	Current State Assessment due March 8. Recommendations to be presented to senior leadership in 6 weeks.
Section 18. Communication Plan (Who, How, and When)	
What it does:	Clarifies the communication plan.
Why it is important:	Identifies everyone who is expecting to receive communication on this team effort.
Example:	The entire team will give a report to the stakeholders six weeks from the start of the project (~ Nov15). The Team Leader will update the Sponsor weekly as an agenda item at the regular staff meeting.
Section 19. Key Stakeholders and Area of Concern as it relates to the Charter	
What it does:	Identifies individuals and/or departments that may be impacted by the outcome. These individuals should be sought out as a resource and communicated with on a regular basis.
Why it is important:	It recognizes their importance and increases the team's awareness.
Example:	John Smith - Information Systems

Figure 3.2: Team Charter Detail by Section

TEAM CHARTER for the Strategic Organization Team		
2. Team Name: SCCA - Strategic Organization Team	**3. Version: 2.0**	**4. Subject:** Formal Communication Guidelines. Recommendations for improved communication channels among SCCA leadership related to meeting critical program goals.
5. Problem / Opportunity Statement: The Director of SCCA is committed to providing a more effective communication environment among her direct reports. She has taken action to reorganize the physical workplace to encourage smoother transfer of information and provide a more conducive atmosphere for sharing of critical program and operational data.		
6. Team Sponsor: Shirley Davis-Boyce		**7. Team Leader: Grace Duffy**
8. Team Members:		**Area of Expertise:**
Mike K		MBB
Lisa V		Seeking BB; Project Management; Process Improvement; Software Development; Systems Engineering
Tim W		Statistics; Tools
Chris G		Tools; Quality
Jim D		Software Development; Testing
Diane F		Project Management; Interpersonal relations; Requirements elicitation
Sara P		SCCA Employee
Leo L		Community Assistance Business Manager
Dave F		MBB

9. Process Improvement Aim (Mission):	
Recommend a set of formal communication guidelines that support Direct Reports to the manager of CA to manage common information of key process areas to meet program outcomes.	
10. Scope (Boundaries):	
Strategic focus; Remaining within the scope of process and organizational focus; Software definition focus is outside the scope. Communication around SCCA Direct Reports	
11. Customers (primary and other):	**Customer Needs Addressed:**
Direct Reports of SCCA Director	Process Definition and Organizational Enhancement
SCCA Director	Process Definition and Organizational Enhancement
12. Objectives:	
Formal Communication Guidelines	
Establish monitoring and measurement tools to maintain improvements	
13. Success Metrics (Measures):	
Surveys of percent satisfied with level of communication.	
Percent improvement of key process area reporting requirements	
14. Considerations (Assumptions/Constraints/Obstacles/Risks):	
No SCCA Leadership involvement on the Strategic Organization team.	
Remote/distributed team will be a challenge.	
Volunteer team is composed of full-time employees with limited time to dedicate to the project during the workdays.	
15. Available Resources: Volunteers, SCCA Project Leader	**16. Additional Resources Required:** SCCA Leadership/Management Involvement with the Strategic Organization team

17. Key Milestones:	**Date:**
Define	May 2010
Measure	June 2010
Analyze	July 2010
Design	September 2010
Verify	December 2010

18. Communication Plan (Who, How, and When): Developed as a separate document	
19. Key Stakeholders:	**Area of Concern (as it relates to the Charter):**
Team Sponsor – TBD during Measure phase	Problem Statement/Objective; Time for direct involvement of SCCA staff and leadership

Figure 3.3: Team Charter Example

Today, resources are scarce. Everyone involved in the public health community must use the tools available for a maximum return on their resources. The Team Charter can save an enormous amount of time and reduce confusion since it defines clear goals, expressed duties, and desired outcomes. To omit this step in planning for a successful team process is to reduce the overall effectiveness of the team and the ultimate goals of the sponsor.

Chapter 4: Roles and Responsibilities for Launching Teams

Grace L. Duffy and John W. Moran

Teams are not new to public health. Health professionals have long respected the knowledge and opinions of others within the organization and the community served. Scarce resources and reduced staffing have led many health departments to cross-train staff in a number of duties not part of their original performance plan. One way to reinforce new skills and work assignments is through teaming.

Types of Teams

A common type of team encountered is the **natural** team, or department. Individuals come together around the goals of the work unit. Responsibilities are assigned as part of a job description or specific program assignment.

A **process improvement** teams (PIT) focus on creating or improving a specific business process. A PIT may attempt to reengineer a process or work on incremental improvements. If attempting a process redesign, the team is usually cross-functional with representatives from a number of different functions and with a range of skills related to the process to be improved. Process improvement teams that are focused more on the overall process as it impacts many functions are **cross-functional** in the composition of its members, especially if the objective of the PIT is to develop a breakthrough improvement.

A **project** team is formed to achieve a specific mission. The project team's objective may be to create something new like a new facility, new program or service, or to accomplish a complex task such as implementing a quality management system or upgrading all measurement reports to use a common software application and database. Typically, a project team employs full-time members on loan for the duration of the project. The project team operates in parallel with their primary organizational functions. The project team may or may not be cross-functional, depending upon its objectives and competency needs. Often the project leader may be the person to whom the ultimate responsibility for managing the resulting project outcome is assigned.

Self-directed or self-managed teams are groups of employees authorized to make a wide range of decisions about how they will handle issues regarding safety, quality, work schedule, work allocation, goals, work standards, program maintenance, and conflict resolution. Often called high-performance work teams, these teams offer employees a broader spectrum of responsibility and ownership of a process. Often team members select the team leader; sometimes leadership is rotated among members. Due to the level of empowerment afforded, careful planning and training is critical to a successful self-directed team.

Virtual teams are groups of two or more persons usually affiliated with a common organization who have a common purpose but who are not necessarily employees. The nature of the virtual team is that they partly or entirely conduct their work by electronic communication. Virtual

teams are a hybrid in that they may or may not be cross-functional. These teams may or may not be partly or entirely self-managed. Typically the virtual team is geographically dispersed, often with individual members working from their home. Public health professionals find themselves involved in a number of virtual team assignments either through multi-state collaboratives, lack of travel funding, or the inability to disengage from other assignments during the life of the team project.

No matter what type of team is initiated, it is important to identify the role each member plays in achieving assigned goals. Members who are new to team work may need training on working collaboratively to achieve required outcomes. Seasoned team players may assume that their role is the same as their last assignment and fail to consider the needs of others on the team. Careful planning must be done before choosing team members and assigning roles within the team in order to balance skills, working styles, personalities, and expectations across the diverse set of knowledge, skills, and abilities available.

Choosing Roles for Team Members

The most critical roles for launching successful teams are Team Leader and Facilitator. Table 4.1 identifies seven major roles required for high-performing teams, along with the basic responsibilities of each role. All seven roles should be assigned, although they may be combined within one individual with the exception of leader and facilitator. It is important that these two responsibilities be kept separate to allow for the difference in focus of these two roles. Timekeeper and Scribe are optional roles about which the authors do not agree. Staying on time and task is the basis of an effective team. Documenting and archiving the content of team meetings, work sessions, or other discussions are crucial requirements of successful teams and projects.

Team members are the heart of the team. Without the knowledge and experience of people who actually do the work, a team cannot be successful. Supplementing the team with subject matter experts for focused periods of time can compensate for a lack of knowledge or skill on segments of project analysis. Team members must willingly share their expertise, listen attentively, and support all team decisions.

The Quality Council or Champion charters a project based on priorities related to critical success factors identified by external or internal customers. One of the first actions in chartering a project is to identify the team leader. The Team Leader is responsible for the content of the work that is produced by the team. This individual needs excellent communication skills and must have a trusted reputation within the organization.

Role Name	Responsibility	Definition	Attributes of Good Role Performance
Champion	Advocate	The person initiating a concept or idea for change/improvement.	• dedication to see it implemented • belief that it is the right thing to do • perseverance and stamina
Sponsor	Backer, Risk Taker	The person who supports a team's plans, activities, and outcomes.	• belief in the concept/idea • sound business acumen • willingness to take risks and responsibility for outcomes • authority to approve needed resources • trust of upper management
Team Leader	Change agent; Chair; Head	One who: -staffs the team or provides input for staffing requirements -strives to bring change/improvement through the team's outcomes -has the authority for and directs team efforts -participates as a team member -coaches team members in developing or enhancing necessary competencies -communicates with management about the team's progress and needs -handles the logistics of team meetings -takes responsibility for team records	• commitment to the team's mission and objectives • experience in planning, organizing, staffing, controlling, and directing • capability to create and maintain channels that enable members to do their work • capability to gain members' respect; a role model • firmness, fairness, and factuality in dealing with a team of diverse individuals • discussion facilitation • ability to listen actively • empowerment of team members to the extent possible within the organization's culture • support of all team members equally • respect of each team member's individuality
Facilitator	Helper; Trainer; Advisor; Coach	A person who: -observes the team's processes and team members' interactions and suggests process changes to facilitate positive movement toward the team's goals and objectives -intervenes if discussion develops into multiple conversations -intervenes to prevent an individual from dominating a discussion or to engage an overlooked individual -assists team leader in bringing discussions to a close -may provide training in team building, conflict management, etc.	• trained in facilitation skills • respected by team members • tactful • knowledge of when and when not to intervene • focus on the team's process, not content • respect of the team leader, not overriding his or her responsibility • respect of confidential information shared by individuals or the team as a whole • ability to decline the facilitator role if expected to report to management information that is proprietary to the team • adherence to the ASQ Code of Ethics
Timekeeper	Gatekeeper; Monitor	A person designated by the team to watch the use of allocated time and remind the team when their time objective is almost met.	• capability of assisting the team leader in keeping the team meeting within the time limitations predetermined • assertiveness to intervene in discussions when the time allocation is in jeopardy • capability of participating as a member while still serving as a timekeeper
Scribe	Recorder; Note taker	A person designated by the team to record critical data from team meetings. Formal "minutes" of the meetings may be published to interested parties.	• capability of capturing on paper or electronically the main points and decisions made in a team meeting and providing a complete, accurate, and legible document or formal minutes for the team's records • assertiveness to intervene in discussions to clarify a point or decision in order to record it accurately • capability of participating as a member while still serving as a scribe
Team Members	Participants; Subject Matter Experts	The persons selected to work together to bring about a change or improvement, achieving it in a created environment of mutual respect, sharing of expertise, cooperation and support.	• willingness to commit to the team purpose; • ability to express ideas, opinions, suggestions in a non-threatening manner • capability of listening attentively to other members • receptiveness to new ideas and suggestions • calm; handles stress and copes with problems openly • competent in one or more fields of expertise needed by the team • favorable performance record • willingness to function as a team member and forfeit "star" status

Table 4.1: Roles, Responsibilities, and Performance Attributes[34]

[34]Bauer J. Duffy G. Westcott R. Ed. *The Quality Improvement Handbook*, 2nd ed. Milwaukee, WI: Quality Press; 2006.

Very frequently, a team must function in parallel with daily assigned work. Rarely does the health organization have the luxury of removing other responsibilities from an individual when he or she is asked to participate on a process improvement team. An important early activity for the team is to establish guidelines for group behavior, set expectations for working together, and receive clear direction from the Project Champion on outcomes and timelines. The project management activities necessary to keep the team on schedule and focused on goals are the responsibility of the Team Leader.

The other critical role in the team is the facilitator. The Facilitator is responsible for ensuring that the process affecting the work of the team is the best for the stage and situation of the team. When launching the team, the Facilitator must assess the entry-level skills of each member and design learning opportunities to fill in the gaps so that the team is able to move forward quickly to address desired outcomes.

A trained facilitator is a valuable partner to the team leader. The Facilitator has experience and training to support situations that might severely disrupt normal project activities such as:

- Team members holding conflicting perspectives on data, problem resolution, or general responsibilities
- A new member joining the team and upsetting established relationships
- A core team member leaving
- Adequate resources not being forthcoming from process owners or champions, threatening the future of the team or the project

Several of the roles such as scribe or timekeeper may be combined, depending upon the size of the team and its purpose. Examples of when combining team roles may be appropriate are:

- A three-person team self-selects the person who originated and sold the idea to management (the Champion) as Team lLeader.
- A cross-functional, performance improvement team chooses to rotate the team leader role at specific intervals.
- A departmental work group (natural team) rotates timekeeper and scribe roles at each meeting to eliminate perceived discrimination based on gender, job held, age, schooling, etc.
- The process owner serves as the Team Leader because the project is confined to his or her area of responsibility only.
- Specialists, as needed, are periodically requested to join the team temporarily, e.g. epidemiologist, inspector, grant specialist, or internal auditor.
- The team has begun to function smoothly, and the team leader has become more skilled under the guidance of a Facilitator. Regularly occurring team meetings may dispense with a separate Facilitator.

For some team missions where very formal documentation is required, the scribe or note taker becomes critical. Organizations just beginning their quality improvement journey must identify long-term operating guidelines for the QI program as a whole. Minutes of team meetings, quality

council decisions, and key measurements will provide an initial baseline for the strategic structure of the program. The documentation role can be distracting for a member whose full attention may be needed on the topics under discussion. For this reason, an assistant, not a regular member of the team, is sometimes assigned to take the minutes and publish them. Care should be taken not to select a team member solely on the basis of demographic characteristics or position in the organization.

Using the Team Charter to Establish Role Expectations

Chapter 3 discusses the value of developing a comprehensive team charter at the beginning of the project. The charter is either created by the project sponsor and team leader before assigning team members or as an initial activity for the team. The authors recommend that team members be involved as early in the development of the charter as possible. The discussion required to identify the information contained in the charter is an excellent vehicle for orienting team members to customer requirements, outcomes, and organizational expectations for the project.

A formal team charter includes:

- Purpose
- Sponsor name
- Champion name
- Team member names and areas of expertise
- Scope
- Problem Statement
- Goal or AIM Statement
- Process Owner
- Objectives
- Resources available and required
- Actual and perceived barriers to project success
- Stakeholders impacted by project outcomes
- Communication plan for both internal and external stakeholders

Roles and Responsibilities May Vary Throughout Project

Teams move through five stages of growth as they develop maturity over time. Each stage may vary in intensity and duration. The stages[35] are:

Stage 1: Forming

The cultural background, values, and personal agendas of each team member come together in an environment of uncertainty. New members wonder: "What will be expected of me? How do I, or

[35] Tuckman B. Developmental Sequence in Small Groups. *Psychological Bulletin,* 1965*;* 63:(6): 384-399.

can I fit in with these people? What are we really supposed to do? What are rules of the game, and where do I find out about them?

Health Departments often work at breakneck speeds due to reduced headcount, feast or famine activities based on grant funding and resultant deadlines or changes imposed by newly appointed local, county, and state officials. Sometimes fear is part of a new member's approach to a team assignment. Fear may be about personal acceptance, additional workload, possible inadequacy for the assignment, or consequences if the team fails its mission. These fears and other concerns manifest themselves in dysfunctional behavior such as: jockeying for position of status on the team; undercutting the ideas of others; disrespecting another member; forcing one's point of view on others; bragging about academic credentials; objecting to any suggestion but one's own; abstaining from participation in discussions; distracting the work by injecting unwanted comments or taking the team off subject; and retreating to a position of complete silence.

Due to the diversity of some teams, a wide variety of disciplines, experience, academic levels, and cultural differences may exist among the members. This variety can result in confusion and misunderstanding of terminology and language difficulties.

A technique for moving the team through this stage is to state and understand the purpose of the team clearly, identify the roles of the members, and establish criteria for acceptable behavior as norms. The team charter, described in Chapter 3, is the vehicle for setting expectations for outcomes and team behavior.

Stage 2: Storming

In this stage, team members still tend to think and act mostly as individuals. They struggle to find ways to work together or sometimes belligerently resist attempts to combine purpose. Each member's perspective remains founded upon his or her own personal experience rather than based on information from the whole team. Uncertainty still exists, defenses are still up, and collaboration is not yet the accepted mode of operation. Members may be argumentative. By this stage, team members know enough about their peers to "push each other's buttons." Disagreements arise over small issues because individuals are not yet invested in the goals and outcomes of the project. They frequently test the leader's authority and competence. Members often try to redefine the goal and direction of the team and act as competitors rather than compatriots.

Stage 3: Norming

At this stage, true teamwork begins. Members change from dwelling on their personal agendas to addressing the objectives of the team. Competitiveness, personality clashes, and loyalty issues are sublimated, and the team moves toward willingness to cooperate and openly discuss differences of opinion. Conflict becomes an opportunity for discovery, not a barrier to forward progress. The leader focuses on process, promoting participation and team decision-making, encouraging peer support, and providing feedback. A potential danger at this stage is that team members may withhold their good ideas for fear of damaging newly formed relationships.

Stage 4: Performing

Now functioning as a mature and integrated team, the members understand one another's strengths and weaknesses. The leader focuses on monitoring and feedback, allowing the team to take responsibility for solving problems and making decisions. The team has become satisfied with its processes and is comfortable with its working relationships and in resolving team problems. The team is achieving its goals and objectives; however, reaching this stage does not mean that the team journey is over.

Typically a team moves through these stages in sequence. However a team may regress to an earlier stage when something disturbs its growth. Adding a new member may take a team back to Stage 1 as the new member tries to become accepted and the existing team members test the newcomer. Loss of a respected member may shift the apparent balance of power, so that the team reverts to Stage 2. A change in scope or threat of cancellation of a team's project may divert a team to an earlier stage to redefine direction. An individual team member's exposed manipulation of the team can cause anger, retrenchment to silence, or a push to reject the offending member, and a jump back to Stage 1.

Some teams find it difficult to maintain Stage 4 and will bounce between Stages 3 and 4. This difficulty may be a matter of unskilled team leadership, an unsupportive sponsor, unprepared team members, external factors threatening the viability of the project, or a host of other factors. The authors use a number of approaches to maintain team member confidence in their role within the project. Some of these approaches are:

- Using techniques and tools of project planning and management to provide structure for the team
- Tracking, measuring, and reporting procedures for both project and team success
- Establishing risk assessment criteria, identify contingency plans, and conducting periodic assessments of both the team and project progress
- Recognizing, reinforcing, and rewarding the team for work done well
- Using the team communication plan to keep stakeholders, customers, and team sponsors informed of progress

Stage 5: Adjourning

Bruce Tuckman's final stage, *adjourning*, added to the original four-stage model in 1977, involves the termination of task behaviors and disengagement from relationships. When a project has met its stated objectives, it is time to close it down and celebrate.

A planned conclusion usually includes recognizing participation and achievement and providing an opportunity for members to say personal goodbyes. Concluding a group can create some apprehension—in effect, a minor crisis. The termination of the group is a regressive movement from giving up control to giving up inclusion in the group. The most effective interventions in this stage are those that facilitate task termination and the disengagement process.

Many quality improvement teams use the adjourning stage as a time to document lessons learned, identify opportunities for continued improvement, and provide general feedback for process sustainability. Six Sigma recommends the development of a Control Plan, including a monitoring and measurement checklist to keep the project gains in place. Figure 4.1 shows the progression through the five stages of team development with a feedback arrow closing the loop from the end of one team project to the initiation of another either with information or actual team members from the earlier activity.

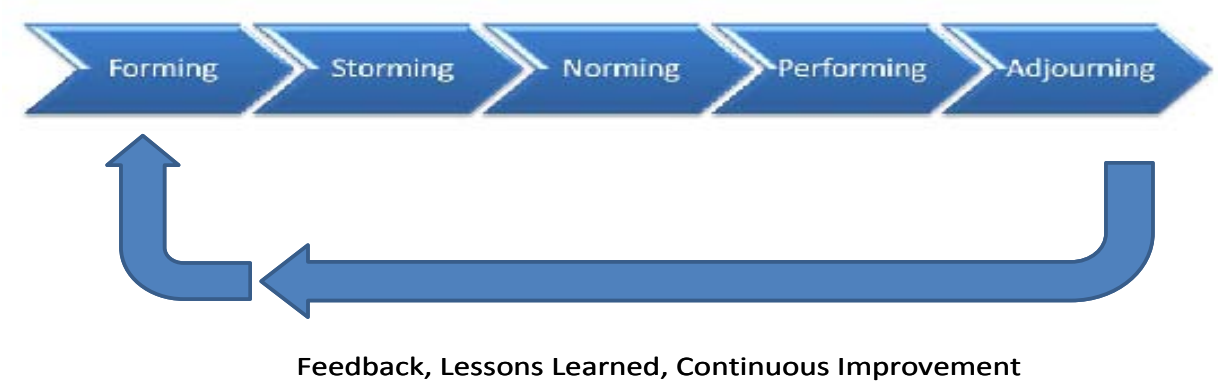


Figure 4.1: The Five Stages of Team Development with Feedback Loop[36]

What Makes a Team Work?

A team is much more than a group of professionals thrown together to complete a set of tasks. A team is a very valuable combination of individuals who choose to contribute skills, knowledge, and attitudes toward the achievement of organizational goals. Fortunately, public health professionals frequently work in teams to maximize resources both within the department and across the community. The same commitment to meet and exceed requirements that these professionals exhibit in traditional health support activities drives success in process improvement teams. The roles and responsibilities of teams provide the structural support upon which team members achieve success. Setting expectations and communicating clearly and frequently provide a foundation for the characteristics of teamwork listed below:

- All team members agree on the expected outputs and outcomes of the team.
- Each member is committed to the goals and objectives of the team and understands why he or she is on the team.
- Each member fully accepts the responsibilities assigned as well as an overall commitment to help with whatever needs to be done to ensure the team's success.

[36] Tuckman B. Developmental Sequence in Small Groups. *Psychological Bulletin*, 1965*;* 63:(6): 384-399.

- Members agree to ask questions and share their opinions and feelings with no hidden agendas and with respect for other team members.
- Information is not hoarded or restricted. Each member has access to what is needed, when it is needed to get the work accomplished.
- Building and maintaining trust is of paramount importance to the team's successful achievement of its purpose.
- Every member feels that he or she can make a difference with his or her contribution.
- Management is committed to support the team's decisions, as is each team member.
- Conflict within the team, when properly managed, produces a win-win outcome.
- The team maintains a dual focus: its process as a team and its anticipated outcomes.
- Serving on the team can increase a member's expertise and reputation but should never be a detriment to a member's personal development (e.g., promotional opportunities, compensation increases, training to maintain job skills).

Chapter 5: Using Performance Indicators in the Public Health Business – Applying the Paynter Chart as a Public Health Scorecard

Roderick Munro and Janice Tucker

Today's use of technology allows for a vast improvement in the capability of individuals to create visual representations for reports that demonstrate the use of data collected. Instead of having to use hand calculations and then hand drawings, computers have allowed professionals to analyze and interpret very large amounts of data in a very short period of time. This ability to crunch massive amounts of data has come with a price that many people do not recognize and that in many cases actually makes the information harder to deal with and to understand.

One of the most common issues that we have seen misused by non-trained statisticians is the use of a "bar" or "column" chart to depict time series data. Figure 5.1 is one such graphical representation of imaginary information collected on the immunization rates for a local population, used to show how well the public health department is doing in the distribution of a drug. This type of graphic is used repeatedly by agencies around the country.

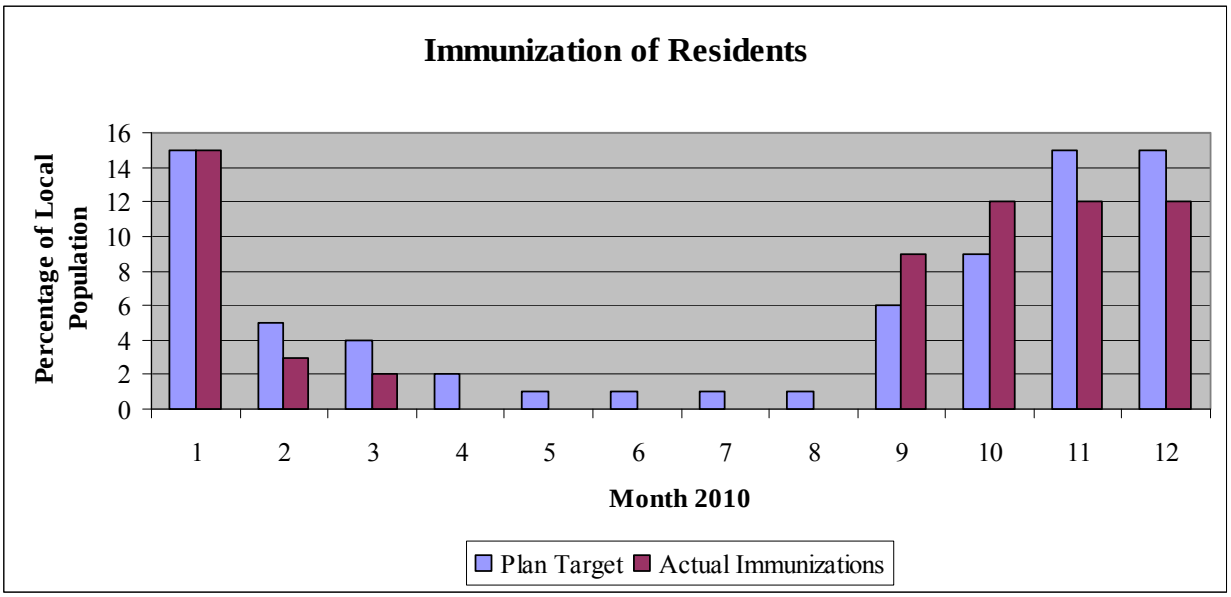


Figure 5.1: A Bar Chart - Immunization of Residents

With today's technologies, better and more effective ways to represent the data are available to help people understand the information. The KISS principle (Keep It Simple, Statistician) is appropriate in most situations. However, when using spreadsheet or database software, knowing what graph to use can make a big difference in how people understand the data. Misuse of graphical data can be used to try to sway the report(s) in some particular pre-conceived manner to fit the wish of the reporters instead of allowing the data to speak for itself. This phenomenon can be readily seen in the research[37] on the Pygmalion Effect on Paradigms which shows how

[37] Barker J. *Paradigms – The Business of Discovering the Future*. New York, NY: Harper Collins Publishers; 1993.

people's attitudes or beliefs can in many cases affect the data and outcome that is then presented by the researcher.

The Paynter Chart was developed in the early 1980's and is useful in public health today. The first step in this exercise is to determine the objective to reach; a clear definition of the project is essential. For this project, the goal is to provide an illustration of how the graphical techniques can be used to expose and understand various public health activities such as how well the local public health department is deploying the immunization process across all areas of the population. This information will support the future assessment of needs for vaccination doses, the seasonality of support for various areas of the population, and the need to take a different approach where certain areas of the populace do not appear to have been taking up the opportunity.

The Check / Tally Sheet

In order to collect data effectively, the data must be easy to obtain and use. For this reason, the check sheet—also called a tally sheet or measles chart and shown in Figure 5.2[38]—is a good place to start. It can be used for many purposes, but its most desirable characteristic is the ease of compiling data. In order to set up a check or tally sheet, it is essential to decide what data will be recorded; in this case, the actual immunization in various segments of the population will be tracked. Secondly, deciding when that data will be recorded is important. This data is to be entered at the point of service or immunization as a check mark on the sheet.

In Figure 5.2, a check sheet has been used to record the number of immunizations by population segment, using a check or tally mark for each moment of service within the stated timeframe. Keeping the tally mark in sets of 5 makes it easy to see progress, easy to sum up, and reduces the need for further work on the information. How the data sheet is set up is important for it needs to be easy to use and read; progress that is being made should be shown. This sheet, for example, can be used by anyone and marked as the event occurs. It is very simple to use and gives a slight pictorial of the rate of take up "at a glance."

Immunization of residents	**Actual Immunizations, January 2010**	**% of Total**
Caucasian	///// ///// ///// ///// ///// ///// ///// ///// ///// /////	50
Black	///// ///// ///// /////	20
Asian	///// ///// ///// /////	20
Native	///// /////	10
Total		100

Figure 5.2: Tally/Check Sheet - Collecting Checks of Immunization Records

[38] Gryna F, Juran J. *Quality Planning and Analysis*. New York, NY: McGraw-Hill; 1993.

The time-based element is missing from this picture. The immunization process is a seasonal process; therefore, it is necessary to see when the implementation of the vaccination process occurred, by month.

The Run Chart

The run chart in Figure 5.3 is by far the most commonly used for tracking time series data. It provides a simple picture of the process over time to detect trends and other non-random variations in this process. The chart individual observations of temperature taken at a determined frequency against the degrees. The plot points are then joined to track the patient's progress.

