

# Quality Improvement and the WHO Global Safety Challenge

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Medicines Safety

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# Lemon Juice

In 1601, James Lancaster successfully conducted an experiment to illustrate the effectiveness of lemon juice to prevent scurvy. When did the British Navy adopt this treatment?

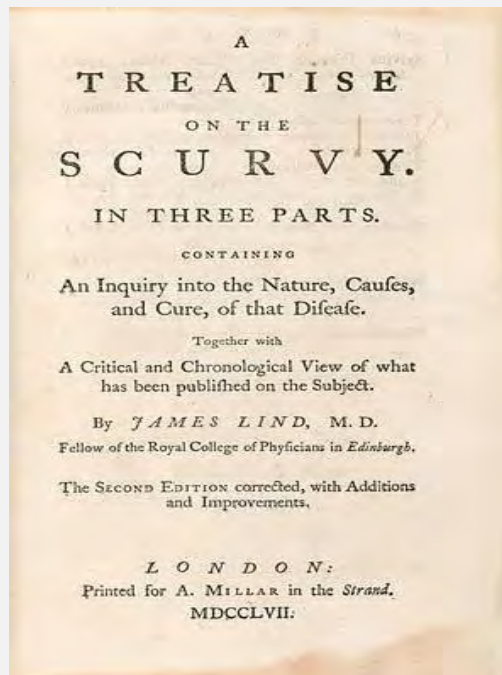
1. 1602
2. 1689
3. 1757
4. 1796

# Lemon Juice

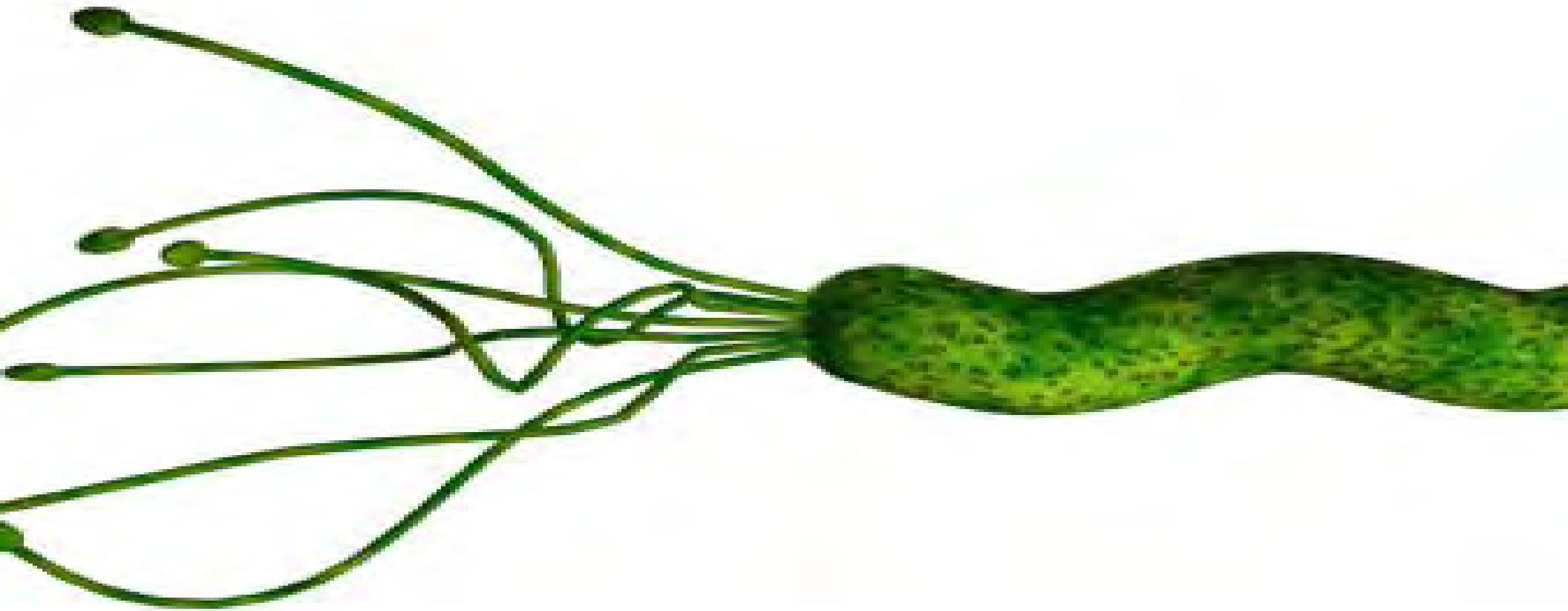
In 1601, James Lancaster successfully conducted an experiment to illustrate the effectiveness of lemon juice to prevent scurvy. When did the British Navy adopt this treatment?

