KNOX COUNTY HEALTH DEPARTMENT
QUALITY IMPROVEMENT PLAN

KCHDQi
1361 W. Fremont St., Galesburg, IL ©

"Creating a culture of Quality"

Acknowledgements

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Table of Contents

PURPOSE AND SCOPE

In accordance to the Mission, Vision, and the Strategic Plan Objectives, the Knox County Health Department (KCHD) has created a department-wide Quality Improvement Plan and Quality Improvement Council to foster a culture of quality improvement throughout the health department.

> **KCHD Mission**: To serve Knox County by assessing health and environmental needs, developing policies, and assuring those needs are effectively addressed.

> **KCHD Vision**: Health people in a healthy community!

> **KCHD Strategic Plan Objective 5**: By December 31, 2012, the Knox County Health Department will have implemented a Quality Improvement operational process to evaluate and maintain programs.

KCHD is committed to creating a culture of quality to ensure the efficiency and effectiveness of departmental activities. It is the intention that KCHD will be applying for National Accreditation in 2014, while maintaining and sustaining a culture of Quality Improvement throughout the Department. Quality Improvement is an important part of the overall performance management system at KCHD. Data-driven, evidence-based and informed practices utilizing data, analysis and improvement to ensure effective and efficient programming will be used to improve the health of the residents of Knox County. KCHD Board of Health supports the efforts of Accreditation and sees the importance of having Quality Improvement be a way of doing business versus additional work to be done.

Knox County Health Department Quality Improvement Plan Vision

Our vision is to develop a culture of quality improvement by formalizing a quality management infrastructure, building on strengths and taking advantage of identified opportunities. We do this in order to:

- Improve the Health of Our Community
- Improve Customer Satisfaction
- Improve Employee Satisfaction
- Achieve Accreditation Standards
- Improve Process Efficiency & Effectiveness and Cost Effectiveness
- Build Staff Capacity for Quality Improvement and Performance Management
- Empower Staff for Performance Improvement
- Achieve the Highest Level of Excellence

> **Definitions:**
> **QI** – Quality Improvement
> **QIC** – Quality Improvement Council
> **BOH** – Board of Health
> **KCHD** – Knox County Health Department
> **PDSA Teams** – Plan-Do-Study-Act Teams

Culture of Quality at Knox County Health Department

In order to assess the current KCHD Quality Improvement (QI) culture, KCHD administered the Organizational Quality Improvement Maturity survey developed by the Robert Wood Johnson Foundation Multi-state Learning Collaborative to staff on January 9, 2014. The survey focuses on how the environment within the Health Department is conducive to quality improvement and efforts currently

underway to build QI capacity and implement improvement initiatives. Based on the results of the survey, our strengths and opportunities for improvement include:

Strengths:

- Board of Health (BOH) Support for QI and Accreditation
- Staff help each other, act as problem solvers, and have desire/interest in QI
- Staff are aware of KCHD established performance measures and monitoring process
- Leadership support and commitment for QI and Accreditation
- QI is valued by KCHD staff
- KCHD is currently formalizing the QI infrastructure

Opportunities for Improvement:

- Empower staff and leadership to work across program areas
- Involve all staff in quality improvement efforts to raise awareness of QI
- Increase communication regarding QI activity and Quality Improvement Council (QIC)
- Translate data and progress on performance metrics
- Integrate QI into KCHD culture
- Provide QI training and develop skills to engage in QI
- Formalize QI infrastructure and QI plan
- Collect customer feedback across all programs

Priority actions for 2014 to address the identified Opportunities:

- Train all staff in QI process model and tools
- Develop and adopt QI infrastructure plan
- Develop hallway wall boards documenting QI project process
- Provide regular updates on QIC and QI projects
- Begin development of Performance Management System

ORGANIZATIONAL STRUCTURE

Appointed by the Administrator and approved by the Board of Health, the QIC is responsible for overseeing and giving support in creating, maintaining, and evaluating the quality improvement efforts at KCHD with the intent to improve the level of performance and foster a culture of QI and excellence.

Roles and Responsibilities

The organizational structure for QI can be found in Figure 1. Described below are the specific roles and responsibilities of staff related to QI efforts at KCHD.

Board of Health

- Approve appointed staff members to the QIC
- Provide final approval of the QI Plan
- Support QI efforts within the Department by authorizing resources for QI activities
- Provide oversight and adopt policies for the Department

Administrator

- Report on the QI efforts at the Department to the BOH
- Appoint staff members for appointment to the QIC
- Provide leadership for QI efforts in the Department
- Promote a culture of QI within the Department
- Allocate resources for QI efforts within the Department

Figure 1: QI Organizational Structure

Division Directors

- Identify staff QI training needs
- Encourage staff to utilize QI concepts, tools, and processes
- Communicate with Division staff to identify QI projects
- Facilitate the implementation of QI activities in their Division, including the selection of PDSA Teams
- Participate on PDSA Teams
- Report results of QI projects to the QIC

Quality Improvement Chair

- Act as a liaison and report activities for the QIC to the Administrator
- Provide guidance and leadership to the QIC
- Organize QI training for staff

Quality Improvement Council

- Advocate for and foster a QI culture within the Department
- Develop and maintain the QI Plan
- Attend and participate in scheduled QIC meetings
- Assist in the identification, development and implementation of QI projects
- Approve QI projects
- Communicate progress on QI projects to staff at monthly All Staff meeting

PDSA Teams

- Attend and participate in scheduled QI meetings
- Conduct Plan-Do-Study-Act cycle(s), including: establishing measurable aim, collecting and analyzing data, identifying root cause, selecting and implementing intervention, and studying results to determine action and achieve QI project goals
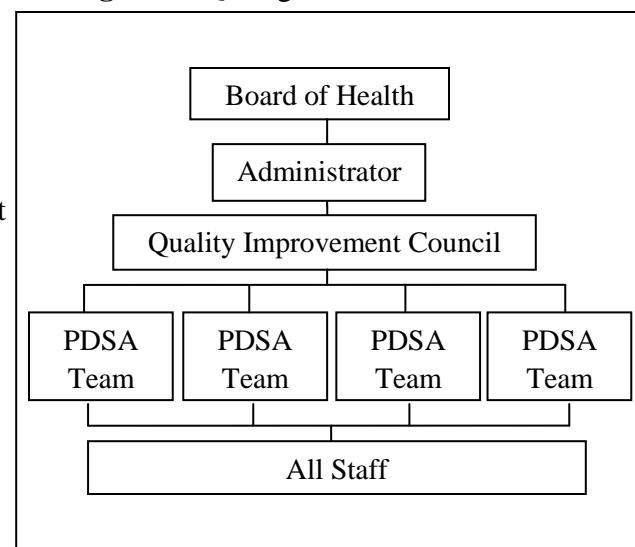
- Report results of QI projects to Division Director
- Present findings/QI project(s) summaries and lessons learned at All Staff meetings

All Staff
- Participate in QI training
- Develop an understanding of basic QI principles
- Apply QI principles and tools to daily work
- Participate in QI projects and efforts as requested, including but not limited to data collection, process changes, project selection, and identifying areas of improvement

Quality Improvement Council Membership Rotation

The QIC is to consist of eight members appointed by the Administrator and approved by the Knox County BOH. The QIC will be led by the QIC Chair. Each division within the Department will be represented at a minimum by Division Directors. The remaining seats within the QIC will be filled by appointment. Council members will be expected to perform the duties described in this plan and serve as champions for QI in the Department.

Staffing and Administrative Support

KCHD QI efforts will be supported by the QIC Chair. The QIC nominates and agrees by consensus on selection of the QIC member as chair. The QIC Chair is a full-time staff member who acts as a liaison between the QIC and the Administrator, reports on all activities of the QIC to the Administrator, and guides the QIC. The QIC Chair duties also include: planning meetings, developing agendas, and facilitating meetings. KCHD has also partnered with the Illinois Public Health Institute (IPHI) to further develop the Department's QI capabilities and to work towards Accreditation.

Budget and Resource Allocation

KCHD received the Accreditation Support Initiative grant from National Association of County and City Health Officials (NACCHO) in order to create a QI infrastructure and work towards accreditation. The Department has dedicated funds for 1.25 full time equivalent (FTE) working in QI, with the QIC Chair accounting for 1 FTE and the Director of Health Protection accounting for 0.25 FTE.

METHODS OF COMMUNICATION

Board of Health and All Staff

KCHD holds All Staff meetings following the monthly Board of Health Meeting. A QI update will be a standing agenda item for both meetings. Pertinent information determined by the Administrator will be presented to the BOH and then presented at the following All Staff meeting. At a minimum, quarterly QI updates will be distributed to the entire health department and BOH to report QI activities, progress, and challenges.

Quality Improvement Council and Teams

The QIC and/or QIC Chair will communicate progress of projects, policy change recommendations, and other pertinent business to the Administrator at monthly meetings.

The QIC and PDSA Teams will actively compile resources which include, but are not limited to: materials, templates, tools, and trainings to share with staff. Such updates will be distributed via email or face-to-face and will be placed on the Health Department's shared drive.

PDSA Teams will present completed QI projects, including lessons learned and results at All Staff meetings to demonstrate the value of QI and celebrate accomplishments.

Staff Communication

Division Directors will communicate QI progress at standing programmatic meetings through:

- Reviewing performance management data with staff and facilitating staff identification of areas in need of improvement.
- If any applicable QI projects are underway, Divisions may discuss progress and updates.
- Informing staff of QIC activities.

Division Directors will also participate in scheduled Management Team meetings. These meetings will be used to discuss performance metrics, cross-divisional metrics and staff QI training needs.

Key Terms and Model for Improvement

A set of terminology has been identified by the QIC in order to establish common language in the Health Department (see Appendices). The Health Department will utilize IPHI's Model for Improvement and the Plan-Do-Study-Act Cycle, seen in Figure 2, as the foundation for QI activities.

Figure 2: IPHI's Model for Improvement and the Plan-Do-Study-Act Cycle

ABCs of the PDCA Cycle, G. Gorenflo and J. Moran,
http://www.phf.org/pmqi/resources.htm

PROJECT IDENTIFICATION & STRATEGIC PLAN ALIGNMENT

Projects will be identified by staff based on performance data. A minimum of two QI projects will be completed annually by KCHD. QI projects will be conducted as needed and as resources permit. Staff will utilize the QI project identification form (see appendices).

Prioritization Criteria

QI projects will be approved and sponsored by the QIC. QI projects will be approved and prioritized based on the following criteria:

1. The proposed project aligns with KCHD's strategic vision and mission as mentioned on page 5.
2. The proposed project has a direct and significant impact on a specific strategic objective from our community health improvement plan.
3. The proposed project focuses on a current issue or process that is not in compliance with a departmental, local, state or national (PHAB) policy, regulation or standard.
4. The proposed project addresses improvement in customer service or organizational efficiencies.
5. No other current QI initiatives related to the strategic objective are underway.
6. QI projects target core health department activities and processes, as opposed to ad hoc activities.

In addition to supporting Division projects, the QIC will also help identify opportunities for cross-Division projects. The QIC may provide technical support to cross-Division PDSA teams and will monitor project progress.

Staff and the QIC have a duty to select QI projects that address high-risk, high-volume, or problem-prone areas and align with KCHD's strategic plan and KCHD's Illinois Project for Local Assessment of Needs (IPLAN)[1].

PERFORMANCE MANAGEMENT AND QUALITY IMPROVEMENT GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

The goals and objectives for FY 2014-2015 will focus on developing the capacity of QI within the Health Department. The goals and SMART objectives are outlined below:

GOAL	OBJECTIVE	ACTIVITY	RESPONSIBILITY	DATE COMPLETED BY	PERFORMANCE MEASURE
Understand KCHD level of QI Culture	Assess staff knowledge of QI through a QI Maturity Tool	Administer and analyze the QI Maturity Tool by staff attending the QI 101	QIC	January 8, 2014	Completion and analysis of the QI Maturity Tool by QI 101 attendees
All health department staff will have a basic understanding of QI	Train 100% of staff in a one day classroom QI 101 session	Staff will attend QI 101 coaching lead by IPHI	IPHI KCHD	April 1, 2014	100% of staff will complete the training
50% of KCHD staff apply QI training by participating on a PDSA Team	Implement 4 PDSA projects	Six month learning collaborative with 4 PDSA Teams	PDSA Teams	April 30, 2014	Complete 4 QI Projects (1 full PDSA cycle) with 50% of staff participation
Develop Approved QI Plan with formal QI structure	Develop QI Plan that addresses all Accreditation requirements for the health department	QIC meet twice a month to develop and gather staff input	QIC	May 30, 2014	BOH adopted QI Plan
Measure	Assess	Collect data on	Program Staff	December 31,	Completion of data

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[1] IPLAN is equivalent to the Community Health Improvement Plan.

Developed: April 2014

Adopted: May 2014

Last Reviewed and Revised:

customer satisfaction in one additional KCHD program	customer satisfaction	customer satisfaction		2014	collection

KCHD QI CAPACITY BUILDING

As part of the Health Department's efforts to continuously integrate QI, the Health Department recognizes the need to train all new employees, existing employees, and management. The types of trainings offered will vary in duration, content, method of delivery, and occurrence.

This training plan will also correspond to KCHD Workforce Development Plan which assesses staff competencies and gaps and addresses opportunities.

Training Topics
In 2014, all KCHD staff will participate in a one day classroom training lead by IPHI, the QI 101 training will include the following topics and hands on skill development:

- Brainstorming and Affinity Diagrams
- Aim Statements
- Flow Charts
- Root Cause Analysis
- Fishbone Analysis
- Data Collection and Analysis
- Plan-Do-Study-Act Cycle
- QI Plan
- Accreditation Domain 9

Training by Role
Additional training is needed to build internal expertise of the QIC to provide support to staff and the PDSA Teams. Further, PDSA Teams in 2014 are receiving ongoing training and technical assistance through a 6 month learning collaborative (all QIC members also serve on one of the four PDSA Teams). KCHD has heavily invested in this support through a NACCHO ASI grant to develop a strong base of QI knowledge and skill for sustainability. The level of training is dependent upon the person's role in QI. Naturally, as staff progress in experience, there may also be a need for advanced training and continued training. Please refer to the matrices below:

Level of Skill / Role	Introduction	Intermediate	Advanced
Quality Improvement Council	X	X	X
PDSA Team	X	X	
PDSA Team Member/ Current Staff/New Staff	X		

Directors are required to report staff training needs to the QIC in order to assess department-wide needs and create an annual training plan. New employees will be provided with QI orientation within 1 week of employment by online resource. Training records and workforce development gap analyses will be utilized to also identify trainings needs.

Training Plan

Following is the FY 2013-2014 Training Plan.

Title	Content	Skill Level	Audience	Date Completed
QI 101	• Introduces the concept and principles of continuous QI	Introduction	All	January 8-9, 2014 ; March 25-26, 2014 KCHC
QI Learning Collaborative	• PDSA Teams participate in 6 month collaborative • Pareto Chart • Fishbone Diagram • 5 Whys • Affinity Diagram • Force Field Analysis • Interrelationship Digraph	Intermediate	Facilitators/ PDSA Team Members	January – May, 2014
PHIT Training	• Quality improvement and facilitation • Performance management and performance measures • National voluntary accreditation • Health assessment and improvement planning • Strategic planning	Advanced	QIC Chair & Accreditation Coordinator	April 23-25, 2014
QI Infrastructure	• KCHD QI Process and	Introduction	All	June 2014

and Plan	QI Plan Components			
COPPHI	• Performance Management • Workforce Development • Quality Improvement • Accreditation • Customer Satisfaction/Customer Service	Intermediate	Accreditation Coordinator	June 2014

Online Resources

Public Health Foundation - Quality Improvement Training Online
Illinois Department of Public Health – I-TRAIN

Prior Trainings

Since the inception of Public Health Accreditation, the Knox County Health Department has completed multiple trainings prior to receiving the NACCHO Accreditation Support Initiative Grant. These steps were taken to better prepare staff at all levels of management and across programmatic areas in preparation for submitting a letter of intent, and subsequently application for Accreditation. Those trainings include:

TITLE	DATE	LOCATION	CONTENT	ATTENDEES
Public Health Accreditation Board Online Orientation	December 2012	Galesburg, IL	• A General Overview of Public Health Accreditation • An Introduction to the PHAB Accreditation Process • The Nuts and Bolts of the PHAB Accreditation Process • Understanding the PHAB Standards and Measures and Documentation Requirements	• Heidi Britton • Sam Jarvis • Becky Moss • Penny Bollivar • Marsheila Betts • Michele Fishburn
IDPH sponsored Quality Improvement 101	April 10, 2013	Galesburg, IL	• Quality Improvement 101	• Staci Simpson • Sam Jarvis • Becky Moss • Penny Bollivar • Marsheila

Developed: April 2014
Adopted: May 2014

Last Reviewed and Revised:

				Betts • Michele Fishburn
Assessing the state of workforce development in Illinois: Practice Perspectives from the field	May 29, 2013	Galesburg, IL	• Workforce Development Assessment	76% of all staff
Illinois Public Health Performance Improvement Conference	August 27, 2013	Springfield, IL	• Quality Improvement in Public Health • Improving the Way We Address the Essential Public Health Services • Public Health Accreditation	• Staci Simpson • Sam Jarvis • Becky Moss • Marsheila Betts
Introduction to Management Principles by Dr. Mary Heidkamp	September 10, 2013	Galesburg, IL	• Management Principles	• Heidi Britton • Erin Olson • Michele Fishburn • Marsheila Betts • Sam Jarvis • Rhonda Peterson
Conflict Resolution by Dr. Mary Heidkamp	October 7, 2013	Galesburg, IL	• Conflict Resolution	• Heidi Britton • Erin Olson • Michele Fishburn • Marsheila Betts • Sam Jarvis • Rhonda Peterson
Institute for Healthcare Improvement: Leading Quality Improvement Essentials for Managers Session 1	January 23, 2014	Galesburg, IL	Managing Your Time	• Heidi Britton • Sam Jarvis • Becky Moss • Erin Olson • Michele Fishburn
Institute for Healthcare Improvement: Leading Quality Improvement Essentials for Managers Session 2	January 30, 2014	Galesburg, IL	Partnering with Patients and Families	• Heidi Britton • Sam Jarvis • Becky Moss • Erin Olson • Michele Fishburn
Institute for Healthcare Improvement: Leading Quality Improvement	February 6, 2014	Galesburg, IL	Effective Coaching Strategies	• Heidi Britton • Sam Jarvis • Becky Moss

Essentials for Managers Session 3				• Erin Olson • Michele Fishburn
Institute for Healthcare Improvement: Leading Quality Improvement Essentials for Managers Session 4	February 12, 2014	Galesburg, IL	Managing Across a System	• Heidi Britton • Sam Jarvis • Becky Moss • Erin Olson • Michele Fishburn
Institute for Healthcare Improvement: Leading Quality Improvement Essentials for Managers Session 5	February 19, 2014	Galesburg, IL	Building Will Through Better Measurement	• Heidi Britton • Sam Jarvis • Becky Moss • Erin Olson • Michele Fishburn
Institute for Healthcare Improvement: Leading Quality Improvement Essentials for Managers Session 6	February 25, 2014	Galesburg, IL	Creating a Culture of Safety and Effective Communication	• Heidi Britton • Sam Jarvis • Becky Moss • Erin Olson • Michele Fishburn

MONITORING AND ASSESSING PROGRESS

QI Infrastructure
The QIC will re-administer the QI Maturity Tool to staff annually in January and review the progress from the previous year, 2014. The 2015 QI Plan will be updated to reflect the needs identified from the QI Maturity Tool.

Quality Goals & Objectives
The QIC will monitor the performance measures identified for each goal quarterly. The QIC will guide and support the current year's QI Plan Goals and Objectives to completion and develop new goals and objectives for 2015.

Training
Training attendance records will be retained and updated after each training session by the Human Resources Manager. The QIC will monitor QI trainings and attendance records annually to identify staff training needs. Additional trainings will be scheduled in order to fill the identified gaps in training.

PDSA Teams
To monitor the status of the QI Projects in the Department, PDSA Teams will report progress of their projects to the QIC as outlined in the organizational structure[2]. PDSA teams are responsible for collecting

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[2] See Figure 1 on page 7
Developed: April 2014
Adopted: May 2014

Last Reviewed and Revised:

and analyzing data for ongoing projects and reporting the data to the QIC through progress reports. The QIC will support and identify methods for PDSA Teams to improve project performance when needed.

Performance Standards & Metrics

While KCHD has performance metrics and monitors performance, a formal performance management system is still under development.

Customer Satisfaction

The QIC will work with a program area in order to develop a method for collecting customer satisfaction data by December 31, 2014. This data will be utilized as part of an improvement tool.

KCHD is committed to creating a culture of quality to improve the health of the residents of Knox County. Quality Improvement is an integral part of KCHD as it allows us to constantly improve upon KCHD's Goals and Objectives.

APPENDICES

Key Terms[3]

Accreditation (Public Health): The development of a set of standards, a process to measure health department performance against those standards, and reward or recognition for those health departments who meet the standards.

Affinity Diagram: An interactive data collection method, which allows people to identify and sort large quantities of ideas in a short time.

Aim Statement: A concise, specific written statement that defines what the team hopes to accomplish with its QI efforts.   It includes numerical measure for the future target, it is time specific and measurable, and it defines the specific population that will be affected. For more information, see the *Institute for Healthcare Improvement* website: http://www.ihi.org.

Assessment: A systematic process of collecting and analyzing data to determine the current, historical, or projected   compliance of an organization to a standard.

Baseline Measurement: The beginning point, based on an evaluation of output over a period of time, used to determine   the process parameters prior to any improvement effort; the basis against which change is measured.

Benchmarking: A technique in which a company measures its performance against that of best in class companies,   determines how those companies achieved their performance levels, and uses this information to improve its own   performance. Subjects that can be benchmarked include strategies, operations, and processes.

Best Practice: A superior method or innovative practice that contributes to the improved performance of an organization,   usually recognized as best by other peer organizations.

Bias: Degree to which your data are inaccurate due to the way you took your measurement.

Big QI: Organization-wide QI

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[3] This list is available to provide a general frame of reference and has been provided by the "Embracing Quality in Public Health."

Brainstorming: A technique that teams use to generate ideas on a particular subject. Each person on the team is asked to think creatively and write down as many ideas as possible. The ideas are not discussed or reviewed until after the brainstorming session.

Cause and Effect Diagram: A tool for analyzing process dispersion. It is also referred to as the "Ishikawa diagram," because Karu Ishikawa developed it, and the "fishbone diagram," because the complete diagram resembles a fish skeleton.   The diagram illustrates the main causes and sub causes leading to an effect (symptom). The cause and effect diagram is one of the "seven tools of quality" (see definition).

Centerline: A line on a graph that represents the overall average mean operating level of the process.

Checklist: A tool for ensuring all important steps or actions in an operation has been taken. Checklists contain items important or relevant to an issue or situation. Checklists are often confused with check sheets (see definition).

Check Sheet: A simple data recording device. The check sheet is custom designed by the user, which allows him or her to readily interpret the results. The check sheet is one of the "seven tools of quality" (see definition). Check sheets are often   confused with checklists (see definition).

Client: The party for which professional services are rendered or the person using the services of a social agency. A   customer or patron (reference "Customers" or "Stakeholders").

Common Cause Variation: Causes of variation that are inherent in a process over time. They are natural

Core Competency Tier (Council on Linkages Core Competencies):

Correlation (statistical): A measure of the relationship between two data sets of variables.

Culture Change: A major shift in the attitudes, norms, sentiments, beliefs, values, operating principles, and behavior of an organization.

Customer:

      External: A person or organization that receives a product, service, or information but is not part of the organization supplying it.

      Internal: The recipient (person or department) within an organization of another person's or department's output (product, service, or information)

Cycle: A sequence of operations repeated regularly.

Data: Factual information, especially information organized for analysis or used to reason or make decisions. A set of collected facts. May be defined as documented measurements or observations.

Deming Cycle: Another term for the plan-do-study act cycle. Walter Shewhart created it (calling it the plan-do-check-act cycle), but W. Edwards Deming made it popular, calling it plan-do-study-act. Also see "plan-do-check-act cycle."

Deviation: In numerical data sets, the difference or distance of an individual observation or data value from the center point (often mean) of the set distribution.

Effect: The result of an action being taken; the expected or predicted impact when an action is to be taken or is proposed.

Effectiveness: The state of having produced a decided on or desired effect.

Efficiency: The ratio of the output to the total input in a process.

Evaluation (Program Evaluation): A systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program or improve program effectiveness. A tool for making informed decisions about future program development.

Fishbone Diagram: See "cause and effect" diagram.

Flowchart: See "process map."

Forcefield Analysis: A way of organizing ideas to help identify the forces and factors in place that support or work against the solution of an issue or problem.

Gantt Chart: A type of bar chart used in process planning and control to display planned and finished work in relation to time.

Goal: A broad statement describing a desired future condition or achievement without being specific about how and when.

Histogram: The most commonly used graph for showing frequency distributions, or how often each

different value in a set of data occurs. This is a numerical tool. It is one of the "seven tools of quality" (see definition).

Improvement: The positive effect of a process change effort.

Indicators: Established measures to determine how well an organization is meeting its customers' needs and other operational and financial performance expectations.

Inputs: The products, services, and materials obtained from suppliers to produce the outputs delivered to customers.

Iterative: Characterized by or involving repetition, recurrence, reiteration, or repetitiousness.

Lean: An operational strategy oriented toward achieving the shortest possible cycle time by eliminating waste. Its key thrust is to increase the value-added work by elimination waste and reducing incidental work.

Little QI: program-level QI

Logic Model: A picture displaying the underlying logic behind a program, connecting inputs to outputs (activities and participants) and outcomes.

Matrix: A chart to assist in systematically identifying, analyzing, and rating the presence and strength of relationships   between two or more sets of information.

Mean: A measure of central tendency. The arithmetic average of all measurements in a data set.

Measure: The criteria, metric, or means to which a comparison is made with output.

Measurement: The act or process of quantitatively comparing results with requirements.

Median: The middle number of center value of a set of data in which all the data are arranged in sequence.

Methodology: An organized, documented set of procedures and guidelines for one or more phases of a research study, such as analysis or design. Many methodologies include a diagram documenting the results of the procedure (a step-by- step "cookbook" approach for carrying out the procedure).

Operational Definition of a Functional Local Health Department: A set of 45 standards developed by

NACCHO with input from public health professionals and elected officials from across the country. The standards are based on the Ten Essential Public Health Services and describe the responsibilities that every person, regardless of where they live, should   reasonably expect their LHD to fulfill. The standards provide a framework by which LHDs are accountable to the state   health department, the public they serve, and the governing bodies to which they report. LHDs can use the definition and the standards to assess local efforts, measure performance, improve quality, expand functions, enhance activities, and communicate the role of local public health to their governing bodies, elected officials, and the community.

Organizational Performance: Ability of an organization to meet its goals and achieve its mission. Performance can be gauged in terms of four key indicators:

- Effectiveness: the degree to which the organization achieves its objectives;
- Efficiency: the degree to which it generates its products using a minimum of inputs;
- Relevance: the degree to which the organization's objectives and activities reflect the necessities and priorities of key stakeholders; and
- Financial sustainability: the conditions to make an organization financially viable

Organizational Capacity: The ability of an organization to carry out the essential public health services and, in particular, to provide specific services, such as disease surveillance, community education, or clinical screening. This   ability is made possible by specific program resources, as well as by maintenance of the basic infrastructure of the public   health system.

Outcome Evaluation: Focuses on the systematic collection of information to assess the impact of a project (outcomes). Addresses questions related to the impact of the project and which outcomes were achieved.

Outputs versus Outcomes: Outputs refer to products, materials, services or information provided (internal or external) from a process. Outcomes relate to a final product or end result due to a process of logical decision making.

Pareto Chart: A numerical tool that illustrates the factors that is most significant on a bar graph. It is one of the "seven tools of quality" (see listing).

Plan-Do-Study-Act (PDSA) Cycle: Named for Walter Shewhart, who discussed the concert in his book, *Statistical   Method from the Viewpoint of Quality Control*. It is the continuous improvement cycle of Plan, Do, Study, Act (also known as Plan-Do-Check-Act).

Performance Measures: Quantitative measures of capacities, processes, or outcomes relevant to the assessment of a   performance indicator. They are used to assess achievement of standards.

Process Evaluation: Focuses on the implementation and operation of a project (process). Process

evaluation addresses questions, which relate to whether the project was implemented as planned, whether there were changes to the project plan, and, if so, why those changes occurred.

Program Liaisons: Program person assigned to work with the Performance and Quality Leadership Committee.

Qualitative Data: Data composed of words, providing in-depth, contextualized, and meaning-driven descriptions of anything from an individual's experience to a community's history.

Quality Improvement (QI): Quality improvement in public health is the use of a deliberate and defined improvement process, such as Plan-Do-Check(Study)-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.

Quantitative Data: Data that is measured or identified numerically and can be analyzed using statistical methods.

Rapid Cycle Improvement (RCI): An improvement process based on the plan-do-study act (PDSA) model. The Rapid Cycle Improvement model entails four steps: set the aim (goal), define the measures (expected outcome), make changes (action plan), and test changes (solution). The concept behind RCI is to first try a change idea on a small scale to see how it works; then modify it and try it again until it works well for staff and customers and becomes a permanent improvement.

Reliability: The extent to which the same measure or the same study would have the same result if it were repeated.

Repeatability: The variation in measurements obtained when one measurement device is used several times by the same person to measure the same characteristic.

Run Chart: A chart showing a line connecting numerous data points collected from a process running over time.

Sample Size (N): The number of units in a sample.

Scatter Diagram: Graphs of pairs of numerical data, one variable on each axis, to look for a relationship. It is one of the "seven tools of quality" (see definition).

Six Sigma: A method that provides an organization with tools to improve the capability of their business

processes. This increase in performance and decrease in process variation leads to defect reduction and improvement in profits, employee morale, and quality of products or services.

S.M.A.R.T: Acronym used to ensure evaluation and research objectives are specific, measurable, achievable, relevant, and time-bound.

Special Causes (variation): Causes of variation that arise because of special circumstances. They are not an inherent part of a process. Special causes are also referred to as assignable causes. Also see "common causes."

Stakeholder: Any individual, group, or organization that will have a significant impact on or will be significantly impacted by the quality of a specific product or service.

Standard: A computed measure of variability indicating the spread of the data set around the mean.

Standard Deviation (statistical): A computed measure of variability indicating the spread of the data set around the mean.

Story Board: Graphic representations of an organization's quality improvement journey. A QI story board is a visual depiction of the team's story, beginning at the "plan" phase and ending at the "act" phase. It can be updated continually throughout the PDSA Cycle. Graphics are key when creating a story board with minimal complementary text. The QI story board should include key elements of all stages of the PDSA process.

Stratification: A procedure used to describe the systematic subdivision of data to obtain a detailed understanding of the underlying structure. This procedure can be used to break down a problem to discover its root causes and set into motion appropriate corrective actions.

Stretch Standard: A standard designed to position an organization to meet future requirements.

Survey: The act of examining a process or questioning a selected sample of individuals to obtain data about a process, product or service.

Target Population: Observable or measurable elements, sampling units, or subjects that will be studied to determine change and the desired outcome.

Team: A group of individuals organized to work together to accomplish a specific objective.

Theory: An explanation for known facts or phenomena.

Timeline: A schedule or timetable for completing the PDSA Cycle of quality improvement.

Validity: Whether you are really measuring what you intend to measure.

Variation: A change in data, characteristic, or function caused by one of the four factors: special causes, common causes, tampering, or structural variance

Performance Management and Quality Improvement Goals, Objectives, and Performance Measures Report

GOAL	OBJECTIVE	DATE COMPLETED BY	PROGRESS
Understand KCHD level of QI Culture	Assess staff knowledge of QI through a QI Maturity Tool	January 8, 2014	100% of all staff
All health department staff will have a basic understanding of QI	Train 100% of staff in a one day classroom QI 101 session	April 1, 2014	100% of all staff
50% of KCHD staff apply QI training by participating on a PDSA Team	Implement 4 PDSA projects	April 30, 2014	57% of all staff
Develop Approved QI Plan with formal QI structure	Develop QI Plan that addresses all Accreditation requirements for the health department	May 30, 2014	BOH adopted QI Plan on May 8, 2014
Measure customer satisfaction in one additional KCHD program	Assess customer satisfaction	December 31, 2014	In-progess

Developed: April 2014
Adopted: May 2014
Last Reviewed and Revised:

Training Plan Report

TITLE	CONTENT	DATE COMPLETED	PROGRESS
QI 101	• Introduces the concept and principles of continuous QI	January 8-9, 2014 ; March 25-26, 2014 KCHC	100% of all staff
QI Learning Collaborative	• PDSA Teams participate in 6 month collaborative • Pareto Chart • Fishbone Diagram • 5 Whys • Affinity Diagram • Force Field Analysis • Interrelationship Digraph	January – May, 2014	57% of all staff
PHIT Training	• Quality improvement and facilitation • Performance management and performance measures • National voluntary accreditation • Health assessment and improvement planning • Strategic planning	April 23-25, 2014	100% of staff
QI Infrastructure and Plan	• KCHD QI Process and QI Plan Components	June 2014	BOH adopted QI Plan on May 8, 2014
COPPHI	• Performance Management • Workforce Development • Quality Improvement • Accreditation • Customer Satisfaction/Customer Service	June 2014	In-progress

Developed: April 2014
Adopted: May 2014
Last Reviewed and Revised: