The Importance of Quality Improvement in Infection Control Programs

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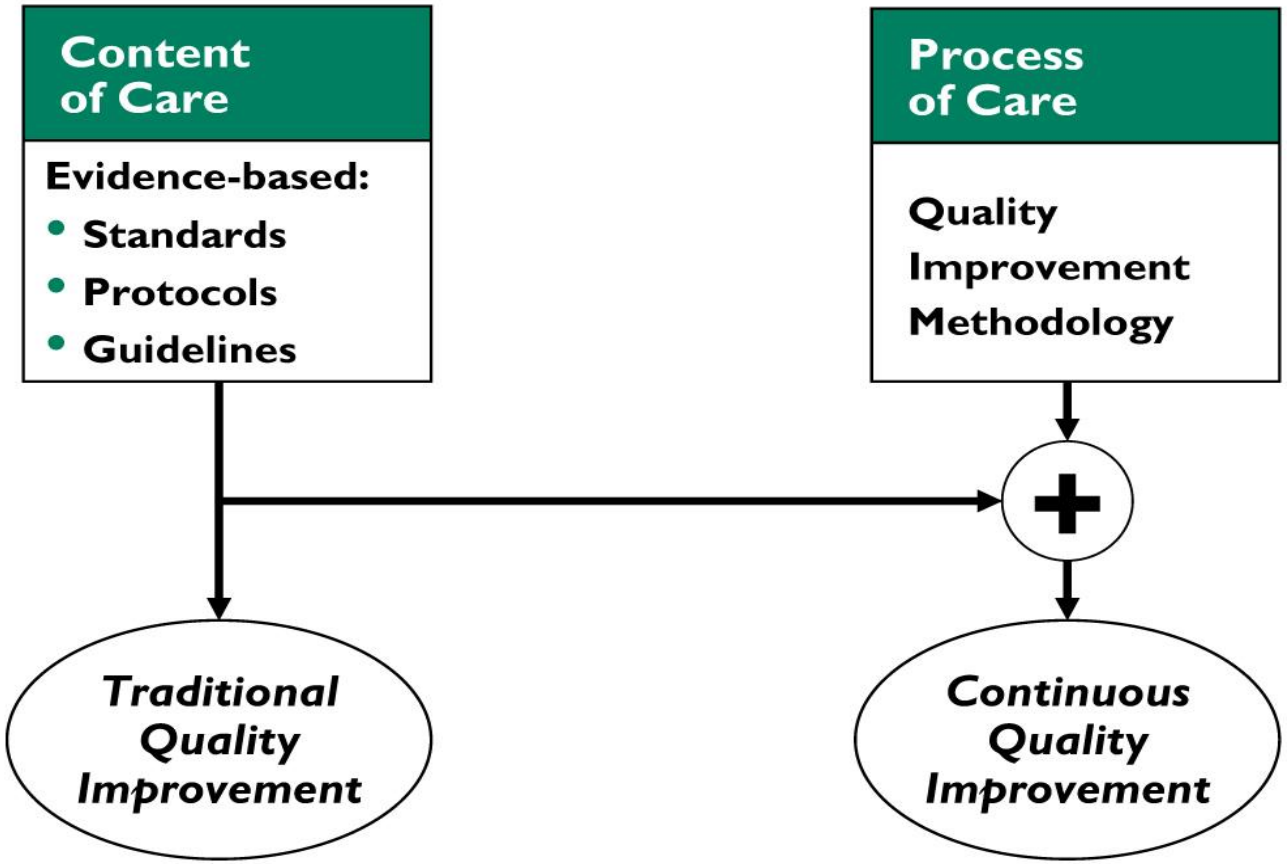
Defining Quality

- Doing the right thing
- At the right time
- In the right way
- To achieve the best possible results

The Agency for Healthcare Research and Quality. Retrieved from http://www.ahrq.gov/

Quality Improvement Integrates Content of Care and the Process of Providing Care



Adapted from Batalden and Stoltz (1993)

Quality improvement (QI) in public health is the use of a **deliberate** and **defined** process which is focused on activities that are responsive to community needs and improving population health.