1. 1602
2. 1689
3. 1757
4. 1796 (195 years later)

# Treatment of Scurvy



- Stephen J. Bown - Scurvy: How a Surgeon, a Mariner, and a Gentleman Solved the Greatest Medical Mystery of the Age of Sail; St. Martin's Press, 2004
- In 1601 lemon juice, as a protective against scurvy, is recorded by James Lancaster.
- In 1612, Woodall recommended citrus fruit for protection against scurvy on sea voyages.
- In 1753 James Lind published A Treatise on the Scurvy which portrays his experiment on-board the ship Salisbury in 1747.
- From 1772 to 1775 sailors on historic voyages with Captain James Cook remained free from scurvy.
- In 1796 lemon juice was officially introduced in the British Navy as a prophylactic against scurvy.
- In 1865 British Board of Trade adopted the policy for the merchant marine.



# Bacteria

How long did the NIH  
take to recommend  
the treatment of ulcer  
as suggested by  
Marshall in his 1984  
Lancet Article?

1. 2 years
2. 5 years
3. 10 years
4. 20 years

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# Treatment of Ulcer – Marshall

The Lancet • Saturday 16 June 1984

## UNIDENTIFIED CURVED BACILLI IN THE STOMACH OF PATIENTS WITH GASTRITIS AND PEPTIC ULCERATION\*

BARRY J. MARSHALL

J. ROBIN WARREN

*Departments of Gastroenterology and Pathology,  
Royal Perth Hospital, Perth, Western Australia*

**Summary** Biopsy specimens were taken from intact areas of antral mucosa in 100 consecutive consenting patients presenting for gastroscopy. Spiral or curved bacilli were demonstrated in specimens from 58 patients. Bacilli cultured from 11 of these biopsies were gram-negative, flagellate, and microaerophilic and appeared to be a new species related to the genus *Campylobacter*. The bacteria were present in almost all patients with active chronic gastritis, duodenal ulcer, or gastric ulcer and thus may be an important factor in the aetiology of these diseases.

- **1979:** Dr. Robin Warren, pathologist at Royal Perth Hospital, Australia found bacteria in stomach of patients
- **1981:** Dr. Barry Marshall starts residency
- **1982:** Marshall cultivates bacteria: *Helicobacter pylori*, 100% in Duodenal Ulcer and 77% in Gastric Ulcer
- **1984:** first publication in Lancet; presents treatment of ulcer with common antibiotic
- **1994:** National Institute of Health recommends treatment of ulcer as suggested by Dr. Marshall

# QI

In an article in the Journal of Quality Improvement, 92 QI projects were compared. What was the timeframe from problem identification to completion of first pilot?