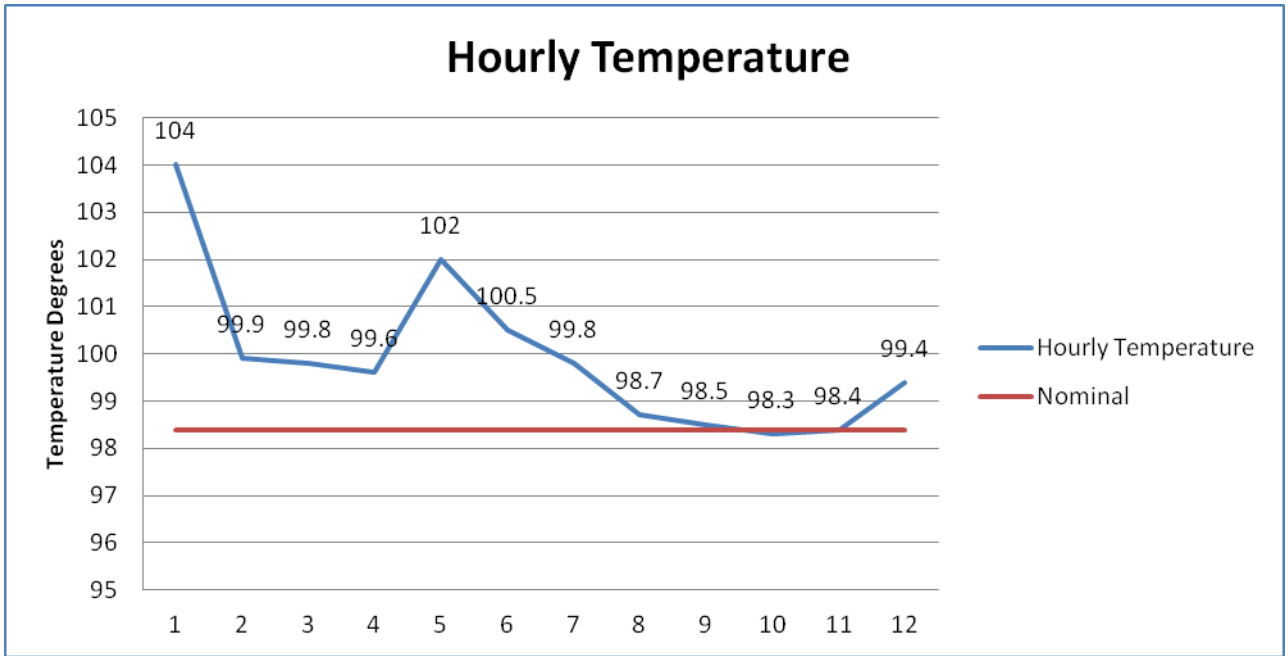


Figure 5.3: Simple Run Chart Example – Individuals (temperature taken hourly) Against Time (hours)

It is easy to see at a glance any unusual changes against the nominal (expected) level which may trigger specific actions to be taken.

Figure 5.4 shows month by month changes in immunizations compared to plan. For example, Months 2, 3, 4, 5, 6, 7, 8 are all below plan, but Months 9 and 10 are above. Month by month changes in seasonal awareness or the publicity regarding an epidemic or pandemic such as H1N1, which may not have been predicted and therefore could not have been planned for, could have varying causes. The chart demonstrates the variance to plan and provides a starting point to question causes for the variances, providing a planning basis for the following year based on the pickup of immunizations.

Figure 5.4 is a chart of observations or subgroups, which are the sum total of all immunization events for each month, plotted on the vertical y-axis (Percentage of Local Population) versus time (Month 2010) on the horizontal x-axis, actual versus plan. The sum of events for each month is entered on the chart.

Seeing the patterns allows prediction to a better degree of what may happen in the future. Using a Run Chart to detect trends over time and determining when and if changes occur in the process are helpful steps in gathering accurate and useful data and tracking the effect of any countermeasure actions taken.

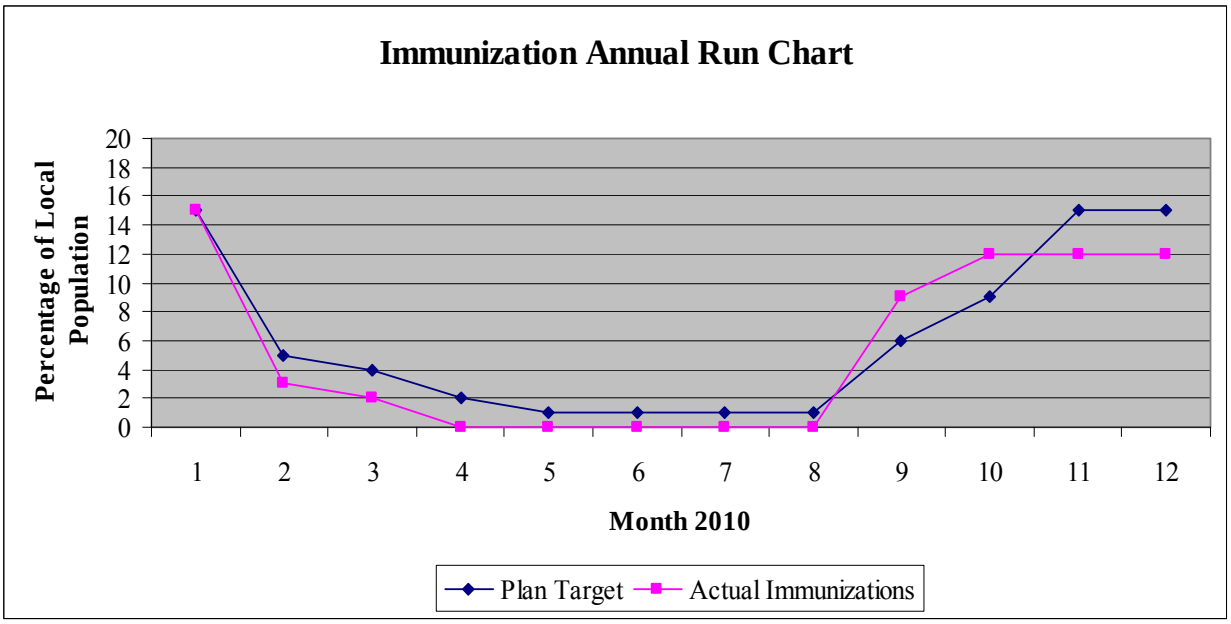


Figure 5.4: The Run Chart Example - Immunizations Over a Year, by Month – Monthly Totals to Plan

In the Run Chart, the aggregate population pick-up rates are plotted by month, together with the variances or gap-to-plan for month by month. It can also be used to measure the improvement or impact of any actions taken by enabling the comparison of before and after results.

Once data has been collected over a few months, it is important to drill down into the information to determine the most frequently occurring incident to the least frequent one. This process can be called separating the "vital few" or the area of most activity to the "virtual many" or the area/spread of lower activity. This information highlights where the most benefit can be gained from focused actions. For this exercise, the Pareto chart enables the prioritization and thus the focus of resources on most-needed areas.

The Pareto Chart

The Pareto chart is a bar chart that ranks problems or causes of problems in decreasing size bars from left to right on a horizontal axis, as in Figure 5.5.

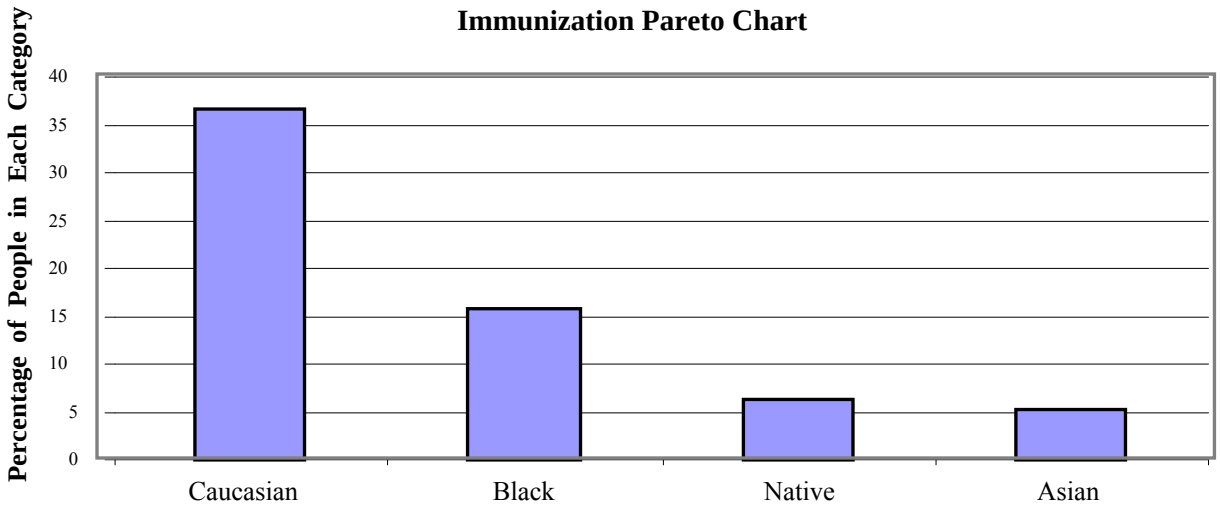


Figure 5.5: A Pareto Chart of Immunizations by Population Segment Distribution

Vilfredo Pareto,[39] an Italian economist, studied the distribution of wealth and proposed a theory of income distribution to fit the data. He saw that most wealth is concentrated in the hands of a few. Later Joseph Juran, who developed the phrase "the vital few and the trivial many," showed the application of this principle to all disciplines.[40]

The Pareto Chart Example

The above Pareto Chart shows the distribution by population segment. The Pareto Chart in Figure 5.6 identifies the variance of the segments to plan versus actual by population segment. For this exercise, the objective is to observe the vaccination take-up by various segments of the population. In order to determine where a lack of take-up exists, and thus the area for future action, it is crucial to look at which area had the greatest gap between plan and actual versus that area which met or exceeded plan.

This Pareto identifies the greatest variance to plan and population segment. The proportions of the plan reflected the percentage distribution of population by segment in the small town utilized for this demonstration purpose.

[39] Wikipedia, The Free Encyclopedia. Vilfredo Pareto. http://en.wikipedia.org/wiki/Vilfredo_Pareto. Updated March 14, 2011. Accessed March 14, 2011.
[40] Wikepedia, The Free Encyclopedia. Joseph M. Juran. http://en.wikipedia.org/wiki/Joseph_M._Juran. Updated March 4, 2011. Accessed March 28, 2011.

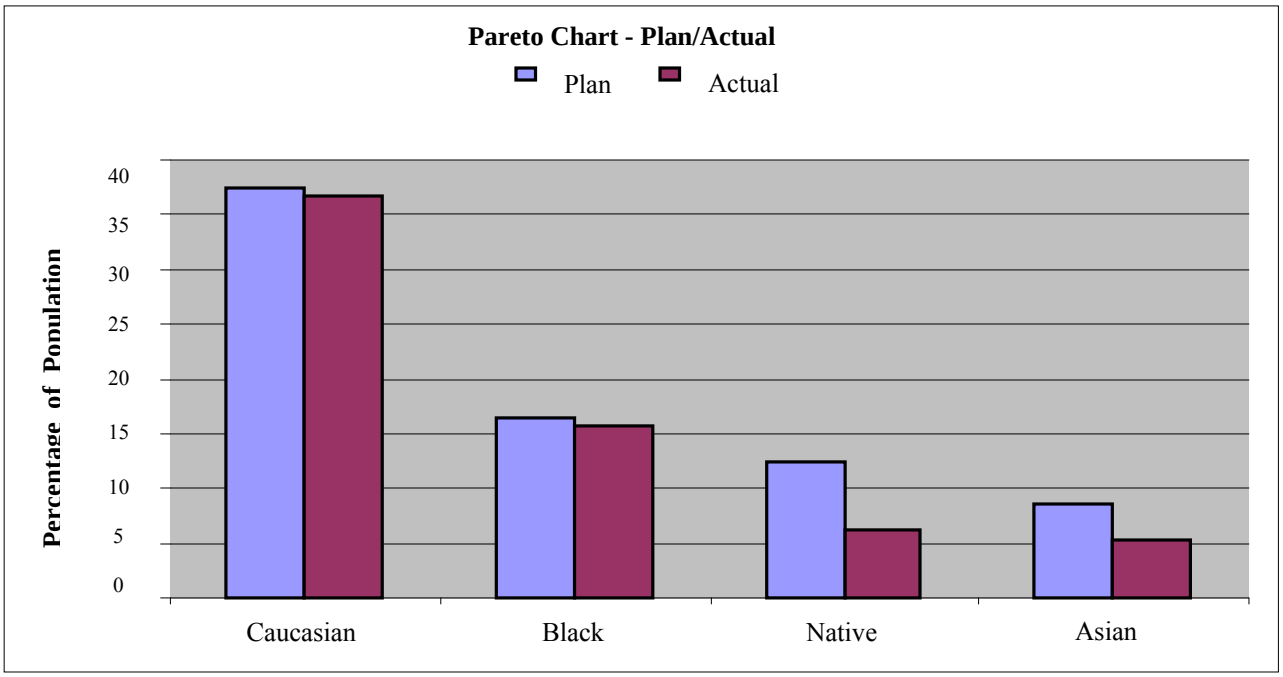


Figure 5.6: Population Segment Total Versus Target Planned Percentage

With several problems, a number of different tools and multiple pieces of paper or reports might be needed to see how things are going.[41] Marvin Paynter, a quality engineer for Ford Motor Company, determined that he could show a number of issues from different sources of inputs on a one-page tool to provide a summary for management. The goal of this one-page summary was to enable the monitoring of a single problem to resolution while demonstrating the status of the entire exercise over time.

He pulled together the run chart and Pareto data into a long-term validation tool that recorded time-sensitive events in one-week timeframes for his purposes; Figure 5.7 shows the failure to meet the planned immunization number by month. The Paynter chart can show emerging and declining problems, the timeframe for any corrective action and its effects, and whether or not such corrective action provided acceptable results.

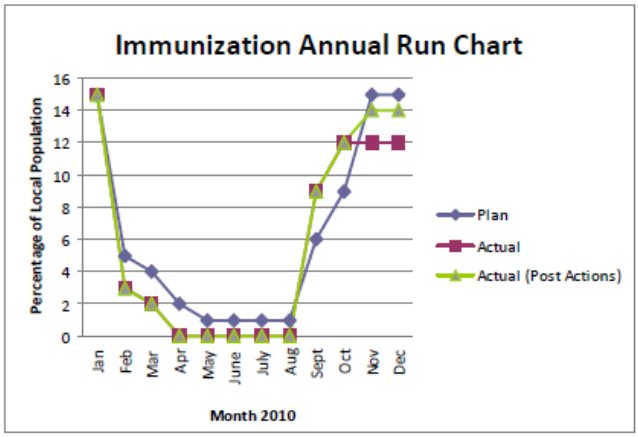
The Paynter Chart is a tool that can display the history of a problem or an opportunity over time. It can be used to monitor and track several different areas of an opportunity or occurrence of failure and highlight or show the impact of any changes or corrective actions over an extended period of time. Ideally, and to get a view of the history of a problem, the chart should show the prior few months, six if possible, and at least three to six into the future. Such a chart gives a better visual of the timeframe for action and responses.

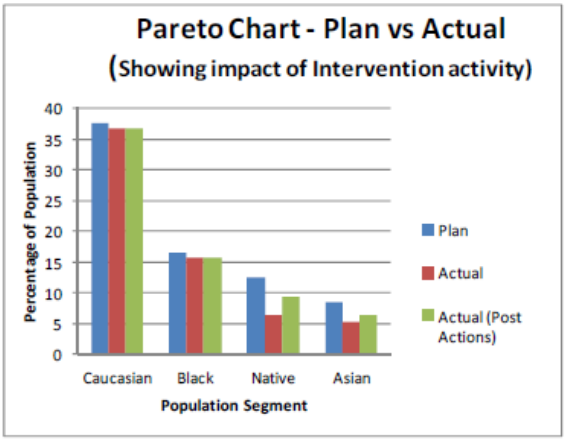
[41] Munro R. Paynter Chart. American Statistical Association. *Detroit Chapter Newsletter*. August 1995.

The information on the Paynter Chart is developed from the Pareto analysis or bar chart, the run chart, and a table record/tally chart of incidents or events tracked over time. It demonstrates the following functions:

a) Identification of new and reducing problems
b) Demonstration of the effects over time of any changes made
c) Correlation of actions taken to any changes in results, acceptable or unacceptable
d) Validation of effect of changes over time.

Paynter Chart Showing Impact Post Intervention Activity on Immunization Performance to Plan





Percent of total population	PAYNTER CHART												12 MONTH
	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	TOTALS
Plan	15	5	4	2	1	1	1	1	6	9	15	15	75
Actual Immunizations	15	3	2	0	0	0	0	0	9	12	12	12	65
Caucasian	8	0	2	0	0	0	0	0	6.75	9	6	5	37
Black	3	1	0	0	0	0	0	0	0.75	2	4	5	16
Native	1	0.5	0	0	0	0	0	0	0.75	1	2	1	6
Asian	3	0.5	0	0	0	0	0	0	0.75	0	0	1	5

Figure 5.7: The Paynter Chart Development Combining a Run Chart and Tally (Monthly) Check sheet, demonstrating Immunization for 2010

Figure 5.7 shows Plan Target against percentage of population to be immunized. It demonstrates the following:

a) Actual immunization totals
b) Diversity data as a percentage of Total Immunized for that segment
c) Planned intervention activity key dates in the table below the Paynter chart with symbols, thus:

= Special low-cost immunization clinics to be held for Asian community
@ = Special low-cost clinics, communication events, and other activities for outreach to Native communities.

The Asian segment has very low pick-up of the services, while the Caucasian has the highest percentage of service take up against actual population segment percentage. From a Pareto perspective, the Asian segment has the largest distance from the target in success rate. It is therefore the Asian segment which would be the first area to address. For example, special low cost immunization clinics can set up in the areas of highest Asian population density. If this action were carried out in October and November, then its impact could be measured in the chart. The next action area would be the Native population, and a similar review of reasons for low pick up could be carried out. Any special action taken can be tailored to specific needs and identified on the chart with an indicator to aid the tracking forward. Based on that feedback, the need for further special action would be determined.

Activity 1: Special Low-Cost Immunization Clinics held in September, October, November for Asians

We might research potential reasons for low pick-up in immunization in the Asian population, including potential cultural difference in how individuals interact with healthcare services. However, special low-cost immunization clinics set up in the areas of highest Asian population density may assist in supporting the need to ensure wellness, especially in times such as the recent pandemic issue of H1N1. If the clinics were set up in October and November, then the impact of this action could be measured in the chart.

Activity 2: Special communications, low cost immunization at sites convenient to the Native population

The next action area would be related to the Native population. The reasons for the low pick-up may be entirely different from those in the Asian population, and need to be determined in order to enable a successful project. If, for example, we learned that Native Americans had issues with transport, then a special action here could be setting up a clinic for them in an area where they have access, providing transport to a clinic, or introducing a mobile clinic. Any special action taken should be identified on the chart on the date of the activity with an indicator to aid the tracking forward. Based on that next round of feedback, the need for any other further special action would be determined.

Using the above Paynter Chart, special low-cost immunization clinics held in September, October and November for the population segments with the lowest pickups, Asian and Native Americans, could be identified with the following symbols:

- # = Special low-cost immunization clinics held in September, October – Asian
- @ = Special low-cost immunization clinics held in September, October – Native American

Measuring the impact of such events in the chart by population segment, as in Figure 5.8, is then possible.

A Paynter Chart is built with the following steps:

Step 1: Development of a check or tally sheet table to gather the information from the Immunization events. This table should provide all of the various types of information necessary to be able to see trends, changes, and variances between segments when charted. It should include information about what, how many, what type, when and how often (frequency).

PAYNTER CHART	PERCENT OF TOTAL POPULATION												12 MONTH TOTALS
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Plan	15	5	4	2	1	1	1	1	6	9	15	15	75
Actual Immunizations	15	3	2	0	0	0	0	0	9	12	12	12	65
Caucasian	8	0	2	0	0	0	0	0	6.75	9	6	5	37
Black	3	1	0	0	0	0	0	0	0.75	2	4	5	16
Native	1	0.5	0	0	0	0	0	0	0.75	1	2	1	6
Asian	3	0.5	0	0	0	0	0	0	0.75	0	0	1	5

Figure 5.8: Check or Tally Data Table for the 2010 Paynter Chart Immunization Exercise

This chart has the plan, the actual events, the month, and the population segment by percent of total population. The next step is to generate the run chart from the data, plan against actual, including the possible effect of the proposed interventions and showing the variance to plan and actual for those events.

Step 2: The Run Chart for the Paynter

The run chart in Figure 5.9 shows the month by month pick-up and plan-to-actual, and demonstrates the improvement possibilities for the planned intervention activities. It does not demonstrate the impact by segment, shown by the Pareto chart in Figure 5.10.

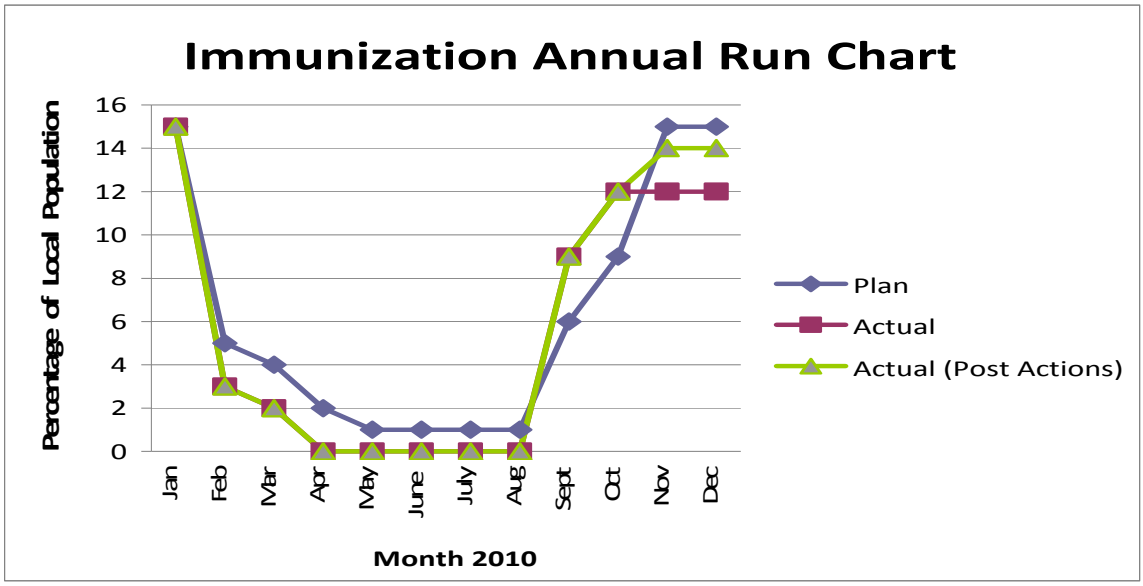


Figure 5.9: Run Chart of Immunizations Showing Post Intervention Activity Impact Possibilities

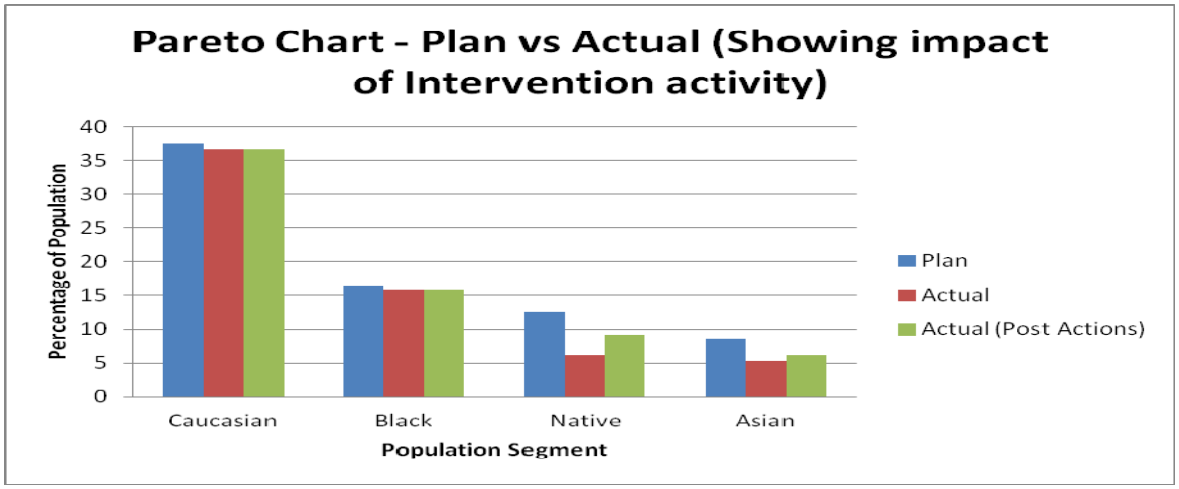


Figure 5.10: Showing Variance to Plan and Impact of Special Interventions

Step 3: Pareto Chart

This chart clearly shows the difference to plan and actual by population segment, enabling the introduction of any further necessary countermeasure actions into local strategic planning activities.

As shown in the above chart, the Asian segment has very low pick up of the services, while the Caucasian has the highest percentage of service take up against actual population segment percentage. From a Pareto perspective, the Asian segment has the largest distance from the target in success rate. It is therefore the Asian segment of the population which would comprise the first area in which action should be taken. Special low-cost immunization clinics are set up in the areas of highest Asian population density. Carried out in October and November, the action and its impact could be measured in the chart. The next action area would be the Native American population, and a similar action should be carried out. Any special action taken should be identified on the chart with an indicator to aid the tracking forward. Based on that feedback, the need for further special action would be determined.

Coaching and Facilitation Process

Chapter 6: Taking The Pulse Of Your Team[42]

Grace L. Duffy and John W. Moran

Just like humans, teams need regular checkups to ensure that they are healthy and performing effectively. Regular checkups will catch deviations and enable a corrective course of action. When teams begin to lose their ability to function at a high level of effectiveness, shown by declining performance, they are probably going through some phase of the team development down-cycle often cited in the Tuckerman[43] team model: Forming–Storming–Norming–and Performing.

Many teams never quite pull out of this downward cycle and continue to exist as a collection of individuals masquerading as a team. For these pretenders, they too often embark to a "Sargasso Sea"[44] of lost teams, maintaining the posture but not meeting the expectations of members or management. This decline may be attributed to a disconnect between performance expectations and organizational reality. Many managers fail to differentiate between what teams are supposed to do and what the team is really doing.

For many, the principles and expectations that management has of teams are not necessarily clear or even shared by those on the front-line. Another possibility is that some of the principles used to define the team model may not be relevant to a particular team or department. For this reason, developing clear, discrete, time-bound, and measurable AIM statements as recommended in Chapter 2 and 3 is crucial. A Team Charter can be created as the guidance document and official work contract for launching the team. The Team Charter is a document that delineates the strategic goals, boundaries, measures of success, constraints/limits, and available resources within which the team must operate as it investigates the problem assigned. In addition, regular reports and project reviews help to keep teams on track and aligned with management's expectations. Chapter 13 details a variety of team reporting formats that can be used to keep open communications flowing between management and the team.

This chapter presents two diagnostic instruments to help the facilitator or coach monitor a team's health. The first instrument is a checklist of tasks that a team should complete in most teaming processes and is shown in Table 6.1. The task side needs to be monitored along with the behavioral side to ensure a balance in the team's health. This table of team tasks is not exhaustive but illustrative. Individuals using this table should modify it to fit the needs of their team's problem by adding additional task items.

[42]This chapter is based on an earlier work: Kuras T, Moran J. 20 Questions to Ask Your Teams. *The Quality Management Forum*. 1997; 23:(4): 4-5.
[43]Tuckman B. Developmental sequence in small groups. *Psychological bulletin*. 1965; 63: 384-399.
[44] Heller R. *A Sea Within a Sea: Secrets of the Sargasso*. Price Stern Sloan, 2000.

Team Tasks:	Yes	No	N/A
1. Team charter developed			
2. Team sponsor reviewed charter with team			
3. Team members selected			
4. Team leader selected			
5. Team facilitator assigned			
6. Team understands the PDC/SA Cycle			
7. Team trained in QI tools and techniques			
8. Team meetings scheduled and developed			
9. Regular team meeting held			
10. Team minutes published			
11. Team followed the PDC/SA cycle			
12. Team is doing rapid cycle PDC/SA			
13. Team and sponsor held regular review meetings			
14. Team completed their assigned project			
15. Team develop a Gantt chart of key implementation milestones			
16. Project solution implemented and key deliverables achieved			
17. Regular communication plan established with team sponsor and organization on progress			
18. Team established realistic improvement targets			
19. Team collected and used data			
20. Final report issued to team sponsor			
21. Team instituted controls to hold the gains			
22. Team made a handoff to those who own the process to institute change			

Table 6.1: Team Task Review Checklist

To check on the behavioral health of a team, the questionnaire shown in Table 6.2 has been developed to help a facilitator, team leader, or coach to monitor a team with 20 different vital signs. This questionnaire is designed to assess a team's behavioral performance over time; it can be used to establish a baseline and then given at regular intervals to assess how the team is functioning. From time to time the questionnaire may reveal during some areas needing attention; they may be minor like a sprain or major like a fracture. The facilitator and team leader need to work together to decide what is the "best medicine" to help the team recover to a productive state. The corrective course of action chosen needs to be communicated to the team members so that they will understand why it is necessary and what outcomes to expect. The team leader and members have to be active participants in the team's recovery.

Team Evaluation Survey

Date:_____

Answer each question by entering the number below that best describes the current team:
1–Strongly Disagree 2–Disagree 3–Agree 4–Strongly Agree

Evaluation Questions		1	2	3	4
1.	As a team member, I am committed to making changes.				
2.	I clearly understand the purpose of my team.				
3.	The team leader has a process for sharing information with members.				
4.	Our team has the right members to be successful.				
5.	As a team member, I understand how our work affects the larger goals of our department.				
6.	Our team is recognized for its accomplishments.				
7.	Team members openly express their ideas and opinions.				
8.	Team members have a means to see progress toward important objectives.				
9.	My team members want to be on our team				
10.	I want to be on our team.				
11.	Our team is able to make thoughtful decisions that all team members support.				
12.	Our team can have productive meetings without the influence of a team leader.				
13.	Our team members trust and respect each other				
14.	Team members express disagreements constructively.				
15.	Team members willingly take on new responsibilities.				
16.	Team members follow through on decisions and action items.				
17.	Our team has established a set of ground rules and guidelines for team performance and behaviors.				
18.	Team members are encouraged to express different points of view.				
19.	Our team makes time to evaluate how effectively they work as a group.				
20.	Members of our team are held accountable for their responsibilities and assignments.				
Total Responses					

Table 6.2: Team Evaluation Survey

The scoring of this table can be can be performed in a number of ways:

1. Add up the scores for the items scored as a 1, 2, 3, or 4 for all of the team members and observe what the data looks like. If they average 3 or more, then the team is progressing on the right course. Items scoring below a 3 should be analyzed to determine if an intervention is necessary.

