Best-Practices in ORAL OPIOID AGONIST THERAPY Collaborative

Got Data, Now What? Moving from Data to QI

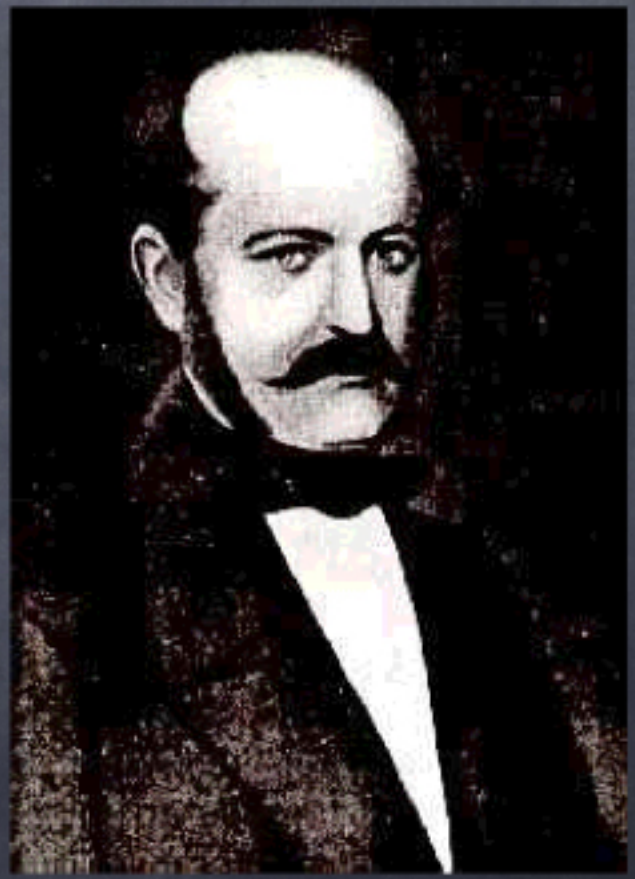
Clemens Steinbock, MBA

Consultant, BC Centre for Excellence in HIV/AIDS

Project Director, HRSA Ryan White HIV/AIDS Program, Centre for Quality Improvement and Innovation

Learning by steps

- Ignaz Philipp Semmelweis: 1846 - Assistant of First Obstetrical Clinic in Vienna, Wiener Allgemeinen Krankenhaus, 1847 - Discovered that touching other women who have childbed fever infect other, 1861 - book on this topic
- Data: 1846 - up to 30% of women died in Dec 1846; Mar 1949 - no a single woman died
- Observations: different rates of diffusion, knowledge alone does not change practice, power of test cycles



