

QI Toolbox

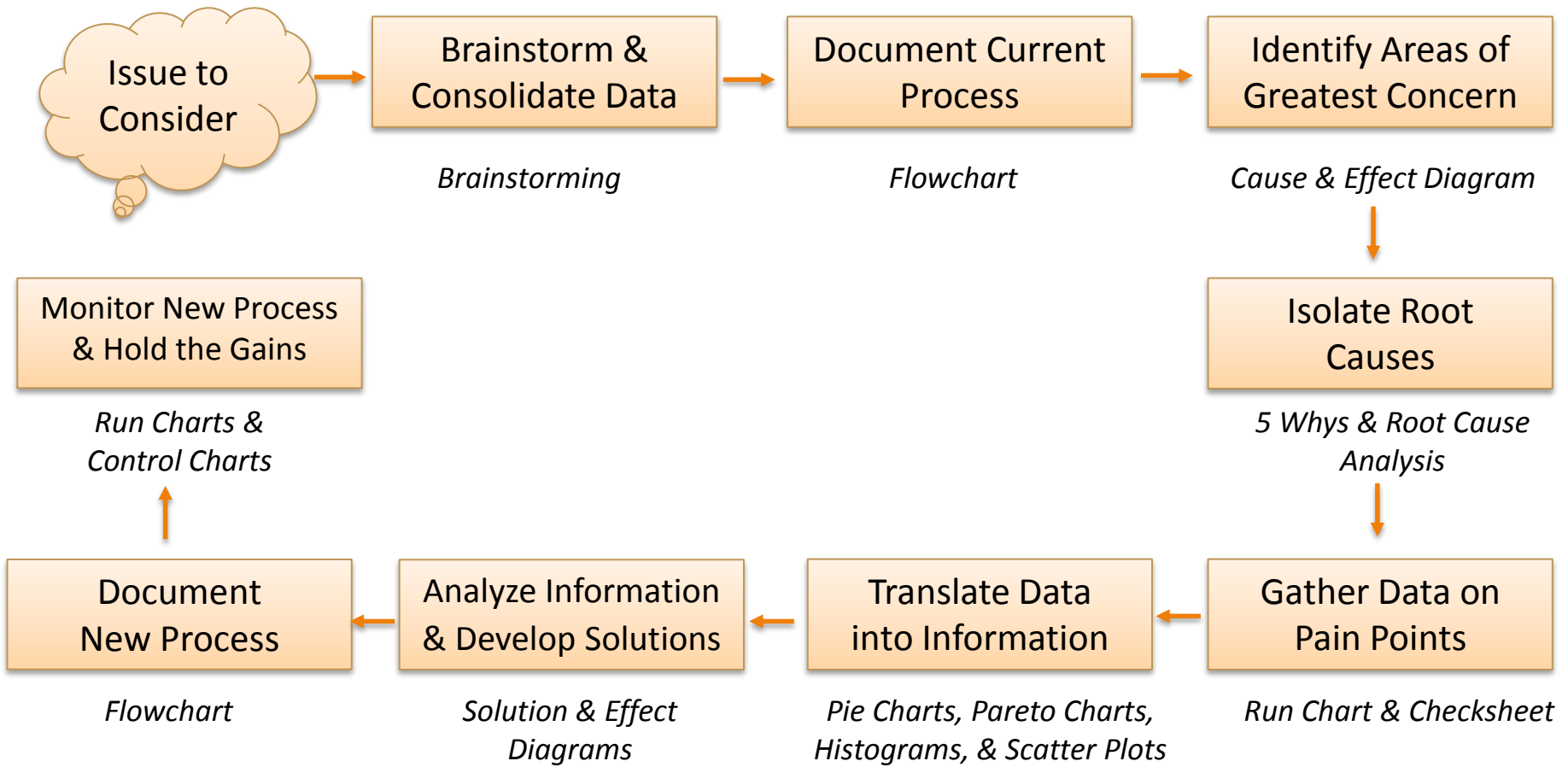
Flowcharts and Gantt Charts

Performance Improvement Team Meeting
September 24, 2015

Marcy Fenton, MS, RD
Susan Hathaway, RN, MPH
Julia Heinzerling, MPH

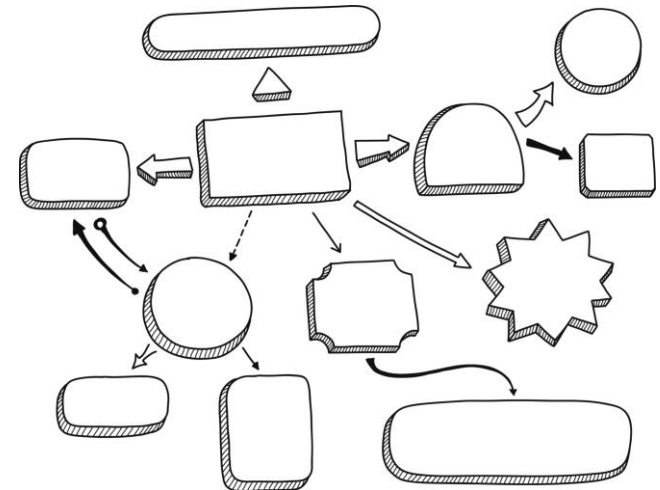


Where Do Flowcharts Fit in the QI Process?



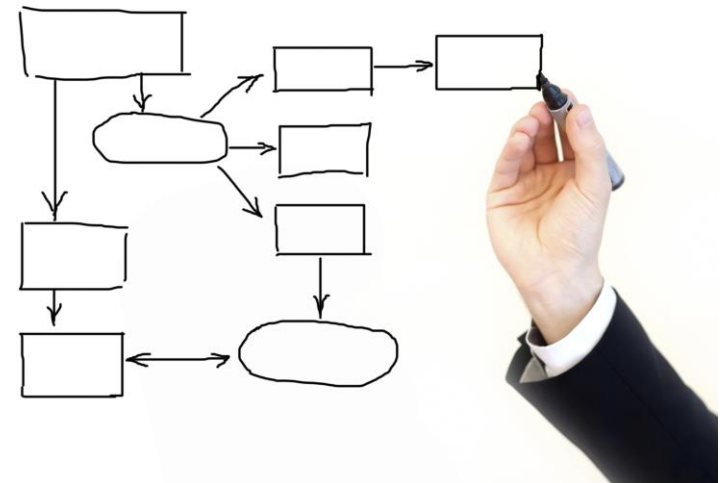
What is a Flowchart?

- A flowchart depicts all of the steps in a process in sequential order from START to FINISH
- Uses shapes/symbols to depict steps
 - Ovals: Starting and Ending Points
 - Diamonds: Decision Points
 - Squares: Activities
 - Arrows: Sequence of Actions
- Possible elements may include:
 - Sequence of Actions
 - Inputs and Outputs
 - Decisions
 - Time or People Involved at each Step



When to Use a Flowchart

- Use a flowchart to depict and understand the steps in a process or design a new process
 - Show connecting processes
 - Identify wasteful steps
 - Uncover sources of variation
 - Identify areas for improvement
- Document the current process when planning and the new process after you've tested improvements
- Use a flowchart as a training tool



How to Construct a Flowchart #1

- Collect information on the process
 - Experience
 - Observation
 - Conversation
 - Interviews
 - Research
- Gather people who understand the process to develop the flowchart
 - Include people who do the work
- Decide how detailed to make the diagram



How to Construct a Flowchart #2

- Define the process' starting and end points
- List each step in the process
 - Recognize that staff may use different processes
 - Be accurate and honest
 - Use post-it notes, to easily adjust steps
- Use the following prompts:
 - How does the process begin?
 - What happens first? What happens next?
 - What are the decision points?
 - Where do inputs and outputs come into play?














Flowchart Template:
<http://asq.org/sixsigma/2009/04/flow-chart-template.xls>



How to Construct a Flowchart #3

- Write each step in the appropriate shape
 - Start with an oval symbol labeled START
 - Finish with an oval symbol labeled END
- Draw arrows between shapes to indicate the process flow
 - Shapes with more than one arrow should be diamonds (decision)
 - All arrows should lead back to an earlier step or toward the end of the process

Common Flowchart Symbols

	Start or End Point
	Activity
	Decision
	Input/Output
	Document
	Forms
	Wait/Delay
	Storage
	Transport
	Input
	Output
	Connector
	Preparation

How to Analyze a Flowchart

- Review the flowchart with people involved in the process
- Walk through the process to verify that steps are in the correct order
- Amend if needed
- Identify areas for potential improvement
 - Time lags or delays
 - Steps that don't add value
 - Unnecessary decision points
 - Illogical sequencing
 - Chances for error
 - Duplication of effort
 - Unclear lines of responsibility

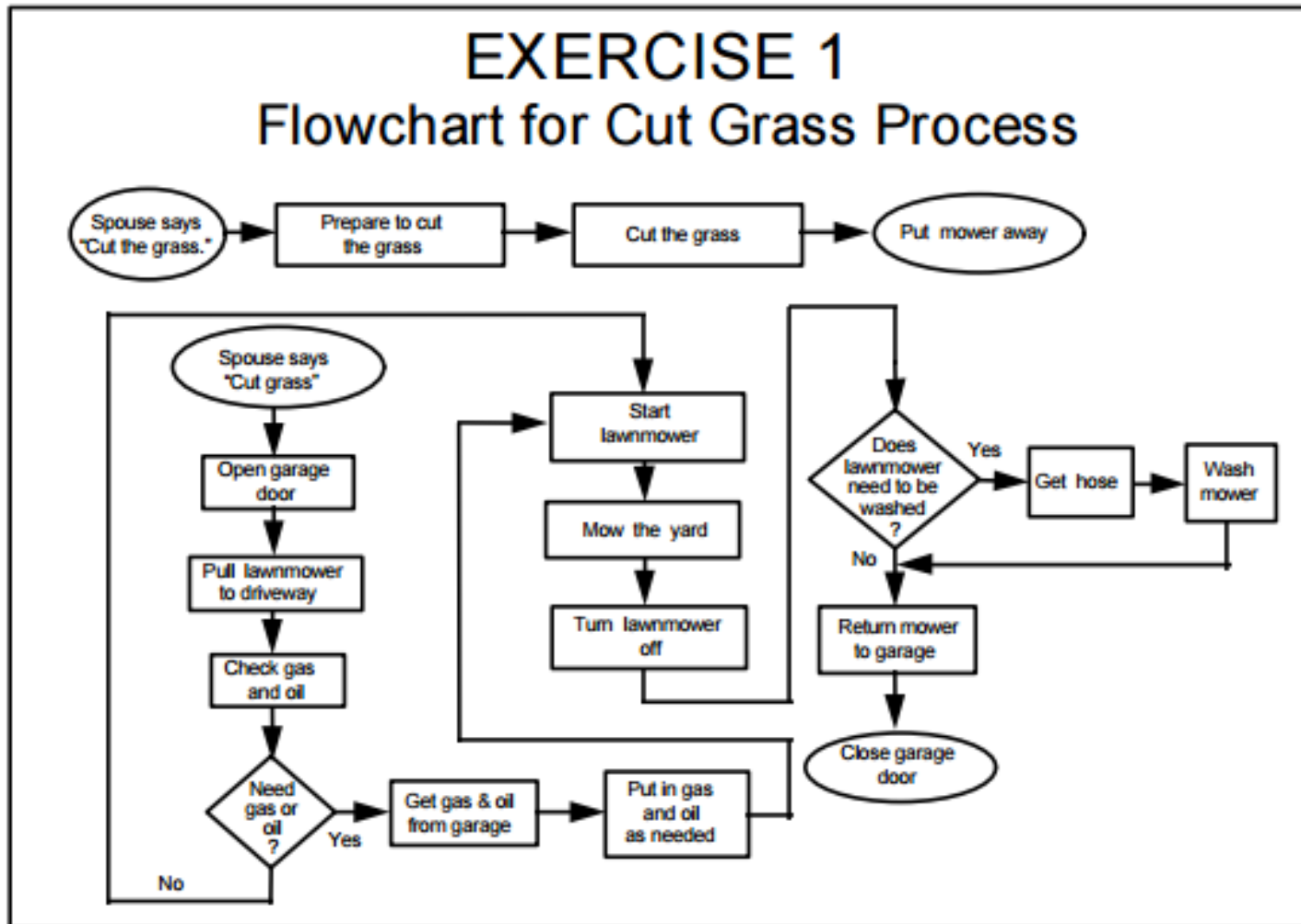


Potential Pitfalls

- Did participants understand the flowcharting process?
- Was the flowchart drawn the way participants envision the process or the way it actually works?
 - Were participants reluctant to depict illogical parts of the process?
- Do you have buy-in to use the flowchart?



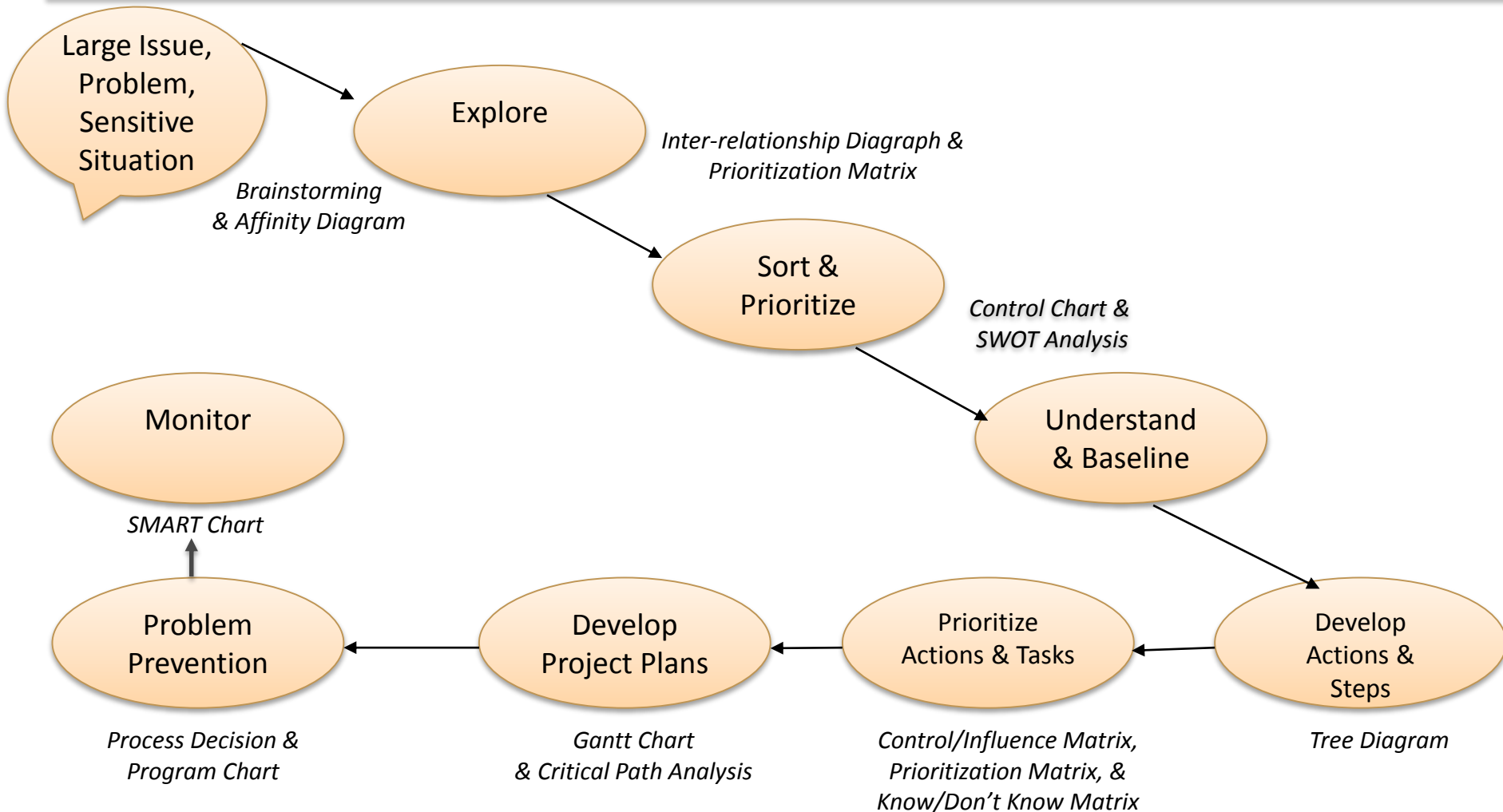
Flowchart Example



Group Activity: Design a Flowchart

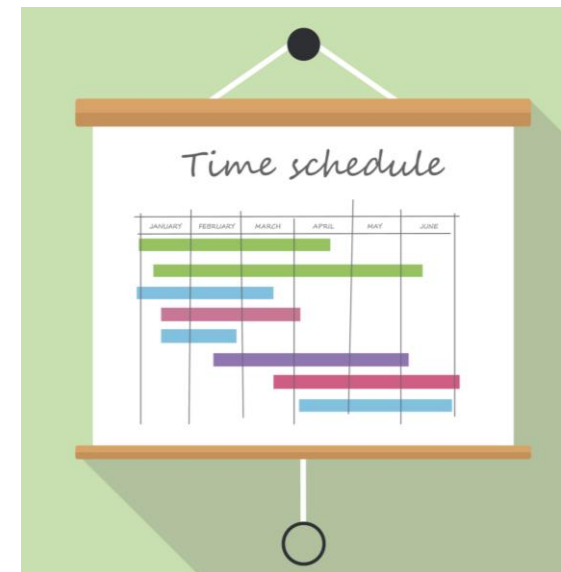


Where do Gantt Charts Fit in the QI Process?



What is a Gantt Chart?

- A chart that represents the project timeline
- Lists all activities required to complete a project
 - Identifies the start and end date of each activity
 - Shows the duration of planned activities
 - Displays overlap between activities
 - May identify people assigned to the tasks
- Can be used to plan activities and show progress
 - Builds accountability



When to Use a Gantt Chart

- Develop a Gantt Chart when planning a project
 - Identify major tasks, resource needs, and timing
 - Establish the order of project activities
 - Identify possible implementation barriers
 - Communicate the project timeline
- Use the Gantt Chart to monitor progress
 - Alerts you to problem areas
 - Identifies milestones



How to Construct a Gantt Chart #1

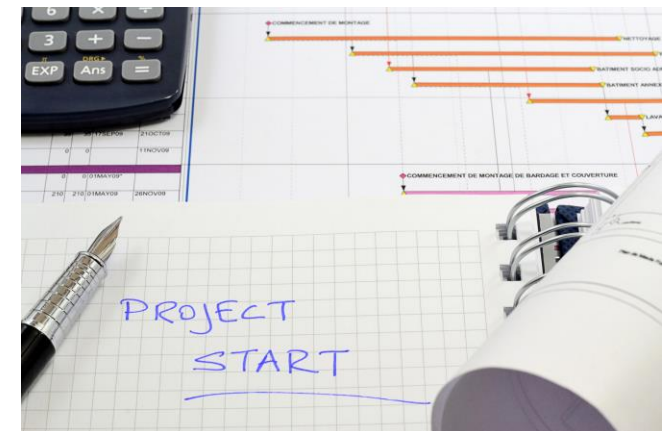
- Brainstorm tasks that need to be completed to make the project a success
- Identify the first and last tasks and the project's start and end dates
- Sequentially order the tasks. Which tasks:
 - Can be completed in tandem?
 - Must be completed consecutively ?



How to Construct a Gantt Chart #2

- Design the Gantt Chart
 - Columns: Timeframe (i.e., Days, Weeks, Months)
 - Rows: Tasks
 - Use an unshaded diamond to denote tasks that happen in a point in time, such as a presentation
 - Use unshaded bars to denote tasks that occur over a period of time, such as publicizing a training

Gantt Chart Template:
<http://asq.org/sixsigma/tools-exchange/docs/gantt-chart.xls>



Use the Gantt Chart to Monitor Progress

- Display progress on the Gantt Chart
 - Partially shade bars to represent progress
 - Shade diamonds and bars when tasks are complete
- Monitor the overall progress of the project and make adjustments if needed
 - Identify deviations and use QI tools to address
 - Prioritize tasks, reassign team members and/or secure additional resources
- Report on the project's status

NEXT STEP



Gantt Chart Examples

Gantt Chart

Livingston County Department of Health-Accreditation Preparation Process

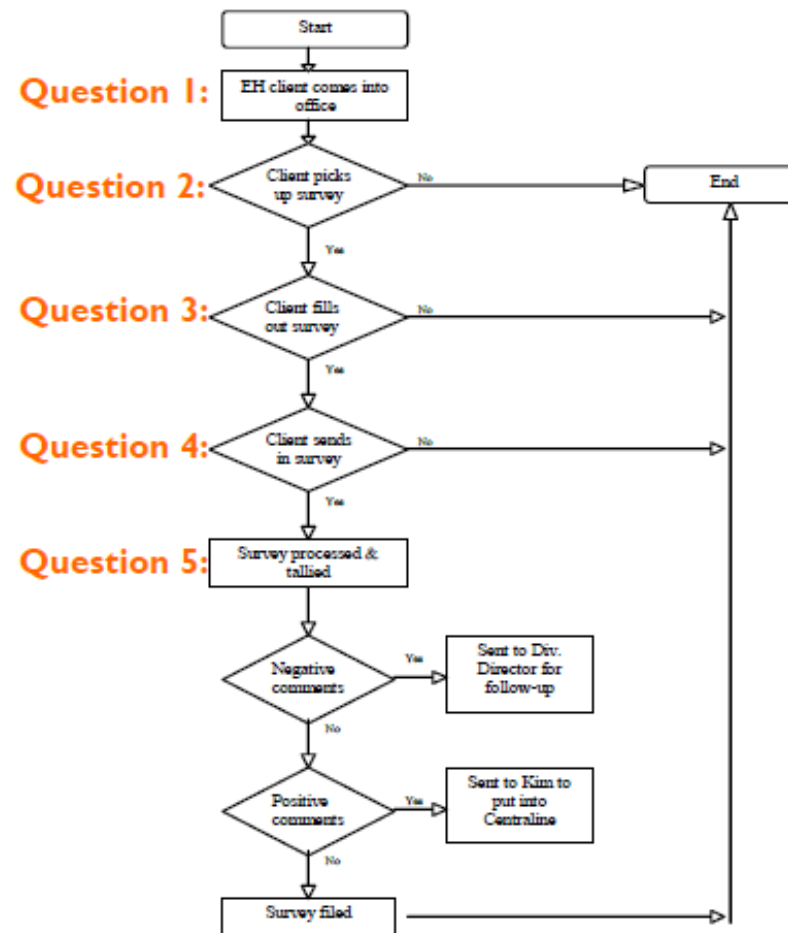
Overview

Task	Time Frame												Assign to:	
	2000	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Educate Staff: Essential Services Operational Definition Voluntary National Accreditation Process	█	█	█	█	█	█	█							PHD
Apply Operational Definition/ES to LCDOH				█	█									PHD
Apply for NACCHO Grant							█							PHD
Complete QI Process for Grant							█							PHD, Center Directors, and Supervisors
Continue with QI process for DOH							█	█	█	█	█	█		PHD
Select another QI project from Matrix									█	█	█	█		Accreditation Team
Apply for Accreditation									█	█				Entire Staff
Celebrate Accreditation										█				Entire Staff
Continue with QI process for DOH										█	█	█		Accreditation Team

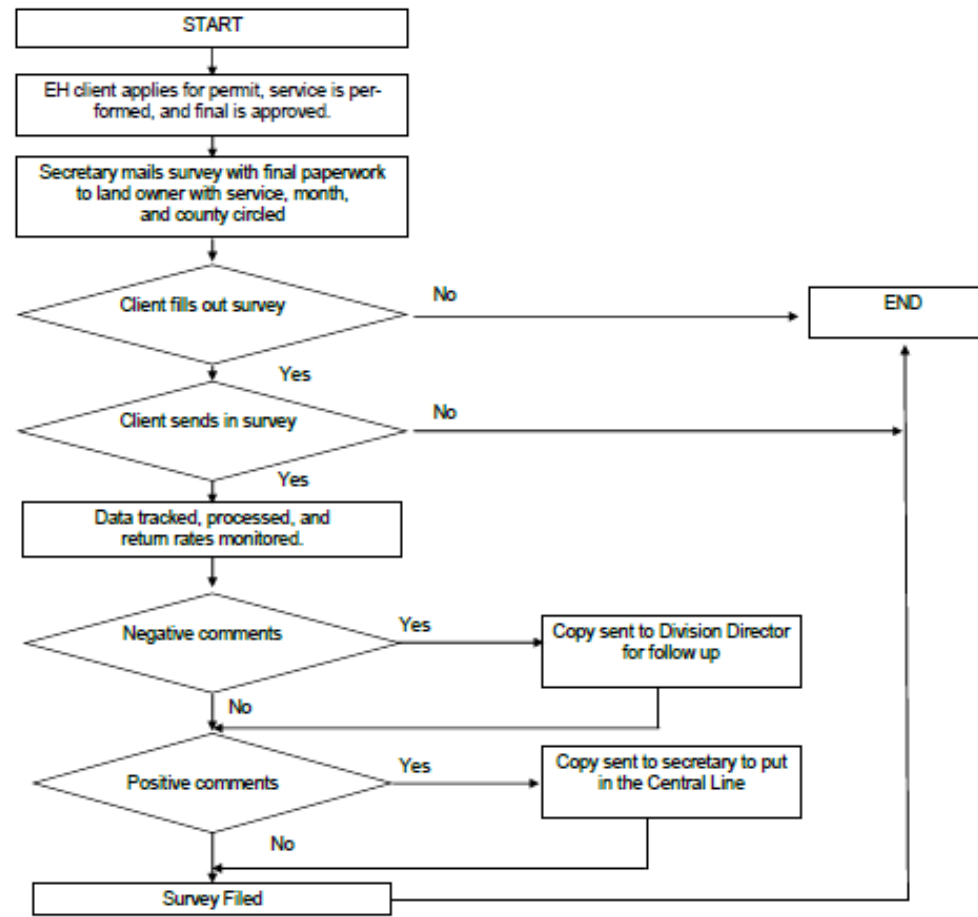
Storyboard



Central Michigan District Health Department Planning Flowchart



Central Michigan District Health Department Updated Flowchart



Central Michigan District Health Department Gantt Chart

MLC-3 CENTRAL MICHIGAN DISTRICT HEALTH DEPARTMENT TIMELINE														
TASK NAME	DATE	Q3 '09			Q4 '09			Q1 '09			Q2 '10			DONE?
		APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	
Step 1: Getting Started- Meet with MPH	04/01/09	X												YES
Step 2: Assemble the team- Initial team meeting	05/26/09		X											YES
Learning Sessions	06/01/09			X										YES
Step 3: Examine the current approach, Planning tools, & AIM statement	06/01/09			X										YES
Look at current survey data					X									YES
Review survey distribution					X									YES
Step 4: Identify possible solutions					X									YES
Decide on QI plan	06/01/09				X									YES
Step 5: Develop an improvement plan					X									YES
Develop proposed tool & proposed policy	06/01/09					X	X	X						YES
Pilot new survey (one county)	07/01/09								X					YES
Implement new survey										X	X	X	X	YES
Step 6: Test the theory						X	X	X	X	X	X			YES
Track surveys given out and received	07/01/09		X	X	X	X	X	X	X	X	X	X	X	YES
Increase data analysis efforts	08/09/09		X	X	X	X	X	X	X	X	X	X	X	YES
Meet with MPH	08/09/09					X							X	YES
Step 7: Study the results								X	X	X				YES
Step 8: Standardize the improvement										X	X	X		YES
Step 9: Establish future plans											X	X	X	YES

QUESTIONS?