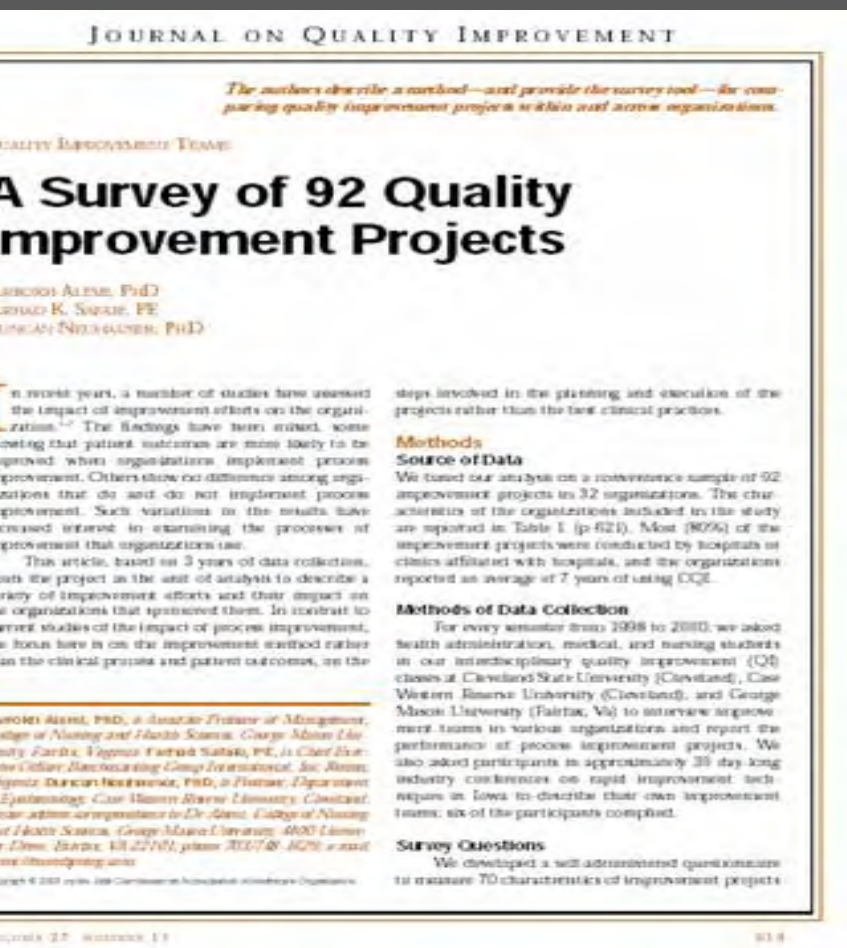
- 23 days
- 60 days
- 397 days
- 504 days

# QI

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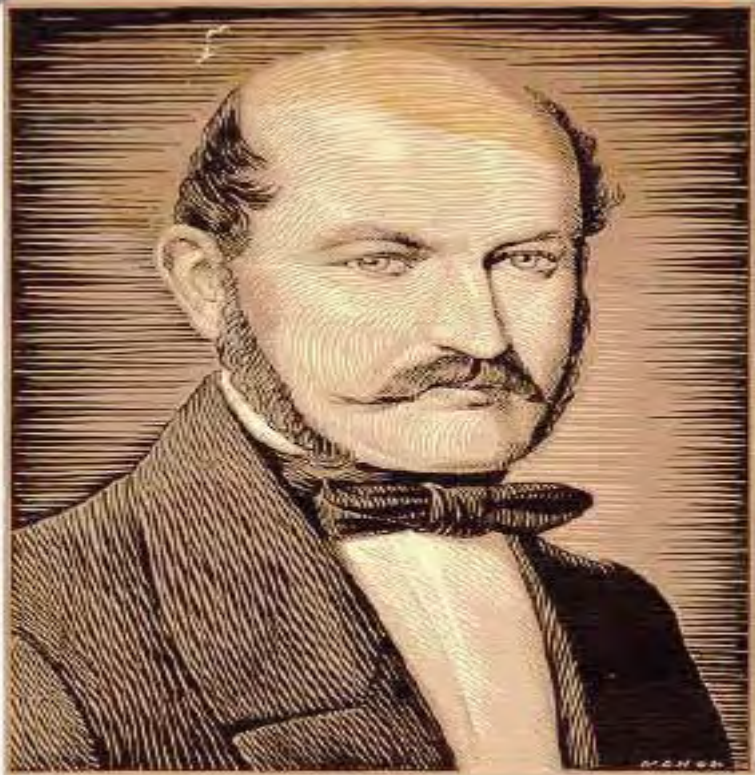
1. 23 days
2. 60 days
3. 397 days
- 4. 504 days**

# Journal of Quality Improvement



- Alemi F, Safaie F, Neuhauser D. "A Survey of 92 Quality Improvement Projects." *Journal of Quality Improvement* 2001, 27(11): 619-632
- 504 days from problem identification to completion of first pilot
- 397 days from first team meeting to the end of first cycle
- 75 days to describe current situation in flowchart
- 62 days for data collection if change was improvement

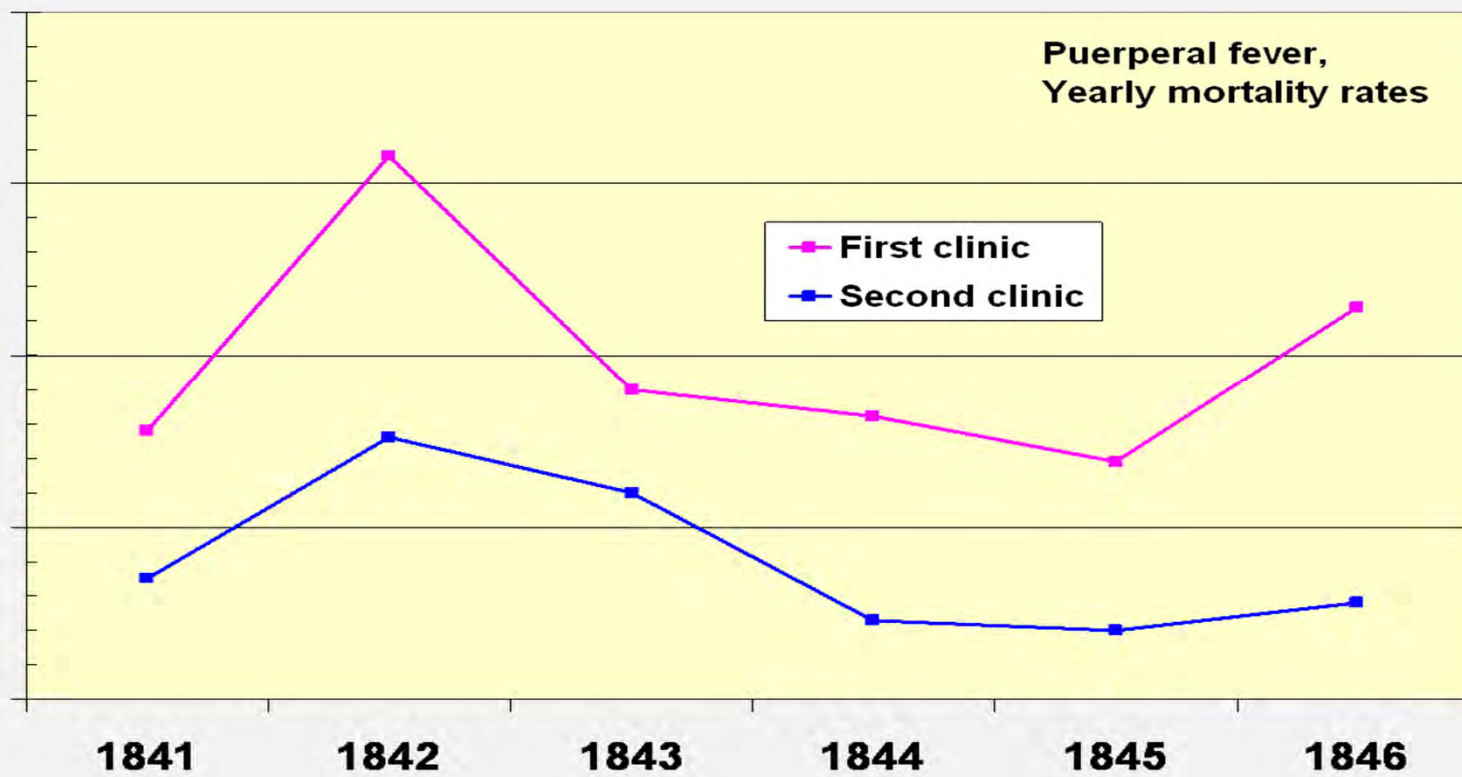
# The Saviour of Mothers



SEMMEIWEIS

- Ignaz Philipp Semmelweis
- Free Antenatal Clinic
- Training for midwifery and medical students

# Mortality 10% vs 4%



- Even 'street births' had lower mortality

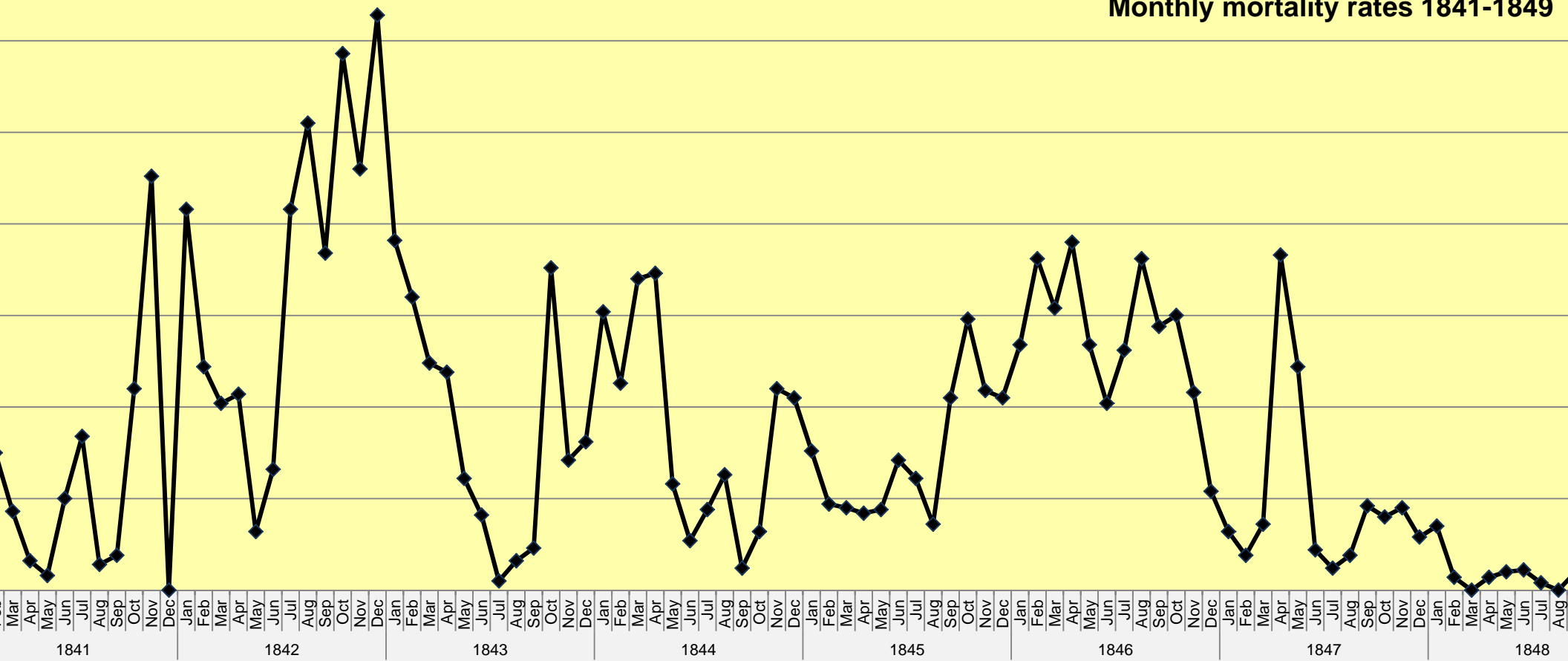
Hanninen, O.; Farago, M.; Monos, E. (September-October 1983), "[Ignaz Philipp Semmelweis, the prophet of bacteriology](#)", *Infection Control* 4 (5): 367-370