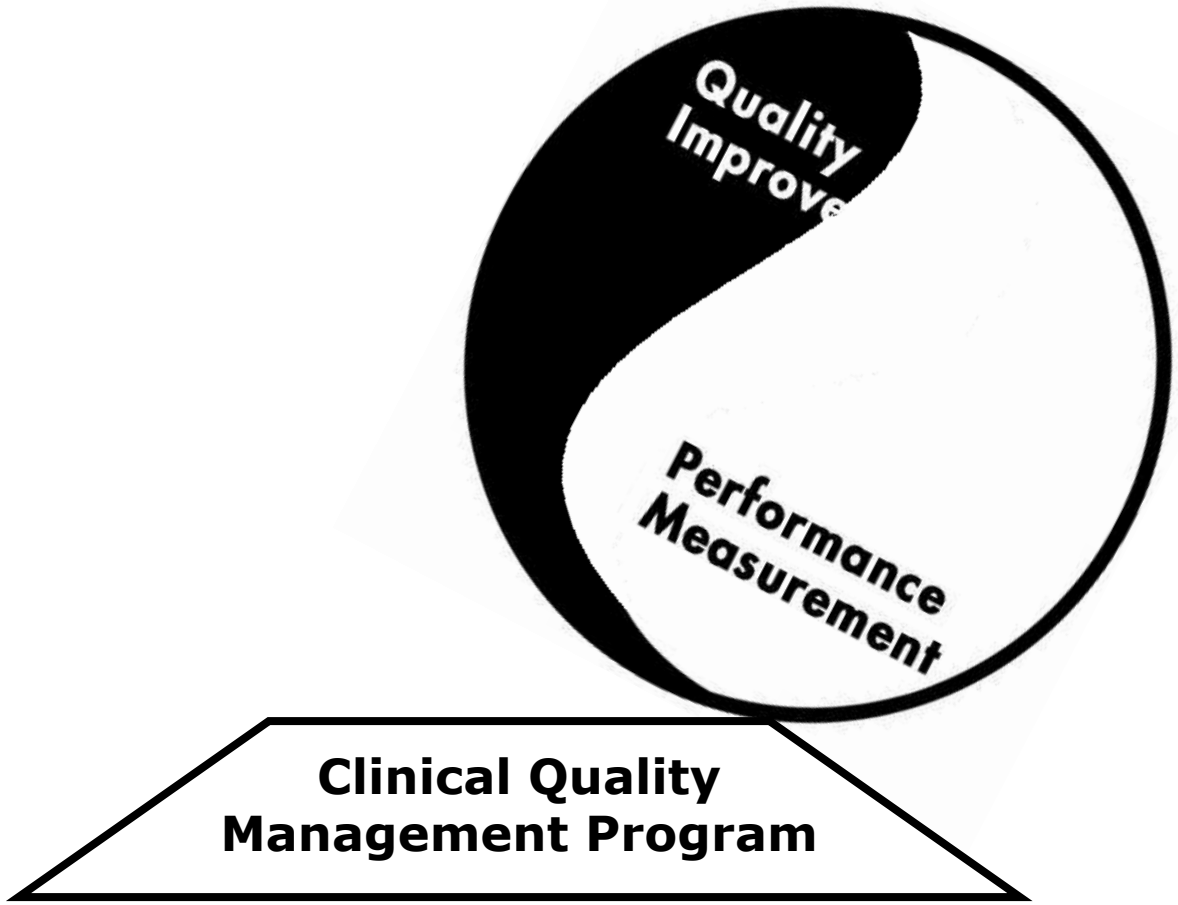
[Ignaz Philipp Semmelweis, The Etiology, Concept, and Prophylaxis of Childbed Fever, University of Wisconsin Press, 1983]

QI Literacy

- *Data are the improvement language!*
- *Variation is the voice of the system!*

Find a Balance between Measurement and Improvement

What we want to avoid……..



Barriers to Putting Data into Action

- Don’t even know where to get data/info
- Paralysis by analysis
- No one is interested in it
- Defensiveness
- Too complex to understand/
- Incorrect interpretation of data
- No ideas about promising interventions

Less is more effect

- Which city is bigger?
- Study: testing of German and American students which cities in Germany and the US are larger
- Findings: American cities got 71% of American cities right and 73% German cities right
- Conclusion: a less knowledgable group often makes better or equal inferences than a more knowledgable group less knowledgable group

[Goldstein, Psychological Review 109, 75-90, 2002]

Overthinking

- How long should a radiologist look at a film?
- If radiologists look too long at a film, the start seeing things that are not there; they begin to overreact to slight irregularities in normal structures and identify non-existent malformations
- Finding: about 38 seconds

[Potchen, Journal of the American College of Radiology3, 423-32, 2006]