2. Average the scores for the team members and indicate for each question the average and the high and low scores. This process offers a snapshot of whether any team members are below the average - which should be investigated. Most of the members may be in agreement that the team is functioning well, but one or two may see it differently.

3. Average the scores for each question and connect the averages with a line; it will look like an electrocardiogram of the team.

The main aspect to notice is deteriorating trends over time and individual outliers that need to be addressed.

Summary:

The issue of effective teaming is a complex topic. Leaders in organizations that have teams must use an assessment process regularly so that they can check the pulse of their teams. This assessment process is a form of team-based preventative medicine by checking the vital signs. This checking process will help to guide management and serves as an effective preventive measure for maintaining team performance.

Too often teams struggle and fail because of unclear performance expectations that management has of teams. It is not hard to find a "disconnect" between how teams view themselves and how managers and supervisors view the team. This instrument can help to identify the expectation gaps between reality and organizational views of team performance.

Chapter 7: Facilitating and Coaching Teams - Tips and Techniques

Grace L. Duffy, Cathy Montgomery and John W. Moran

Facilitating and coaching teams are learned skills that require education, observation, and hands-on experience. The authors have used facilitation and coaching techniques with over a thousand teams to get them back on track and performing at maximum potential. This chapter includes tips on some effective techniques for facilitating and coaching teams.

Facilitation is used in a variety of contexts including training, experiential learning, conflict resolution, and negotiation.[45] Facilitation is the process of helping groups or individuals learn, find a solution, or reach consensus without imposing or dictating an outcome. Facilitation empowers individuals or groups to learn for themselves or to find their own answers to problems without control or manipulation. Facilitators need good communication skills, including listening, questioning, and reflecting.

Coaching is defined as partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential.[46] Facilitation and coaching are closely related. Both facilitators and coaches strive to get clients or teams to improve performance. Coaching is slightly more directive than facilitation. The distinction between facilitation and coaching often becomes blurred. At times, a group is led through facilitation to a resolution. At other times, directive coaching is necessary in order to get the group moving.

In this chapter the authors assume that the facilitation or coaching services have been requested by a team experiencing some sort of difficulty reaching their assigned goal. Facilitation/coaching interventions must be well planned with the team leader so that additional damage is not done to the team. A facilitator or coach may be assigned to help guide a team through the problem-solving process. The tips and techniques presented here should be followed at startup to help the team reach its maximum performance level as quickly as possible.

The importance of a Team Charter was discussed in Chapter 3. Before attempting any team facilitation or coaching, it is important to make sure that a team charter is in place as a baseline of the team's activities. The charter provides start-up direction that a team needs to be successful in tackling the task that it has been assigned. Often teams spend valuable resources trying to figure out what it is they are supposed to do. If the team is struggling with this issue, then the facilitator or coach should get the sponsor together with the team to complete a team charter.

Example:

The Florida Department of Health (DOH) facilitates a collaborative of nine county health departments (CHD) working on quality improvement projects over a three year period to reduce rates of childhood overweight and obesity in their counties.

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[45] The CBS Interactive Business Network. Facilitation. http://dictionary.bnet.com/definition/facilitation.html. Copyright 2011. Accessed March 30, 2010.

[46] International Coach Federation. http://www.coachfederation.org/. Copyright 2010. Accessed March 30, 2010.

At the beginning of the project, each CHD coordinated a team of peers to develop goals, objectives, strategies and activities; only one team developed a charter, outlining roles and responsibilities of team members.

Each year, a survey was conducted among collaborative team members to assess project successes, lessons learned, use of quality improvement tools, and experience participating in a collaborative. A component of the survey asked participants to provide information and feedback on aspects of their team's performance.

Two-thirds (65%) of survey respondents (n = 17) reported that their project teams were composed of multiple program areas within the CHD. No consistency was shown in the frequency of meetings; and, even when teams met, only 35.3% of respondents said that their meetings were productive.

Shifts in priorities (e.g., H1N1; Haitian relief efforts) and staff turnover reduced the number of members available to work on projects in multiple CHD teams. Other team members became disengaged; because their role and purpose were not clear.

One team member wrote:

> *"(QI) projects often assume people know how to work in teams. In fact, it is a skill set that requires just as much training and guidance as any other (QI) tool. If a person functions in a positive team, there is great satisfaction achieved; however, (QI) tools alone and objectives will not prepare people for basics on how to function as a team."*

Successfully facilitating and coaching a team requires building a partnership among the facilitator/coach, sponsor, team leader, and team members. This partnership is most effective when ground rules, clear expectations, specific time frames, and goals and measures of success are established. The overall goal is to build a culture of commitment and accountability to the assigned task within the team.

The goal of team facilitation and coaching is to establish trust, build rapport and open communication, clarify key roles and responsibilities, and establish goals. An effective personal development plan and a mentoring agreement should be created between the facilitator/coach and the individuals within the team.

To be an effective facilitator and coach, eight key rules need to be followed:

1. Know the needs of the team. The coach must address current team needs, not some desired future state.

2. Confirm that the team is ready to be coached:
    a. Will they be receptive to coaching?
    b. Have they requested coaching or been told to receive it?
    c. What do they expect to get from coaching?

3. Set realistic expectations with the team and team sponsor:
    a. Establish goals for the coaching or facilitating outcomes.
    b. Clarify whether the purpose is to facilitate a team activity or conduct individual team member coaching. The difference between the two will show up here.
    c. Build trust, establishing who is to receive a report of results. Making it clear to the team that the outcome of the coaching is important will help to build trust.
    d. Establish when and where coaching or facilitating will take place.

4. Observe the team:
    a. Identify destructive behaviors engaged in by individuals.
    b. Document specific incidences of inappropriate behavior.
    c. Document strengths and weaknesses of team members and the team as a unit.
    d. Understand what team members think is hindering their progress toward the goal.

5. Measure where the team is using a team development model such as Tuckman's Group Development Model[47] of forming, storming, norming, performing, and adjourning.
    a. Understand where the team is currently. Document the behaviors which indicate that the team is in that stage.
    b. Understand the history of the team and what the biggest challenges in working as a team have been.
    c. In Chapter 3 it was discussed that a well-developed team charter helps to move the team to the performing stage. An effective charter answers a number of issues that usually arise in the norming and storming phase of team startup. The facilitator/coach must ensure that a well-developed team charter is in place before attempting any changes.

6. Develop an Improvement Plan:
    a. Describe the impact of team behaviors, both positive and detrimental.
    b. Review causes that lead to bad outcomes for the team.
    c. Set realistic change expectations for team behavior.
    d. Build the improvement plan around individual member and team strengths.
    e. Describe specific corrective actions to overcome observed weaknesses.
    f. Indicate any training that may be required and how that training may be obtained.

7. Confidentiality:
    a. What is observed, recommended, or assisted with remains confidential.
    b. If a finding must be reported to someone higher in the organization, the team must be informed at the outset.

[47] Wikipedia, The Free Encyclopedia. Tuckman's Stages of Group Development. http://en.wikipedia.org/wiki/Forming,_storming,_norming_and_performing, Updated March 25, 2011. Accessed March 29, 2010.

8. Follow-Up:
    a. Set a time to follow up with the team to see if progress has been made.
    b. Ask them to send brief updates on a regular basis about what is and is not working.

The following are some typical examples of issues that the authors addressed with teams in facilitation or coaching roles. Some of these might be encountered when helping a team:

- Clarify objectives and goals for the team; return to the team charter.
- Coach a group of people into a cohesive team.
- Dissolve hidden agendas held by one or more of the team members.
- Encourage team members to commit and be accountable for their actions.
- Help the team define the obstacles that are impacting progress. Coach the team on how to overcome these obstacles.
- Move from hoping to be a team to acting and functioning like a team.
- Generate efficiency in the team's approach to problem analysis.
- Help the team model other high performing teams' success.
- Overcome a team's feeling of frustration and failure.
- Keep them going through encouragement and recognition so that they finish their task.
- Coach team members who have a difficult time confronting one another on important issues.
- Establish and clarify roles and responsibilities for the team members.
- Develop good meeting practices and set ground rules for the team to follow to enhance their time together.
- Overcome the disruption of one dominant team member.
- Encourage and involve those who hold back or are quiet.
- Help the team focus on the possibilities, not the obstacles.
- Help resolve destructive differences.

Whatever team issue is encountered, it is always a good idea to discuss it with another facilitator/coach to get two view points on how to approach the issue. Once the cause of the issue is fully understood, developing an action plan to get the team back on track is the next step.

The need for facilitation and coaching interventions can be reduced by utilizing the following *16 Guidelines for Teams to Work Effectively.*[48] This list applies to all teams as they begin and progress toward their goal; and can be used as a checklist by the sponsor or team leader to help ensure a smooth teaming process.

[48] Fetteroll G, Hoffherr G, Moran J. *Growing Teams*. Salem, NH: Goal/QPC; 1993.

1. Establishing goals and objectives that all team members accept, thereby developing team ownership is crucial. Before facilitating or coaching a team or even presenting information, asking the group what they expect to achieve by the end of the meeting is an important action. Documenting their responses on flipchart paper helps to visualize their expectations. Allowing the group to verbalize expectations helps team members and the facilitator establish the same vision for the meeting.

   Posting the expectations and reviewing the list with the group at the end of the meeting to verify that most if not all of the expectations were addressed is also important.

2. Allowing each team to define its own standards of performance—not dictated standards but ones they believe in and will follow—will lead to greater success.

3. Encouraging members to disagree in a constructive way to resolve problems is positive; team members must feel comfortable with each other to have a constructive disagreement. Before facilitation of a team, establishing *Ground Rules* for the meeting is prudent. The Florida Department of Health's Office of Performance Improvement (HPI) facilitates several strategic planning teams each year. One method they found to be effective is printing and laminating *Ground Rules* that are taped to the floor at the entrance to the meeting space. The rules get noticed! Reviewing the *Ground Rules* with team members to ensure that everyone understands expected behaviors works.

   HPI's *Ground Rules* include:
   - Welcome all ideas
   - Listen actively
   - Respect what others say
   - Allow everyone to participate
   - Allow one person to speak at a time
   - Discuss issues, not individuals

4. Reviewing past actions when making plans for the future helps the team to see where they have been successful and unsuccessful and why that has happened. They can learn from their mistakes.

5. Making decisions by consensus helps all team members feel that their ideas were considered and that they are part of the process. The Florida Department of Health's Office of Performance Improvement has facilitated and coached a number of advisory councils and strategic planning teams. One method used to determine consensus of the group is to use red and green "voting" cards. After discussions of an issue, the facilitator may make a recommendation or proposal to the group to move them forward. Group members are asked to hold up the green card if they approve of the recommendation, and "votes" are counted. Similarly, group members are asked to hold up the red card if they do not approve of the recommendation. These members may be asked to provide an alternate proposal or request further discussion about the issue and recommendations. In either event, allowing everyone an opportunity to cast a vote helps teams eventually reach consensus.

6. Remaining cohesive and maintaining a sense of unity gives the team a sense of shared purpose which can be built upon to move the whole team to a higher level of performance.

7. Striving for synergy occurs when the team members build on each others' thoughts and ideas and get the creative juices flowing.

8. Developing a comfortable working atmosphere creates a positive and active climate in which the team can function and interact with one another. Since 1999, the Florida Department of Health (DOH) has measured the satisfaction of its employees to provide data needed to improve the work environment. The way that employees feel about their work environment is important and can impact performance in many ways from overall productivity to customer satisfaction, as well as the ability to recruit and retain a well-qualified workforce.

   Based on Employee Satisfaction Survey results, employees at local health departments and state health offices, divisions, and bureaus formed work groups to discuss opportunities for improvement. To create a climate where employees felt comfortable sharing what they thought the root causes of issues were and provide suggestions for improvement, it was important to separate the management team from the group. This allowed employees more freedom to share their thoughts and ideas about issues.

   Also key to providing a safe climate was the review and understanding of ground rules with particular emphasis being placed on confidentiality.

9. Using physical work space that is conducive to the team process, including the right temperature and comfortable seating, provides an environment for a productive meeting. The room should have all the necessary tools such as a flip chart and markers, to allow the team to capture their ideas. This rule seems like common sense, but often ideas are lost because they are not written down. Room set-up is critical to engaging participants at meetings. For example, if the facilitator is using PowerPoint or an overhead projector screen, placing the screen at the front of the room on the facilitator's dominant side (e.g. right side if he/she is right-handed) limits the number of times that the facilitator turns away from the audience, allowing eye contact to be maintained. Flipcharts should be placed to the facilitator's non-dominant side.

10. Listening to each other and providing useful feedback are essential skills for all members of the team. They must be able to understand and comprehend what others are saying. This skill should be taught during team training and reinforced by the team leader at all meetings.

    An overly vocal person can easily sabotage a meeting and can be persuasive enough to lead others to "groupthink."

While suppressing the flow of ideas is not a goal, two methods that the facilitator may use to restrain the person who will not allow others to share their ideas are:

a) Moving the person to the facilitator's non-dominant side, limiting direct eye contact with the facilitator and drawing attention away from the talkative person and engaging others in the discussion.

   One way to move an audience once they have been seated is to place colored markers in the center of each table during room set up. Asking participants to select a colored marker, noticing what color the talkative person selects, and then asking all participants who selected those colored markers to move to the table that is on the speaker's non-dominant side not only eliminates distractions from the "talker" but is also an effective technique for breaking up cliques in a group setting.

b) Walking around the room and laying a hand on a person's shoulder usually works to quiet the person and allows others to engage. People from some cultures do not like to be touched, so it is important to know the audience before trying this method.

11. Using constructive criticism to facilitate group interaction is often effective, though personal direct criticism should not be tolerated. Constructive debates help teams to make better decisions.

12. Allowing members to express their ideas fully and frankly is essential. When members express themselves, making sure that they are not advancing any personal agendas intended to sidetrack the team is important. It is difficult to facilitate or coach an individual or a team who has his/her own ideals or "agenda." One way to capture ideas that may not be relevant to the group's objectives is to establish a *Parking Lot*. At the beginning of the meeting, explaining that the *Parking Lot* will be used to document thoughts or suggestions which may or may not be used in activities decided on by the group will help participants to understand that it is important to contribute, though their ideas might have to be considered later. This documentation validates that a person's comments have been heard and allows the meeting and flow of ideas to continue.

13. Recognizing individuals for the contribution that they make within the team is an incentive to help team members continue to share their expertise, ideas, and thoughts with the rest of the team.

14. Assisting members toward successful completion of team goals reinforces team members' obligation to help one another when someone is struggling to accomplish a task. Team members need to feel comfortable asking for help. One approach to keep meetings and team members on task is to develop an agenda for every meeting. Outlining meeting goals or objectives and identifying topic areas for discussion are necessary.

    Dividing the agenda into three columns and identifying the topic to be discussed in Column 1 sets the stage. Notes or any activities related to the topic that have occurred

since the previous meeting should be outlined in Column 2. Column 3 is the Action Register where activities that need to be completed before the next scheduled meeting and people responsible for completing the activities are listed.

The Action Register should be reviewed at each meeting. Members are accountable for completing their assigned tasks and remaining engaged. If team members are unable to meet their obligations due to shifting priorities, meetings provide an opportunity for members to ask for help.

An agenda with an Action Register keeps activities moving towards the completion of team goals.

15. Valuing creative approaches to problems is a characteristic of the most effective teams. Creativity is a way to stimulate team members to greater heights of performance and productivity.

16. Incorporating flexibility in the team's thoughts and action allows team members to grow, feel free to make mistakes, and have faith in their ability to contribute to team achievements. If the team is rigid, it will stifle creativity.

Summary

Facilitation and coaching are as much arts as sciences. They are skills honed through hands-on experience interacting with many teams in the group development process. Those who accept the role of a team facilitator or coach must understand the natural behaviors of teams and the individuals who comprise them.

Applications and Tools for Creating and Sustaining Healthy Teams addresses a number of characteristics exhibited by successful teams. Chapter 13 focuses on the third party brought in to create a motivating atmosphere through which the team can increase performance. A healthy team is a system, just as the corporation or department is a system. Very little occurs in a vacuum within a team; one action impacts another action. The effective team leader, facilitator, and sponsor must maintain constant association with the team to support progress towards their goal. Newly formed teams or individuals new to teamwork will need closer monitoring than more seasoned teams. The facilitator and team leader must respect the empowerment of team members to take charge of their own success. This balance of coaching and encouragement is an ongoing challenge for champions, team leaders, and facilitators.

The authors wish the reader success in forming and growing healthy teams within their organization. Working with teams is a rewarding activity and one the authors recommend to all who seek to improve organizational performance.

Chapter 8: Ingredients for Effective Meetings and Team Communication

Grace L. Duffy and John W. Moran

Working effectively in teams includes running and participating in meetings. These meetings may be face to face (F2F) or virtual, depending on the availability of technology and the preference of the team leader and members. The authors recommend that the first meetings of a forming team be F2F to establish strong associations with each other and the required outcomes of the project to which the team has been assigned.

It is critical to set the proper tone during the initial team meetings. As introduced in Chapter 4, Roles and Responsibilities in Launching Teams, new teams will progress through a series of stages in their behavior towards each other and their approach to project tasks. Each team member has something important to contribute, whether it is experience or expertise. The team will engage in serious work, but that work can also be a fun experience that contributes to the organization.

Many people have learned to dislike meetings. When a meeting is disorganized with no agenda, is poorly facilitated, or is disrupted by inappropriate behavior from attendees, individuals develop an aversion to all meetings. It is the responsibility of the team leader and facilitator to plan ahead for a clear, targeted agenda, effective materials, prepared attendees, and significant content.

Effective meetings start in the mind of the leader long before attendees show up. Preparation is a requirement for meeting success. Good preparation starts with identifying the purpose of the meeting. What is to be accomplished? Who needs to be involved to accomplish this purpose? Does this purpose require individuals to be F2F, or can the meeting be accomplished through teleconferencing, or even email, if information does not need to be received simultaneously?

Should a Meeting be Held at All?

One of the fastest ways to lose motivated team members is to hold unnecessary meetings. It is critical to communicate effectively with team members, sponsors, stakeholders, and customers, but it is not helpful to spend valuable time reviewing information that can be available when the recipient is personally ready to access it.

Meetings are valuable when team input, discussion, and joint analysis are required. F2F meetings are crucial when the team leader, facilitator, or process owner needs to experience the full range of communication channels, most notably body language and tone. Discussion boards provide group input in words without benefit of body language or tone of voice. Teleconferences provide words and tone but not the nuance of seeing the individual as he or she presents ideas. Video-conferencing comes close to F2F and is becoming a more frequent alternative as budgets shrink and workloads increase. Many laptop computers now include a web camera, further enabling use of alternative meeting venues.

In preparation for a meeting, it is important to think of the best venue for delivering the proposed content. Can the information be made available on a shared drive, virtual workspace, through a social networking group discussion area, or simply in an email with attachments? If immediate discussion is not required, asynchronous team member access may be a more efficient delivery medium.

Figure 8.1 is a generic representation of a meeting flow. Planning before the meeting is important. Attendees are more effective when they know what they will be expected to contribute during the meeting, so it is imperative that the meeting leader envision and articulate the intended outcome of the event. Starting the meeting on time respects participants, and staying on agenda and on time allows all to manage their schedules appropriately. Closing the meeting with a summary of action items and decisions reinforces progress and establishes accountability. Finally, follow-up ensures that assignments are tracked and measured to completion.

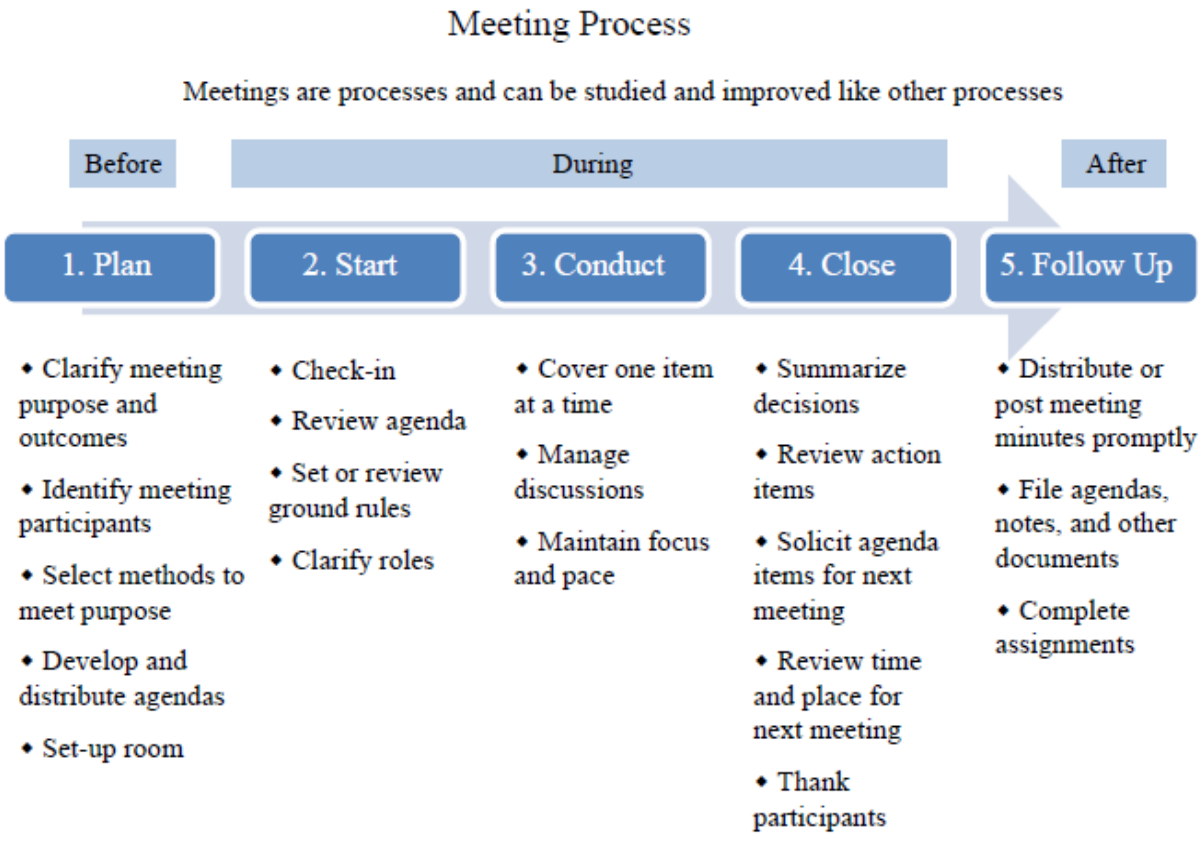

Figure 8.1: A Generic Meeting Process Flow

Planning the Meeting

Once the decision is made to hold a meeting, whether F2F or virtual, it is time to plan the following details:

- Purpose and outcome
- Participants
- Length
- Location
- Preparation
- Notification

What is the specific reason for holding the meeting? Clarifying the topic and content of the discussion is crucial. Identifying the intended outcome of the meeting and determining what deliverables are expected at the end of the meeting will form part of the invitation message to participants and interested stakeholders.

Organizing the content of the meeting into timed blocks before developing the agenda not only provides the skeleton of the agenda but also create the timeline for the meeting. Visualizing the meeting while creating the topic items serves as a dress rehearsal and aids the meeting leader or facilitator in adequate preparation.

Identifying the meeting location, date, and time at the top of the agenda gives the invitees an idea of what, when, and where for their own planning purposes. Sending out an electronic meeting invitation if the participants have a calendar function on their office computing network is a very efficient way to invite potential attendees. Attaching the agenda to this calendar notice is a positive step. It is best to send the invitation and agenda several days ahead to allow participants to prepare reports, data, or questions.

The meeting announcement should include specifics on how the participants are to prepare for the meeting. It is good practice to inform participants whether they are to provide formal presentations, handouts, reports, generalized feedback, or specialized analysis related to the content of the meeting. If special guests are invited, a dress code, such as business casual, business attire, blue jeans, or uniform of the day might be suggested. It is crucial to give the participants the information that they need in order to be prepared. If participants must travel to attend, sending the notification out well in advance of the meeting to allow for budget and travel arrangements is necessary.

Only inviting people who will benefit from involvement or who possess information that will further the purpose of the meeting will prevent wasting the time of anyone not critical to the meeting. Listing the meeting participants and the reason for their inclusion in the meeting—as team member, subject matter expert, process owner, champion, facilitator, supplier, customer, etc.—will ensure that only the essential people are at the table. If others might benefit from the content, they can receive a distribution of the minutes after the meeting.

The decision about possible attendees depends on what needs to be accomplished during the meeting. Many meetings occur without the right people there. It is wise to asking several other people for their opinion instead of relying solely on one's own judgment about people to invite. Calling each person to tell them about the meeting, its overall purpose, and why their attendance is important is a positive gesture, if it is feasible. Following up the call with a meeting notice, including the purpose of the meeting, where it will be held and when, the list of participants and the person to contact if they have questions will generate better response. Sending out a copy of the proposed agenda along with the meeting notice and having someone designated to record important actions, assignments, and due dates during the meeting will enable solid participation and follow through. The person designated to record important actions, assignments, and due dates should ensure that the information is distributed to all participants shortly after the meeting.

Starting the Meeting on Time

Starting the meeting when the agenda says it will start encourages good time management—often a challenge considering busy schedules. Starting on time will let the participants know that when they show up on time at the next meeting, their time will be well spent. Reviewing the purpose of the meeting and the agenda, including any adjustments that may have happened since the draft agenda was distributed, is the first order of business.

The process used in a meeting depends on the kind of meeting planned (e.g., staff meeting, planning meeting, problem solving meeting, etc.). However, certain basics are common to multiple types of meetings.

It is important to have a few ground rules for most meetings. These ground rules cultivate the basic ingredients needed for a successful meeting. Four powerful ground rules are: participate, focus, maintain momentum, and reach closure. A ground rule about confidentiality, depending on content sensitivity, is a good idea. Listing primary ground rules on the agenda and reviewing *each* ground rule for new attendees while keeping the ground rules posted at all times ensure that everyone participates according to the same guidelines.

Participants can provide input on priorities, agenda modifications, and additions. If members are calling in to the meeting, they need to be able to hear and participate adequately from their location. The scribe and timekeeper for the meeting need to be identified. A description of additional roles is included in Chapter 4: Roles and Responsibilities in Launching Teams.

Using the agenda keeps the meeting on track; it can be referred to for timing and content coverage. The scribe or minute taker records all decisions, action items, and critical points of discussion. This information will become part of the history of the project or program. The meeting minutes are then used as a record for the team to reference in future activities.

Group discussion needs to be encouraged in order to surface all points of view. Decisions will be of higher quality and members will be more highly motivated with group discussion; they will feel that attending meetings is worth their while. Ideas, activities, and commitment to the

organization improve when members see their impact on the decision-making process.

Conversation needs to remain focused on the topic. Only constructive and non-repetitive comments are productive. Tactfully ending discussions when they are getting nowhere or becoming destructive or unproductive ensures the quality of the meeting. Brainstorming and problem-solving techniques encourage participants to share ideas. Chapter 7: Facilitation Tips and Techniques contains excellent guidelines for facilitating effective meetings. Clarifying statements when necessary by repeating important comments such as "what I hear you saying is ..." gives the speaker a chance to verify a point or for others to share additional thoughts about the subject.

Ending the Meeting on Time

Not only is it important to start the meeting on time, but it is also important to end on time. Participants may be running from one appointment to another with little transition time. It is important only to run over the allotted time with the participants' permission.

The scribe/recorder should review any action items, deliverables and due dates, quickly restating any decisions made during the meeting. Consensus on the issues can be verified with a reminder to the participants that they are expected to support the outcomes of the meeting.
The next meeting date, time, and agenda should then be set. This preliminary information can be included at the bottom of the minutes so that participants can block out time on their future calendars. If the agenda cannot be finished, the remaining issues can be covered early in the agenda of the next meeting.

Leaving 5 to10 minutes at the end to evaluate the meeting is crucial. Each member should rank the meeting from 1 to 5, with 5 as the highest and have each member explain his or her ranking. The highest level manager in attendance should rank the meeting last.

Figure 8.2 is an example of a Lean Six Sigma Process Improvement meeting agenda template. This example includes the mission and vision of the Process Owner's department and allows the team members to reflect on the alignment of their activities to the strategic objectives of the organization most impacted by their activities. Minutes of the previous meeting are reviewed at the start of the session. Any actions, due dates, or deliverables are emphasized as a way to encourage accountability for project outcomes. Links to reference materials can be included in the electronic version of the agenda when it is sent out to participants before the meeting.

A copy of the agenda along with all supporting documentation, meeting minutes, and task lists should be archived in a common, accessible database for both team and organizational reference. Mr. Chris Giles, the project manager for the Seminole County Florida Community Services Lean Six Sigma improvement project, developed a flowchart to guide the documentation archive process for the Manager's Meeting redesign. Figure 8.3 shows the process that was piloted during spring 2010 in Sanford, Florida. Note that the archive process encompasses the pre- and post-meeting activities of creating the agenda, gathering data, scribing minutes during the meeting, capturing action items in a tracker, as well as storing the finalized documents in the standardized data base for retrieval and analysis.

Agenda

(Time) Mission and Vision Statement for Department or Process Owner Function
- *Include mission here as reminder to team and stakeholders of ultimate goal of their decision making.*

(Time) Review minutes of previous meeting. Action items, due dates, barriers to completion.
- ID scribe and timekeeper
- *Refer to Chapter 4: Roles and Responsibilities in Launching Teams*

Team Leader:
Meeting Facilitator:
Team Members and Other Attendees:
1.
2.
3.
4.
5.

Time:	Agenda Topics:	Person Providing Information:
	Topic 1:	
	Topic 2:	
	Topic 3:	
	Topic 4:	
	Topic 5:	
	Decision Summary	Insert link to document for reference
	Action Item Summary	Insert link to document for reference
	Review Parking Lot Items for Follow-up	Meeting Leader and Scribe; open discussion
	Identify Items for Next Agenda	Insert link to document for reference
	Evaluate Today's Meeting	Hand out evaluations and collect

Additional comments, special information:
Date for next meeting:
(Time) Adjourn

Note: Prepare the agenda and send to all participants before the meeting, allowing everyone to prepare for the meeting.

Figure 8.2 Agenda for Process Improvement Team Meeting

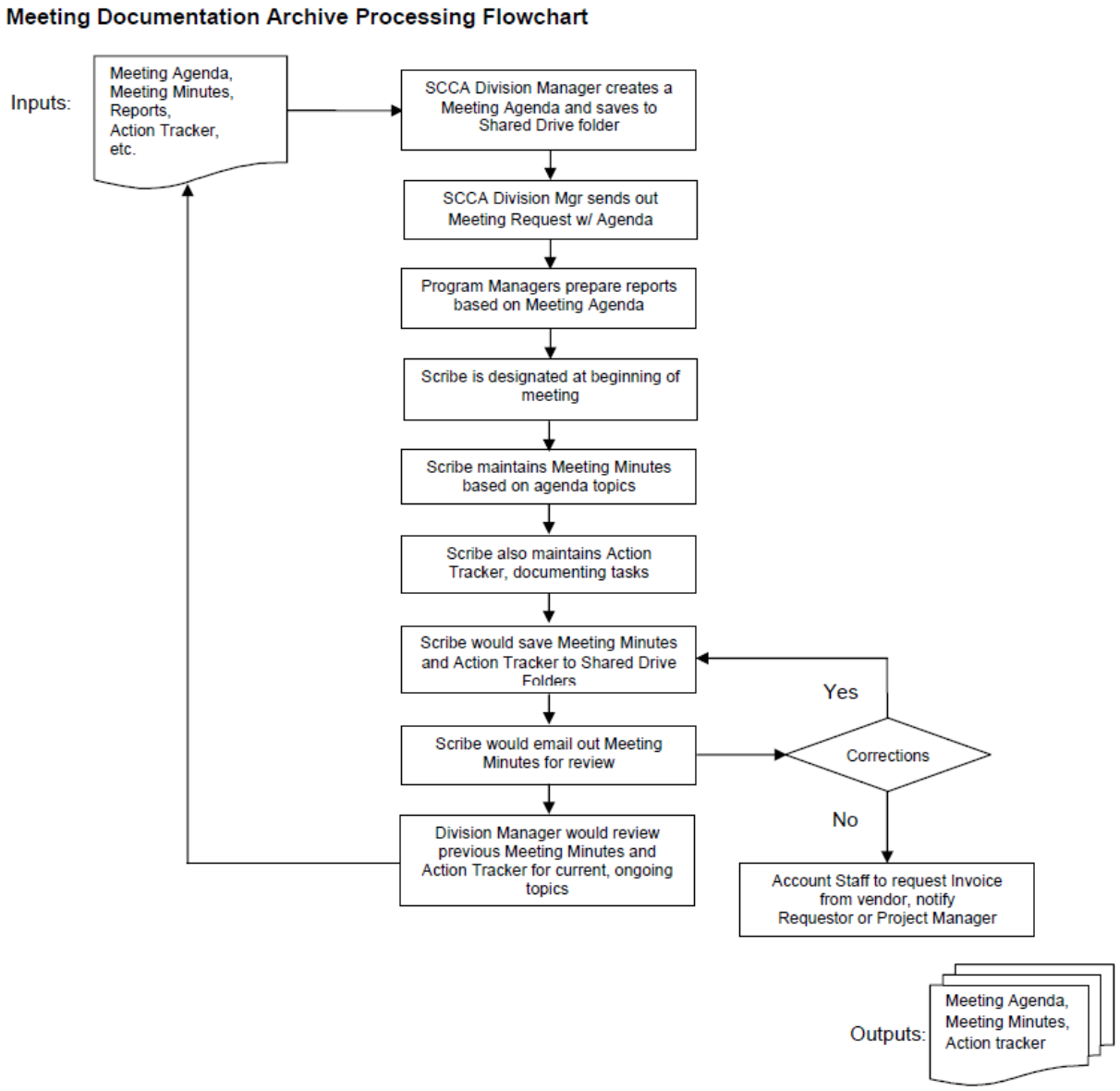

Figure 8.3: Seminole County (Florida) Community Services Meeting Documentation Archiving

An example of meeting minutes is provided in Figure 8.4. This template was developed by the Seminole County Division of Community Assistance during a 2009–2010 Lean Six Sigma improvement project to increase the effectiveness of division management meetings. One of the authors served as a Master Black Belt trainer and advisor to the project. The template includes a "fill-in-the-blanks" format, which serves as a checklist for the scribe to include valuable information during the meeting. Feedback from the Lean Six Sigma pilot meetings using this template suggested that the attendees develop an outline of their operations status before the meeting.

QI Team Meeting Minutes

Date:_____

Project:_____

Invitees and Attendees

👍	Erica Farmer		David Feist
👍	Chris Giles	👍	Tim Willingham
👍	Jim Decker		Sarah Purcell
👍	Supreeth Rajan	👍	Shirley Davis-Boyce
👍	Ola Batarseh	👍	Grace Duffy
👍	Dr. Daniela Asparouhva	👍	Dr. Karla Moore
	Lisa Vance		Sara Wybo
👍	Clark Westerfield		Mike Kirchner

👍 = Attendee present at meeting

Agenda

- Scribe _____
- Meeting called to order: _____
- Meeting facilitator: _____

Minutes

- Review of action items: status, updates, due dates
- Topic #1
- Topic #2
- Etc.
-
- Next meeting will be _____ (time), _____(location), _____(topic, assignment)

Action Items

Owner	Item/Notes	Priority	Due
Sarah	Email handouts to everyone	M	03-31
Sarah	Follow up with Sponsor/Champion	H	03-31
Mike	Find out if we can set up a mailing list through Headquarters	M	04-22
Grace	Find out if a SharePoint site can be established through Headquarters	L	04-03
Daniella	Prepare stakeholders on a template to send out	M	04-22
Sarah	Schedule meeting with employees for trainer's presentation	H	04-03
Team	Read through section III of the training manual	H	04-25
Sarah	Send templates to team members	M	04-03
Data Teams	Send information to Sarah for dissemination	H	04-22
Sarah	Disseminate all information received	H	04-22
Sarah	Send SIPOC template to Ola and Majd	M	03-31
Leadership team	Prepare and send list of questions to Sarah for dissemination to team members	M	04-03
Team	Document short bio and list of strengths to send to Emad	M	04-22

Next Meeting

(Date and time), (Room)

Figure 8.4: Process Improvement Team Minutes Example

An electronic version of this outline is provided to the scribe, thus saving the scribe significant rework in typing up the minutes either during or after the meeting.

Figure 8.5 includes a table of action items coming out of the meeting. This interim documentation is entered into a formal action tracker for longer term project management. Figure 8.5 is a simpler meeting minutes template, useful for less complex improvement project

meetings. This version uses a summary table to encourage group discussion on how change might be verified, what successes and concerns were brought up in the meeting, plus additional comments. Even this rudimentary minutes template includes a column to identify the person responsible for follow-up on the item listed. Accountability should be a significant part of any organizational culture. Accountability is a positive control technique when employed effectively by leadership.

TEAM MEETING MINUTES TEMPLATE				
Meeting Name:				
Project:				
Date:				
Time:				
Participants:				
Items	**Notes**	**Action Items**	**Due Date**	**Person Responsible**
Tests of Change				
Successes				
Barriers/Concerns				
Other Comments				

Figure 8.5: Team Meeting Minutes Template

Tracking assignments from the meeting is a simple way to make sure that action items do not fall through the cracks. The first step is to capture the ideas as they occur during the meeting; thus, an action items section is included in the meeting minutes templates (Figures 8.4 and 8.5). Figure 8.6 shows a version of the Seminole County Community Assistance Department action tracker related to operations requirements for the Division of Community Services.

Not all events need an end-of-meeting evaluation. When the meeting is part of a pilot improvement or change activity, it is imperative to capture the Voice of the Customer on how the changes meshed into the continuing requirements of the process under study. Figure 8.7 is the evaluation developed for the Seminole County Community Services Manager's Meeting improvement and redesign project. The items included for feedback in this evaluation instrument are focused specifically on the impression that the participating managers had on the updates to the meeting agenda, location, timing, and alignment with operating requirements. The reader is encouraged to plan diligently to develop a feedback form that addresses the exact content of the meeting to be assessed.

Action Tracker worksheet: 12/01/09

Action	Recom. #	Unit	Responsible Individual	Start Date	Due Date	Measure
Process Maps of major CTQs	1	Each	Rick, Ed, Carmen, Leo, Shirley			Complete Approved
ID info and materials from outside Division	1		Shirley, Leo			
ID unit level projects, outcomes	1		Rick, Ed, Carmen, Leo	11/09/09	12/1/09	
Develop project status update process for pre-meeting prep	1	Division	Shirley			
Establish standard agenda items for mgr's meeting	2,4	Division	Shirley	4/09 in progress		
Build minutes template for mtg	1	Division	Draft: LSS team			
Develop standard corrective action worksheet	6	Division	Draft: LSS team			
Establish referrals log and tracking sheet	5	Division	IT/ Software overlap with Tech project			
QFD CTQs and interactivities between Units	1	Division	Draft: LSS team			Accurate overlaps, priorities weighted, update sched set
Identify training required for managers and staff to roll out improved meeting and follow up processes	3					List training items, who needs training, scheduled, completed, evaluated, effective. Process documented for future transition

Figure 8.6: Seminole County (Florida) Community Services Manager's Action Tracker

The evaluation can be handed out at the end of the meeting and gathered immediately for analysis. If the desire is to have confidential feedback, then either a link to a survey online, a paper copy to be handed back later, or some other format may be more appropriate. Analyzing the data gathered about the meeting and creating a summary report with observations and recommendations for improvement then providing this report to those who provided the feedback are positive next steps. Following through with any action items coming out of the evaluation and respecting the participants by showing them that their comments have been heard and acted upon creates goodwill and sets the tone for productive meetings in the future.

Meeting Agenda:

- How satisfied are you with the meeting agenda template?
  - Very satisfied
  - Satisfied
  - Moderate
  - Dissatisfied
  - Poor

Recommendations: _____

- Did you receive the meeting agenda in sufficient time to prepare before the meeting?
  - Yes
  - No

Recommendations: _____

Communication during the meeting:

- Do the previous meeting minutes adequately cover the topics discussed during that meeting?
  - Yes
  - No

Recommendations: _____

- How satisfied are you with the meeting minutes template?
  - Very satisfied
  - Satisfied
  - Moderate
  - Dissatisfied
  - Poor

Recommendations: _____

After the meeting:

- Are the tasks resulting from the team meeting clearly assigned in terms of job requirements and due date?
  - Yes
  - No

Recommendations: _____

- Are the tasks previously assigned discussed in next meeting after the assignment?
  - Yes
  - No

Recommendations: _____

- Do you have any additional opinions about the team meeting arrangements? If so, briefly explain.

_____

Figure 8.7: End-of-Meeting Evaluation for Pilot Improvement Project

Summary

Holding effective team meetings is all about communication. It requires planning to anticipate the subject, organize content, tune the information to the intended audience, and prepare the proper supporting materials. Figure 8.8 is a generic meeting flowchart showing the responsibilities for planning and conducting an effective meeting. The Team Leader has most of the responsibility. The Sponsor and Process Owner also have a part in meeting success. Team members can provide information and energy for the meeting. Chapter 4: Roles and Responsibilities in Launching Teams offers more guidance on using the skills of all team members in communicating effectively for healthy teams.

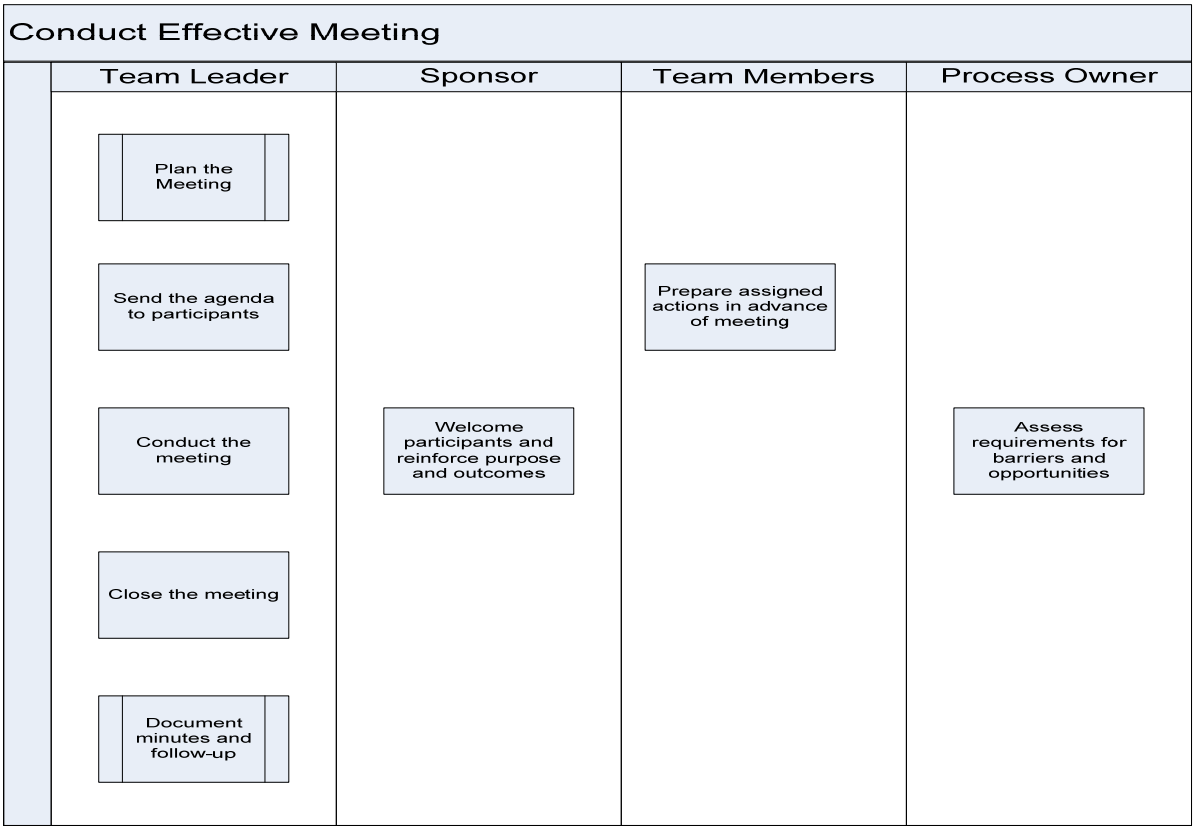

Figure 8.8: Deployment or "Swim-lane" Representation of the Meeting Process

Planning and Problem-Solving Process

Chapter 9: The ABCs of PDCA

Grace Gorenflo and John W. Moran

The Public Health Accreditation Board's (PHAB) voluntary accreditation program emphasizes the importance of quality improvement and has catalyzed health department activity in this arena. The Accreditation Coalition, composed of national public health leaders, defines quality improvement in public health as follows:

> "Quality improvement in public health is the use of a deliberate and defined improvement process, such as Plan-Do-Check-Act, which is focused on activities that are responsive to community needs and improving population health. It refers to a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community."[49]

The Plan-Do-Check-Act cycle (PDCA) has been embraced as an excellent foundation for and foray into quality improvement for public health departments, as it is both simple and powerful. Its simplicity comes from the systematic, straightforward, and flexible approach. Its power is derived from its reliance on the scientific method; it involves developing, testing, and analyzing hypotheses. This foundation offers for becoming comfortable with a host of quality improvement methods and techniques and evolving progressively into address more complex problems, employ additional QI tools, and migrate to system-wide approaches to QI.

PDCA is based on the "Shewhart cycle" and was made popular by Dr. W. Edwards Deming, considered by many to be the father of modern quality control.[50] During his lectures in Japan in the early 1950s, Deming noted that the Japanese participants shortened the cycle's steps to the now traditional plan, do, check and act. Deming preferred plan, do, *study*, act since the translation of "study" from Japanese to English has connotations closer to Shewhart's intent than does "check." Though this model has been around for 60 years, it is relevant in today's public health world, providing a defined and well-tested process to achieve lasting improvement to the problems and challenges that public health currently faces.

Spending adequate time in each phase of the PDCA cycle is imperative to having a smooth and meaningful quality improvement process. The elements put forth here comprise a deliberate

[49] This definition was developed by the Accreditation Coalition Workgroup and was approved by the Accreditation Coalition on June 2009. Members of the workgroup were: Les Beitsch, Ron Bialek, Abby Cofsky, Liza Corso, Jack Moran, William Riley, and Pamela Russo.

[50] Wikipedia, The Free Encyclopedia. PDCA. http://en.wikipedia.org/wiki/PDCA. Updated March 8, 2011. Accessed December 2, 2009.

process based on the scientific method and help to ensure that improvement efforts are conducted in a way that will maximize the degree of success achieved.

Before beginning the PDCA process, it is important to assemble the team that will participate and to develop a communications plan about the effort.

Assemble the team

PDCA involves a team approach to problem solving. To begin, a team leader and team members must be designated, and the following questions should be addressed:

- Are people included who are directly involved with the area needing improvement?
- Does the team need training?
- Who will facilitate the team and process?

Another key step is to develop a Team Charter[4] (as described in Chapter 3) which serves to provide focus and clarity regarding the team's work. A Team Assessment, Team Charter, Team Manager Self-assessment, and the Team Process Review Checklist[51] as well as "20 Questions to Ask Your Team"[52] are additional resources on tending to teams as they move through the PDCA process and may prove useful to optimize team performance.

Communication plan

Those individuals involved with or impacted by improvements must be kept informed of the changes, timing, and status of the quality improvement project. It is important to establish a communication plan at the outset of the improvement effort and to communicate and post progress on a regular basis in a highly visible location. Storyboards[7] offer a cogent picture of key points in the PDCA cycle and can be an effective venue for telling the story as the team moves through its improvement work.

Phases of the PDCA Model

The phases of the PDSA model below assume that just one underlying or root cause will be addressed by testing just one intervention. When undertaking the PDCA process, the team may decide to address more than one root cause and/or to test more than one intervention to address a

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[4] Duffy G and Moran J. Team Chartering. *Quality Texas Foundation Update.* April 10, 2010. http://www.phf.org/resourcestools/Pages/Team_Chartering.aspx

[51] National Association of County and City Health Officials. Quality Improvement Toolkit. www.naccho.org/toolbox/ in the Quality Improvement Toolkit. Copyright 2011. Accessed March 16, 2011.

[52] Kuran T, Moran J. 20 Questions to Ask Your Team. *The Quality Management Forum.* 1997; 23: (4).

[7] A number of national efforts to support QI in public health have used a storyboard format that was developed by the Michigan Department of Public Health, accessible at http://nnphi.org/CMSuploads/Storyboard-Guidelines-FINAL-05868.pdf. Accessed March 26, 2010.

root cause. In such instances, it will be important to measure the effect of *each* intervention on the root cause that it is intended to address.

***Plan*:** The purpose of this phase is to investigate the current situation, fully understand the nature of any problem to be solved, and develop potential solutions to the problem that will be tested.

1. Identify and prioritize quality improvement opportunities. Usually a team will find that several problems or quality improvement opportunities arise when programs or processes are investigated. A prioritization matrix[8] may help in determining which one to select. Once the quality improvement opportunity has been decided, a problem statement must be articulated. Revisiting and revising the problem statement while moving through the planning process will ensure that acceptable needs are addressed.

2. Develop an AIM statement[9] that answers the following questions:
    a. What needs to be accomplished?
    b. Who is the target population?
    c. What are the specific, numeric measure(s) to achieve?
    d. The measurable improvement objective is a key component of the entire quality improvement process. It is critical to quantify the improvement to achieve. Moreover, the entire aim statement also will need to be revisited and refined as the planning phase progresses.

3. Describe the current process surrounding the problem in order to understand the process and identify areas for improvements. Flow charts and value stream mapping are two examples of methods to accomplish this.

4. Collect data on the current process. Baseline data that describe the current state are critical to further understanding the process and establishing a foundation for measuring improvements. The data may address, for example, time, people, space, cost, number of steps, adverse events, and customer satisfaction. A host of tools is available to collect and interpret data on the process, such as Pareto charts, histograms, run charts, scatter plots and control charts. The data collected must be aligned with the measures listed in the AIM statement.

5. Identify all possible causes of the problem and determine the root cause of each. While numerous causes will emerge when examining the quality improvement opportunity, it is critical to delve in and carefully identify the underlying, or root, cause of the problem in order to ensure that an improvement or intervention with the greatest chance of success is

[8] Bialek R, Duffy G, Moran, J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.
[9] Butler J, Martin A, Sherry M, Tews D. Embracing Quality in Local Public Health: Michigan's Quality Improvement Guidebook. February 2008. Accessed March 26, 2010. http://www.accreditation.localhealth.net/MLC2%20website/Michigans_QI_Guidebook.pdf

selected. Brainstorming is a useful way to identify possible causes; a cause and effect/fishbone diagram and the 5 Whys are useful for determining the actual root cause.

6 Identify potential improvements to address the root cause and agree on one to test. Once the improvement has been determined, carefully consider any unintended consequences that may emerge as a result of implementing the improvement. This step provides an opportunity to alter the improvement and/or develop countermeasures as needed to address any potential unintended consequences. Revisiting the aim statement and revising the measurable improvement objectives are important steps at this point.

7. Develop an improvement theory. An improvement theory[10] is a statement that articulates the expected effect for the improvement to have on the problem. Writing an improvement theory crystallizes the expected result of the intervention and documents the connection between the improvement to test and the measurable improvement objective.

9. Develop an action plan indicating what needs to be done, who is responsible, and when it should be completed. The details of this plan should include all aspects of the method to test the improvements—what data will be collected, how frequently data are collected, who collects the data, how they are documented, the timeline, and how results will be analyzed.

***Do*:** The purpose of this phase is to implement the action plan.

1. Implement the improvement.

2. Collect and document the data.

3. Document problems, unexpected observations, lessons learned, and knowledge gained.

***Check/Study*:** This phase involves analyzing the effect of the intervention**.** Compare the new data to the baseline data to determine whether an improvement was achieved and whether the measures in the AIM statement were met. Pareto charts, histograms, run charts, scatter plots, control charts and radar charts are all tools that can assist with this analysis.

1. Reflect on the analysis and consider any additional information that emerged. Compare the results of the test against the measurable objective.

2. Document lessons learned, knowledge gained, and any surprising results that emerged.

[10] Butler J, Martin A, Sherry M, Tews D. Embracing Quality in Local Public Health: Michigan's Quality Improvement Guidebook. February 2008. Accessed March 26, 2010. http://www.accreditation.localhealth.net/MLC2%20website/Michigans_QI_Guidebook.pdf

Act: This phase marks the culmination of the planning, testing, and analysis regarding whether the desired improvement was achieved as articulated in the AIM statement; the purpose is to act upon what has been learned. Options include:

1. Adopt: Standardize the improvement if the measurable objective in the aim statement has been met. This step involves establishing a mechanism for those individuals performing the new process to measure and monitor benchmarks on a regular basis in order to ensure that improvements are maintained. Run charts or control charts are two examples of tools to monitor performance.

2. Adapt: The team may decide to repeat the test, gather different data, revise the intervention, or otherwise adjust the test methodology if sufficient data were not gathered, circumstances have changed (e.g., staffing, resources, policy, environment, etc.), or if the test results fell somewhat short of the measurable improvement goal. In this case, adapting the action plan as needed and repeating the "Do" phase are recommended.

3. Abandon: If the changes made to the process did not result in an improvement, consider lessons learned from the initial test and return to the "Plan" phase. At this point the team might revisit potential solutions that were not initially selected or delve back into a root cause analysis to see if additional underlying causes can be uncovered. They might even reconsider the AIM statement to see if it is realistic. Whatever the starting point, the team will then need to engage in the Plan phase to develop a new action plan and move through the remaining phases.

PDCA offers a data-based framework rooted in the scientific method. This simple yet powerful format drives continuous and ongoing efforts to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community.

Chapter 10: Rapid Cycle PDCA

Grace L. Duffy, John W. Moran and William Riley

What is Rapid Cycle PDCA? [53] The word "Rapid" means occurring in a brief period of time and characterized by speed.[54] "Cycle" means an interval during which a recurring sequence of events occurs.[55] Therefore, Rapid Cycle PDCA, as shown in Figure 10.1, is applying the recurring sequence of PDCA in a brief period of time to solve a problem or issue facing a team or organization in order to achieve breakthrough or continuous improvement results quickly.

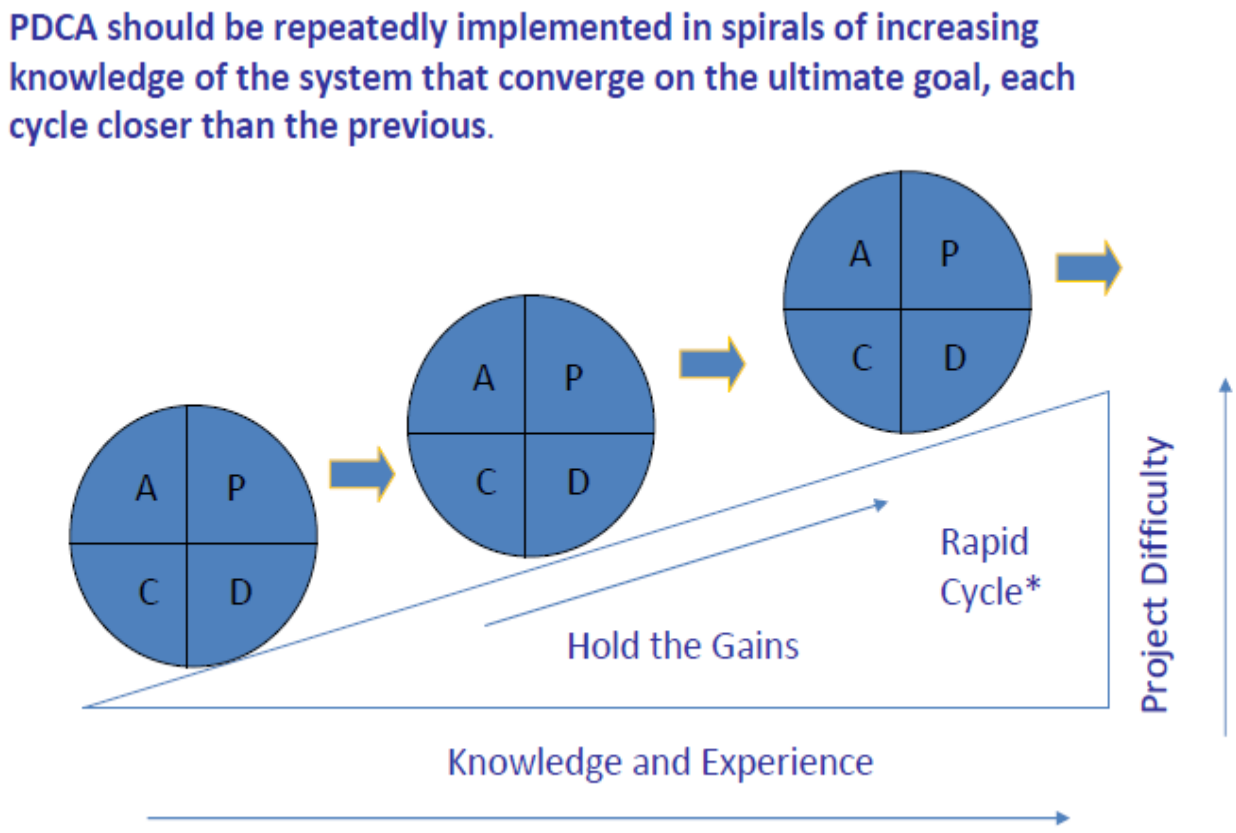


Figure 10.1: Rapid Cycle PDCA

[53] Duffy G, Moran J, Riley W. Rapid Cycle PDCA. *Quality Texas Foundation Update*. August 2009.
[54] Princeton University Wordnet: A lexical database for English. Rapid. http://wordnet.princeton.edu/. Copyright 2011. Accessed March 16, 2011.
[55] Princeton University Wordnet: A lexical database for English. Cycle. http://wordnet.princeton.edu/. Copyright 2011. Accessed March 16, 2011.

Too often teams or organizations launch a PDCA effort but take three months to do what could be accomplished in three days or three hours. They waste too much time and energy by not solving the problem quickly. These teams fail to hold the gains or move on to the next organizational challenge. Consequences of not doing rapid cycle PDCA are that team members lose interest, become bored with a long process, do not gain experience and knowledge in applying QI, and do not see the impact of their efforts for a long time.