# Handwashing



# Puerperal Fever Monthly mortality rates 1841-1849

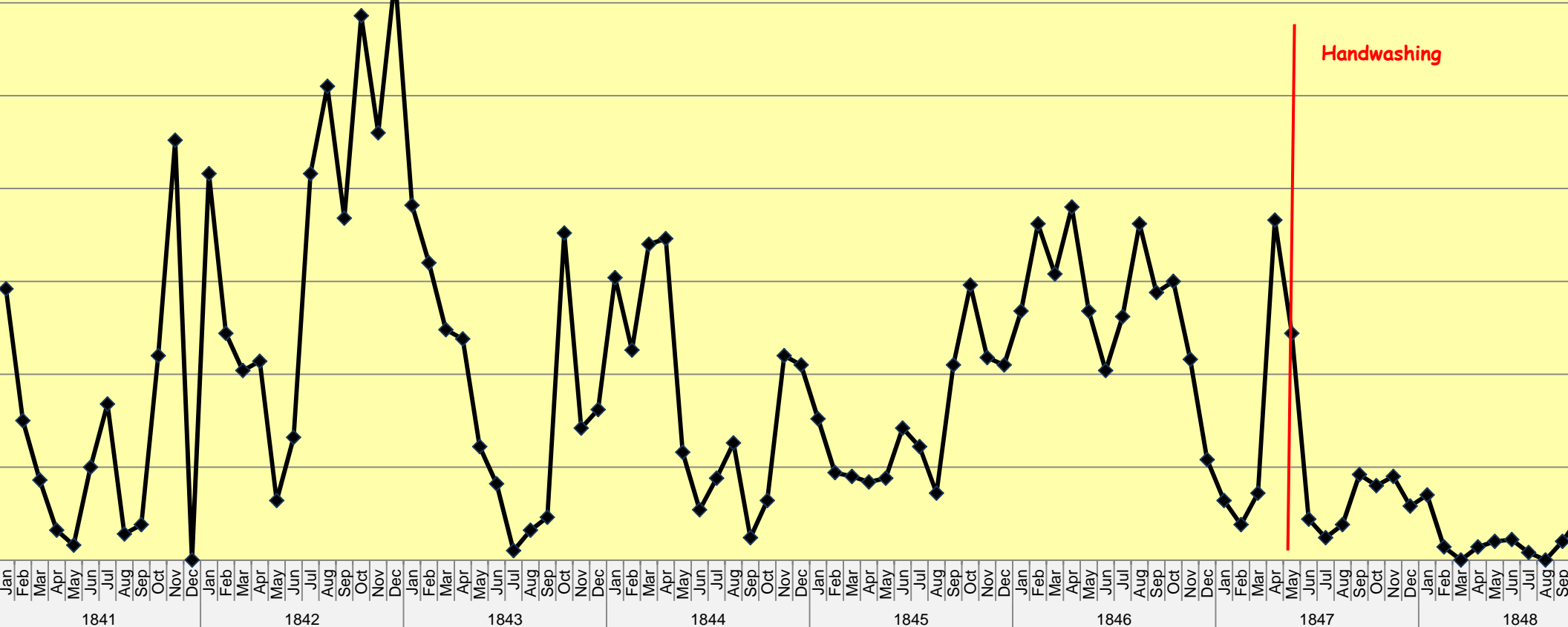




# What information can we get from the chart?

- What was the desired outcome from introducing handwashing?
- Where on the chart did handwashing commence?
- A spot measurement of mortality in Feb 1847 and again in Sep 1847 would have revealed what?

# Puerperal Fever Monthly mortality rates 1841-1849



# Why Quality Improvement

*Quality improvement is all about 'change'*



# Quality improvement

What are we trying to accomplish?

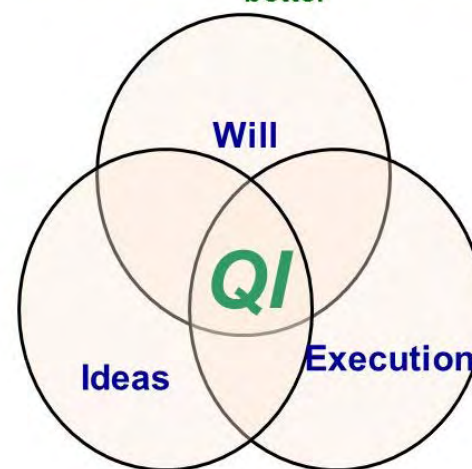
How will we know that a change is an improvement?

What change can we make that will result in improvement?

## Key Factors for Quality Improvement

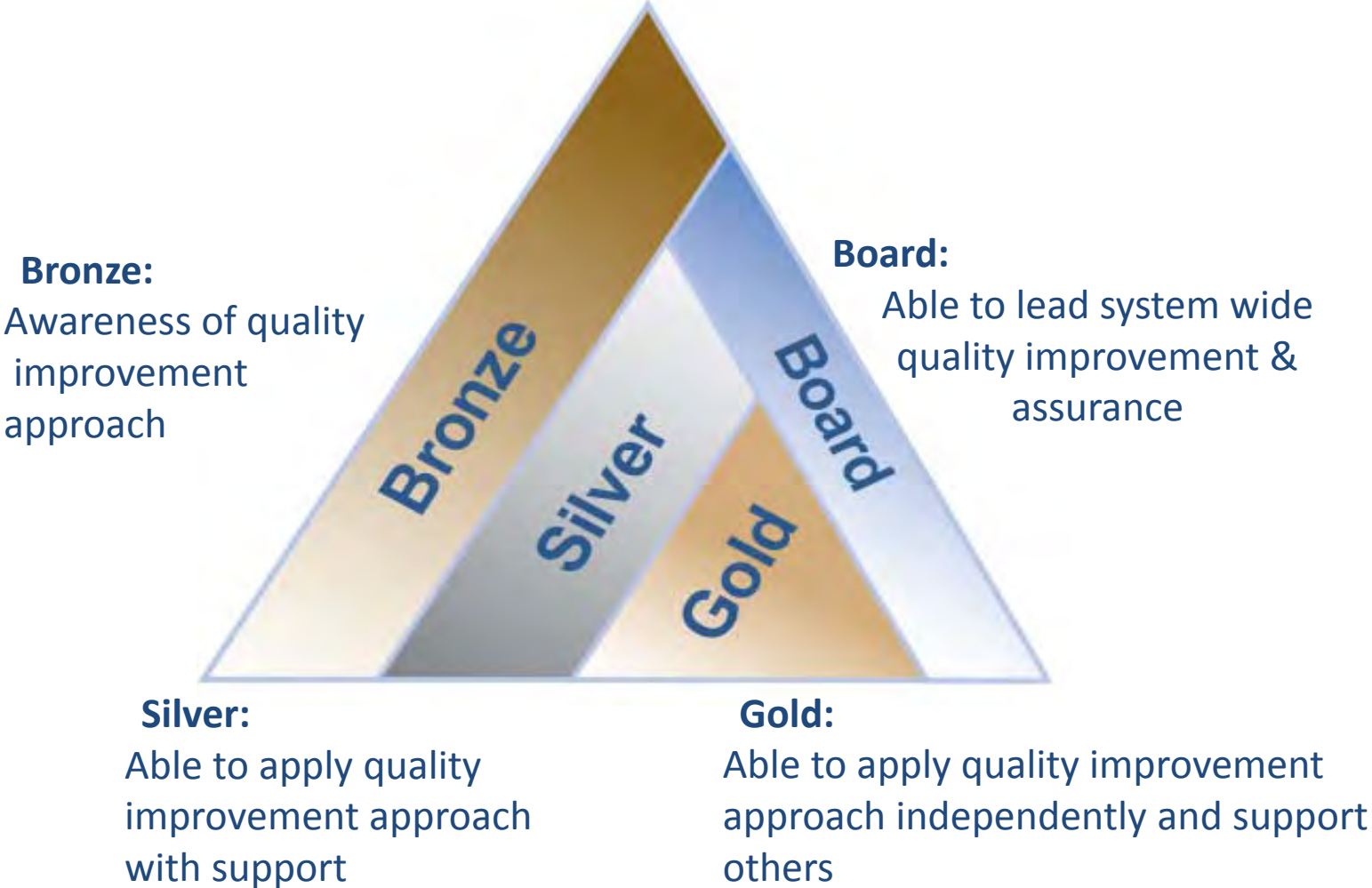
Having the Will (desire) to change the current state to one that is better

Developing Ideas that will contribute to making processes and outcome better



Having the capacity to apply CQI theories, tools and techniques that enable the Execution of the ideas

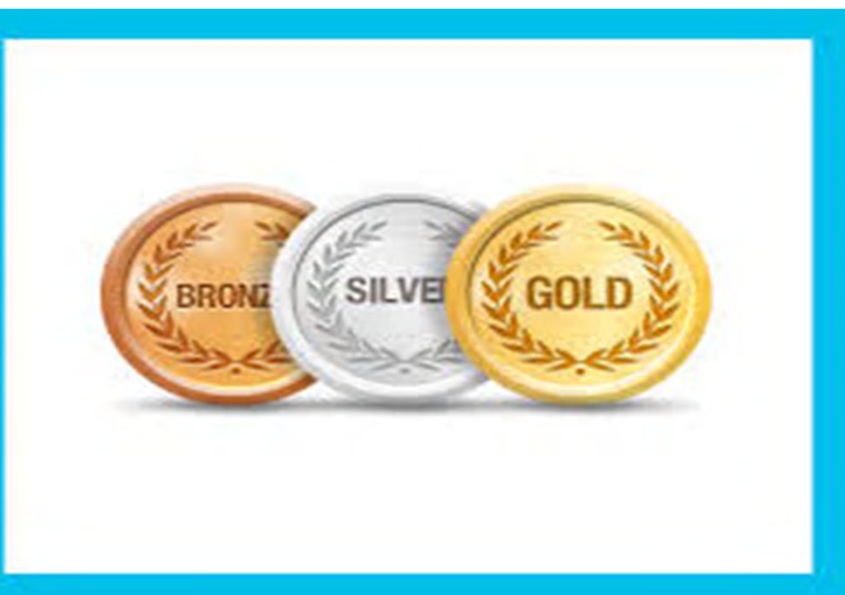
# Improving Quality Together - Building skill & capability in NHS Wales



1000%

# Quality Improvement and Medicines Safety

## Improving the System...





# Medicines Safety programme in Wales

## Improve Quality Improvement Capacity and Capability

- Bronze training available and promoted to all
- Silver level training for pharmacy / prescribing lead workforce
- National 'Gold' network for Medicines Safety leads – coaching, data support, additional training

## Measurement

- National Dashboard
- Process AND Outcome data
- Medicines admissions, prescribing data and audit plus

## National Collaborative Programme

- Quarterly meetings – shared learning, education, celebration
- Key areas – Falls, Bleeds, Acute Kidney Injury

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