Kubler Ross Stages of Coping with Data

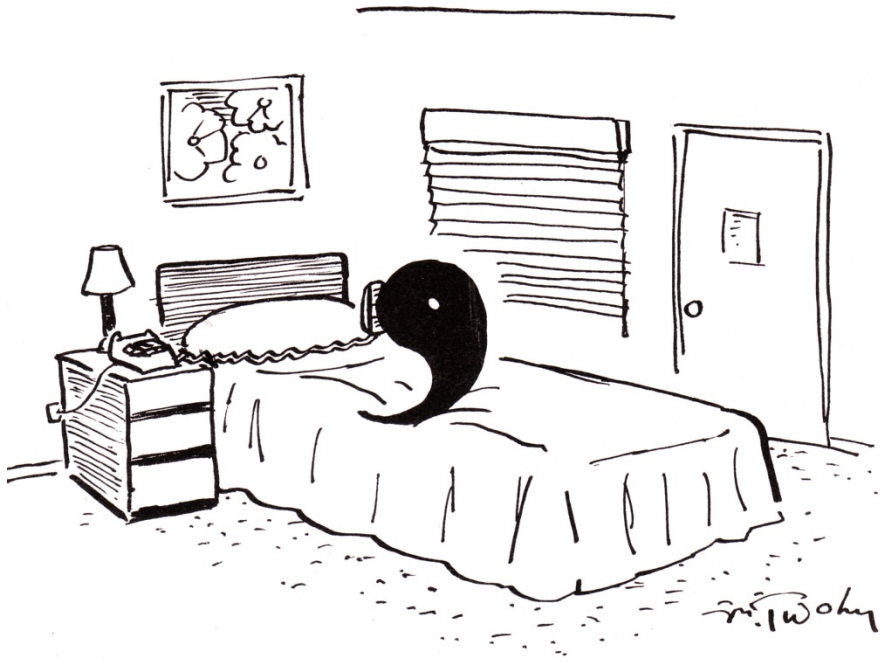
- Denial: “The data are wrong….”
- Anger: “The data are right, but it’s not a problem…”
- Bargaining: “The data are right, it’s a problem, but it’s not *my* problem…”
- Acceptance: “The data are right, it’s a problem, it’s my problem…”

“Every system is perfectly designed to get the results it gets.”

Paul Batalden, M.D

QI Principle

QI performance measurement alone is not quality improvement.



"Miss you, too."

QI Principle

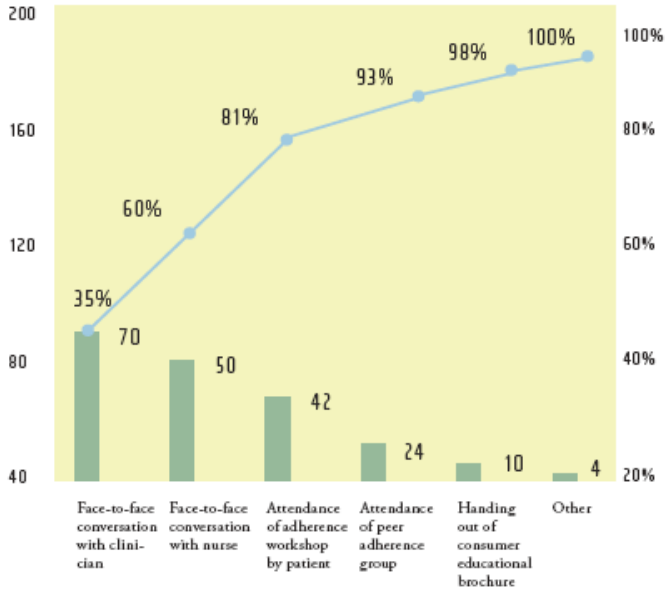
Learn through small, incremental changes to achieve continual improvements.

Got Data: Now What?

- Analyze (understand the data)
- Prioritize areas for action
- Communicate with stakeholders
- Take improvement actions

First, Look at the Data - What Do They Tell Us?

- How bad is the problem?
  - How many? How often? How severe?
- Is the performance stable, or is there a trend?
  - Getting better? Getting worse?
- How does our performance compare to others'?
- What are the data limitations?



Options for Improvement Actions

- **'Do nothing!'** – if results are within expected ranges and goals, frequently repeat measurement
- **'Take Immediate Individual Action'** – follow-up on individual pts (missed appointments, pts not on meds, etc.) and/or provider
- **'Quick PDSA'** – develop a quick pilot test
- **'Launch QI Project!'** – set up a cross-functional team to address identified aspects of chronic care