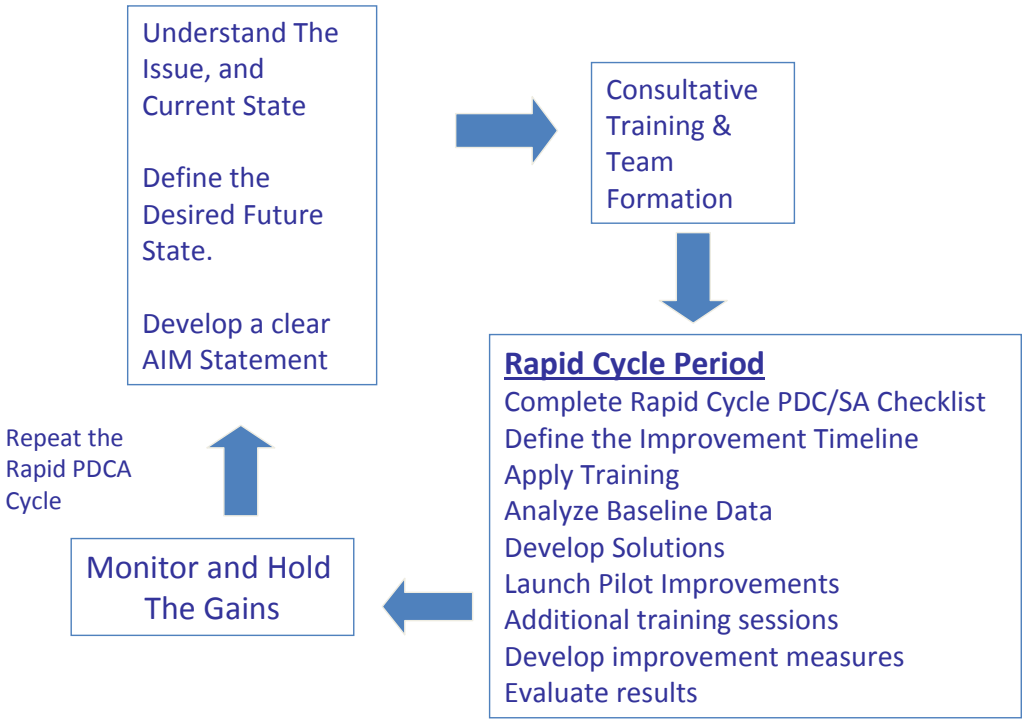


Figure 10.2: Rapid Cycle Process Model, Defining the Steps to Ensure a Successful Rapid Cycle Application of PDCA

The Rapid Cycle Process in Figure 10.2 is defined as:

- **R**ealization of a problem or issue that needs to be corrected. Management is committed to making the change.
- **A**cting to start a resolution or change to the problem or issue by utilizing the QI tools and techniques.
- **P**lanning for success by developing a clear AIM statement.
- **I**nvolving key constituents in the PDCA process.
- **D**eveloping the change team and establishing the rapid cycle timeline.

- **C**onsultative training interventions as required by the team.
- anal**Y**zing baseline data and understand the current state and scope of the problem.
- **C**onstructing solutions to get to the desired future state.
- **L**aunching pilot improvement solutions to determine if the desired change can be achieved.
- **E**valuating results achieved from pilot improvement, making any necessary adjustments, and launching it throughout the organization.

The utilization of a Rapid Cycle PDCA process helps organizations realize a quick return on their investment in QI. Some benefits include:

- Short cycles of change to accelerate quality improvement in the organization
- Holding the gains as a platform for the next level of project improvement
- Developing a broad base of QI knowledge and experience in the organization
- Helping in the establishment of an organization-wide culture of quality and excellence
- Solving many organizational problems that will promote needed organizational change and improvement
- Providing an iterative opportunity for team members to reinforce their QI knowledge quickly in the next project

To help in using Rapid Cycle PDC/S, Table 10.1 provides a Pre-Planning Check Sheet. The check sheet contains questions as a guide when starting a Rapid Cycle Quality Improvement Project; it leads a participant through the Rapid Cycle pre-planning to help ensure a successful improvement project.

The check sheet provides columns to indicate what has been completed (√) and what needs to be done (TBD) along with the expected completion date. Adding other questions that are applicable to a particular improvement project is recommended.

Step	Rapid Cycle PDC/SA Pre-Planning Check Sheet	TBD/ Date	✓
Plan:	What is the focus/AIM of this improvement project?		
	What are the improvement goals?		
	Who and what are impacted?		
	When and where are they impacted?		
	Why and how are they impacted?		
	Who is the customer, and who is the supplier?		
	What are the constraints?		
	What is the rapid cycle timeline?		
	Who should be on the improvement team?		
	What training does the improvement team require? Who will deliver the required training, and when?		
	What is predicted to happen?		
	Measurement(s) defined /developed to show current performance and track future improvements?		
	Action plans developed to detail who will complete what and when?		
	Communication plan developed for potential timing/status changes?		
	What additional information is needed to take action?		
	Other Plan questions unique to the improvement project?		
Do:	Improvement plan developed?		
	When will the improvement plan be implemented?		
	When will the pilot test occur?		
	What was observed from the pilot test?		
	Did sponsors provide approval and support if implementation goes outside personal area of responsibility?		
	Were implemented changes documented to duplicate and standardize?		
Check/ Study:	Did the pilot test results agree with the predictions made earlier? ✓ If not, why not?		
	What new knowledge was gained through this cycle?		
	How will this new knowledge be used to make improvements?		
	Are results continually checked as the process is initiated and when in place to determine if the changes meet requirements?		
	Are the measurements used to determine success adequate?		
	Was data gathering automated, if possible?		
Act:	Was 'Plan' revisited if the process still did not meet requirements, and were additional process improvement opportunities investigated?		
	Were minor adjustments made and documented?		
	Was the change standardized, and was the SDCA Cycle initiated?		
	If the process changes met requirements, was continued monitoring after standardization arranged?		

Table 10.1: Rapid Cycle PDC/SA Pre-Planning Check Sheet

Chapter 11: Solve the Real Problem Using Root Cause Analysis

Grace L. Duffy, John W. Moran and William Riley

Root Cause Analysis (RCA) is a structured investigation that aims to identify the true cause of a problem and the actions necessary to eliminate it with a permanent fix rather than continuing to address the symptoms. The true root cause is difficult to determine immediately; it often takes analysis using one or more tools to separate it from symptoms or masking factors. In RCA it is important to determine what happened, why it happened, and how to eliminate it so that it will not happen again.

RCA is a group of problem-solving approaches designed to identify the true causes of problems or events. RCA practice is based on the premise that problems are best solved by correcting or eliminating the fundamental causes, as opposed to merely addressing short-term or obvious symptoms. By directing corrective measures at root causes, the likelihood of problem recurrence is minimized. Preventing problem recurrence by a single intervention is rarely possible. RCA is often an iterative process and is a reactive method of problem detection and solving. When combined with other pro-active improvement tools such as Failure Mode and Effects Analysis, or Risk Analysis, quality professionals are more likely to forecast the possibility of a problem before it occurs.

RCA is not a single methodology; different tools, processes, and philosophies of RCA have been published in a myriad of texts. However, most approaches can be classified into five broadly defined "schools:"[56]

- **Safety-based RCA** descends from the fields of accident analysis and occupational safety and health.
- **Production-based RCA** has its origins in the field of quality control for industrial manufacturing.
- **Process-based RCA** is basically a follow-on to production-based RCA, with a scope that has been expanded to include business processes.
- **Failure-based RCA** is rooted in the practice of failure analysis as employed in engineering and maintenance.
- **Systems-based RCA** has emerged as an amalgamation of the preceding schools, along with ideas taken from fields such as change management, risk management, and systems analysis.

[56] The Juran Institute. Simplify and Energize Your Enterprise: Being World Class. Six Sigma Workshop in Bloomington, Minnesota. January 12, 2010.

Fundamentals of Root Cause Analysis

1. RCA must be performed in a systematic manner with assumptions, potential causes, and conclusions backed up by data and documented evidence.
2. To be effective, data gathering and analysis must establish all known causal relationships between the root cause(s) and the defined problem. This establishment is completed using a Cause and Effect Diagram or Fault Tree.
3. Multiple potential root causes exist for any given problem.
4. Interaction among potential root causes must be understood and analyzed to determine how they impact each other and the problem or issue under discussion.
5. Potential solutions must be developed and analyzed to determine the extent to which they will permanently fix the problem and what the economic impact to the organization is to fix the problem.

Problem-Solving Methodology

"We can't fix problems with the same kind of thinking we used when we created them."
Albert Einstein

The Plan-Do-Check/Study-Act Cycle, shown in Figure 11.1, is a problem-solving methodology that supports RCA. The following general steps outline a root cause analysis approach:

Plan:

- Define the problem – create a clear and discrete AIM Statement.[57]

A problem is the difference between an expected result and what actually happens. It is important to gather relevant data regarding both fact and opinion about the problem to define its boundaries, how long it has existed, any special conditions that allow this problem to exist, any particular sequence of events internal or external to the organization that leads to this problem, and understand what the specific symptoms/impacts of this problem are on the organization.

- If the problem is not defined correctly, it will never be solved permanently.
- Quality improvement tools like Pareto Charts, Run Charts, Scatter Diagrams, and Histograms may be helpful during the data gathering process.

[57] Beitsch L, Duffy G, Moran J. Ready, AIM, Problem Solve. *Quality Texas Foundation Update*. October 2009.

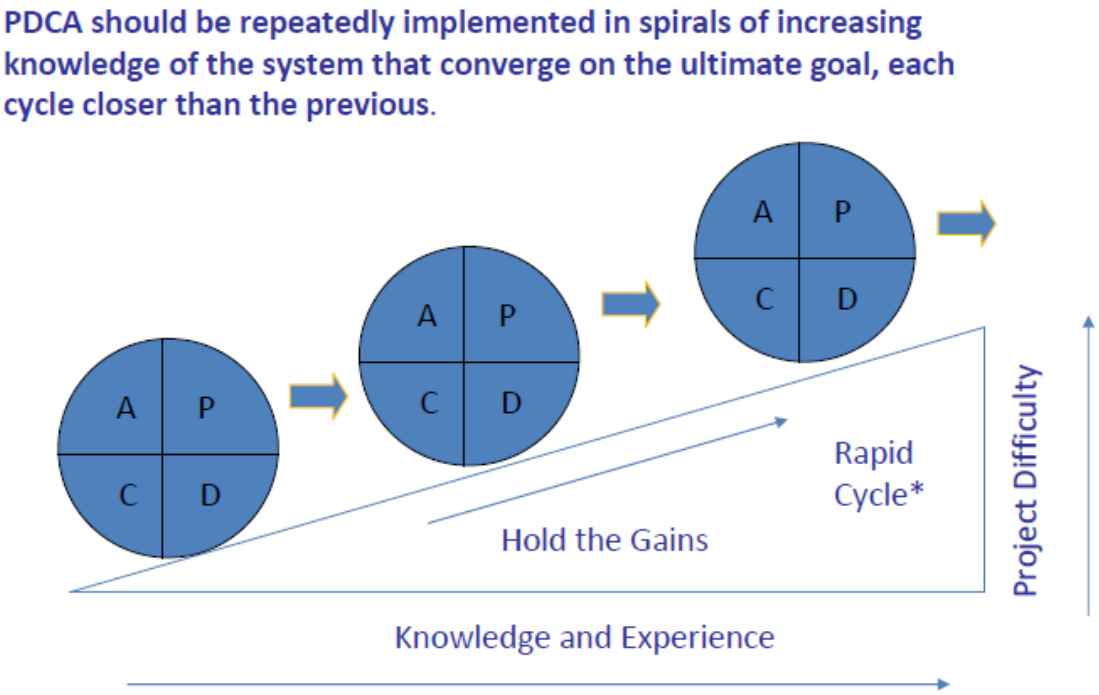


Figure 11.1: The Plan-Do-Check-Act Continuous Improvement Cycle

Do:

- Develop a Cause and Effect Diagram to identify and develop all of the causal relationships associated with the defined problem.
- Identify which causes if removed or changed will prevent recurrence of the problem.
- Try to shrink the problem down to its smallest size, defining what it is and is not.
- Identify effective solutions that prevent recurrence, are within one's control, meet goals and objectives, and do not cause other problems.
- Develop targets to be achieved and a timeline for their achievement.
- Define measures to track the solution's effectiveness in reducing or eliminating the stated problem or issue.
- Implement the recommendations.

Check:

- Are the solutions achieving the targets and timelines?
- Is the original problem or issue eliminated or controlled?
- If the answer to the above questions is "No," then determine why.

Act:

- If the solution(s) implemented are not achieving the set targets or not controlling the original problem, then it is necessary to analyze the why and either develop a

corrective action plan and timeline or re-analyze the problem, starting at the Plan stage.

Solving a Problem with Root Cause Analysis

Beneath every quality, process, or safety problem lies a root cause for that problem. Therefore, when trying to solve a problem, RCA considers two approaches:

1. Identifying the cause (or causes) of the problem.
2. Determining ways to eliminate these causes and prevent them from recurring.

This two-step approach seems quite simple, but it is often very difficult to find the real causes of a problem. Often what appears to be the cause of a problem is actually a symptom or a secondary cause but not the root cause.

Potential Classification of Root Causes

1. **Tangible Causes** – The materials, equipment, methods, facilities, and physical environment are inappropriate for the tasks to be accomplished, or other items failed in some way. "My car died."

2. **People Causes** – Someone did something incorrectly or did not do something; a poorly trained workforce or inadequate staffing levels are in place. Human causes can be related to tangible/physical causes. "My car died since no one maintained it properly."

3. **Economic/External Environmental Causes** – These include changes in the economy such as a recession; H1NI virus; political occurrences; and acts of God—events over which humans have very little (if any) control but which require a response due to their impact on the internal environment.

4. **Managerial Causes** – Inappropriate organizational structure to run the organization; lack of a defined mission; poor communications; poorly trained managers; inattention to tasks; or no consequences for poor performance.

5. **Organizational Causes** – A system, process, or policy that people use to make decisions or do their work is faulty; for example, no one person was responsible for vehicle maintenance, and everyone assumed that someone else had filled the brake fluid.

6. **Information Management or Technology Causes** – Necessary information is not available, accurate, or complete when needed to make informed decisions. Technology platforms, equipment, and software are inadequate for current needs of the organization.

Different Levels of Causes

A problem often results from multiple causes at different levels; some causes affect other causes that, in turn, create the visible problem. Causes can be classified into the following levels:

1. ***Symptoms:*** Signs of existing problems but not actual causes.
2. ***Problems:*** A gap between how the process performs and how it should perform.
3. ***First-level Causes:*** Causes that directly lead to a problem.
4. ***Higher-level Causes***: Causes that lead to the first-level causes. While they do not directly cause the problem, higher-level causes form links in the chain of cause-and-effect relationships that ultimately create some problem.
5. ***Highest-level Cause:*** This cause is the root cause.

Most problems have compound causes where different factors combine to cause the problem. It is rare that a problem has a single cause. However, in RCA an effort is made to isolate one major factor that is the primary cause.

The highest level cause of the problem is called the root cause. This highest level cause is the factor that sets all other causes in motion or combines with other causes to create a problem. In other words, the root cause sets in motion the entire cause-and-effect chain causing the problem(s). Figure 11.2 shows the root cause as the highest level cause, its relationship with other causes, the visible problem, and symptoms.

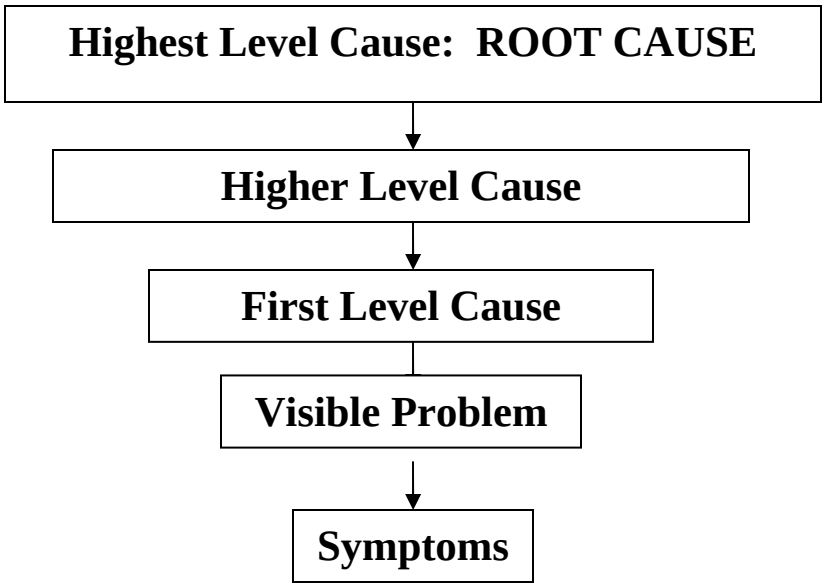


Figure 11.2: Root Cause and How It Relates with Other Factors

Example of RCA

Consider a health department that has received adverse media attention because of a series of foodborne illness outbreaks from the same restaurant. The problem could be defined as "Unfavorable media attention." However, this media attention is actually a symptom, not the problem. The visible problem is poor enforcement. The first level cause might be sporadic and incomplete restaurant inspection, while higher level causes could be a lack of staff, inadequate training, and poor follow-up scheduling. These higher level causes ultimately resulted in serious food borne illness outbreaks occurring at the same restaurant. However, it is still not clear what the root cause is for this inspection and enforcement failure. The root cause can only be determined after a careful and methodical analysis.

Correctly Identifying the Root Cause

When the root cause of a problem has not been correctly identified, the problem continues to persist because the solution will not solve the problem. Often, only the symptoms or first-level causes are identified, and the solutions are either ineffective or only temporarily effective. This treatment of the symptoms or first-level causes provides some temporary relief but will never produce a lasting solution. When the wrong root cause is identified, the solution will result in one of the following:

1. Identification and removal of symptoms: If only the symptoms are identified and removed, the problem will still be present, but easily recognized symptoms that can be monitored will not be evident.
2. Identification and removal of first-level and higher-level causes: This action may temporarily alleviate the problem, but the root cause will eventually find another way to manifest itself.

In RCA, the only way to discover the root cause of a problem is to follow the chain of cause and effect behind a problem all the way to the beginning of the causal sequence. This root cause is often the cause of many different problems, and it is important to find and eliminate it.

Root Cause Identification

Problems in quality, process, and safety emerge in health field processes. Using a run chart or control chart is the most effective way to monitor a process in order to determine if a problem has occurred. When special cause is identified by a run chart or control chart, it is clear that a problem has occurred which needs to be identified and solved. However, the cause of problems is not always obvious.

A number of possible causes are created and analyzed in RCA. From this list of possible causes, the highest level cause, the root cause, is identified. This stage is the most difficult for a problem-solving team.

Determining the Root Cause

A quality improvement tool used to find root causes is a Cause and Effect Diagram,[58] shown in Figure 11.3 It can organize the various causal categories visually in one diagram. After various causes are determined by a cause-and-effect diagram, the next step is to understand the relationship among causes. This step involves tracing a precursor to a cause back to the original cause, the root cause.

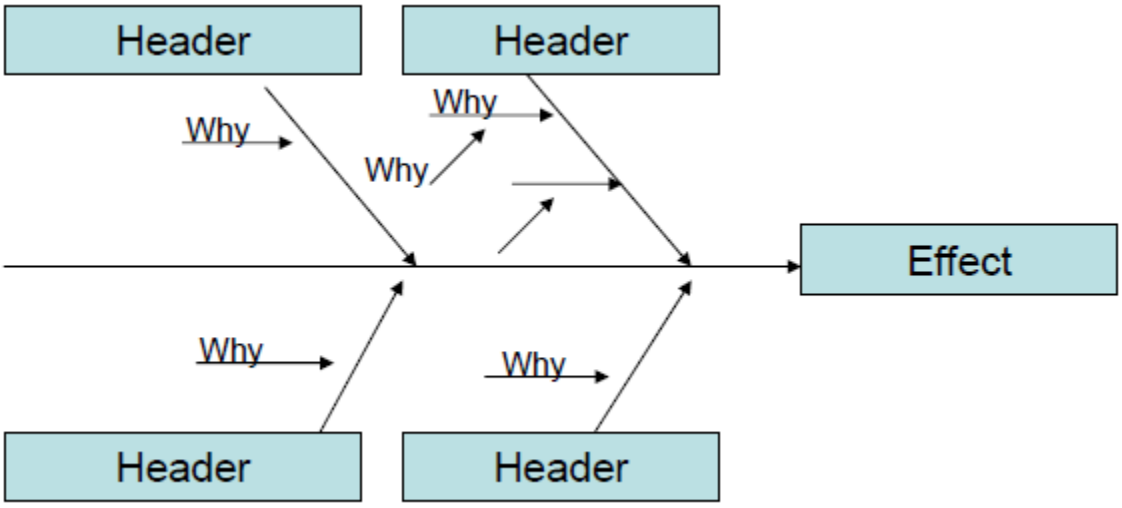


Figure 11.3: Cause and Effect Diagram Template

One technique to make sure that all causes and sub-causes have been identified is the 5 Whys technique. The 5 Whys technique selects a cause proximate to the problem and asks the question "Why?" that initiates an answer to the question of another cause that chronologically or logically comes before the cause that is being examined. This process is repeated up to a total of five times. The main purpose is to ask "Why?" constantly when a cause has been identified. Repetitively asking "Why?" helps to lead a team toward the root cause. The key concept of the 5 Whys technique is to pose the question "Why?" for each cause that has been identified. This relentless approach continually probes the relationship between causes and helps not to settle on anything less than the root cause. A point in the chain of causes occurs where no further causes

[58] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

can possibly be found. This last cause is the root cause, the point at which one should stop asking why.

When a team completes a Cause and Effect Diagram, it usually quickly focuses on the obvious quick fixes that can be made to the symptom being studied. The easy solution, if enacted, has no more than a short-term minimal impact on the symptom. The situation is alleviated quickly when the symptom is fixed, but soon after that the symptom returns. A new team is formed to investigate it, and the cycle begins again.

What should instead be done is to remove the symptom from the Cause and Effect Diagram and fix it; it is usually not that difficult. It is important to prioritize each branch of the cause and effect diagram. This prioritization can be completed after data has been collected on each of the potential root causes. The team members will have to subdivide the root causes on which to collect data. Pareto charts, control charts, run charts, scatter diagrams, check sheets, and histograms are all key data collection tools for the team to use.

Once the data is collected, the impact of each of the root causes can be analyzed in a matrix (like the one shown in Figure 11.4) to determine the overall impact on the symptom.

	Impact on the Problem					
Potential Root Cause	Improved Quality	Reduced Costs	Improved Customer Satisfaction	Other	Total Score	Ranking

Impact Scoring Scale: Low = 1, Medium = 3, High = 5

Figure 11.4: Root Cause Analysis Rating Form

The matrix allows the team to assess each potential root cause over a number of potential impact dimensions and develop a score. The score can help to rank the potential root causes according to their strongest impact on the symptom, if solved.

Causal Relationships

It is rare that a problem has a single cause; most problems often have compound causes where different causal factors combine. However, in RCA an effort is made to isolate one major factor that is the primary cause. One check that a team can make after they have determined the top few root causes is to determine how they relate to each other. The team can use an Interrelationship Digraph[59] to determine if interconnections between the potential root causes are evident. Determining these interconnections may show some patterns that may change the team's decision on which root cause(s) to pursue to solution.

The Interrelationship Digraph is a way to determine interrelationships between root causes by doing a paired comparison process, comparing each root cause to all of the other root causes. This comparison is completed by starting with a pair of root causes and asking the following questions, recording the results on the matrix shown in Figure 11.5.

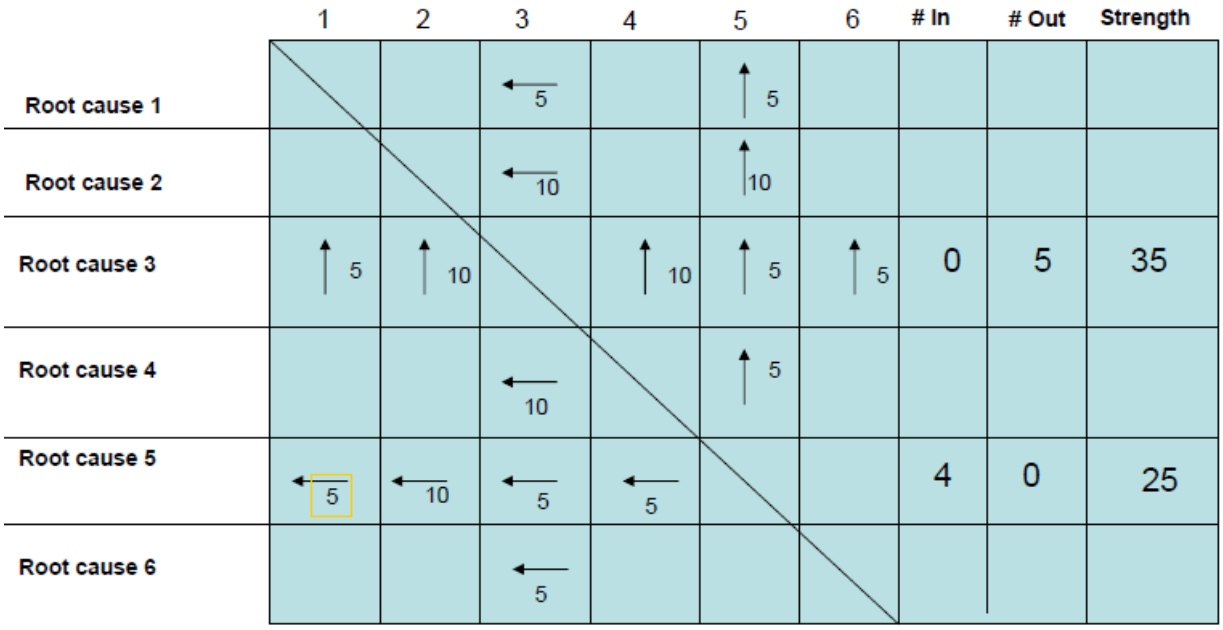


Figure 11.5 Root Cause Interrelationship Digraph

[59] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook.* Milwaukee, WI: Quality Press; 2009.

Is there any relationship between the two cards?

- Yes – Proceed to Step 2
- No – Pick another pair of cards for comparison

Which way is the cause direction?

- Does the first card cause the second card to happen? Y/N
- Does the second card cause the first to happen? Y/N

- Draw the arrows in the right direction on the matrix
- How strong is the strength of the relationship?

  - 1 – weak 5 – medium 10 - strong

Factors with the most connections and highest strength will usually be the most important factors on which to focus. This step will provide the team with a Check on the potential impact and spillover effects of focusing on a particular root cause to moving forward to a solution. Sometimes this step alters the team's perspective on the most important root cause.

Solution Development

One quality improvement tool to use to develop solutions to selected root causes is a Solution and Effect Diagram[60] is shown in Figure 11.6.

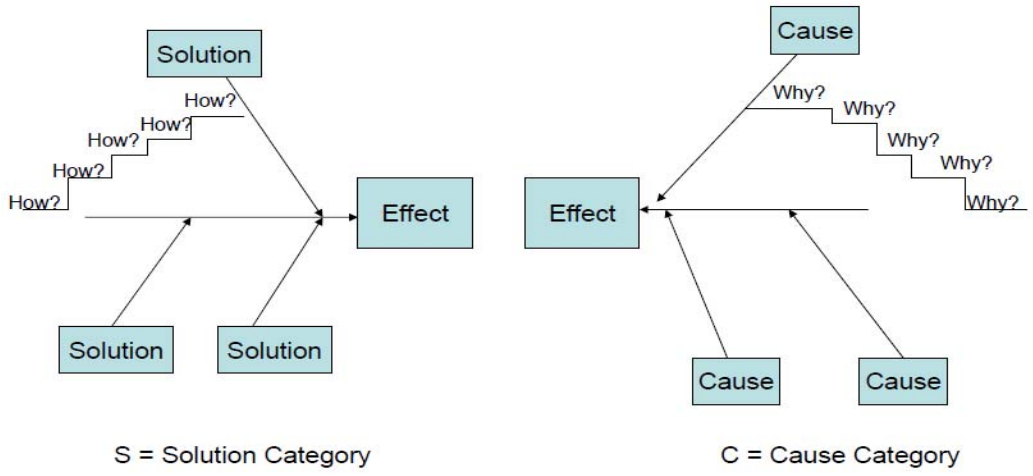


Figure 11.6: The Solution and Effect Diagram

[60] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.

The Solution and Effect Diagram is very similar to the Cause and Effect Diagram, except that the former identifies changes and recommendations, and the effect is made into a positive statement to help move the team to solution. The root cause selected is now the effect; development of solution branches and asking "How" instead of "Why" helps to develop potential solutions. These solutions are then prioritized by those individuals with the most impact on making a permanent fix. The implementation plan is then developed and tracked during the Check and Act cycle.

Root Cause Cost Removal Impact

Once the root cause has been identified and a solution(s) to resolve it has been developed, the next step is for the team to determine the costs and benefits of a permanent fix. Figure 11.7 is a matrix to compare the various potential solutions to determine which ones may have the best cost-benefit ratios.

Potential Solutions	Corrective Action Type	Verification Method	Cost To Fix	Benefit of Fix	Cost Benefit Ratio	Selected? Y/N

Corrective Action Type: Immediate but Interim (**II)**, Short-term Temporary (**ST),** Permanent – Short Term (**PST)**, and Permanent – Long Term (**PLT)**

Figure 11.7: Root Cause Analysis Solution Impact Analysis Form

The team must decide whether the removal of the cause will cost more than the cost of continuing to deal with the symptom. If the cost of the removal is more than the cost of continuing to fix the symptom, the team and management must consider other intangible factors such as employee satisfaction, morale, stress levels, and customer satisfaction in making their decision regarding whether or not to fix the symptom or continue to deal with it.

This question does not have a generalized answer. Each situation must be considered on a case-by-case basis since many tangible and intangible factors influence the final decision.

Summary

The goal of Root Cause Analysis is to find out what happened, why it happened, and how to prevent it from happening again. This goal seems simple enough on the surface but requires a rigorous problem-solving investigation model such as P-D-C/S-A to ensure that a rigorous analysis is conducted, and that the true root causes are treated in a manner that eliminates their impact on the problem being investigated.

RCA can be part of a daily management, individual QI program where individual workers analyze recurring work, people, or customer dissatisfaction problems that manifest themselves in the day-to-day work of the organization. If causes can be fixed at the daily work level before they become organization-wide problems, the cost and impact to the organization are minimized.

Chapter 12: TAPP into the PDCA Cycle to Make Improvements in Public Health

Grace L. Duffy, John W. Moran and William Riley

The basic steps of managing a successful process are first to make sure that the process is controlled and then to set realistic performance targets that are monitored on a regular basis through measurement of key quality characteristics (KQCs) related to process parameters. As long as the process remains controlled and achieves its targets, progress can continue to be monitored, and the process can be left alone. Action is taken after an established gap between the process's targeted performance and actual performance is observed and documented.

Why is measurement important?

- If something cannot be measured, it cannot be understood.
- If something cannot be understood, it cannot be controlled.
- If something cannot be controlled, it cannot be improved.[61]

Often when a deviation is detected in a process, the steps to correct it and bring it back into compliance are unknown. Too often, arbitrary adjustments are made without a real analysis of the root cause of the deviation observed. Such arbitrary adjustments are a type of tampering, and they usually do not improve performance, often resulting in further process perturbation.

As shown in the Target-Act-Process-Performance (TAPP)/Plan-Do-Check-Act (PDCA) Integration Model in Figure 12.1, process monitoring should be done on a regular basis so that any shifts or sudden changes that may cause deviations from the process performance target can be detected.

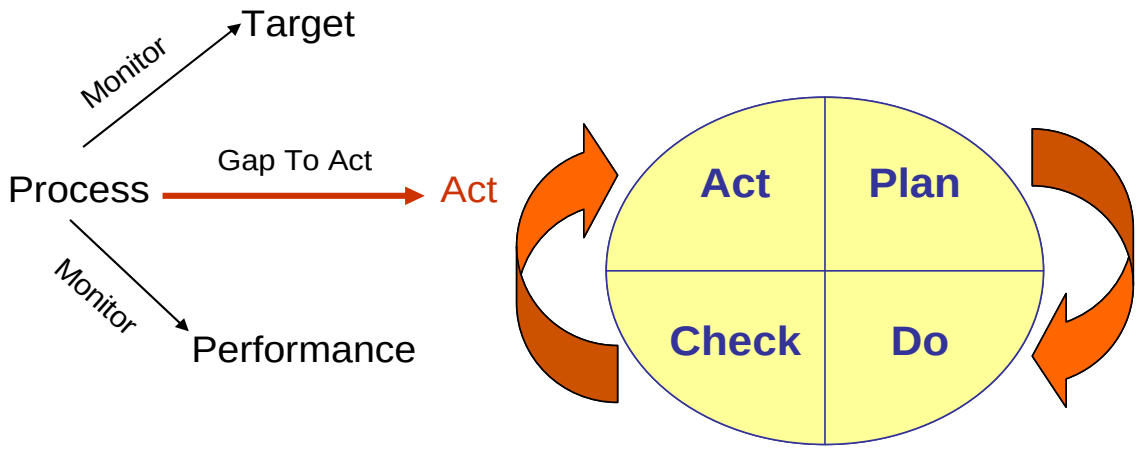


Figure 12.1: TAPP/PDCA Integration Model

[61] Harrington J. *Business Process Improvement*. New York, NY: McGraw Hill; 1991.

When monitoring a process, it is important to identify key quality characteristic (KQC) measures that relate to the process design parameters. These KQC measures of a process can be in the form of indicators of Capacity, Process, Outcome, or all three depending on the process. As shown in Figure 12.2, when a process is measured, it is best to measure all three indicators. When a process capacity is understood, it should lead to the critical parameters of how the process produces its output. It is then clear how these outputs impact the community and the customers.

Control charts are the foremost method to analyze and monitor KQCs by assessing the process capability and stability. A control chart is a time series analysis that measures the performance of a process longitudinally. The process stability reflects the presence or absence of special cause variation, while the process capability measures the performance on a specific KQC in a stable process. A constant dynamic between process stability and capability exists. If a process is not stable, then the special cause variation needs to be identified and corrected. If a process is stable, then it must be determined whether the performance target for the KQC is met. If the process is not performing at the target level, then extensive process re-engineering is necessary.

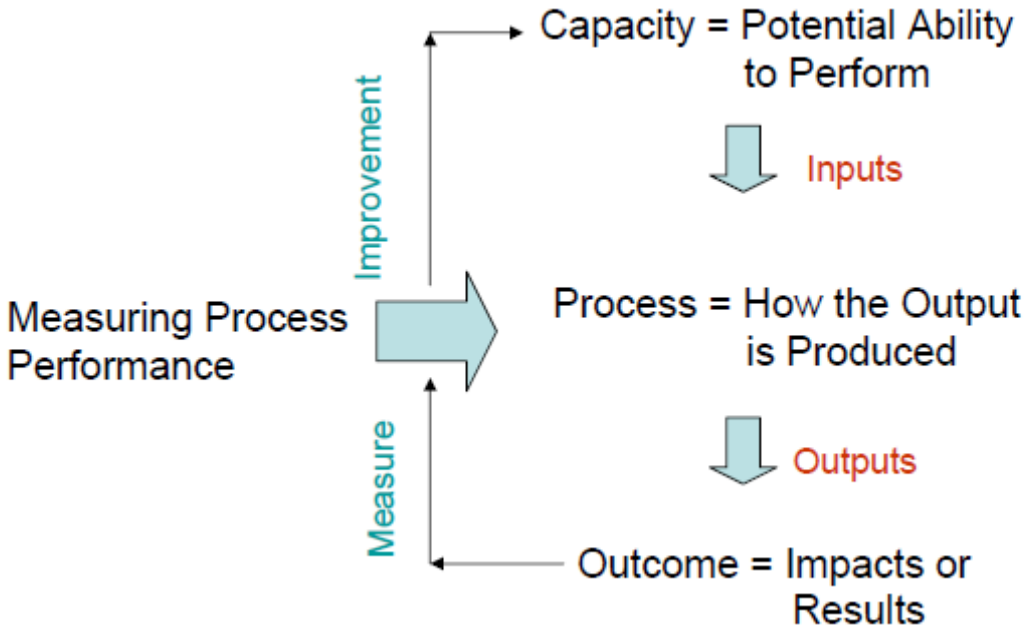


Figure 12.2: Capacity, Process, and Outcome Indicators

Performance measurement is an important part of ensuring that a process is able to show how it is performing. Performance measurement can be both qualitative and quantitative. It should be focused on the critical aspects of a process that show their effects on the public and the customers.

Capacity Indicators relate to the potential ability of the process to produce or perform at a certain level, such as:

- Health department workforce turnover rate
- Completion of an annual health profile by every Local Health Department (LHD)

Process Indicators relate to those parameters that define how the process produces its output, such as:

- Number of no-show appointments at the Women, Infants, and Children's (WIC) clinic.
- Percentage of women who receive adequate prenatal care

Outcome Indicators are something that result or follow from an event taking place, such as:

- Number of influenza deaths
- Prevalence of multi-drug resistant tuberculosis cases

It is necessary to use measures which are considered important by customers, are easy to compute, are relevant to standards, and are supportive of accountability that leads to desired behavioral changes.

A gap is when a difference is evident between the process performance and the target value it is supposed to achieve. The gap could be a positive one in which the process is performing above the assigned target value. When a large positive gap is consistent, it may be time to review the target value and adjust it to reflect the ability of the process to deliver results. The target value may have been set too low at the outset and needs to be adjusted. Ideally, a process is delivering results that are at the target value with minor variation in either direction.

The gap could be a small deviation in either the positive or negative direction. These types of deviations need to be monitored over time to see if minor process adjustments can correct any consistent negative deviations from the target value. These types of adjustments are just quick fixes without a major problem-solving effort.

When major negative gaps between the actual process performance and its target value cannot be corrected by a quick fix, "Act" is the next step. Major negative gaps require a thorough process analysis that can be accomplished through the use of the PDCA cycle.

The steps in the PDCA model, as shown in Figure 12.3, are as follows:

- **Plan** – changes aimed at improvement, matched to root causes.
- **Do** – initiate changes, attempting first on a small scale.
- **Check** – if the desired results occur.
- **Act** – by making changes based on information learned.

When gaps are uncovered, they need to be investigated thoroughly to decide if what is needed is **process improvement** by removing special causes or **process reengineering** by removing

common causes. Every system will have some amount of variation of results; common cause variation occurs naturally in every process. The way to minimize common cause variation is to change the existing system. Many of the gaps encountered in performance may need process reengineering to reach the level of performance desired as an organization.[62]

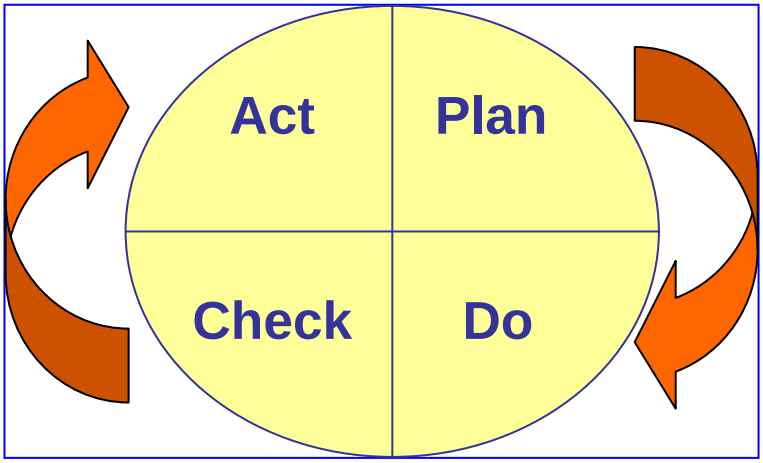


Figure 12.3: PDCA Model

It is important to use both TAPP and the PDCA cycle for improvement that can close the gap between the desired state (the target value) and the current state (the process performance). PDCA provides a methodology to analyze the performance of a process systematically in order to ensure that the root cause of any observed deviation from target value is evident.

Once the changes in process steps are made, the process can be monitored through established measures. If the monitoring shows the process to be back in control, then ongoing monitoring is all that is needed.

[62] Gryna F. *Quality Planning and Analysis*. New York, NY: McGraw Hill; 2001.

Chapter 13: Daily Work Management – Quality Improvement in Daily Work

Grace L. Duffy, John W. Moran and Elizabeth Pierson

"If you add a little to a little and do this often enough, soon it will become great."
Hesiod, 8th century BC Greek Poet

Including QI in daily work allows many small continuous improvements to increase over time. QI in daily work is called Daily Work Management. It is the use of the tools and techniques of quality improvement to make daily work more customer-focused and manageable. It is the continuous improvement of the daily work performed.

Using the Quality Improvement tools and techniques learned in team training, the application of Daily Work Management generates great reward for the individual and the organization. Organizations must train their workforces at all levels in the tools and techniques of QI in order to institute organization-wide Daily Work Management.

How to begin using QI in daily work:

1. **How is time spent?** To use QI in daily work, it is necessary to be specific on where time is being spent. It can be very enlightening to use a check sheet and review one's work calendar for a couple of months to determine what categories of activities absorb time. What type of meetings are occurring, how do they relate to the job, how much time do they take, are they regular or random meetings, etc? Answers to these questions help to determine what daily work is being completed on a regular basis. Most people, especially at the supervisory and managerial level, find that meetings and emails are major categories where time is spent. It is a good idea to continue to monitor where time is spent in order to capture any changes that take place over time.

   The following QI tools that can help to determine where time is spent:

   - Check sheets or Tally sheets
   - Concentration Diagrams (pictorial Check sheets)
   - Activity/Time-logs
   - Sampling – selecting days to analyze through a random number generator
   - Pie or Pareto charts - displaying the data

2. **What are the key processes?** Dr. W. Edwards Deming once said "If you can't describe what you are doing as a process, you don't know what you're doing."[63] Once it is understood where time is spent, critical processes that are performed on a regular basis can be identified. These critical processes are the important pattern of tasks that determine

[63] ThinkExist.com Quotations. W. Edwards Deming Quotes. http://thinkexist.com/quotation/if_you_can-t_describe_what_you_are_doing_as_a/12330.html. Copyright 1999-2010. Accessed January 29, 2010.

what makes up a job. The next step is to describe these critical processes with 5 to 10 high-level process flow steps.[64] These process flow diagrams of critical processes describe the most frequent daily work accomplished.

A QI tool to help develop a flow process diagram is a SIPOC+CM Form.[65] The SIPOC+CM form indicates who suppliers are, where the inputs to the process originate, the key elements of the process, where output goes, and who the customers of the process are. The form also provides space to define any constraints on the process and specify measures used to indicate how the process is performing.

Another QI tool, the Flow Chart Summary Matrix, helps document the resources that a process consumes in producing its output.

3. **Are customers' needs and wants known?** For each key process identified and mapped, it is crucial to indicate what the customer needs and wants that process to deliver. The first pass at this will be the process owner's understanding of the customers' desires. Once needs are documented, they should be checked with the customer to ensure alignment. If not, the documented needs and wants should be corrected. Any corrections should be verified to ensure that the process can deliver the new requirements.

   Once agreement is reached with the customer on needs and wants, it is important to perform the same action with suppliers to make sure that they understand needs and wants. Quality Function Deployment[66] can help with the collection and analysis of customer wants and needs with the following tools:
   - Process Steps Impact Customer Needs Matrix
   - Kano Model
   - Understanding/Interpreting the Voice of the Customer Table
   - Internal/External Customer Needs Matrix

4. **Is each step in the defined processes controlled?** A key part of daily QI is a clearly defined process owner who understands which parts of the process are controllable. Process ownership establishes the roles and responsibilities for the process. Knowing these rules enables individuals doing the work to make improvements.

   The Control and Influence Matrix is a QI tool used to check each process step to determine if control is present or if others need to be involved in order to make a change.

[64] Collett C, DeMott J, Moran J. Introduction to Critical Processes. GOAL/QPC Application Report No. 92-01A; 1992.
[65] Bialek R, Duffy G, Moran J. *The Public Health Quality Improvement Handbook*. Milwaukee, WI: Quality Press; 2009.
[66] Duffy G, Moran J, Riley W. *Quality Function Deployment and Lean Six Sigma: Applications in Public Health* Milwaukee, WI: Quality Press; 2010.

5. **Are process measures available?** Once the process is defined, it is important to understand how it is performing. It is necessary to know if the process is stable, repeatable, and in control. Measurement helps reveal how well the process is doing, how well goals are met, and how satisfied customers are. Measures must be determined as Key Process Indicators (KPI). The following areas might be measured:
   - *Effectiveness*: Does the process output conform to stated requirements? Goal: Doing the right things.
   - *Efficiency*: Does the process produce the required output at minimum resource cost? Goal: Doing the right things correctly.
   - *Quality*: Does the output meet customer requirements and expectations?
   - *Timeliness*: Does the process produce its output correctly and on time?
   - *Productivity*: How well does the process use its inputs to produce its output? Goal: Assessment of the ratio of the amount of output per unit of input.
   - *Output*: How much does the process produce in a given time period?

   Depending on the process, the KPIs chosen may be a combination of the above or others. It is desirable to have proactive measures that show what *is happening* now in the process rather than reactive measures that show *what has happened*. Whatever measures chosen should give a clear indication of how the process is operating. Analyzing these measures indicates when action is needed.

6. **Can the process be monitored and controlled on a daily basis?** Once the process can be measured, it is necessary to monitor and control the process on a daily basis. Monitoring and control are important activities which indicate when the process needs corrective action. Monitoring, control, and response activities are necessary to maintain performance levels for important processes and hold the gains from improvement activities.

   Some QI tools useful in monitoring and control are:
   - Pareto Charts
   - Histograms
   - Scatter Diagrams
   - Run Charts
   - Control Charts
   - Stem and Leaf Plots

7. **Can processes be improved**? Improvement of daily work is a cornerstone of a quality system in any organization. Monitoring and controlling activities point out problem areas in the process. Using the PDCA cycle will help to analyze and develop solutions to identified problems. The following QI tools help to prioritize, analyze, and develop solutions to problems:
   - Problem Selection Grid
   - Cause and Effect Diagrams
   - Solution and Effect Diagrams

- Stop-Start-Continue Matrix
- Impact Action Plots

8. Repeat steps 1–7 on a regular basis to check the process's performance and uncover additional improvement opportunities.

Summary

Henry Ford once said that "Quality means doing it right when no one is looking." QI is crucial in daily work. Daily Work Management, when done well, is performed all of the time at all levels in the organization. Daily Work Management is a system that becomes acculturated into an organization. It is not visible except perhaps for some up-to-date measurement charts on a wall, employees meeting to solve a common problem using QI tools, employees making a presentation about the use of QI tools and techniques, or a conference room with a Cause and Effect (Fishbone) Diagram left from a previous meeting.

Managers watch for signs that Daily Work Management is not yet a reality in an organization:[67]

- Process output quality is different from shift-to-shift, location-to-location, person-to-person. This inconsistency indicates a lack of standardized methods, poor training, or a lack of accurate metrics.
- The same problems continually recur after being addressed.
- Work processes were never planned but evolved over time by the different people doing the job.
- Different areas doing the same work have different forms, collect different data, and may have different technology systems.
- Interacting processes have different goals and objectives with no smooth hand off. Items are often lost or delayed.
- A crisis mode of operation is the norm.
- The workforce is blamed for problems that occur.
- Clients complain about a lack of service or long waits.
- Poor documentation of changes made to the process occurs. Often those changes are not communicated clearly to those involved.
- When veteran employees take a vacation or leave, problems arise since processes to accomplish various tasks are not documented.

For Daily Work Management to be effective, everyone must understand how the process works, how it interacts with the other processes in the organization, and how it contributes to the strategic direction of the organization. Everyone must feel an ownership of the process and its output. Measurement must be a way of life and must be used to improve and not punish. Everyone must have a customer/supplier orientation in which communication and understanding of wants and needs is clear. Everyone must develop an attitude and willingness to change often. It is a rapidly changing society in which the status quo is constantly being challenged.

[67] The ROI Alliance. Daily Management. http://www.roi-ally.com. Copyright 2010. Accessed February 3, 2010.

The following case study provides an example of how Daily Work Management supported one very busy Health Department staff member.

Daily Work Management Case Study

Sally the epidemiologist often felt like her days were not her own; rarely could she get ahead on her work load. She was responsible for investigating disease outbreaks, surveillance, planning and preparedness activities, writing reports, responding to community requests for data, and various other tasks. No matter how many To-Do lists she made, something always came up that distracted her from her original priorities. She wanted to manage her time better, and she remembered that her colleague mentioned something about helpful quality improvement tools that could be applied to her daily work.

Sally first identified what she did on a usual day and how much time it actually required. Her favorite method was to use a random number generator to select one day every week to analyze; Sally spent ten minutes filling out an activity log for that day, as shown in Table 13.1. To fill out the activity log, she reviewed her email to see what she had accomplished that day (a Monday). She went back through her appointment calendar and emails for ten previous Mondays and found that the majority of her time was spent on Communicable Disease Investigations.

Activity	**Category**	**Time spent (%)**
Pertussis, Salmonella	Communicable Disease Investigations	50
Norovirus	Food borne Disease Investigations	10
Grant Updates	Planning and Preparedness	25
Communicable Disease Reporting System Updates	Monthly Meeting	5
Phone Calls and Emails from Hospitals	Surveillance	10

Table 13.1: Daily Activity Log

Sally decided to analyze the communicable disease investigations, since they took up half of her time on most days, and were some one of the critical processes that she performed on a regular basis. She thought if she mapped out the process that she used to complete an investigation it might help her figure out where all of her time is spent. She found a template for a SIPOC+CM form and filled it out. Figure 13.1 includes Sally's SIPOC+CM example.

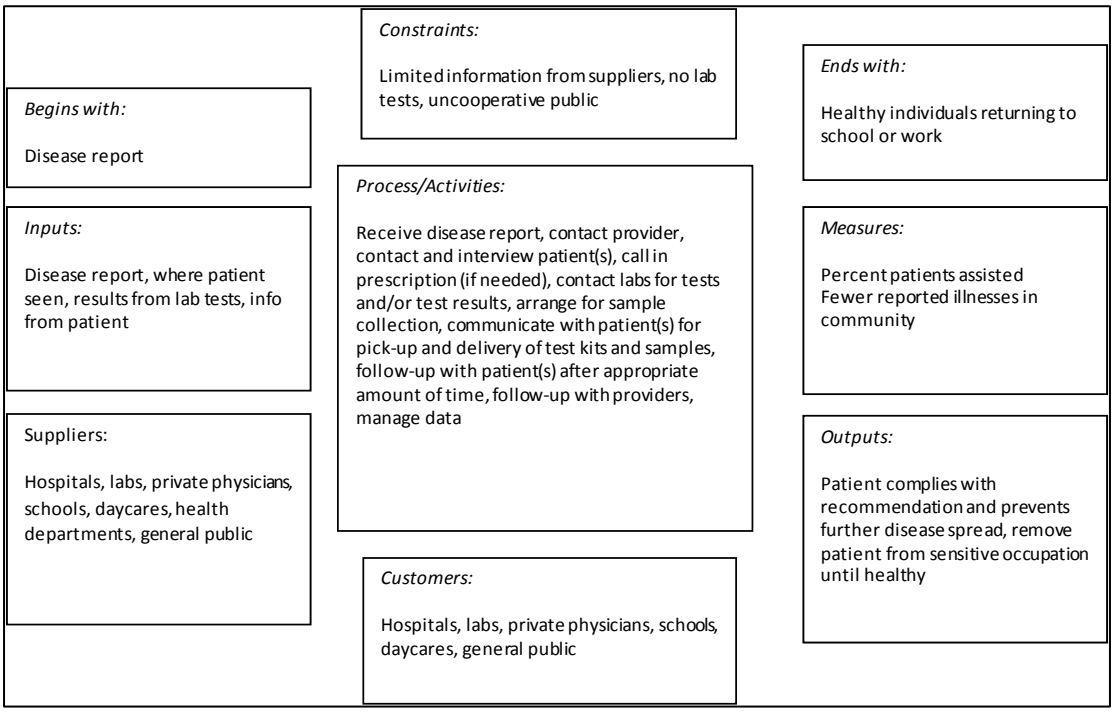


Figure 13.1: Communicable Disease Investigation SIPOC + CM

Once Sally understood one of her critical processes, she decided to investigate customer needs and wants of this process. She made a list of potential customer desires and used a customer needs matrix as shown in Table 13.2. She listed potential customers and their needs as she understood them. Then she rated the perceived level of their satisfaction on a 1–5 scale (1=not satisfied, 5=satisfied). She planned to use the last column after contacting key customers to verify their needs and current level of satisfaction.

Customer	Needs	Satisfaction	Checked
Patients	Education, Prevention, Prescriptions	3	
Providers	Guidance	3	

Table 13.2: Customer Needs Matrix

As Sally reviewed the process flow through the SIPOC+CM model and the other aspects of the process, she realized that she did not actually have control over all of the pieces of her daily work. Without control, the daily work had the tendency to manage her. In the packet of information that her friend had forwarded to her, Sally found and completed a Control and Influence Matrix, shown in Figure 13.2. She knew that by evaluating her level of control, she might refine the process to more effectively manage her time.

	Control	*No control*
Knowledge	**Data management** [Do it]	**Prescribing medication** [Influence]
No knowledge	**Receive disease reports from providers** [Get help]	**Patients don't return phone calls** [Stay away]

Figure 13.2: Control and Influence Matrix

Sally found that she really only had control over the data management. She had some influence when she contacted the provider and the patient or the lab and limited or no control over whether individuals returned her calls or picked up kits for testing.

Having control over a process is not the only information that Sally needed to manage a process. She needed to know a few more specifics. For instance, she needed to review the "how" of the process; measuring indicators of the process could help to ensure that she would get the results that she wants.

Of several *Key Process Indicators*, Sally chose to assess timeliness and quality, particularly as they related to managing the data. In this instance, she needed to review and/or input data into the disease reporting system within a short timeframe. Sally decided to monitor the amount of time that had elapsed between notification of a disease and the first phone call to the patient. She also wanted to add a question about satisfaction to the end of each patient phone call. Based on her reviews with key customers, she determined that a goal of 30 minutes would be appropriate for the review of data and a phone call to the patient.

Sally decided to set up a Run Chart with the goal she developed; the Run Chart would be appropriate for reviewing data or inputting it into the disease reporting system. She set up a tracking log to record each time that she reviewed or entered data into the disease reporting system and the amount of time that elapsed between notification and action. The Run Chart for the most recent 20 entries is shown in Figure 13.3. This Run Chart shows the following pattern of compliance to the goal. Monitoring and control are important activities since they will indicate when the process is out of control and when corrective action needs to be taken.

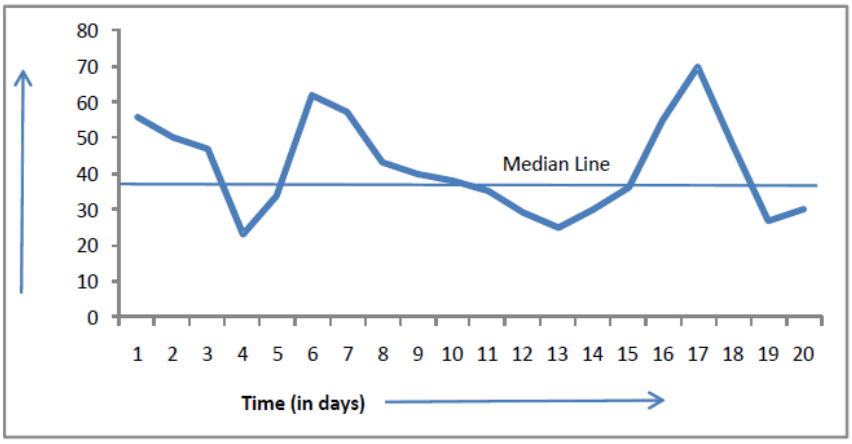


Figure 13.3: Run chart

When reviewing the Run Chart, Sally sees some inconsistencies in the amount of time it takes to complete the first steps of the investigation—receiving the data, reviewing it, inputting it into the data management system, and calling the patient. As Sally had realized earlier, she had control over the data management piece, so she decided it was the review and input into the system that needed improvement. Sally put together a simple cause and effect diagram to investigate further, as shown in Figure 13.4.

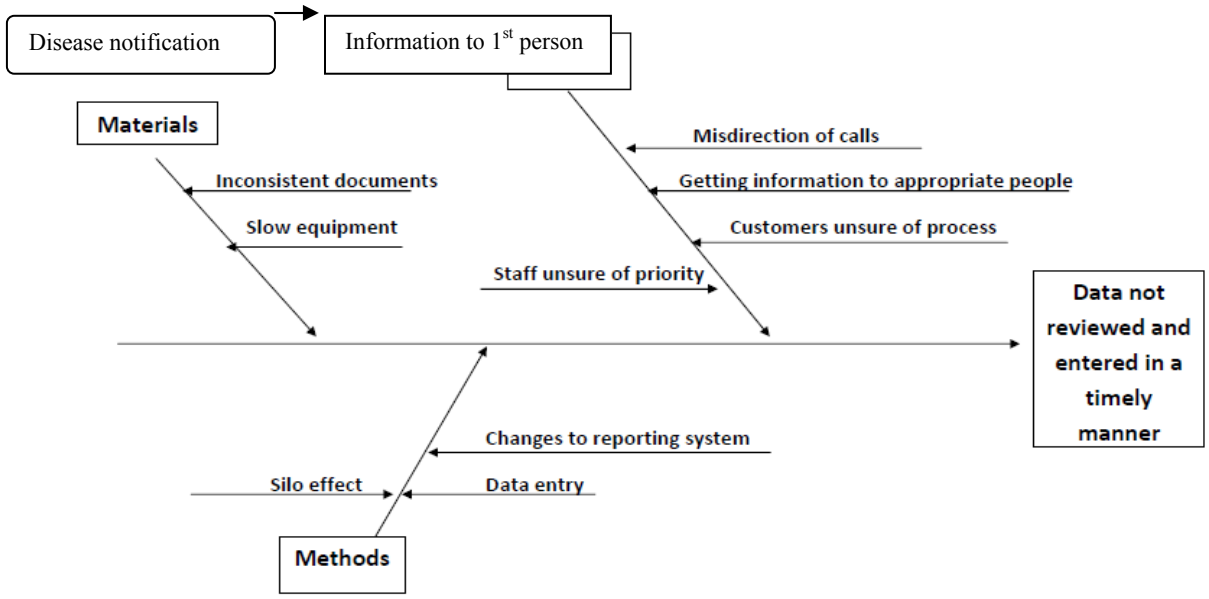


Figure 13.4: Cause and Effect (Fishbone) Diagram

Completing the Cause and Effect (Fishbone) diagram helped Sally to elucidate some of the issues that could be directly addressed in the investigation process. She selected the category "People" as the area of focus that could most impact the timeliness of investigations. To better understand how information was getting from person to person, Sally worked with her team to develop a Flowchart (shown in Figure 13.5).

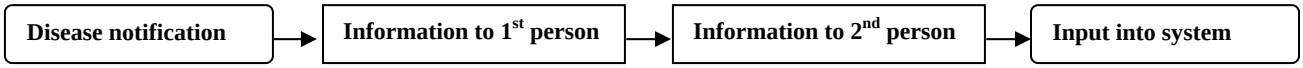


Figure 13.5: Abbreviated Flowchart

Once the flowchart was completed, Sally could evaluate where some of the breakdowns were happening and create an appropriate solution to ensure information was communicated quickly and effectively.

Sally also continued to monitor the timing and efficiency of the process so that she could systematically review the data and continue the improvement cycle.

With the appropriate tools, Sally could manage her daily work in a way that prevented it from managing her.

Appendices

Appendix A: Success Story – Engaging Community Partners to Meet Priority Outcomes

Cheryl Plettenberg, Ph.D.

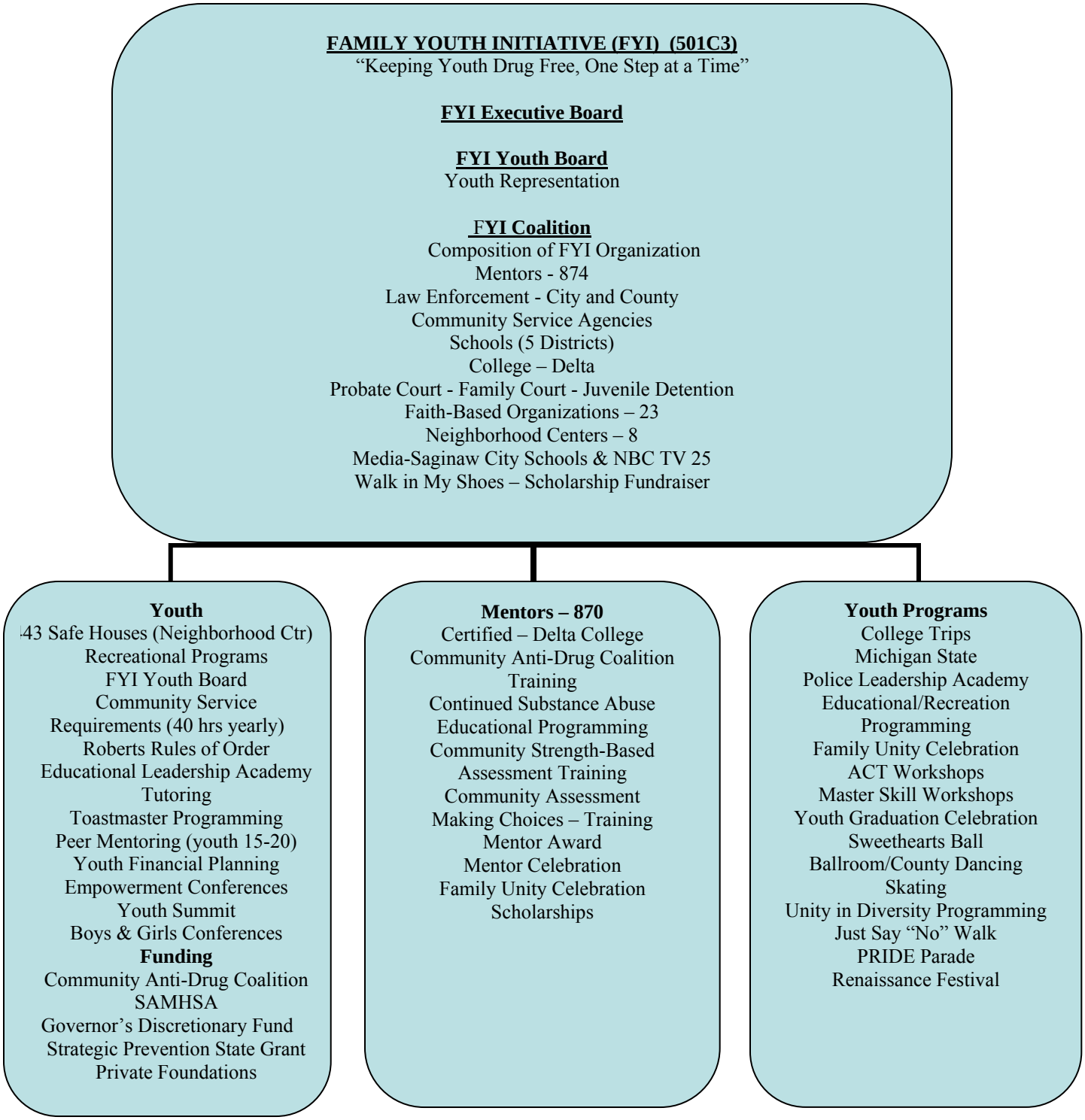
"If you have an apple and I have an apple and we exchange these apples then you and I still each have one apple, but if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas." – George Bernard Shaw

When the Family Youth Initiative (FYI) was first thought of in Saginaw, Michigan, its goal was to "keep youth drug free, one step at a time." The creation of ideas and activities toward this specific goal was a twelve-year community-wide initiative that has achieved results far beyond the expectations of the small group of individuals who imagined and dreamed it. FYI grew from a single center (Safe House – neighborhood center) with three mentors to 43 centers, 879 mentors, and over 15,000 youth. This journal shares experiences of how FYI engaged a community and collaboratively developed an initiative that today serves a very important priority: its youth. Interestingly enough, no matter how much education or how many degrees held, no better source of energy, productivity, or leadership exists than that source tied into the "grassroots" of a community. They are the "movers" and "shakers" who give their time and energy to work with families, youth, and local faith-based and community organizations to create change and provide a positive environment for the youth to grow and become productive adults.

This initiative grew out of an idea among three community leaders who, because of their concerns about crime, drugs, and juvenile activity, realized that steps must be taken to provide an environment that was safe and positive for the youth and families in Saginaw, Michigan. This twelve-year journey is about what a group of citizens accomplished through their hard work and dedication in order to make that change. This "Family Youth Initiative (FYI)" is a partnership of teachers, faith-based organizations, law enforcement, families, mentors, community organizations, substance abuse prevention providers, youth and families banding together to change the course of events within their community.

The goals of FYI were to: (1) establish a community partnership to prevent/reduce crime, substance abuse and drug trafficking among its youth, and (2) reduce the effects of drugs over time by addressing the community issues that were increasing the risk factors of substance abuse. The motto was to keep youth drug-free and in school. Figure 5.1 illustrates the "One Step at a Time" concept through the development of strategies that included: (1) enlisting the critical input, support, and participation of parents/guardians, community leaders, faith-based organizations and mentors; and (2) launching a county-wide organized program that addressed the risk factors associated with drug abuse/use among the youth and (3) introducing a mentor/peer mentor program within neighborhood centers, or Safe Houses, that would educate, communicate, and empower families and their youth to change.

Family Youth Initiative (FYI) Organizational Chart



Community Overview

The Family Youth Initiative (FYI) has action plans designed to provide the youth of Saginaw with continued resources and tools critical to their healthy growth and development. Unfortunately, even as FYI continues, so do the negative external factors influencing the youth and families in Saginaw; they are very similar to the rest of the country in that way. Saginaw continues to rank as one of the worst crime centers in the State of Michigan, second only to Detroit. Violent crimes have reached an unprecedented level. Over the past five years, Saginaw buried 15 youth between the ages of 6 months and 18 years as a direct result of gang violence and drug trafficking. Youth incarcerations have robbed the community of talented and gifted young people whose contributions are lost. Unfortunately Saginaw is on the main drug trafficking routes spanning from the southern US border to Canada. In 2009 Saginaw was earmarked as economically disadvantaged with an estimated 10,000 home foreclosures. Geographically, Saginaw, which is primarily urban, encompasses 809 square miles with a population that has decreased from 210,000 to 204,612 in 2007 with an overall 17% unemployment rate. County population is fairly diverse: White: 155,344 (75.9%), Black 38,421 (18.8%), Hispanic 14,570 (7.1%), Asian, 2081 (1.0%), and Indian 847 (.04%). While the outlook for Saginaw continues to be bleak with social ills causing devastation, FYI refused to allow this trend to go unchecked. Through their motto "One step at a time," teams of community partners continue to fight the challenges by building strong coalitions and empowering youth to stay off drugs, graduate from high school, continue their education and come back to serve Saginaw.

Using multiple community resources, FYI identified substance abuse as a major community issue. Saginaw in the last decade experienced several issues that have contributed to increased homicides, drug trafficking, and criminal activity. The *Detroit News* on November 22, 2006 reported that the "Violent crimes per 1,000 residents were 27.2 for Saginaw while Detroit was 23.6." The Uniform Crime Reporting (URC) in 2007 reported that Saginaw was ranked first in Michigan for Domestic Violence (DV) out of 83 counties. Additionally, the Saginaw Police Departments Gang Task Force gathered extensive intelligence showing that the number of violent street gangs has increased from four to seven in the last two years with an estimated thirty-five to fifty active members in each. The ongoing rivalry recently resulted in an infant being shot and killed while riding in the car with its mother. The Saginaw Public School District noted increased gang involvement openly evident inside some of the buildings. In the fall of 2005, a fifteen-year-old student was shot in the hallway as retaliation for testimony given in a gang-related homicide trial. At the same high school, two innocent students were struck as gunfire erupted unexpectedly. For years Saginaw residents depended primarily on the automobile industry for employment. Due to the downsizing of that industry, the unemployment rate for Saginaw in December 2008 was 10.4% with Michigan at 11.6% (2009) being the worst in the nation and expected to increase. Abandoned homes are causing an increase in arson within Saginaw from 89 in 2005 to 167 in 2006, a 53% increase over 1 year (Saginaw Police Technical Services).

The literacy rate for Saginaw is 21%; however, in the city 33% of the residents function at level one literacy. These adults may perform simple tasks with text and documents but display difficulty using certain reading, writing, and computational skills considered necessary in everyday life functions. More than 20% of adults read at or below a 5th grade level, far below the level needed to earn a living wage.

This data provides a clear picture of the current trends in Saginaw. Left unchecked, this downward spiral will continue to claim the lives of children. Law Enforcement officers currently partnering with FYI indicated "that drug sales are at the root of many gang-related crimes." Domestic violence, foreclosures, and loss of an entire sector of industry/manufacturing all contribute to the disintegration of the family, increased drug use/abuse, and trafficking.

How did FYI know that each of these problems exists? The increase in alcohol, tobacco and drugs (ATOD) is driven by the devastating community factors (crime, poverty, availability of drugs, lack of perceived risk and interaction with anti-social (gang) peers, as noted in the results of the "Why Kids Do Drugs" annual survey. Table 1 is a summary of a "Why Kids Do Drugs" survey showing total responses from youth from 2004 through 2009.

2004-05	2005-06	2006-07	2007-08	2008-09	Responses from FYI youth between ages 10-20
16	32	21	125	937	Peer Pressure
10	24	06	93	81	Family accepts drug use/does not provide support (Norm)
9	17	10	44	20	Drugs are readily available
5	7	2	48	450	Youth needed to learn about drugs or lack of perceived risk
4	5	4	40	60	Lack of youth activities
3	17	6	78	40	Youth use drugs to escape depression (sexual abuse)
3	0	4	57	182	Youth lack enough developmental assets
2	0	5	47	10	Society promotes/condones it (Alcohol and drugs)
2	5	4	45	81	Selling provides easy/quick money
1	0	1	29	61	Based upon hereditary/environment
1	0	3	61	100	Gang involvement
1	4	7	79	364	Youth like to experiment
1	2	35	0	0	Lack of law enforcement
1	0	5	67	12	Lack of role models
1	13	6	66	121	Makes the youth feel good
16	116	86	911	2055	Total youth participating in the survey

Table 5.1 "Why Kids Do Drugs" Survey Summary: 2004 - 2009

These results continually demonstrated that: # 1 reason for youth engaging in drug use was peer pressure, #2: "It's cool," # 3: boredom, # 4: friends do drugs, and #5: just to fit in. Additionally, in 2008-9, 2055 youth identified that the primary ATOD used on the streets were: alcohol, marijuana, and cocaine/crack with a growing increase of over-the-counter prescription drugs and heroin. Other negative factors influencing the ATOD use included family breakdown and a favorable attitude of the parents/adults toward use of ATOD. Gang activity with drug trafficking and violence is causing an increase in robberies and break-ins by youth to secure resources for the purchase of street drugs/alcohol.

Availability of drugs, lack of perceived risk, poverty, gangs, violence, selling drugs, and being severely economically disadvantaged were major issues influencing community members to form FYI. FYI provides a team approach to the problems of ATOD in Saginaw, addressing the "perceived availability of drugs." This community-wide approach included the family in supporting the anti-drug use message. The family is both a major protective and risk factor. Not only does the family provide guidance and anchoring for youth, but the survey summarized in Table 1 also indicates that poor family experiences influence youth toward drug use. Other risk factors were peers, availability of drugs, and the need for consistency and research-based prevention programming for the family as a whole.

Community Gaps and Weaknesses

One identifiable gap is a perceived lack of cooperation between non-profit, grass roots, and faith-based organizations. The perception leaves "grassroots" and faith-based organizations behind without the training in grant writing, resources, and opportunities that larger non-profit organizations have. A lack of provider willingness to share staff or resources widens this gap. These gaps and weaknesses are damaging and increase the likelihood for ATOD use/abuse among the youth when associated with criminal activity, homicides, violent crime, gang activity and drug offenses, drug use, dilapidated houses, unemployment, poverty, and lack of education. The annual neighborhood town hall meetings blame community schools for allowing youth too much free time. The schools are not teaching youth because teachers are willing to "remove" the youth from the school instead of dealing with the behavioral problems, thereby allowing youth to roam the streets, rather than dealing with the problems in a controlled environment.

FYI Structure: FYI's coordination is under the auspices of the Saginaw County Department of Public Health's (SCDPH) Substance Abuse Treatment and Prevention Services (TAPS) Coordinating Agency (CA). The CA has been in existence since 1995 and is the referral agency for Saginaw County residents seeking ATOD treatment and community ATOD prevention. The CA's certified staff coordinates the ATOD prevention strategies associated with the education and reduction of substance abuse/use. SCDPH is a vital component of FYI and allows for key staff to coordinate activities of FYI. FYI is an inclusive, culturally diverse, multi-lingual entity that supports: a) diversity; b) leadership that supports the diversity of the community; and c) membership participation in the development, governance, and leadership. The Membership Committee is the key to ensuring inclusiveness and diversity. FYI has become a long-standing

hierarchy of cross-functional teams through the guidance of the Membership Committee in partnership with SCDPH and the TAPS Coordinating Agency.

Governance: FYI is under the guidance of an executive board shared by two co-chairs elected from the coalition. Five subcommittees are composed in finance, marketing, education, youth board, and planning. Ad Hoc committees are formed on an as-needed basis for community activities and events. The 52-member coalition has representation from law enforcement, education, neighborhood centers, faith-based organizations, parents, youth mentors, the CA's prevention coordinator, civic, media, and community leaders with 43 Safe Houses organizations. The executive board serves as the Quality Council to provide leadership and overall communication among the myriad sub-teams, addressing specific issues within the community.

The youth coalition is comprised of two elected representatives from each Safe House with an elected executive comprised of a President, Vice President, Secretary, Treasurer, and two at-large members elected by the youth membership. The youth coalition is supported by an adult mentor advisory team and law enforcement officers who meet monthly to coordinate youth activities and community events. A member of the youth executive board is also a voting member of the FYI coalition executive board.

Day-to-day activities are coordinated by the CA's Prevention Coordinator, a Mentor Coordinator, two Outreach Coordinators, Law Enforcement, and Delta College. Each Safe House's activity includes addressing ATOD prevention strategies that include pre and post-testing surveys. The Safe House activities are monitored to evaluate compliance to the goals and objectives of FYI.

Bylaws and Formal Procedures: In 1998 FYI formally established bylaws, policies/procedures, goals, and objectives. The executive board was charged with the development of these documents; in May 1998 they were formally approved by the coalition. These documents are reviewed annually, and any changes/additions are presented to the coalition for adoption.

Fostering Community Involvement: FYI works through its membership to foster continual community involvement and support by forming alliances and Memoranda of Understanding (MOU) with its partners, including:

- Maintenance of business representation with active involvement in strategic planning and evaluation
- Collaboration with school districts and designating each of them as official Safe Houses
- Representation on the Saginaw County Human Services Collaborative Body – Multipurpose Committee and The Crime Prevention Initiative
- Increase of the number of relationships with financial corporations to increase sustainability
- Continual involvement of the Michigan State Police for the Youth Leadership Academy
- Collaboration with Saginaw Police to share information on gang and drug activity
- Work with media networks including television, radio, cable, newspaper, magazines, and billboards
- Work with the Saginaw County CA to provide ATOD prevention strategies

Engaging the Community in the Strategic Plan: FYI used the community needs assessment surveys performed by various community agencies that identified community issues. FYI leadership presented these results to multiple community organizations to garner interest in the need to address the ATOD issues. Additionally, the membership used their connections and linkages to obtain desired representation. Sponsored FYI community activities/events (Graduation Celebration, Family Unity meetings, Just Say No to Drugs Walk and the Mayor's Task Force on unity and diversity) and key leaders as speakers, workshop presenters, honored guests, etc., involve key community organizations and individuals willing to engage with FYI and assist with the strategic plans needed to accomplish FYI's pre-established goals. The FYI membership committee plays a key role in the solicitation of representatives. FYI also encourages volunteer participation from youth, parents, and private citizens to round out the much-needed community-wide representation and involvement. Youth input is essential to the strategic plan, and youth play has a vital role in its development. The FYI youth board not only selects its leaders but has a voice in the activities/events.

The final and single most important engaging component of FYI is parental involvement. The "family" is both a risk and a protective factor associated with the development of the youth. It is FYI's continual goal to engage the parents' participation through mentoring and workshops to support the changes necessary to keep the youth on a positive road to adulthood. FYI alerts the community of its programming via community media and the Safe House activities.

What did FYI do to strengthen its internal capacity? FYI's strength comes from strong collaborative partnership efforts. Their strength is achieved by nurturing youth, involving parents, grass roots/faith-based organizations, and community human services agencies. Support also comes from educational and multi-jurisdictional law enforcement teams and recognition that a healthy relationship is essential to combating the problem of ATOD issues in the community. Recently the partnership with the Native American representation continues to expand diversity within the organization and supports the philosophy of supportive/caring relationships with family, church, youth, and community.

FYI partnership responsibilities include:

- Acting as a youth advocacy group for prevention programming, activities, and events
- Supplying youth with certified mentors to assist with activities and role models
- Participation in, organization of, and delivery of youth development activities and services
- Sharing information and resources regarding services to youth/families and the needs in the community
- Bringing community needs/issues to FYI

FYI Executive Board responsibilities include:

- Establishing eligibility criteria and standards for the FYI Safe Houses
- Reviewing/approving Safe House applications/participation
- Youth activities
- Mentoring educational curriculum, Safe House assignments, and timetables

- Applications for grants
- Activities to address issues brought forth from the coalition
- Mediating coalition concerns/disputes

How does FYI assist the community in the reduction of the ATOD problems?

- Giving youth who are using and/or selling ATOD a second chance
- Providing youth performance contracts to monitor/reduce absenteeism, truancy, or dropouts
- Providing Safe Houses as an alternative to gang involvement
- Assisting families in identifying/solving ATOD issues within the home
- Working through outreach coordinators to establish alternatives for communicating with youth
- Working with the Saginaw Sheriff's Department in the reduction of selling tobacco to youth
- Maintaining a 24/7 hotline for youth and their families
- Tracking activities/demographics/grades, surveys, and outcome measures
- Having a full-time police officer as part of FYI
- Increasing contributions for sustainability
- Educating, training, and certifying adult and peer mentors
- Supporting graduation from high school, higher education, and community service

FYI Plan: The plan for achieving the goals/objectives of the coalition from the beginning was to engage the community, promote community membership, involve the entire coalition in the operation of the partnership, and continually support its diversity. FYI is responsible for measuring its pre-established outcomes through:

- Assuring total community involvement in its development, evaluation, and sustainability,
- Identification of problems, priorities, and objectives,
- Equal representation of the community among the coalition's leaders, and
- Establishments of goals/objectives that reflect the needs of the community.

The community problems, priorities, and objectives were identified through reviewing community health/needs assessments conducted by the SCPDH and United Way, law enforcement crime statistics, town hall meetings, census data, Uniform Crime Report, 2007 and "Why Kids Do Drugs" annual survey. This evaluation led to the development of FYI outcome measures including: parent/youth surveys, academic grades/absentee/truancy report, youth performance contracts (academic, behavioral and sports), violence surveys, and pre and post-testing.

Evaluation Components

- Research-Based Programming: to assure improved behavior/attitude change, the coalition

researched effective substance abuse prevention programming that had a mentor component. Once research-based models were identified, a decision was made by the coalition with input from established ATOD prevention providers within the community. A curriculum was developed by educators, mentors, and college faculty. The curriculum resulted in training provided by Delta College for the Safe Houses and mentors with both pre- and post-evaluation tools to assure understanding of the concepts that built FYI.

- Utilization of Data: At the beginning of each year, the coalition reviews the most recent community health/needs assessment and compares these assessments to give FYI a yardstick about Saginaw. Originally, the goal was to get buy-in from the community as a whole to realize the magnitude of the issue and develop plans to combat the problem. These results became the basis for establishing FYI. These assessments identified the urgency of the problem and were presented to key community leaders to gain support in changing community norms. Each member of the coalition was responsible for reporting these findings to his or her community.

How does FYI continue to strengthen collaboration in Saginaw? The original purpose of FYI was to come together for common goals: increase awareness of the ATOD issues, make available community services that will engage families, work towards environmental changes and community norms, and work towards a healthier, safer community. Adult and peer mentoring programs were put in place in the Safe Houses to support behavioral change in youth and their families. Mentors reinforced the message that change was needed to eliminate and/or decrease significant ATOD behaviors. FYI planned to reduce ATOD use/abuse among youth and their families and, over time, among adults by building a structure that would support change. FYI teams continue to add members to the partnership that support these goals, remain culturally competent and diverse, establish outcome measures, clarify roles, provide continual community updates and dialogue, gain appropriate legal and fiscal organization, cultivate leaders among both the membership and youth, share the responsibilities of the coalition with its entire membership, and provide monthly meetings to review progress and engage in community dialog. The establishment of the Safe Houses or neighborhood centers provided a means to educate youth on the risks and consequences of long-term use of drugs, provide information to parents, enhance skills, provide support for the families/youth, enhance access/reduce barriers, and modify/change behavior. The final goal of FYI was to enhance the structure, add new partners, provide cultural competency seminars, continue to clarify the role of FYI in the community, maintain and review the by-laws, facilitate dialogue, provide current data/information to the community, and share responsibilities among its members.

How does FYI plan to reduce ATOD? FYI felt the way to reduce ATOD in this community was by involving the neighborhood/community partners. By participating in the planning/evaluation process, the community came together to strengthen those protective factors that decrease the use and abuse of drugs. FYI has continually invited neighborhoods and the 43 Safe Houses to participate in the planning, implementation, and evaluation process, as well as educate youth on the risks/consequences of long-term poly-use of drugs. FYI community partners provide current information on the condition of ATOD trends impacting Saginaw, enhancing skills and providing support to keep youth drug-free and build a healthy lifestyle.

How did the community participate with FYI to achieve the goals/objectives of the plan? Community participation is critical to the ongoing success of FYI. Each entity brings expertise and knowledge without which the services/programs could not be provided. FYI continues because of these participants and, over time, has developed strength and skills. Solutions, resources, and assistance are available to the entire county through FYI.

How did FYI impact Saginaw? Successful execution of the plan happened because of the positive impact the partnership had on the community. It was the first initiative that removed "turf" boundaries. Active involvement of these diverse individuals produced county-wide youth and family programs, including: workshops, educational prep courses, peer mentoring scholarship, skill-building workshops, youth leadership academies, adult/peer mentors, positive role models, and ATOD educational programs by Law Enforcement officers and tutors, and strong participation from faith-based organizations and parents.

How will the success of the plan be evident over the years? Over the next 10 years, FYI will learn of the benefits of this program by: 1) evaluation of the improved grade point averages of its youth; 2) review of the retention rate and graduation numbers of its youth; 3) identification of the number of youth who graduate from college; 4) tracking the number of youth who will return to Saginaw to serve the community as teachers, social workers, outreach coordinators, and mentors; 5) monitoring during the first twelve years of the program the youth returning home from college, and 6) the extension of its boundaries to include townships, underrepresented minority groups, and increased parental participation and support.

Evaluation Plan: FYI tracks, measures, and reports its findings to the community and incorporates its findings into the annual assessment of the goals/objectives of the collaborative.

Measurements include:

- Performance Indicators: measure perception of risk, peer/adult disapproval, last 30-day usage and age of onset.
- Surveys: youth/parent surveys annually addressing attitudes toward school, peers, family, community, violence, and drug use. These questions identify the risk and protective factors including youth changes in attitude, perception of drug use, and the success and/or failure in their behavior.
- Pre and Post-Program Testing Instruments*:* Each Safe House collects pre-established, standardized performance indicators for all educational activities. These indicators question retention/understanding of information presented.
- Other Safe House Measures: Collection of report cards to garner baseline information about attendance, attitudes, and gaps to evaluate youth performance, identify truancy, dropouts, grade advancement, and school achievement.
- Other Measurable Objectives include: Annual review/research on other community activities surrounding ATOD use/abuse programming; review of research models to determine if FYI is gathering the appropriate information to make decisions in the reduction of ATOD, acquisition of ATOD school surveys completed by Western

Michigan University and a coalition assessment to determine levels of achievement of goals/objectives and the strategic plan.

- Core Measures used at the Safe Houses are:
  - Average age of onset of ATOD use. The goal is to delay the onset of first-time drug use by one year,
  - Average ATOD use in past 30 days, including most frequently used. Goal is to decrease the frequency by 20%,
  - Youths' perceptions of risk/harm of ATOD use. Goal is to increase youths' understanding of the perceived risk/harm by 10%, and
  - Youths' perceptions of peer/adult disapproval of ATOD use. The goal is to improve this perception by 15%.

These core measures are collected quarterly on youth between the ages of 10 to 19 or grades 5 through 12 by Delta College, are analyzed, and are presented to FYI. Once a year, FYI's partners present this information to the community, law enforcement, city council, county commissioners, the State of Michigan, and agencies supporting FYI.

FYI's Internal Evaluation: Annually the membership is asked to complete an internal assessment tool to facilitate conversation among the membership and generate ideas/questions regarding how to change and/or move forward. The assessment questions include: 1) clarity of goals/objectives; 2) effectiveness of the structure, outreach, and communication; 3) effectiveness of meetings; 4) opportunities for membership growth; 5) effectiveness of planning, 6) implementation/evaluation of activities/projects; 7) use of research-based models/external resources; 8) knowledge of whether FYI has the sense of the community; 9) success with which FYI meets the needs and provides benefits to the community; and finally, 10) the relationship with elected officials, community leaders, and others in Saginaw.

All of the above information, research, and data is reviewed/evaluated by the coalition which discusses any indication for change. The recommendations are voted upon and published in the coalition newsletter.

Community Information Sharing: FYI as an initiative of America (Saginaw) Promise, Crime Prevention Initiative, Mentor Michigan, Vision 20/20, and the Saginaw County Human Services Collaboration multipurpose body publishes its accomplishments and survey results annually. Additionally, the youth and Safe Houses participate in community activities including such programs as the Saginaw Christmas "Pride Parade," the "Just Say No to Drugs" Walk, FYI summer camps, College trip, Michigan State Police Leadership Academy, scholarship fund raising, high school graduation celebration, Family Unity Celebration, a 24-hour youth referral service, the "Mayor's Task Force on Unity in Diversity" and the newly established scholarship fundraiser "Walk in My Shoes" that annually raises funds for college scholarships. The survey, performance indicators, and outcome measures are published in the FYI Newsletter produced by one of the faith-based organizations and the youth.

The Coalition's Accomplishments and Challenges: Over the past 12 years, FYI has had a very positive and far-reaching effect on youth and families in Saginaw. Highlights of its many accomplishments will follow; unfortunately the coalition continues to face the economic and ATOD issues/concerns that threaten to destroy entire communities on the local, state, and national levels. Recognizing that no collaborative effort can successfully tackle all of the challenges plaguing its youth, FYI has identified six accomplishments/challenges that it will continue to tackle in accordance with its goals and objectives, one step at a time.

Mentors
Accomplishments: FYI has 875 certified mentors. Few programs have accomplished this level of success. Throughout the last 12 years, these mentors have helped more than 15,000 youth to achieve their goals.
Challenge: Continual recruiting of qualified and committed adults willing to give of their time and resources to support/guide youth as positive role models in a community struggling to sustain itself in a time of economic depression, record violence, and the highest rate of drug law violations in Michigan.

Gangs, Violence, and Drug Use/Abuse
Accomplishments: Continual use of evidence and research-based prevention models in collaboration with local law enforcement to: 1) instill values to assist youth in making decisions based upon his/her understanding of conflict resolution; and 2) establish goals that they understand cannot be achieved if violence is their tool for problem solving.
Challenges: FYI tracks ATOD use/abuse among its youth. Some youth have died as a direct result of drugs (sales/use), and some youth are incarcerated as a result of drugs and violence. Due to these actions, youth have a greater potential of dropping out of school. These obstacles are fought by FYI on a daily basis in Safe Houses which provide havens for youth. The mentors, outreach coordinators, and law enforcement connect with these young people daily to encourage and support their efforts to ward off gangs and ATOD use/abuse. The negative impact in schools of ATOD trafficking, use/abuse, and its resulting harmful effects needs continual monitoring and introduction of prevention strategies.

Media
Accomplishments: FYI continues to combat the sensationalized media that draws the youth's attention by: Public Service Announcements (PSA), billboards, contracts with NBC TV25 for coverage of FYI events, and informing all local TV, radio, and newspapers of positive events.
Challenges: News broadcasting prefers to cover negative activity including gang activities, drug trafficking, and violence, drawing negative attention to our youth and communities. This coverage also creates fear and instability, destroying the sense of security and well-being necessary to foster healthy families and communities.

Academic
Accomplishments: FYI sponsors year-round educational opportunities for students in order to ensure success in the classroom and in life. Activities include: Academic summer enrichment educational trips, after-school tutoring, College entrance exams Workshops, Quiz Bowl, GIRLS

and BOYS Conferences, Youth Board, peer mentoring, Mastery Skills programs for youth graduating high school and entering college, youth college trips, college night at Delta College, and college scholarships. Academic literacy in the FYI Safe House using evidence-based curricula, research/development, and skilled instructors/presenters consistently provides youth and adults with after-school tutoring, a full-time Summer Enrichment Program including partnerships with libraries, nutritious meals, and ATOD prevention education intervention programming that encourages student attendance and assists with student success.
Challenges: Saginaw County Schools have not fared well in testing, attendance, behavior management, and overall performance. After eight public hearings to address concerns specific to Saginaw County School District, Michigan Education Association's Assistant Director of Communications Doug Pratt states that "three things have surfaced from the hearings: 1) students need meaningful relationships with adults in and outside school; 2) youth need to 'connect the dots' between classroom learning and their futures; and 3) that the dropout problem begins in early childhood."

Leadership and Partnerships
Accomplishments: In 1998, FYI took the initiative to collaborate with faith-based and community organizations, law enforcement, and individuals committed to the healthy growth of youth in Saginaw. Over the past 12 years, this coalition has grown because of the strong community support and recognizes that without the support of the leadership and partnerships of Saginaw, FYI would not be the program it is today. This coalition has developed one of the most extensive initiatives in the state of Michigan. The most unique and effective partnership of this operation is ongoing and is structured contractually with MOU's, agreements with local law enforcement allowing youth to interact with police officers on a regular basis in a non-threatening, safe environment which helps to establish a level of trust in communities where police officers are generally perceived to be the enemy. Another unique feature of FYI is the relationship between faith-based and community-based organizations which cross the traditionally diverse lines of race, denomination, culture, and economics. These partnerships have destroyed barriers that supported an 'us vs. them' mentality that stifles growth/cohesiveness in Saginaw.
Challenges: FYI recognizes that they will need to continue to pursue the development of continued partnerships with community organizations and leaders that can influence the continued sustainability of the coalition and assure the inclusiveness of the diverse community within Saginaw.

Recreation
Accomplishments: The new FYI recreation program has been uniquely designed to address the needs of Saginaw within the 43 Safe Houses located throughout the townships. The recreational activities could be offered to communities based upon their interests within each Safe House. FYI recognizes that one size does not fit all and that the Safe House will be able to provide opportunities for the youth to participate in competitive sports, dance, and other activities which promote healthy lifestyles, positive communication skills, and conflict resolution. Some additional programs requested by the youth are ballroom and country dancing, soccer days, basketball tournaments, and bowling.

Challenges: Presently, Saginaw provides structured recreational activities such as baseball, basketball, or soccer on an individual basis, depending upon availability of funds. As a result of dwindling finances and high unemployment rates, Saginaw and many of the smaller townships are unable to serve the youth with extra-curricular activities.

Sustainability: The FYI strategic plan includes ongoing attention to establish and maintain resources essential to its sustainability. These resources include human, social, and material goods needed to ensure achievement of its long-term goal of building an independent, self-sufficient organization serving the youth/families of Saginaw.

Each year FYI asks the crucial questions which require an examination of challenges and accomplishments of the previous year, the current level of service provided, and identification of clearly defined resources necessary to maintain and enhance services. The accomplishments/challenges serve as building blocks to develop the coalition as it moves towards achieving self-sufficiency. Steps identified during the FYI review include: Development of a "One Step at a Time" booklet which defines FYI's history from inception through the next 5 years to 2014; security of funding to sustain the current level of operation at minimum for the next five years; provisions of educational opportunities to further develop youth, mentors, staff, and volunteers in areas identified as critical, including cultural competency, strength-based community assessment, mentor education, and leadership development; development of a nationally approved FYI model sanctioned as an innovative evidence-based program; creation of neighborhood centers or Safe Houses in all 27 townships throughout Saginaw, and development of a strong collaborative representing the diverse Saginaw Community.

FYI was designed to provide strong leadership, maintaining an active and committed executive board, a competent and educated staff, and the support of the community. FYI believes that, regardless of the leadership, the partnership firmly believes in the ability of the collaborative to continue to meet the needs of Saginaw's youth.

Exhibit 1 **FAMILY YOUTH INITIATIVE (FYI)**

What is the Family Youth Initiative Coalition?

FYI is a Michigan Non-profit Corporation 501(c)(3) By-law – 1998, Executive Committee
Sub Committees include: Marketing, Finance, Education, Business, Recreation, Community Special Events.

FYI is:

- **A Coalition**
  Grass roots groups: 52 partners engaged in fund raising representing:
  - Faith Based Organizations (22)
  - Social Services Organizations
  - Media
  - Business
  - School Districts (5)
  - Community Neighborhood Centers (20)
  - Law Enforcement
  - Civic Organizations
  - Government
  - Colleges

- **A Safe House – A safe environment – no drugs – year around – safe haven**
  School Districts, Faith-based Centers (23 Churches), Neighborhood Centers. Colleges and Law Enforcement

Safe House Programs

Education	Life Skills	Recreation
Tutoring Reading, Math	Job Readiness	Sports – Basketball, Tennis, Golf, Volleyball, Soccer, Football
College Prep - ACT/SAT Workshops - Master Skills College - Early College programming	Social Skills	Talent Show
Computer Skill building	Peer/Conflict Resolution	Choir/Band Concerts
Financial Literacy	Empowerment – Youth	Skating
Educational Field Trips	Parenting Training/Education	Bowling
ACTSO – Local/National	Personal Growth	Quiz Bowls
Media Broadcasting	Summer Camp-Educational	Fishing
Communication Skills	Motivational Speakers	Field Trips
Law Day		Olympics
GED Program – Youth/Parents		Board Games

- **A Mentor – 870 individuals, composed of:**
  Teachers, social workers, parents, educators, law enforcement, retirees, government officials, and ministers.

- **A Family –** Parenting Workshops, Family Unity Celebration, Mentors, Counseling, Faith-based, Committee members, GED program, Participation in youth programs and Educational experience

- **A Youth:**

Youth Programs

10 – 19 years of age	Supported over 15,000 youth in eight years
2340 Active youth	All ethnicity
All youth of Saginaw County	At-risk youth
Truancy youth	GED programming
Town Hall Meetings	Off Drugs
Stay In School	Graduate from High School
College	Facilitators for Community Workshops
Saginaw Community Service	

- **A Program:**

Youth Executive Board	Level 3 High-risk Youth
"Just Say No" Walk	Martin Luther King
Mayor's Unity in Diversity	College Week trip
Mastery Skills programming	Garage Sales
Skating Parties	Golf – Educational Programs
Ballroom Dancing	Parenting Programs – POPI
Basketball Camps	
Ames United, Jason Richards, and AHHS Coach	
Soccer Camps – with Michigan State Soccer Team	

Special Events	
Youth Speakers Bureau – College youth	Sister "2" Sister
FYI Scholarship	Sweet Hearts Ball
Law Day Mock Trial	Youth Choir
Michigan State Police Leadership Academy	Youth Band
Summer Camp – educational	College Trip - educational
Washington D.C. Trip	Girls Conference
ACTSO – Academic, Cultural, Technical, Science Olympics	

With Accomplishments	

PSA & FYIC Videos	Bennie T. Woodward Coalition Award
Community Recognition	Parishioners on Patrol
FYI Level 3 High-Risk Youth Program	Initiative of Crime Prevention Coalition
Juvenile Justice Coalition - Initiative	City and County Proclamations
Youth outcomes	
Fundraisers include:	"Walk in My Shoes" scholarship auction
Youth Talent Contest	Garage Sales
Community Service Challenges	

Exhibit II Youth Programs Safe Houses in Partnership with FYI activities

Ames United Methodist
Radical Youth rally
Crystal Clear Youth band
Neighborhood Fest Get together with family
Neighborhood Thanksgiving Dinner
Clothing Drive
Kids Club
How to be a DJ

Boys & Girls Club	
National Kids Day	Earth Day
Community Service Programs	Peace Awareness Day
Friday Night Live	Hershey Track / Field Week
Etiquette Dinner	Family Night
Job Shadowing	Youth of the Year Award
Soccer Clinic	Camp Kiwanis
Lights on in October – crime prevention	

Calvary United Methodist	**(Safe House)**
Young Youth Choir	
Praise Team	(Music discovery)
Children and Parent Dinner	
Art Team	(building the arts)
News Team	(Newsletters, writing skills)
Outreach to Senior Citizens Homes	

Carrollton Public Schools	
Leadership Youth Rally	(Rules of respect and self-esteem)
First Tee Club	(Youth camp with skill development)
Basketball tournament	
New Alternative Middle School	(county wide)
Scholarships for FYI	
Family Unit Celebration	

Delta College
FYI Adult/Peer Mentor educational program
ACT-SO arts – band, drama, speech, music
KUDOS Leadership skill building for boys
XINOS Leadership skill building for girls

First Ward/Cathedral District Youth Centers	
Summer Day Camps	International Day
Valentine Party	Community Garden
Greenhouse Soccer	Black History Program
East Side Family Reunion	Old Timers Reunion
Cookie Bake	ArtSmart – Intro to the arts
Easter Egg Hunt	

Green House Gathering Place
Gems Youth Program
Youth speak out workshops
Job skill development

Greater Williams Temple	
Graduation Celebration	Music Enrichment Classes
Pep Rally – Thankful you are alive	Clean the Neighborhood
Drill Team	

Harvest Assembly of God	
Missionette Honors	Hispanic Art Program
Showcase Youth Talent	
Si Se Puede Workshops	

House of Prayer	
Singing/Music Workshop	Girls to Ladies – Social Skills
Youth Rally	Creative Arts Education
Family Enrichment Workshop	Boys to Men

InnerLink
Search Institute 40 assets building
24 hour crisis intervention center
Competition
Transitional House for Youth

Mexican American Council	
GI Forum Pageant	Showcase Youth Talent
Si Se Puede Workshops	Girls Scholarship
Hispanic Arts Program	Hispanic Law Day/ Youth Summit
L3 – High Risk Youth Program	

New Alternative Youth	
Sister "2" Sister program	Media Sharp
Short-term suspension alternative school	Thanksgiving social for families
Christmas Social for families	Support Team / Families program
Kwanzaa Celebration	

Neighborhood House/Trinity	
Girl Talk	Trinity Youth Mutual
Family Fun Night	FYI Youth Coalition Board Meetings
Family Dinner Night	Protect Hot – HIV/AIDS Education
Clean the Neighborhood Parks	Sexual Assault Peer Ed
Prevention is for the Whole Child	

Preventive and Youth Services (PAYS)	
"If you buy, you die"	(tobacco project)
Pick-Up Butts Day	(clean up after smokers)

Professional, Psychological, and Psychiatric Services / Insight
L3 Juvenile Detention Program
Outreach youth/family programs

Red Ribbon Day	(drug-free promotion)

Substance abuse treatment/ prevention center

Shield of Faith	**(Safe House)**
Friday Night Firehouse Teen Center	Youth Leadership development rally
Teen Support Group with trained mentors	Pen Pals with 85 youth in Mexico
Teen group to Mexico to build a playground	Fundraiser for Bicycles for Mexican children
Day Camp summer- arts and crafts	

Tabernacle Baptist Church	
100 Girls/Boys Soul Choir	Creative Expression/ Community Service
Arts Enrichment	Live Skills Empowerment

Teen Parenting	**(teen pregnant/ parenting teens)**
Strong Family/ Safe Children Program	Transitional Living Project
Healthy Families Saginaw	Play Groups – parents and children
Academic Recognition Luncheon	24 hour crisis intervention
Life Skills	High School Completion
Job Training	Birth to Five – Start Family Literacy Services

Women of Color, Inc	Purpose: Responsible for developing positive leaders and role models
Girls Pride	Sugar and Spice
Hearth Home – Helping Hands Drive – HIV/Aids	Christmas After Glow at Maplewood Manor – Senior citizens center
Poetry and Pancake – a lyrical fundraiser fair	

Program: Young Champions Association (Safe House)	Purpose: Promotes community service
Activities:	Participant requirement: 4 – 10 hours per month
Back to school picnic	Charm and etiquette classes
Get acquainted parent dinner	Youth champion scholarships
Annual youth recognition dinner	

Appendix B: Blank Forms and Checklists

Team Task Review

Team Tasks:	Yes	No	N/A
1. Team charter developed			
2. Team sponsor reviewed charter with team			
3. Team members selected			
4. Team leader selected			
5. Team facilitator assigned			
6. Team understands the PDC/SA Cycle			
7. Team trained in QI tools and techniques			
8. Team meetings scheduled and developed			
9. Regular team meeting held			
10. Team minutes published			
11. Team followed the PDC/SA cycle			
12. Team is doing rapid cycle PDC/SA			
13. Team and sponsor held regular review meetings			
14. Team completed their assigned project			
15. Team developed a Gantt chart of key implementation milestones			
16. Project solution implemented and key deliverables achieved			
17. Regular communication plan established with team sponsor and organization on progress			
18. Team established realistic improvement targets			
19. Team collected and used data			
20. Final report issued to team sponsor			
21. Team instituted controls to hold the gains			
22. Team made a handoff to those who own the process to institute change			

Team Evaluation Survey

Date:_____

Answer each question by entering the number below that best describes the current team:
1–Strongly Disagree 2–Disagree 3–Agree 4–Strongly Agree

Evaluation Questions	1	2	3	4
1. As a team member, I am committed to making changes.				
2. I clearly understand the purpose of my team.				
3. The team leader has a process for sharing information with members.				
4. Our team has the right members to be successful.				
5. As a team member, I understand how our work affects the larger goals of our department.				
6. Our team is recognized for its accomplishments.				
7. Team members openly express their ideas and opinions.				
8. Team members have a means to see progress toward important objectives.				
9. My team members want to be on our team				
10. I want to be on our team.				
11. Our team is able to make thoughtful decisions that all team members support.				
12. Our team can have productive meetings without the influence of a team leader.				
13. Our team members trust and respect each other				
14. Team members express disagreements constructively.				
15. Team members willingly take on new responsibilities.				
16. Team members follow through on decisions and action items.				
17. Our team has established a set of ground rules and guidelines for team performance and behaviors.				
18. Team members are encouraged to express different points of view.				
19. Our team makes time to evaluate how effectively they work as a group.				
20. Members of our team are held accountable for their responsibilities and assignments.				
Total Responses				

Step	Rapid Cycle PDC/SA Pre-Planning Check Sheet	TBD/ Date	✓
Plan:	What is the focus/AIM of this improvement project?		
	What are the improvement goals?		
	Who and what are impacted?		
	When and where are they impacted?		
	Why and how are they impacted?		
	Who is the customer, and who is the supplier?		
	What are the constraints?		
	What is the rapid cycle timeline?		
	Who should be on the improvement team?		
	What training does the improvement team require? Who will deliver the required training, and when?		
	What is predicted to happen?		
	Measurement(s) defined /developed to show current performance and track future improvements?		
	Action plans developed to detail who will complete what and when?		
	Communication plan developed for potential timing/status changes?		
	What additional information is needed to take action?		
	Other Plan questions unique to the improvement project?		
Do:	Improvement plan developed?		
	When will the improvement plan be implemented?		
	When will the pilot test occur?		
	What was observed from the pilot test?		
	Did sponsors provide approval and support if implementation goes outside personal area of responsibility?		
	Were implemented changes documented to duplicate and standardize?		
Check/ Study:	Did the pilot test results agree with the predictions made earlier? ✓ If not, why not?		
	What new knowledge was gained through this cycle?		
	How will this new knowledge be used to make improvements?		
	Are results continually checked as the process is initiated and when in place to determine if the changes meet requirements?		
	Are the measurements used to determine success adequate?		
	Was data gathering automated, if possible?		
Act:	Was 'Plan' revisited if the process still did not meet requirements, and were additional process improvement opportunities investigated?		
	Were minor adjustments made and documented?		
	Was the change standardized, and was the SDCA Cycle initiated?		
	If the process changes met requirements, was continued monitoring after standardization arranged?		

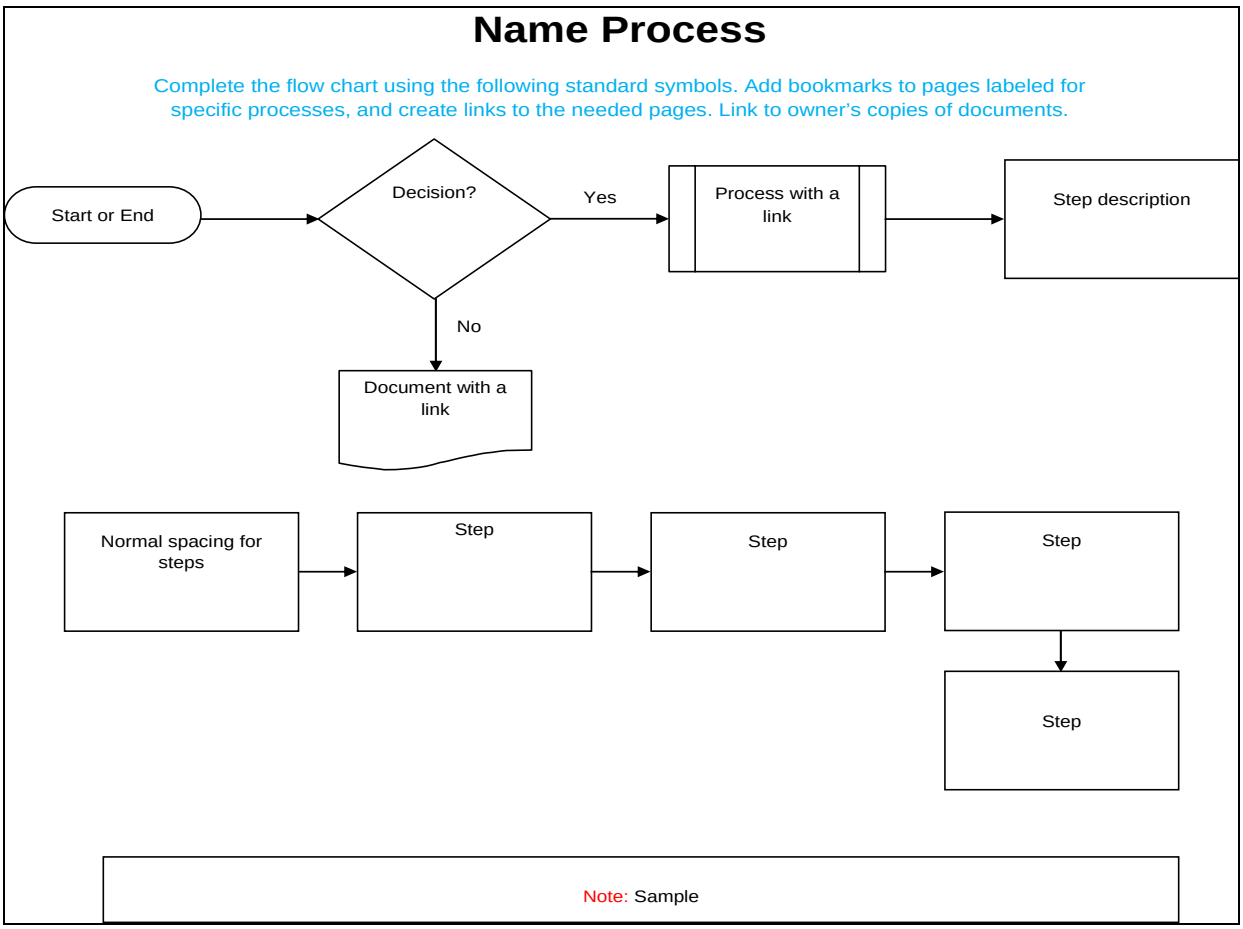
TEAM CHARTER

Team Name:	**Version:**	**Subject:**
Problem/Opportunity Statement:[68]		
Team Sponsor: **Team Members:**		**Team Leader:** **Area(s) of Expertise:**
1.		
2.		
3.		
4.		
5.		
Performance Improvement AIM (Mission):		
Scope (Boundaries):		
Customers (primary and other):		**Customer Needs Addressed:**
Objectives: SMART-Specific, Measurable, Achievable, Realistic, Timeframe		
✓		
✓		
✓		
Success Metrics (Measures):		
Considerations (Assumptions /Constraints /Obstacles /Risks):		
Available resources		**Additional Resources Required:**
Key Milestones:		**Date:**
Communication Plan (Who, How, and When):		
Key Stakeholders:		**Area of Concern (as it relates to the Charter):**

[68] For additional information on developing AIM Statements reference: Beitsch L, Duffy G, Moran J. Ready, AIM, Problem Solve. *Quality Texas Foundation Update*. October 2009.

TEAM MEETING MINUTES TEMPLATE				
Meeting Name:				
Project:				
Date:				
Time:				
Participants:				
Items	**Notes**	**Action Items**	**Due Date**	**Person Responsible**
Tests of Change				
Successes				
Barriers/Concerns				
Other Comments				

Flowchart Template



STORYBOARD TEMPLATE

(Place LDH logo here if desired)

LOCAL HEALTH DEPARTMENT NAME: _____

ADDRESS: _____

PHONE NUMBER: _____

SIZE: _____

POPULATION SERVED: _____

PROJECT TITLE: _____

PLAN
Identify an opportunity and Plan for Improvement

1. Getting Started
Start typing here

2. Assemble the Team
Start typing here

3. Examine the Current Approach
Start typing here

4. Identify Potential Solutions
Start typing here

5. Develop an Improvement Theory
Start typing here

DO
Test the Theory for Improvement

6. Test the Theory
Start typing here

CHECK
Use Data to Study Results of the Test

7. Check the Results
Start typing here

ACT
Standardize the Improvement and Establish Future Plans

8. Standardize the Improvement or Develop New Theory
Start typing here

9. Establish Future Plans
Start typing here

Appendix C: Author Biographies

Leslie M. Beitsch, MD, JD joined the faculty at the Florida State University College of Medicine in November 2003 as Professor of Health Policy and Director of the Center for Medicine and Public Health. He is currently Associate Dean for Health Affairs.
Before joining FSU, Dr. Beitsch was the Commissioner of the Oklahoma State Department of Health. Dr. Beitsch served as Deputy Secretary and Assistant State Health Officer for the Florida Department of Health from 1997-2001. Prior to this appointment, Dr. Beitsch was Assistant State Health Officer and Division Director for Family Health Services and Medical Director of the Broward County Health Department in Ft. Lauderdale. Recently, he joined the board of directors of the Public Health Accreditation Board. He is past chair of the board of directors for the Public Health Foundation (PHF) and the Public Health Leadership Society.

Grace L. Duffy, CMQ/OE, CQA, CQIA, CLSSMBB provides services in organizational and process improvement, leadership, quality, customer service and teamwork. Her clients include government, healthcare, public health, education, manufacturing, services and not-for-profit organizations. She is co-author of *The Quality Improvement Handbook*, *The Executive Guide to Improvement and Change*, *The Public Health Quality Improvement Handbook*, *Executive Focus; Your Life and Career*, and *Quality Function Deployment and Lean Six Sigma Applications for Public Health*. Grace holds a Masters in Business Administration from Georgia State University. She is an ASQ Fellow and Past Vice President of ASQ.

Grace Gianturco Gorenflo, MPH, RN directed NACCHO's accreditation preparation and quality improvement activities. She also served as the interim chief operating officer for the new Public Health Accreditation Board. Grace has been with NACCHO for 19 years, having served as the deputy director for five of those years. She has co-authored articles and book chapters on accreditation, quality improvement, local health department infrastructure, and managed care. She received a Master of Public Health from Johns Hopkins University. She also has a Bachelor of Science in Nursing from the University of Virginia and worked for 10 years as a registered nurse in adult cardiothoracic surgery, HIV/AIDS clinical trials, and emergency medicine.

Kim McCoy, MPH, MS, CQIA is a Community Health Planner at the Minnesota Department of Health. She is the coordinator of Minnesota's Multi-State Learning Collaborative project. Kim has worked as a planning and policy analyst for local, state, and federal public health organizations. She is a Certified Quality Improvement Associate. Kim has a Master of Public Health degree in Public Health Administration, a Master of Science degree in Health Services Research from the University of Minnesota, and a BA in Russian Studies from Macalester College.

Cathy Montgomery, MS, CQIA is a Performance Consultant with the Office of Performance Improvement at Florida's Department of Health (DOH). She coaches state health offices, divisions and bureaus and county health departments (CHD) in strategic planning and performance improvement efforts; manages grant-funded projects; and facilitates a nine-county learning collaborative, implementing activities targeting childhood overweight and obesity using

quality improvement tools and methods. Mrs. Montgomery received her Bachelor's and Master's of Science in Health Education from Florida State University and is certified as a Quality Improvement Associate with the American Society for Quality.

John W. Moran, MBA, PhD, CMC, CQIA, CMQ/OE is Senior Quality Advisor to the Public Health Foundation and a Senior Fellow at the University of Minnesota, School of Public Health. He has over 30 years of quality improvement expertise in developing tools and training programs, implementing and evaluating QI programs, and writing articles and books on QI methods. Dr. Moran is a retired Senior Vice-President of Information Systems, Administrative and Diagnostic Services at New England Baptist Hospital. He was previously Chief Operating Officer of Changing Healthcare, Incorporated. Dr. Moran was employed for 21 years by Polaroid where he held various senior management positions. His last position was Director of Worldwide Quality and Systems.

Roderick A. Munro, PhD, ASQ Fellow, CMQ/OE, CQE, CQA, SSMBB, Fellow CQI, IRCA QMS Lead Auditor is a Business Improvement Coach with an extensive background in management and leadership in quality applications; business strategic planning, implantation and verification; and utilization of quality improvement methodologies. He is the author of six books with numerous additional chapters, articles, and many public presentations. Rod has been very active in several professional organizations as a past Section/Charter Chair, past Division Chair, and past National Board of Director Member.

Elizabeth Pierson, MPH, CPH is the Epidemiologist for Planning and Assessment at the Franklin County Board of Health. Beth is responsible for preparing and providing data for departmental strategic planning and assisting with program evaluation, grant preparation, and coordination. She also provides technical assistance to staff.
In her role as an epidemiologist, Beth has participated in several foodborne and communicable disease outbreaks, including the response to H1N1. Ms. Pierson most recently served as an Emergency Preparedness Coordinator for a local health department. She holds a Bachelor's degree from Marietta College and a Master's degree from The Ohio State University College of Public Health. She is certified in Public Health.

Cheryl A. Plettenberg, EdD, RHIA is Chair for Health Information Management at Alabama State University. She specializes in Health Information Administration, community health assessments, and community collaboration. As a full-time Associate Professor, she teaches quality assessment, legal aspects of healthcare, health information management, and community planning. Dr. Plettenberg has over 15 years of experience in planning, developing, and organizing community initiatives. She has been a director of the Saginaw County Substance Abuse Coordinating Agency, founder of the Hearth Home (an HIV/AIS safe center) and the Family Youth Initiative (FYI), a county-wide community coalition. She is the recipient of the Martin Luther King Community Service award and the Bennie T. Woodard Collaborative award.

William Riley, PhD is Associate Dean of the School of Public Heath at the University of Minnesota. He specializes in quality improvement, quality control, and safety. He teaches

healthcare quality improvement, finance, and process control. Dr. Riley has over 20 years of experience as a senior executive and has held the position of president and CEO of several healthcare organizations, including an integrated delivery system; a large multi-specialty medical group; and a health plan joint venture. He has extensive experience developing and implementing effective quality systems. He is the author of numerous studies and articles related to quality control in public health. Dr. Riley is an ASQ Certified Quality Improvement Associate.

Janice A. Tucker, BA Sys Eng, ASQ CSSBB, CQM/OE, CQA, Member CQI, QMS/Environmental Lead Auditor is a member leader of the ASQ Quality Management Division and committee member with Voice of the Customer, Web development, and Automotive divisions. She is an expert in failure analysis and warranty systems and has co-authored *CQI-14, the Consumer-Centric Warranty Guideline for Industry*. She is a member of the automotive Original Equipment Suppliers Association Councils for Warranty and Environmental. She has twenty years of global operations, strategic leadership, and change agent experience in the automotive industry with ten years as a Vice President. Jan joined PRISM as a Health Practice Coach at the beginning of 2010.

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