Riley, W. J., Moran, J. W., Beitsch, L. M., Bialek, R., Cofsky, A. (2010). Defining Quality Improvement in Public Health. *Journal of Public Health Management and Practice, 16*(1), 5-7.

Use a **deliberate** and **defined** process

Examples of QI Models:

- CARE Model
- FADE (Focus, Analyze, Develop, Execute)
- Lean Model
- Model for Improvement
- Six Sigma

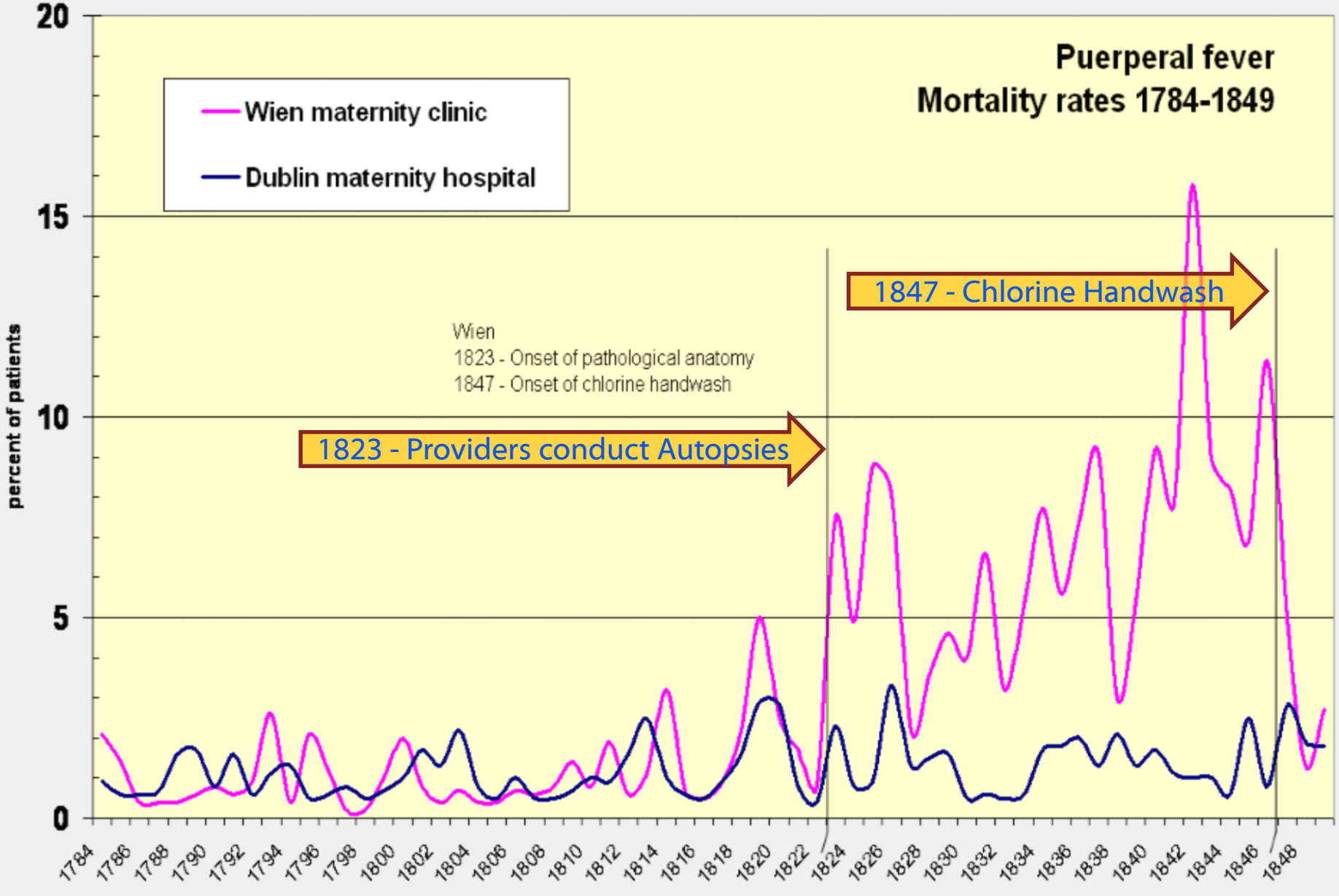
PDSA Cycle
The basic structure for QI projects

A cyclical process of measuring and improving a process or processes within a system

- **What are the Benefits of Quality Improvement?**

- Improves patient and population based **clinical outcomes**

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html



Ignaz Semmelweis. Retrieved from https://en.wikipedia.org/wiki/Ignaz_Semmelweis

- **Improves Efficiency**

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

- **Improves Efficiency**
  - # of cases captured by the surveillance system increased when data collection began in the laboratory
  - Improved procurement of supplies
  - Ensure all patients who need a blood culture have one drawn
  - Avoid duplication / error in inputting specimens into the database.

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

- **Proactively identifies and improves problems**

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

- **Proactively identifies and improves problems**
  - **Report all errors**
  - **Early evaluation of surveillance system**

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

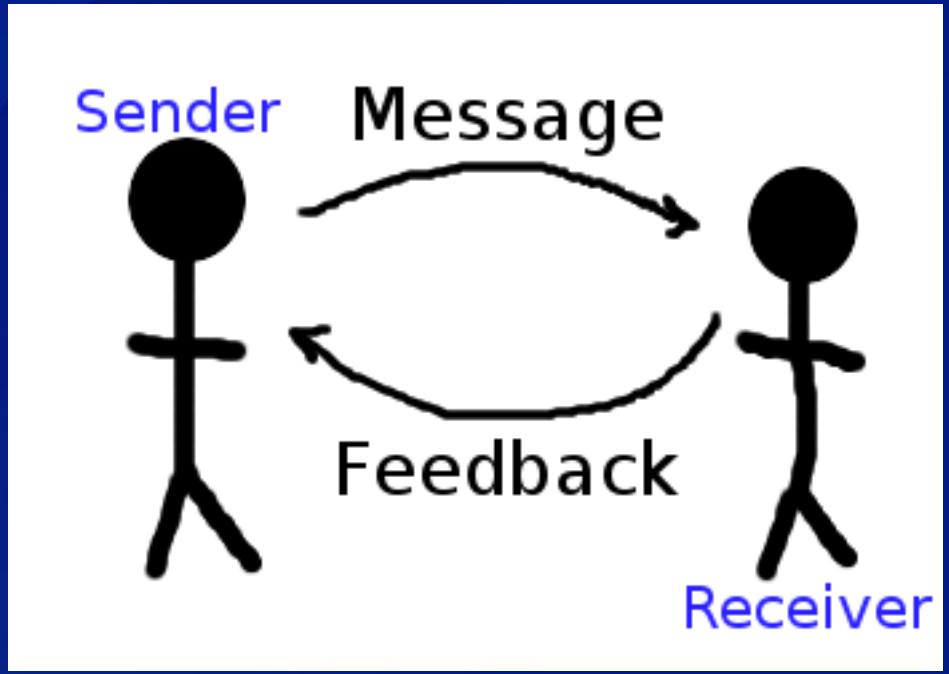
- **Avoids costs** associated with inefficient and unreliable processes

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

- **Avoids costs** associated with inefficient and unreliable processes
  - Avoid duplication of staff needed to collect/ input data.
  - Use of a check-list for central line insertion

Quality Improvement. Retrieved from http://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/index.html

- **Enhances communication and accountability**



Safety Calendar

			1	2			
			3	4			
			5	6			
7	9	11	13	15	17	19	21
8	10	12	14	16	18	20	22
			23	24			
			25	26			
			27	28			
			29	30			
			31				

Month

September

Days without incident

16

Instructions (see next tab for blank form)

27	Indicates day without injury, e.g. "On the 27th of the month we had zero accident or recordable incidents."
11	Indicates day with injury, e.g. "On the 11th of the month we had an accident or recordable incident."

Days without incident

16

Subtract last green date (27) from last red date (11) to get continuous "days without incident" (16).

The larger this number is the better your safety record.

Printing instructions: legal sized paper (A3), landscape

101 Kaizen Templates. Retrieved from http://gembapantarei.com/2008/01/101_kaizen_templates_safety_cross.html

PDSA Cycle
The basic structure for QI projects

Step 1: Plan

Plan changes aimed at improvement using information from root cause analysis.

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The basic structure for QI projects

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Plan changes aimed at improvement using information from root cause analysis.

CARE Model

FADE

Lean Model

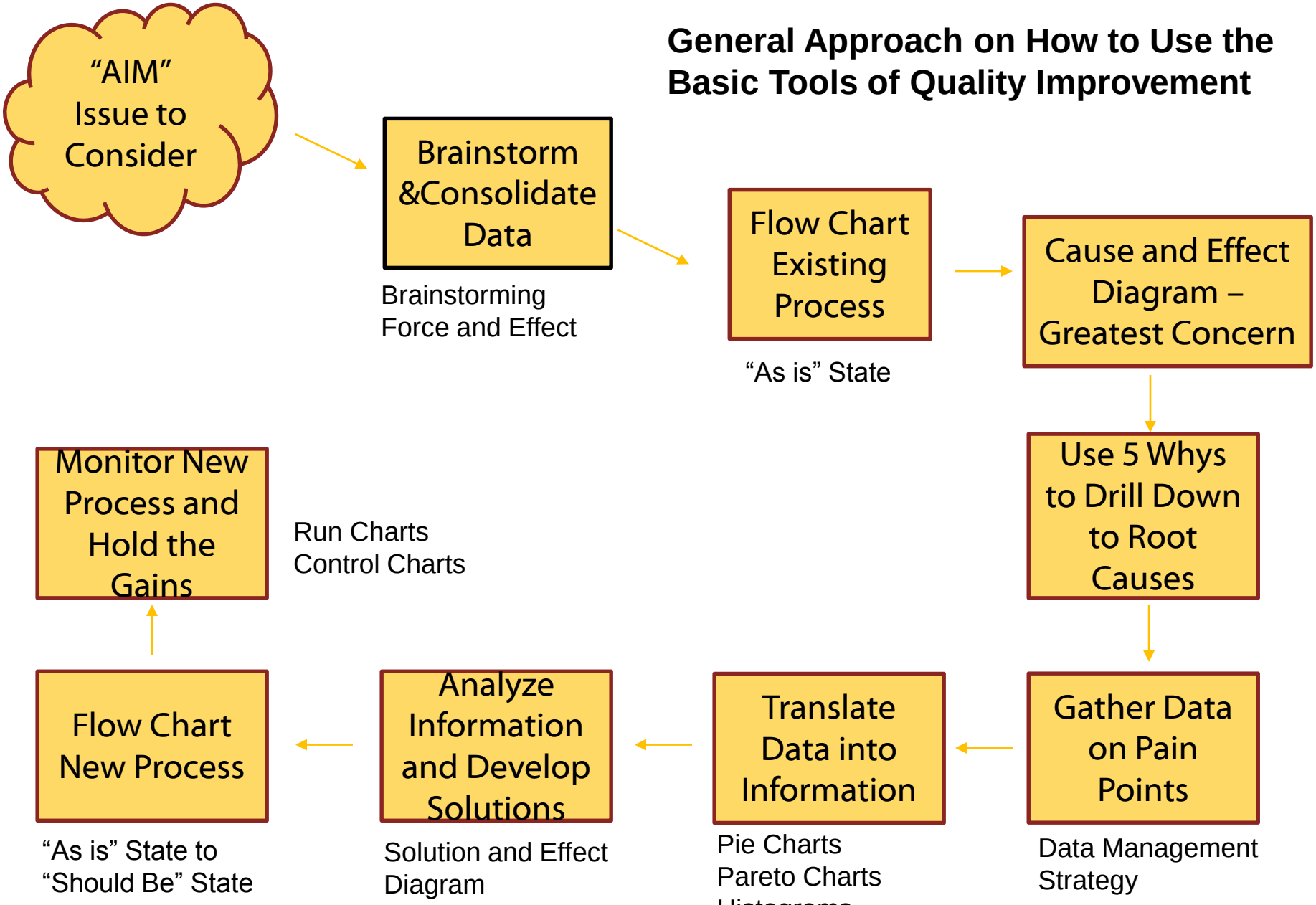
Model for Improvement

Six Sigma

Tools

- Flow Chart
- Fishbone Diagram
- Pareto Chart
- Check Sheet
- Histogram
- Scatter Diagram
- Control Chart

General Approach on How to Use the Basic Tools of Quality Improvement



Source: Blalek, R., Duffy, G. L., Moran, J. W. (2009). *The Public Health Quality Improvement Handbook*. Milwaukee, WI: American Society for Quality, Quality Press

PDSA Cycle
The basic structure for QI projects

Step 1: Plan – Plan changes aimed at improvement using information from root cause analysis.