Collect “Just enough” Data

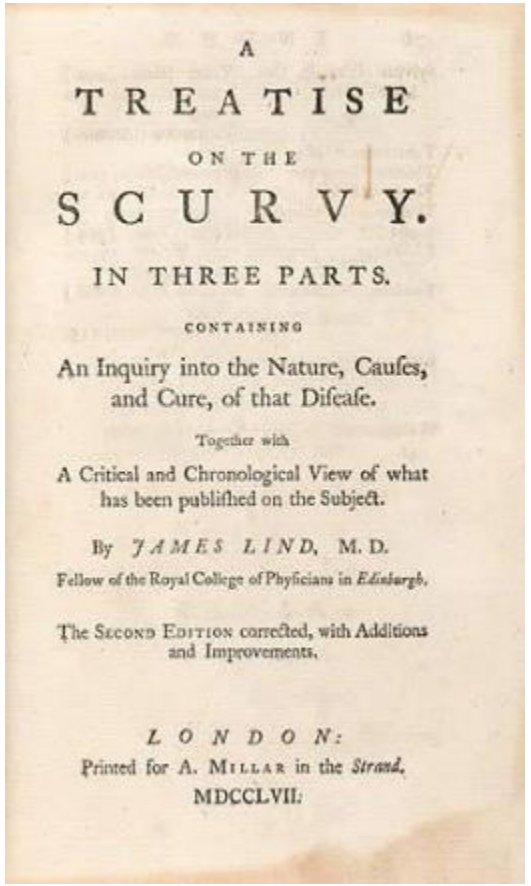
- The goal is to improve care, not prove a new theorem
- 100% is not needed
- Maximal power is not needed
- In most cases, a straightforward sample will do just fine

Quiz

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

Treatment of Scurvy



A

TREATISE

ON THE

SCURVY.

IN THREE PARTS.

CONTAINING

An Inquiry into the Nature, Cauſes, and Cure, of that Diſeaſe.

Together with

A Critical and Chronological View of what has been publiſhed on the Subject.

By *JAMES LIND*, M. D.

Fellow of the Royal College of Phyſicians in *Edinburgh*.

The SECOND EDITION corrected, with Additions and Improvements.

LONDON:

Printed for A. MILLAR in the *Strand*,

MDCCLVII.

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

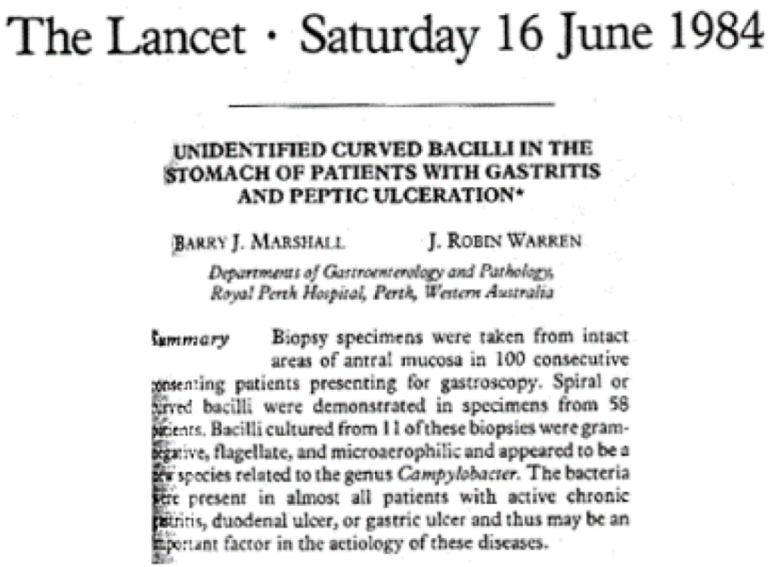
- In 1601 lemon juice, as a protective against scurvy, is recorded by James Lancaster.
- In 1612, Woodall recommended citrus fruit for protection against scurvy on sea voyages.
- In 1753 James Lind published A Treatise on the Scurvy which portrays his experiment on-board the ship Salisbury in 1747.
- 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.

Quiz

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

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 actiology 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

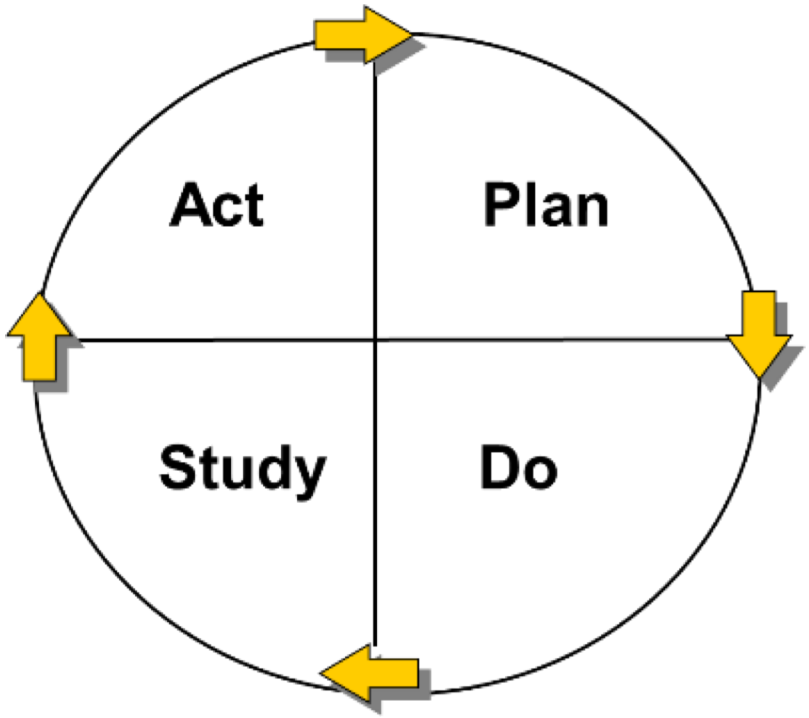
1982: Marshall cultivates bacteria: Helicobacter pylori, 100% in Duodenal Ulcer and 77% in Gastric Ulcer

1984: first publication in Lancet; presents treatment of ulcer with common antibioticum

1994: National Institute of Health recommends treatment of ulcer as suggested by Dr. Marshall

“How can we accelerate change and improvements.”

PDSA Cycle

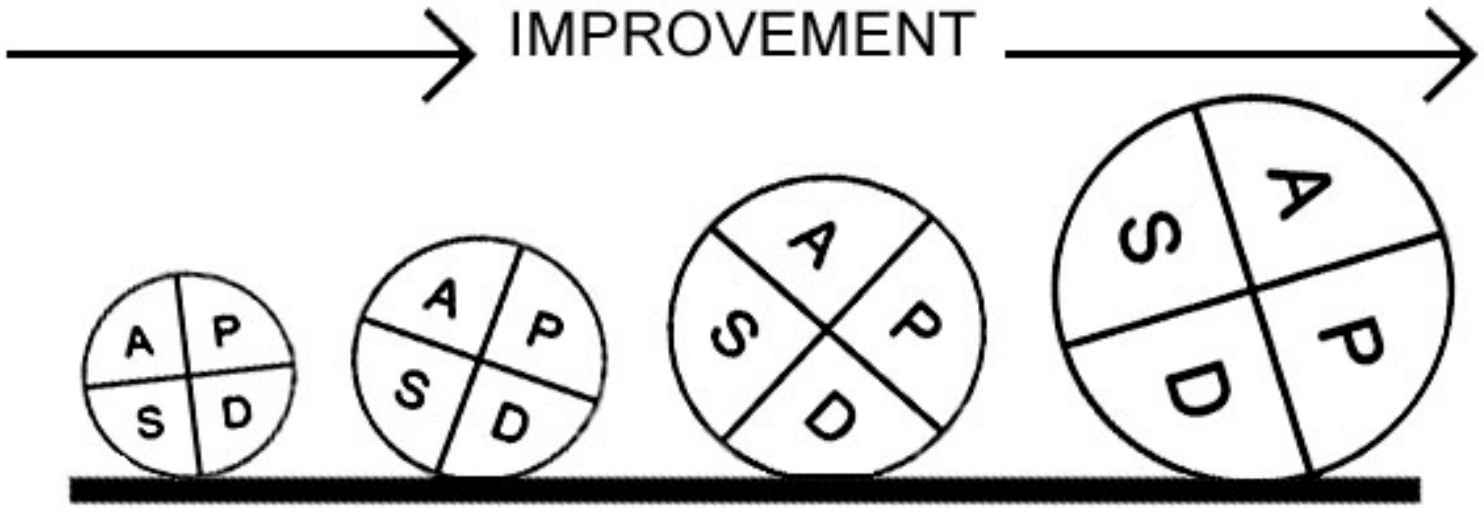


Why use the PDSA Cycle to test for change?

- Increase your confidence that the change will result in improvement
- Learn to adapt the change to conditions in the local environment
- Minimize resistance when you move to implementation

PDSA Cycle

Start



Small-scale test

Follow-up test

Wide-scale tests

Implementation

PDSA Cycle Tips

- “What change could you test by next Tuesday?”
- Learn from others (‘*Steal shamelessly, share senselessly*’)
- Volunteers at first
- Useful, not perfect, data
- Start Small - “Rule of 1”:
  - 1 facility
  - 1 office
  - 1 provider
  - 1 patient

Hand washing in Pakistan

Introduction of plain soap and hand washing promotion resulted in:

- 53% lower incidence of diarrhea
- 50% lower incidence of pneumonia than controls
- 34% lower incidence of impetigo

Effect of handwashing on child health: a randomised controlled trial

Stephen P Luby, Mobina Agboatwalla, Daniel R Feikin, John Painter, Ward Billhimer MS, Arshad Altaf, Robert M Hoekstra

Summary

Background More than 3·5 million children aged less than 5 years die from diarrhoea and acute lower respiratory-tract infection every year. We undertook a randomised controlled trial to assess the effect of handwashing promotion with soap on the incidence of acute respiratory infection, impetigo, and diarrhoea.

Methods In adjoining squatter settlements in Karachi, Pakistan, we randomly assigned 25 neighbourhoods to handwashing promotion; 11 neighbourhoods (306 households) were randomised as controls. In neighbourhoods with handwashing promotion, 300 households each were assigned to antibacterial soap containing 1·25% triclocarban and to plain soap. Fieldworkers visited households weekly for 1 year to encourage handwashing by residents in soap households and to record symptoms in all households. Primary study outcomes were diarrhoea, impetigo, and acute respiratory-tract infections (ie, the number of new episodes of illness per person-weeks at risk). Pneumonia was defined according to the WHO clinical case definition. Analysis was by intention to treat.

Findings Children younger than 5 years in households that received plain soap and handwashing promotion had a 50% lower incidence of pneumonia than controls (95% CI −65% to −34%). Also compared with controls, children younger than 15 years in households with plain soap had a 53% lower incidence of diarrhoea (−65% to −42%) and a 34% lower incidence of impetigo (−52% to −16%). Incidence of disease did not differ significantly between households given plain soap compared with those given antibacterial soap.

Interpretation Handwashing with soap prevents the two clinical syndromes that cause the largest number of childhood deaths globally—namely, diarrhoea and acute lower respiratory infections. Handwashing with daily bathing also prevents impetigo.

Introduction

Every year, more than 3·5 million children aged less than 5 years die from diarrhoea and acute lower respiratory-tract infection.[1] These deaths are concentrated in low-income communities in developing countries.[2–4] Several studies have shown that regular handwashing with soap reduces the incidence of diarrhoea in children younger than 5 years in communities with a high incidence of diarrhoea,[5–7] although we are unaware of any reports of the effect of handwashing on acute respiratory-tract infections in settings where pneumonia is a leading cause of death.

Impetigo is another condition that is common in low-income countries with high humidity, which affects mothers of young children. A previous study[8] in Karachi, Pakistan, investigated the effect of antibacterial soap on impetigo. Incidence of impetigo in children living in households receiving antibacterial soap (1·10 episodes per 100 person-weeks) was 23% lower than that in households receiving plain soap (p=0·28) and was 43% lower than the standard habit and practice controls (p=0·02).

In Karachi, more than 4 million low-income residents live in squatter settlements where they do not legally

[Lancet 2005, Jul 16-22, 366 (9481), 225-33]

QI Challenge

How can you accelerate change and improvements to increase the number of OUD patients who are on oOAT and retained in treatment!