Quality Improvement Plan
Grand Forks Public Health Department

Public Health
Prevent. Promote. Protect.

Grand Forks Public Health

Adopted on 05/25/2017

Quality Improvement Plan
Grand Forks Public Health Department
Signature Page

This plan has been approved and adopted by the following individuals:

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Kate Goldade, Quality Improvement Team Lead

05/25/2017
Date

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Quality Improvement Plan
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Table of Contents

Grand Forks Public Health Department is committed to the ongoing improvement of the quality of services it provides. This Quality Improvement Plan serves as the foundation of this commitment.

This plan includes the following topics:

Purpose & Introduction

Executive summary

Grand Forks Public Health Department (GFPHD) is committed to protecting the community, preventing disease, and promoting health among the residents of our community as stated in our mission statement below. Quality improvement is an element that has been embraced by the department through our collaborative efforts to develop a Community Health Assessment (CHA) and Community Health Improvement and Implementation Plan (CHIP). The Strategic Plan provides a roadmap for addressing goals for improving health. We are guided by the principles of collaboration, communication, inclusion, and engagement to ensure a culture of quality exists at Grand Forks Public Health Department and within our partnerships. We will use this Quality Improvement Plan to maximize our efforts toward building quality improvement and to achieve our vision. Further, the Quality Improvement Plan outlines the actions we will take to create and sustain this culture with a focus on respect for new ideas and encouraging leadership throughout all levels of our workforce. It establishes a framework for QI culture assessment training to improve the culture as well as formalize processes for QI project identification, selection, implementation and sharing.

Mission, vision & values

GFPHD will implement the Quality Improvement Plan (QIP) with various processes to improve the performance of our health department. The QIP will assist GFPHD to ensure our mission, vision and values, intended to improve our services and the health of the community, are achieved.

Mission: The Grand Forks Public Health Department is committed to:

- promoting healthy environments and lifestyles
- preventing disease
- building community resilience through preparedness
- assuring access to health services

Vision: Healthy people, healthy environment, healthy community.

Values:

- Integrity
- Collaboration
- Client Focused
- Advocacy
- Evidence – Based
- Respectful

Definitions & Acronyms

Introduction

A common vocabulary is used agency-wide when communicating about quality and quality improvement. Key terms and frequently used acronyms are listed alphabetically in this section.

Definitions

Continuous Quality Improvement (CQI): A systematic, department-wide approach for achieving measurable improvements in the efficiency, effectiveness, performance, accountability, and outcomes of the processes or services provided. Applies use of a formal process (PDSA, etc.) to "dissect" a problem, discover a root cause, implement a solution, measure success/failures, and/or sustain gains.

Plan, Do, Study, Act (PDSA, also known as Plan-Do-Check-Act): An iterative, four-stage, problem-solving model for improving a process or carrying out change. PDCA stems from the scientific method (hypothesize, experiment, evaluate). A fundamental principle of PDCA is iteration. Once a hypothesis is supported or negated, executing the cycle again will extend what one has learned. (Embracing Quality in Local Public Health: Michigan's QI Guidebook, 2008)

Quality Improvement (QI): 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. (Riley, Moran, Corso Beitsch, Bialek, and Cofsky. *Defining Quality Improvement in Public Health*. Journal of Public Health Management and Practice. January/February 2010).

Quality Improvement Plan: A plan that identifies specific areas of current operational performance for improvement within the agency. These plans can and should cross-reference one another, so a quality improvement initiative that is in the QI Plan may also be in the Strategic Plan. (PHAB Acronyms and Glossary of Terms, 2009)

Quality Improvement Committee: A cross sectional representation of the GFPHD selected to support and drive Continuous Quality Improvement activity within the health department. It consists of staff members specifically trained in Quality Improvement in order to provide counsel and guidance to QI Project teams.

Quality Improvement Project Team: A team temporarily convened to address an identified project within the department. With guidance from the QI Committee, the Quality Project Team will utilize QI tools to find and implement solutions to address the identified issue.

Quality Culture: QI is fully embedded into the way the agency does business, across all levels, departments, and programs. Leadership and staff members are fully committed to quality, and results of QI efforts are communicated internally and externally. Even if leadership changes, the basics of QI are so ingrained in staff members that they seek out the root cause of problems. They do not assume that an intervention will be effective, but rather they establish and quantify progress toward measurable objectives. (Roadmap to a Culture of Quality Improvement, NACCHO, 2012)

Storyboard: Graphic representation of a QI Committee's quality improvement journey. (Scamarcia-Tews, Heany, Jones, VanDerMoere & Madamala, 2012)

Acronyms

AIM – Achievable, & measureable
BOH - Board of Health
CHA – Community Health Assessment
CHIP – Community Health Improvement Plan
GFPHD – Grand Forks Public Health Department
NACCHO – National Association of County and City Health Officials
PDCA – Plan, Do, Check, Act (See definitions above)
PDSA – Plan, Do, Study, Act (See definitions above)
PHAB – Public Health Accreditation Board
PHQIX – Public Health Quality Improvement Exchange
PHF – Public Health Foundation
QA – Quality Assurance
QI Committee – Quality Improvement Committee
QIP – Quality Improvement Plan (See definitions above)
QI Project Team – Quality Improvement Project Team
SMART – Specific, Measurable, Attainable, Reasonable, Timely
WFD – Work force development Plan

Description of Quality in Agency

Introduction

This section provides a description of quality efforts in Grand Forks Public Health Department, including culture, roles and responsibilities, processes, and linkages of quality efforts to other agency documents.

Description quality efforts

Although the GFPHD has long history of pursuing a Quality Culture through an informal process, employees do not understand the concepts of Quality Improvement as a systematic process of change.

In March 2017, the Quality Improvement (QI) Committee distributed to GFPHD staff members the "Building and Sustaining a Culture of Quality: Abridged Self-Assessment Survey". Three groups were assessed: leadership, QI Committee members and front line staff members. The results varied widely among the three groups.

The QI Committee is using the survey results to determine appropriate transitional strategies found in the "NACCHO Roadmap to Quality Improvement". The committee is working on engaging the staff members through education and training, introduction of forms to solicit projects and a monitoring system to measure progress.

This plan will improve the Quality Culture by providing an outline and examples of the process GFPHD will use to engage the employees in the consistent use of the QI processes at all levels of programming. Future activities will include staff member training, development of QI Project Teams, and group facilitation and mentoring, to move toward achieving the QI goals within the plan. Our future desired state would be to obtain a higher level Quality Culture among staff members within the department at which QI activity is pervasive throughout our daily work.

Links to other agency plans

The Quality Improvement (QI) plan was developed after the Workforce Development Plan, Community Health Assessment, and Community Health Improvement Plan were written and before the Strategic Plan was updated. The plans will be reviewed and amended as needed to link with each other and the QI Plan. The QI Committee will actively engage with staff members and other Department Committees to accomplish this.

Aside from the QI Plan, GFPHD has an informal metrics reporting system to track processes and/or outcomes. The QI Committee will look for opportunities to monitor performance management until a Performance Management System is in place that incorporates the QI concepts and QI plan.

The plans will be reviewed to better identify the areas where department goals, vision, mission and values can be linked or aligned to improve the outcomes in community based interventions.

Quality improvement management, roles & responsibilities

The Quality Improvement Plan will be managed by the Quality Improvement Committee. The QI Committee provides leadership to ongoing QI activity within the department. The QI Committee will convene monthly or more frequently as needed.

Responsibilities include:

- Champion QI efforts throughout GFPHD
- Assess QI training needs and coordinate training for staff members
- Complete a "Building and Sustaining a Culture of Quality: Abridged Self-Assessment Survey" within GFPHD every two years at minimum to evaluate QI training needs and coordinate training for staff members
- Implement transitional strategies outlined in the NACCHO Roadmap to a Culture of Quality
- Make recommendations for QI projects based on employees' suggestions, customer feedback, strategic plan priorities and other identified priority areas
- Monitor ongoing QI projects, assist with facilitation of projects, encourage peer-sharing of outcomes, support implementation of improvements department wide and share outcomes with stakeholders and the public when appropriate
- Evaluate department wide QI efforts
- Review, revise and approve the QI Plan annually

The QI Committee will identify which processes are in need of improvement through various avenues including input from all staff members. Tracking of suggestions made by staff members will be gathered and continually monitored by the QI Committee; see Appendix A. The QI Committee will prioritize QI activity and select processes to improve with a minimum of one formal QI project a year.

Currently the QI Committee has seven members including the Health Department Director. Membership is a cross-sectional representation from various divisions within GFPHD.

- Javin Bedard, Environmental Health Manager
- Kristie Hegg, Administrative Specialist
- Carolyn Kaltenberg, Disease Prevention Team Leader
- Kate Goldade, QI Committee Team leader
- Theresa Knox, Accreditation Coordinator/Nursing and Nutrition Manager
- Twyla Streibel, Public Health Nurse
- Debbie Swanson, Health Department Director

Members serve a two year term, with no more than four members rotating off each year. Consecutive terms are allowable. Individual responsibilities are described within the following chart.

QI Committee Member	Responsibility
QI Committee leader	Serve as Leader of QI Committee Convene and develop agendas for QI Committee meetings Work jointly with QI Committee, Accreditation Coordinator and Department Director to provide vision & direction for QI activities Request resources for activities Report QI summary to BOH annually
Health Director and Accreditation Coordinator	Provide vision and direction for QI program Allocate resources for QI activities
Administrative	Record meeting attendance, minutes and provide copies to QI committee members
All QI Committee members	Identify appropriate staff members for QI Project Teams Oversee QI efforts within GFPHD and facilitate QI Project Teams as needed Assure access to QI tools and encourage completion of QI-related performance management goals for all GFPHD staff members Encourage staff members to incorporate QI efforts into daily work

The QI Committee strives for consensus on all decisions and agrees to abide by majority vote in absence of consensus.

All staff members within Grand Forks Public Health Department will: participate in QI projects as requested, submit QI project ideas to the QI Committee when identified, participate in QI training, and incorporate QI concepts into daily work.

Quality improvement process

Grand Forks Public Health Department will be using the PDSA Quality Improvement model for our QI activities. QI Committee members will be trained on PDSA, related tools and how they can be utilized to benefit process improvement. Additional tools used may include but are not limited to:

- Cause and Effect/Fishbone diagrams, Radar charts, Flowcharts, check sheets, brainstorming, Affinity Diagram, Prioritization Matrices. See Appendix B

Quality Goals, Objectives & Implementation

Introduction This section presents the overall goals and implementation plan for QI.

Goal	Objectives & Activities	Measure	Timeframe	Responsible
Goal: Establish a Quality Culture within the health department	By June 1, 2017 a Quality Improvement Plan for Grand Forks Public Health Department will be established	A complete, published Quality Improvement Plan ready for distribution	February 1, 2017-June 1, 2017	Quality Improvement Team, Quality Improvement Team Lead
	By September 2017 the department director, managers and quality improvement committee members will participate in quality improvement training.	Complete The Ohio State University College of Public Health 3 module online training CQI for Public Health: The Fundamentals https://osupublichealth.catalog.instructure.com	June 1, 2017-September 30, 2017	Public Health Director, Public Health Managers
Goal: All staff members will actively participate in Quality Improvement activities	As part of performance review process for October 1, 2017-September 30, 2018 evaluation period, all employees will update their action plans to include participation in at least one quality improvement activity.	Updated employee action plans by April 1, 2018.	October 1, 2017-March 31, 2018.	Human Resources, Public Health Director, Managers and Team Leaders.

Projects

Introduction

This section describes the process for QI project identification, prioritization, and selection of team members. Information about current and past projects may be obtained on the shared electronic G drive: phcommon/Accreditation – PH/Quality Improvement folder or from QI Committee members upon request.

Project selection

Any staff member may recommend a project to the QI Committee for consideration at any time. Project ideas will be solicited during the strategic planning process and at Department meetings.

Ideas may be based on data obtained from internal and external customer feedback, program evaluations, after-action reviews, performance metrics, or from Grand Forks Public Health Department's performance management system.

Project submissions will be screened using the SMART criteria to determine whether the QI process is appropriate to address the issue:

- Specific - Specific process is defined as the focus of the project
- Measurable - Availability of data, improvement can be shown
- Achievable - Within sphere of influence, resources and expertise available
- Relevant - Problem exists or improvement possible that is significant enough to expend resources, motivation exists for change
- Time Specific - Timeline can be defined

Projects not meeting SMART criteria will not be selected unless they can be reframed to meet the criteria. When multiple project ideas are presented, they will be prioritized considering the following:

- Alignment : agency's mission, strategic plan, CHA, CHIP, PHAB Standards and Measures
- Impact: number of people affected, financial consequence, time savings/efficiency improvement potential
- Urgency: risks associated with not addressing
- Longevity: will project have lasting impact
- Resistance: will the project be met with resistance from internal or external stakeholders

Project ideas not pursued immediately will be held in queue until other higher priority projects are completed. Selection methods may include: multi-voting technique, strategy grids, nominal group technique, Hanlon method, prioritization matrix, or other methods and will be agreed upon by the QI Committee at the beginning of each selection process.

	Project team members will be selected so that the scope of the problem or project is represented; teams will consist of three to five members and represent affected departments, disciplines, or clients as needed.
Current projects	The GFPHD is currently developing their first formal QI project. The QI Committee will receive training on QI project facilitation. This training is anticipated to be completed by fall 2017. The first formal QI project will begin concurrently with this training, allowing QI committee staff members to practice using QI tools. The QI project to be undertaken by the QI Committee will utilize QI Project Proposal forms, PDSA QI Project Checklist, a Storyboard Template and the Quality Improvement Project Tracking form all of which are found in the appendices of the QI Plan and on the electronic shared G drive. In the future, an archive of projects will be maintained on the electronic shared G drive in addition to the above mentioned templates.

Training

Introduction

GFPHD is committed to training staff members on QI to develop and maintain a Quality Culture. All staff members will be asked to recommend and participate in QI projects and will need training accordingly.

Training and support

The QI Committee will continue to utilize NACCHO's "Building and Sustaining a Culture of Quality: Abridged Self-Assessment Survey", extensive resources and the Roadmap to Culture of Quality Improvement to guide overall staff member training needs moving forward. Training opportunities are available or will be created to meet the identified needs of staff members.

The QI Committee was created January 2017. Since then, training has been provided to all GFPHD staff members including an introduction to QI, to the PDSA improvement model and to the process by which we will develop the QI infrastructure following the NACCHO Roadmap to a Quality of Culture. Following the Roadmap, GFPHD staff members completed the "Building and Sustaining a Culture of Quality: Abridged Self-Assessment Survey". The results of this survey function as a baseline of Quality Culture within the department. From the results of this survey, the QI Committee has begun to develop a framework for QI, the QI plan and training at various levels relevant to anticipated staff member involvement in QI projects and activities.

Training detailed in the chart below assures that GFPHD employees will be trained initially on QI as an expectation of employment and will be updated regularly on QI training. GFPHD has also incorporated QI training goals and objectives within the agency Workforce Development Plan.

Staff Member	Required Training	Resource
All QI Committee members, Health Director and Accreditation Coordinator	CQI for Public Health: The Fundamentals	On-line self-study course available at https://osupublichealth.catalog.instructure.com/
QI Project team members	Just In Time Training: PDSA	GFPHD QI Power Point in shared electronic G drive
All GPHD Staff Members	Quality Improvement section of new employee orientation Quarterly QI updates on QI concepts, project outcomes and/or tips on QI tools	New Employee Orientation Manual; Quarterly All-staff meetings

Additional QI training events may be attended as determined to be applicable, Examples include: National Network of Public Health Institutes (Open Forum for Quality Improvement in Public Health), National Association of County and City Health Officials (QI training), American Society for Quality, etc. Any additional individualized training opportunities will be completed and entered by the individual staff members in the GFPHD Staff Member QI Training Log; see Appendix F. This training log will serve as a training resource for orientation to the QI Committee as member turnover occurs. Support to QI project teams will be customized based on identified needs of participating staff members and provided by QI Committee.

Communication

Introduction

Quality Improvement related news is communicated on a regular basis using a variety of methods to staff members, Board of Health members, and the general public. This section describes how quality and quality initiatives are shared.

Quality sharing

Quality initiatives will be shared through the various following avenues:

All Employees

- All Staff Meetings will be used as a forum to communicate:
  - Identified training needs
  - QI projects completed within the previous 12 months; outcomes will be shared and QI Project team members will be recognized
  - A QI Committee representative will report QI Plan progress, evaluation results and subsequent changes
- Project storyboards will be shared at department meetings following conclusion of QI project and posted in the department.
- All Quality Improvement meeting documents and QI Committee templates and documents (agendas, summaries, data tools, storyboards, etc.) will be maintained on the shared electronic G drive for review by all staff members at any time.

Board of Health

- Board of Health members will receive annual updates on quality initiatives which will focus on QI project outcomes.

Public

- Project descriptions and results may be featured on the agency's website, and included in the annual report examples may include QI impact boards or storyboards.

Other

- In addition to these regularly occurring communications, the QI Committee will seek avenues to share quality initiatives with other community partners and other regional/state and national audiences as appropriate.

Monitoring and Evaluation

Introduction	This section describes the monitoring and evaluation for the QI Plan and associated goals.
Quality Improvement Plan	The QI Plan will be reviewed annually by a facilitated discussion among the QI Committee. Necessary updates will be identified and deliberated by the QI Committee. The QI Committee leader is ultimately responsible to implement the agreed upon changes to the QI Plan and re-route it for signatures. Concurrently with annual QI plan review, evaluations of QI projects will be studied, discussed and evaluated by the QI Committee.
Quality Improvement Project Teams	QI Project Teams are responsible for completing documentation for various steps in PDSA cycle. Templates for this documentation may be found in the Quality Improvement folder in the shared electronic G drive. Current QI projects will be discussed at regular QI Committee meetings. One QI Committee member at minimum will be assigned to each formal department QI project. The QI Committee member(s) representing each ongoing QI project are responsible for updates to the QI Committee. Within one month of finalization of a QI project, a storyboard will be shared as appropriate. A brief evaluation will be completed by participating QI Project Team members within one month of finalization to evaluate the facilitation of the QI project. This will be done to identify gaps and potential solutions to the department QI process. Long term sustainment of QI Project improvements will be monitored by the QI Committee along with the accomplishment of department QI goals in conjunction with the annual QI Plan review.

References & Resources

Resource	Location and Description
American Society for Quality	https://asq.org A membership organization whose mission is to increase the use and impact of quality in response to the diverse needs of the world. Training, resources, certifications and learning communities.
Center for Public Health Practice, The Ohio State University College of Public Health	https://cph.osu.edu/practice/ Online source for training and resource for organizational development https://osupublichealth.catalog.instructure.com/ Learning content management system; searchable catalog of training opportunities including online CQI modules
Journal of Public Health Management and Practice	Volume 18 (1) January/February 2012 - pg. 1-101,E1-E16 Volume 16 (1) January/February 2010 - pg. 1-85,E1-E17 Journals dedicated to quality improvement.
Michigan Public Health Institute	https://www.mphiaccredandqi.org/qi-guidebook/ Practitioners Quality Improvement Guidebook
Minnesota Department of Health	http://www.health.state.mn.us/divs/opi/qi/toolbox/ Quality Improvement resources and tools
National Association of City and County Health Officials (NACCHO)	http://www.naccho.org/programs/public-health-infrastructure/quality-improvement NACCHO is a membership organization that represents local health departments across the nation providing educational tools and resources to all of its members. NACCHO provides resources on all elements of public health accreditation to local health departments including quality improvement resources http://qiroadmap.org/ Roadmap to a Culture of Quality Improvement
National Network of Public Health Institutes (NNPHI)	https://nnphi.org/focus-areas-service/performance-improvement-management/ Accreditation and performance improvement resources
Public Health Accreditation Board (PHAB)	http://www.phaboard.org/ The Public Health Accreditation Board is a nonprofit organization dedicated to improving and protecting the health of the public by advancing and ultimately transforming the quality and performance of state, local, tribal, and territorial public health departments.

Resource continued	Location and Description
Public Health Foundation (PHF)	http://www.phf.org/Pages/default.aspx The Public Health Foundation exists to improve the public's health by strengthening the quality and performance of public health practice. The Foundation provides key resources and tools in the focus areas of performance management, quality improvement and workforce development.
Public Health Quality Improvement Exchange (PHQIX)	https://www.phqix.org An online community designed to be a communication hub for public health professionals interested in learning and sharing information about quality improvement (QI) in public health.

List of Appendices

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Appendix B: Commonly Used Quality Improvement Tools
Appendix C: PDSA QI Project Checklist
Appendix D: QI Project Submission Form
Appendix E: QI Project Storyboard Template
Appendix F: GFPHD Staff Member Quality Improvement Training Log
Appendix G: Record of Revisions

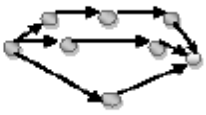
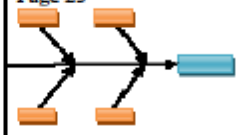
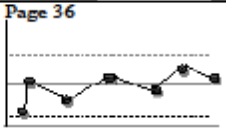
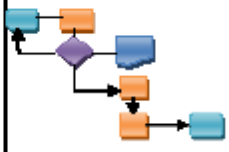
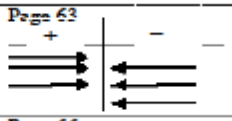
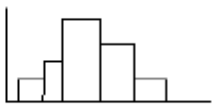
Appendix A: QI Project Tracking Form

The below table is a sample of the form used to track QI activity. The live document may found in the shared electronic drive under Quality Improvement

Grand Forks Public Health Department Quality Improvement Project Tracking Form							
Project Name	Project Mission/AIM:	Program/Area	Suggested by:	Prioritization:	Date started:	Date of completion:	Status/Outcome/Notes:

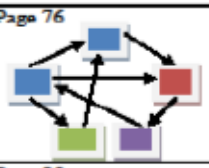
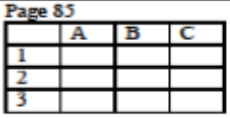
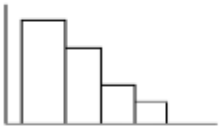
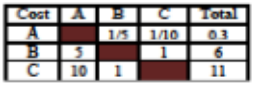
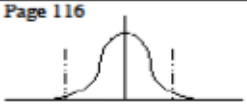
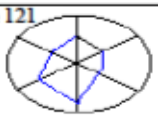
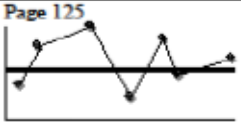
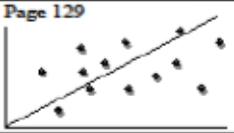
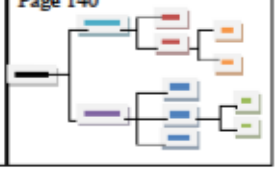
Appendix B: Commonly Used Quality Improvement Tools

Quality Improvement (QI) Toolbox

QI Tool	*What the Tool Does*	*Public Health Memory Jogger II*
Activity Network Diagram/ Gantt Chart	Used to: Schedule sequential and simultaneous tasks • Gives team members the chance to show what their piece of the plan requires and helps team members see why they are critical to the success of the project. • Helps teams focus its attention and scare resources on critical tasks.	Page 3 
Affinity Diagram	Used to: Gather and group ideas • Encourages team member creativity by breaking down communication barriers. • Encourages ownership of results and helps overcome "team paralysis" due to an array of options and a lack of consensus.	Page 12 
Brainstorming	Used to: Create bigger and better ideas • Encourages open thinking and gets all team members involved and enthusiastic. • Allows team members to build on each other's creativity while staying focused on the task at hand.	Page 19 
Cause and Effect/Fishbone Diagram	Used to: Find and cure causes, not symptoms • Enables a team to focus on the content of the problem, not the problem's history or differing personal issues of team members. • Creates a snapshot of the collective knowledge and consensus of a team around a problem. • Focuses the team on causes, not symptoms.	Page 23 
Check Sheet	Used to: Count and accumulate data • Creates easy-to-understand data ~ makes patterns in the data become more obvious. • Builds a clearer picture of "the facts", as opposed to opinions of each team member, through observation.	Page 31 
Control Charts	Used to: Recognize sources of variation • Serves as a tool for detecting and monitoring process variation. Provides a common language for discussing process performance. • Helps improve a process to perform with higher quality, lower cost, and higher effective capacity.	Page 36 
Data Points	Used to: Turn data into information • Determines what type of data you have • Determines what type of data is needed	Page 52 
Flowchart	Used to: Illustrate a picture of the process • Allows the team to come to agreement on the steps of the process. Can serve as a training aid. • Shows unexpected complexity and problem areas. Also shows where simplification and standardization may be possible. • Helps the team compare and contrast the actual versus the ideal flow of a process to help identify improvement opportunities.	Page 56 
Force Field Analysis	Used to: Identify positives and negatives of change • Presents the "positives" and "negatives" of a situation so they are easily compared. • Forces people to think together about all aspects of making the desired change as a permanent one.	Page 63 
Histogram	Used to: Identify process centering, spread, and shape • Displays large amounts of data by showing the frequency of occurrences. • Provides useful information for predicting future performance. • Helps indicate there has been a change in the process. • Illustrates quickly the underlying distribution of the data.	Page 66 

Developed from the Public Health Memory Jogger II (2007)

Quality Improvement (QI) Toolbox

Interrelationship Digraph	Used to: Look for drivers and outcomes • Encourages team members to think in multiple directions rather than linearly. • Explores the cause and effect relationships among all the issues. • Allows a team to identify root cause(s) even when credible data doesn't exist.	Page 76 
Matrix Diagram	Used to: Find relationships • Makes patterns of responsibilities visible and clear so that there is even distribution of tasks. • Helps a team come to consensus on small decisions, enhancing the quality and support for the final decision.	Page 85 
Nominal Group Technique	Used to: Rank for consensus • Allows every team member to rank issues without being pressured by others. • Makes a team's consensus visible. • Puts quiet team members on an equal footing with more dominant members.	Page 91 
Pareto Chart	Used to: Focus on key problems • Helps teams focus on those causes that will have the greatest impact if solved. (Based on the Pareto principle ~ 20 % of the sources cause 80% of any problem.) • Progress is measured in a highly visible format that provides incentive to push on for more improvement.	Page 95 
Prioritization Matrices	Used to: Weigh your options • Forces a team to focus on the best thing(s) to do and not everything they could do. • Increases the chance of follow-through because consensus is sought at each step in the process (from criteria to conclusions)	Page 105 
Process Capability	Used to: Measure conformance to customer requirements • Helps a team answer the question "Is the process capable?' • Helps to determine if there has been a change in the process.	Page 116 
Radar Chart	Used to: Rate organization performance • Makes concentrations of strengths and weaknesses visible. • Clearly defines full performance in each category. • Captures the different perceptions of all the team members about organization performance.	Page 121 
Run Chart	Used to: Track trends • Monitors the performance of one or more processes over time to detect trends, shifts, or cycles. • Allows a team to compare a performance measure before and after implementation of a solution to measure its impact.	Page 125 
Scatter Diagram	Used to: Measure relationships between variables • Supplies the data to confirm a hypothesis that two variables are related. • Provides a follow-up to a Cause & Effect Diagram to find out if there is more than just a consensus connection between causes and the effect.	Page 129 
Tree Diagram	Used to: Map the tasks for implementation • Allows all participants (and reviewers outside the team) to check all of the logical links and completeness at every level of plan detail. • Reveals the real level of complexity involved in the achievement of any goal, making potentially overwhelming projects manageable, as well as uncovering unknown complexity.	Page 140 

	Jo	Bob	Hal	Total
A	3	4	4	11
B	2	1	2	5
C	4	3	3	10
D	1	2	1	4

Cost	A	B	C	Total
A		1/5	1/10	0.3
B	5		1	6
C	10	1		11

Developed from the Public Health Memory Jogger II (2007)

Appendix C: PDSA QI Project Checklist

	Steps	Key Activities	Person/Group Responsible
PLAN	**Step 1** Getting Started	☐ Identify area, problem, or opportunity for improvement ☐ Estimate and commit needed resources ☐ Obtain approval to conduct QI	All GFPHD Staff Members
	Step 2 Assemble the Team	☐ Identify and assemble team members and identify roles/responsibilities ☐ Enter the project in on the QI Project Tracking Form ☐ Develop SMART Aim Statement ☐ Discuss problem / opportunity for improvement ☐ Establish initial timeline and schedule regular team meetings for the QI project	QI project team with QI Committee guidance
	Step 3 Examine the Current Approach	☐ Examine current process ☐ Obtain existing baseline data or create /execute data collection plan to obtain current data ☐ Obtain input from customers / stakeholders ☐ Analyze baseline data ☐ Determine root cause of problem ☐ Revise Aim Statement based on baseline data if needed	QI project team with QI Committee guidance
	Step 4 Identify Potential Solutions	☐ Identify all potential solutions to the problem based on the root cause ☐ Review model or best practices to identify potential improvements ☐ Pick the best solution (the one most likely to accomplish your Aim Statement)	QI project team with QI Committee guidance
	Step 5 Develop an Improvement Theory	☐ Develop a theory for improvement – *What is your prediction?* – *Use an "If . . . . Then" approach* ☐ Develop a strategy to test the theory – *What will be tested? How? When?* ☐ Develop an Action Plan – *What changes will be implemented? Who is responsible?*	QI project team
DO	**Step 6** Implement the Improvement	☐ Carry out the change to the process on a small scale ☐ Collect, chart, and display data to determine effectiveness of the test ☐ Document problems, unexpected observations, and unintended side effects	QI project team
STUDY	**Step 7** Study the Results	☐ Determine if your test was successful: – *Compare results against baseline data and the measures of success stated in the Aim Statement* – *Did the results match the theory/prediction?* – *Did you have unintended side effects?* – *Is there an improvement?* – *Do you need to test the improvement under other conditions?* ☐ Describe and report what you learned (develop a storyboard)	QI project team
ACT	**Step 8** Standardize the Improvement or Develop a New Theory	☐ If your improvement was successful, implement the permanent change and make plans to adopt the change throughout the department as applicable ☐ If your change was not successful, develop a new theory and test it. Multiple cycles may be needed to produce the desired improvement	QI project team
	Step 9 Establish Future Plans	☐ Celebrate your success ☐ Communicate your improvements and lessons learned to internal and external customers ☐ Take steps to preserve your gains and sustain your accomplishments	QI project team with QI Committee guidance

Appendix D: QI Project Proposal Form

Public Health
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Grand Forks Public Health Department

QI Project Proposal Form

Project:	
Date submitted:	Submitted by:
What is the problem? Please describe (a gap in service, inefficiency or process needing improvement and who is impacted):	
Has baseline data been gathered or is it available? Can improvement be measured?	
Anticipated resources needed? Anticipated time needed?	
Who should lead this team (subject matter expert(s))?	Recommendations of other staff members to be part of the project team?

Appendix E: QI Project Storyboard template

Project Title:	
Project Dates:	
Project Team Members:	

Plan

1) Getting Started:

2) Assemble a team:

3) Examine current approach:

AIM Statement: example Increase HPV vaccination rate 2 % in males of Grand Forks County, age 12-15 years old by January 2019

4) Identify potential solutions:

5) Develop an Improvement Theory

Do

6) Implement the improvement

May add graphics and flowchart of process here

Study

7a) Study the results:

7b) Describe and report what you learned:

Act

8) Standardize the improvement

Appendix F: GFPHD Staff Member Quality Improvement Training Log

GFPHD Staff Quality Improvement Training Log					
Staff	Course attended	Date started	Date completed	CEUs earned	Additional information/ link to objectives

Appendix G: Record of Revisions

The Grand Forks Public Health Quality Improvement plan is a living document and will potentially be revised frequently. For efficiency and accountability purposes, changes are recorded below.

Date:	Description of Change:	Page Number:	Changed by:	Reasoning:	Signature(s) of approval:

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