Step 2: Do - Try out the test on a small scale.

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Step 3: Study – Analyze the data and compare the results to your predictions.

PDSA Cycle
The basic structure for QI projects

Step 1: Plan – Plan changes aimed at improvement using information from root cause analysis.

Step 2: Do – Try out the test on a small scale.

Step 3: Study – Analyze the data and compare the results to your predictions.

Step 4: Act - Make changes based on what was learned.

Tips for Successful QI

- **Strong and Empowered Leadership**
  - Facility leadership supportive.
  - Administration empowers a dedicated team to identify and remove barriers to implementation.
  - Strong implementation champion(s) are identified on wards.

Yamey, G., (2012). What are the barriers to scaling up health interventions in low and middle income countries? A qualitative study of academic leaders in implementation science. *Globalization and Health*, *8*(11).

Leatherman, S., Ferris, T. G., Berwick, D., Omaswa, F., Crisp, N. (2010). The role of quality improvement in strengthening health systems in developing countries. *International Journal for Quality in Health Care*, *22*(4), 237-243.

Tips for Successful QI

- **Embed QI in the existing health system**
  - Avoid a piecemeal approach
  - Focus on sustainability with broader health system in mind rather than isolated QI projects
  - Identify sustainable financing
  - Focus on training HCW to perform QI as part of daily work

Leatherman, S., Ferris, T. G., Berwick, D., Omaswa, F., Crisp, N. (2010). The role of quality improvement in strengthening health systems in developing countries. *International Journal for Quality in Health Care*, *22*(4), 237-243.

Tips for Successful QI

- **Pick simple interventions and outcome measures**
  - Begin with one or two interventions
  - Have a plan to scale up a successful intervention

Durand, M. (2010). Quality improvement and the hierarchy of needs in low resource settings: perspectives of a district health officer. *International Journal for Quality in Health Care*, *22*(1). 70-72.

Yamey, G., (2012). What are the barriers to scaling up health interventions in low and middle income countries? A qualitative study of academic leaders in implementation science. *Globalization and Health*, *8*(11).

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Tips for Successful QI

- **Implement QI at health care facilities where staff is ready to adopt the interventions as useful or necessary**

Maru D. S-R., Andrews J., Schwarz D., et al. (2012). Crossing the quality chasm in resource-limited settings. *Globalization and Health*, *8*(41).

Yamey, G., (2012). What are the barriers to scaling up health interventions in low and middle income countries? A qualitative study of academic leaders in implementation science. *Globalization and Health*, *8*(11).

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Quality Improvement Resources on the Web

- HRSA Quality Improvement Methodology- Training Modules http://www.hrsa.gov/quality/toolbox/methodology/index.html
- USAID – A modern Paradigm for Improving Healthcare Quality https://www.usaidassist.org/resources/modern-paradigm-improving-healthcare-quality-0
- HIVQUAL US/International. www.healthqual.org
- National Quality Center Academy. http://nationalqualitycenter.org/
- Quality Assurance Project. http://qaproject.org/
- Healthcare Communities. Quality Improvement Resource Center http://www.healthcarecommunities.org/ResourceCenter.aspx?CategoryID=8601&EntryID=33952
- Family Health International. https://www.fhi360.org/resource/quality-improvement-series
- Canada Patient Safety Institute, "New Approach to Controlling Superbugs": Starter kit, QI framework for controlling drug resistant pathogens in healthcare settings. Special focus on MRSA, VRE, and C.diff (http://www.patientsafetyinstitute.ca/en/toolsResources/Documents/Interventions/Infection%20Prevention%20and%20Control/NACS%20Getting%20Started%20Kit.pdf)

Questions?

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov