Nuts and Bolts of Quality Improvement

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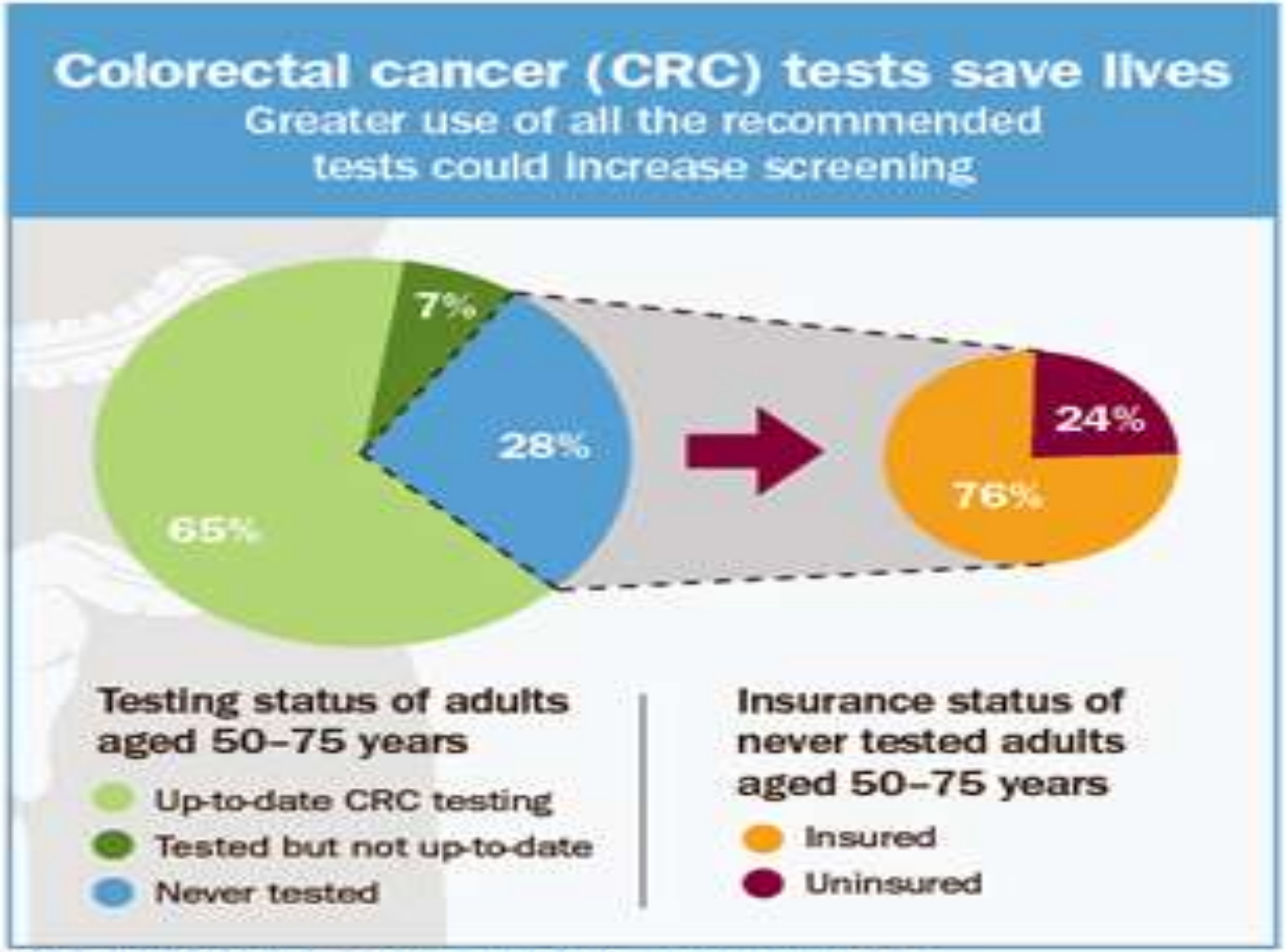
QUALITY IMPROVEMENT ADVISOR

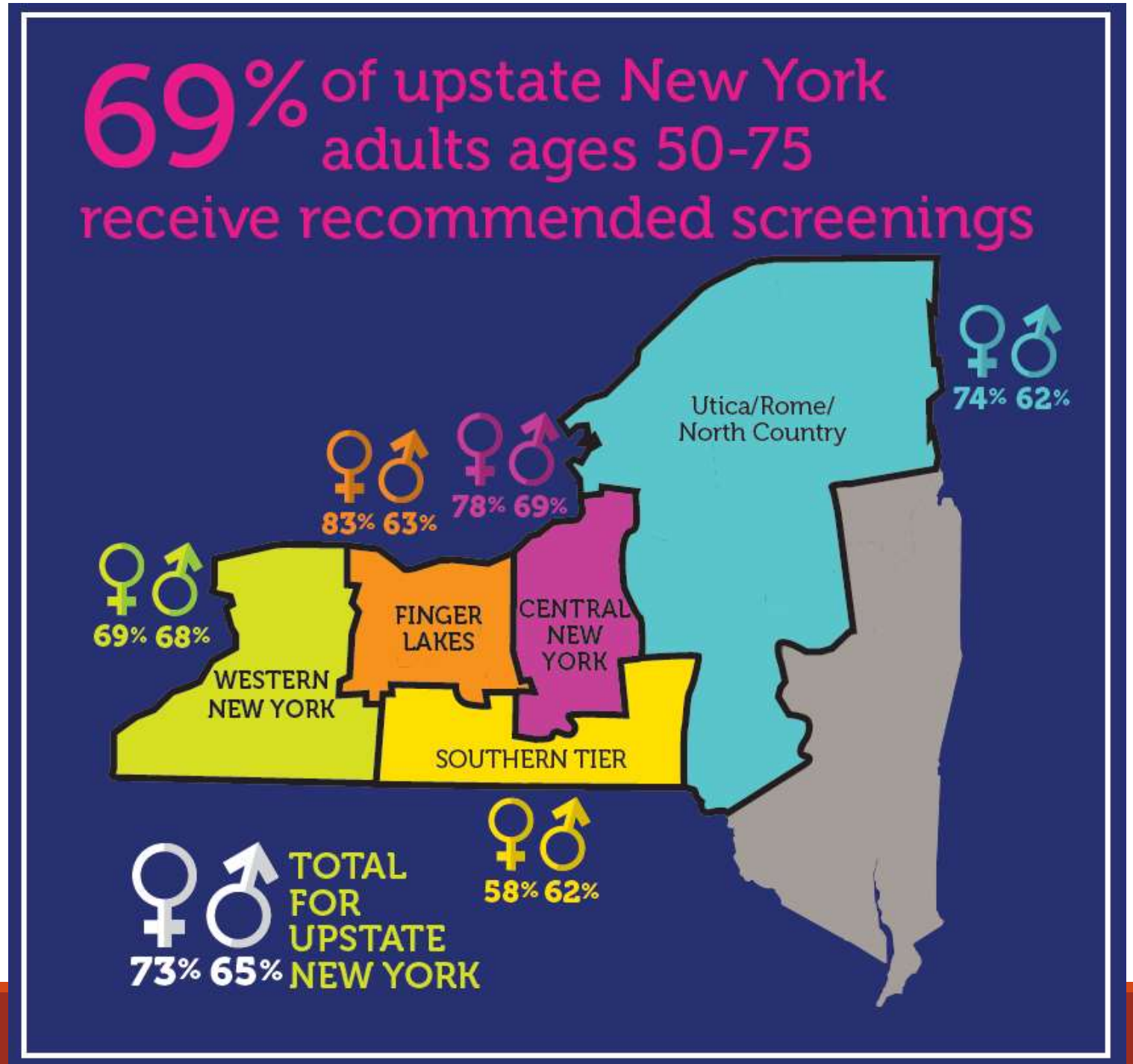
The First Law of Improvement

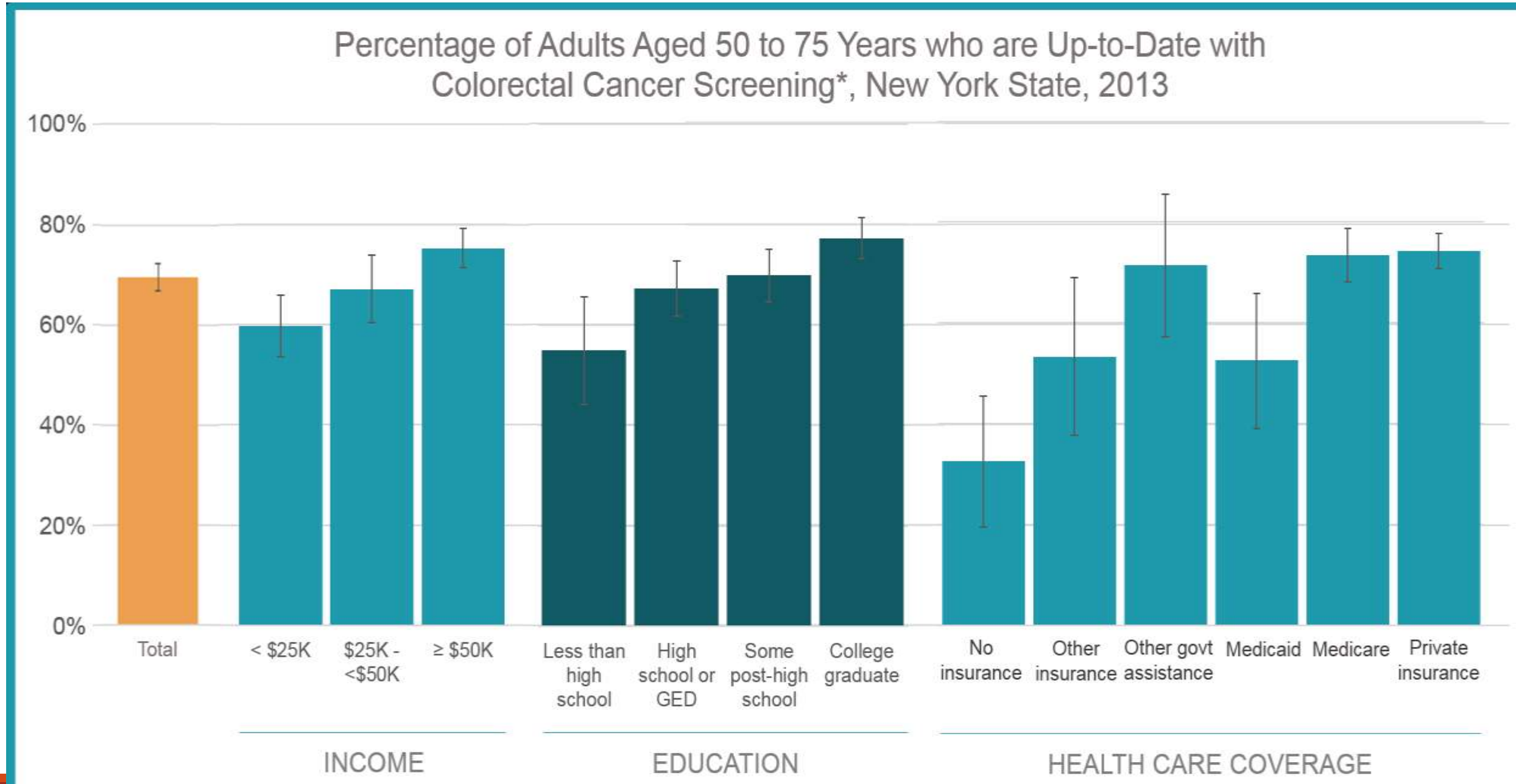
"Every system is perfectly designed to achieve exactly the results it gets."

Dr Paul Bataldan



SOURCE: CDC Vital Signs. November 2013. www.cdc.gov/vitalsigns. Behavioral Risk Factor Surveillance System, 2012.


69% of upstate New York adults ages 50-75 receive recommended screenings
74% 62%
Utica/Rome/ North Country
83% 63%
78% 69%
69% 68%
FINGER LAKES
CENTRAL NEW YORK
WESTERN NEW YORK
SOUTHERN TIER
58% 62%
73% 65%
TOTAL FOR UPSTATE NEW YORK


Percentage of Adults Aged 50 to 75 Years who are Up-to-Date with Colorectal Cancer Screening*, New York State, 2013
100%
80%
60%
40%
20%
0%
Total
< $25K
$25K - <$50K
≥ $50K
Less than high school
High school or GED
Some post-high school
College graduate
No insurance
Other insurance
Other govt assistance
Medicaid
Medicare
Private insurance
INCOME
EDUCATION
HEALTH CARE COVERAGE
* FOBT/FIT within 1 year, or sigmoidoscopy within 5 years with FOBT/FIT within 3 years, or colonoscopy within 10 years

How do we close the gap?

Do you know where to start?

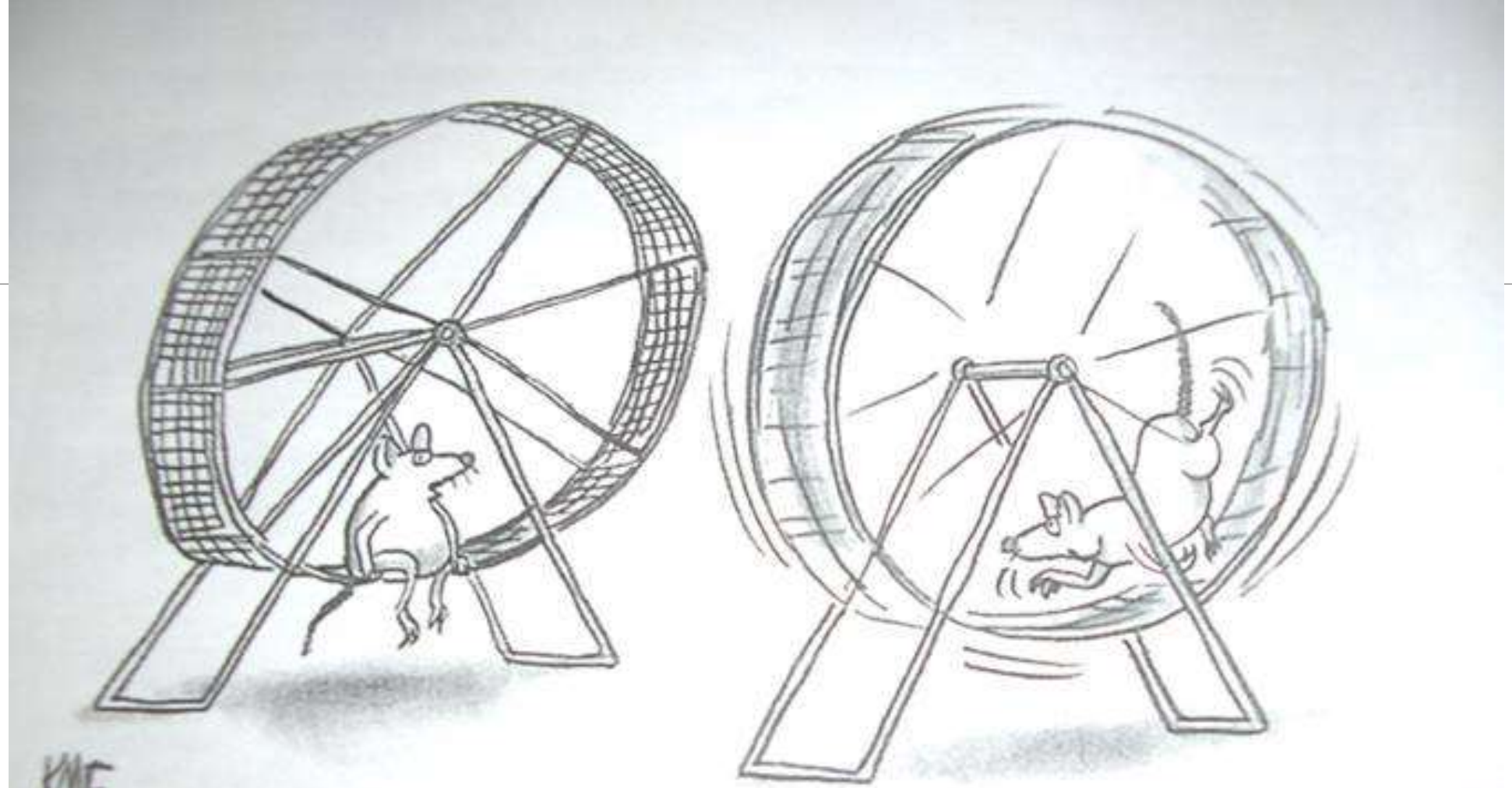
What are your screening rates?

How are they different among your population?

How are they different among providers

What is the difference in FIT vs. Colonoscopy screening

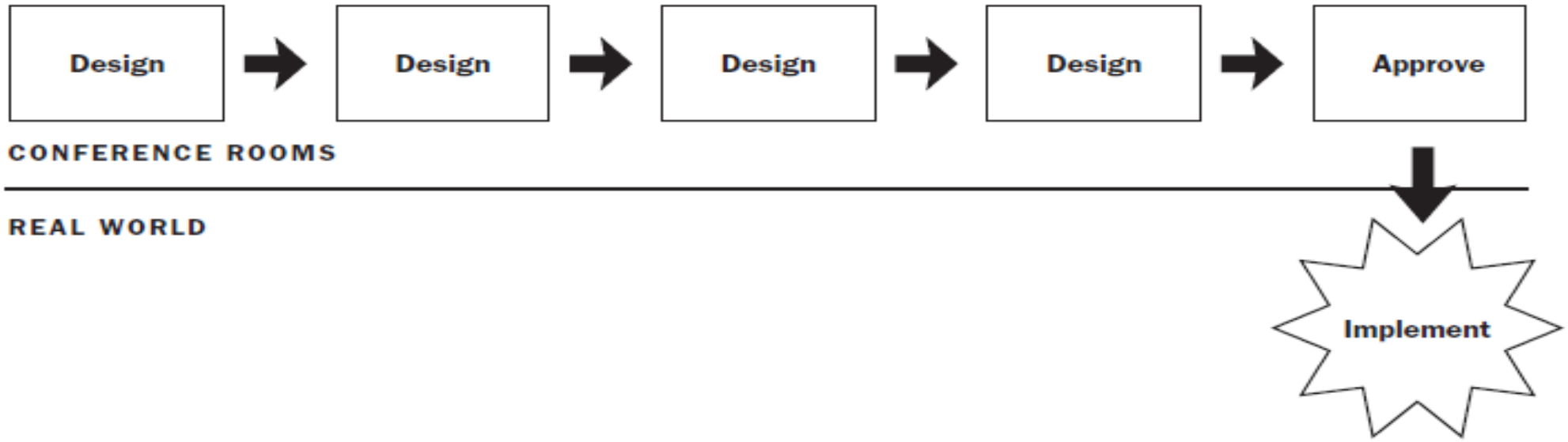
OPPORTUNITY
OPPORTUNITY
OPPORTUNITY



"I had an epiphany."

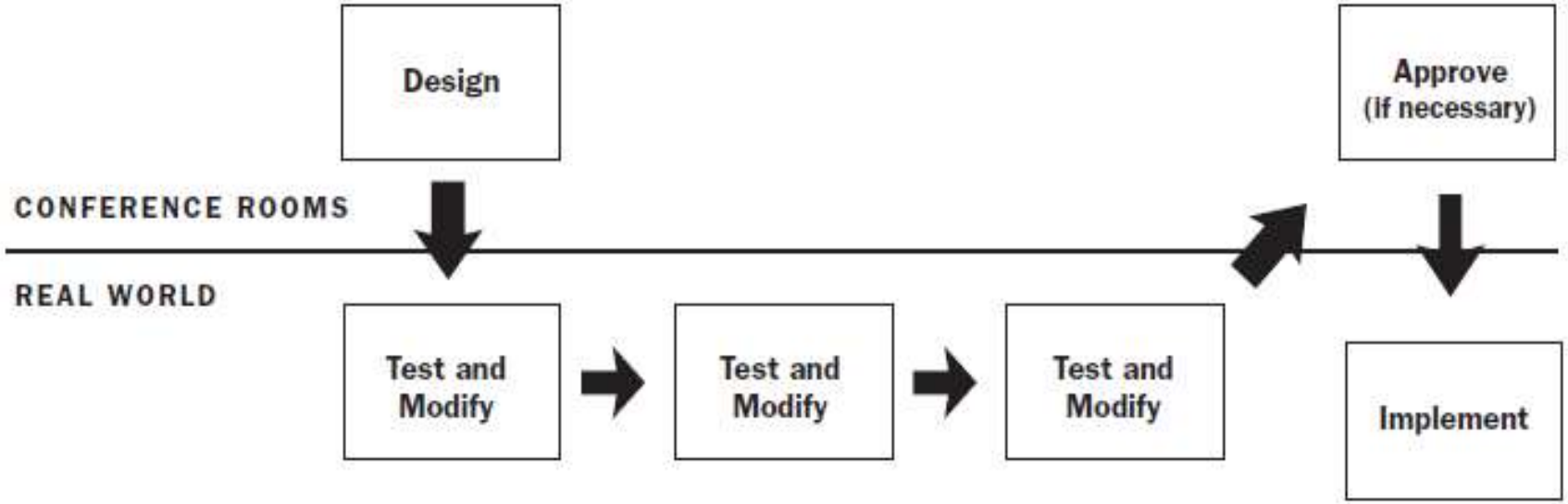
The Typical Approach

Figure 7. The Typical Approach to Standardizing Clinical Processes



Applied Science Approach

Figure 8. Standardize Clinical Processes: Refine the Design for the Local Setting Using Small Tests of Change



Quality Improvement vs. Quality Assurance

Systems focused

Uses proactive approach

Fallibility Recognized

Teamwork

Errors seen as opportunities for learning

Relies on Inspection

Uses retrospective approach

Perfection Myth

Solo practitioner

Errors punished

"How can we provide better services"

"Do we provide good services"

Ward. D (2014) QA vs QI NNPHI Roundtable discussion

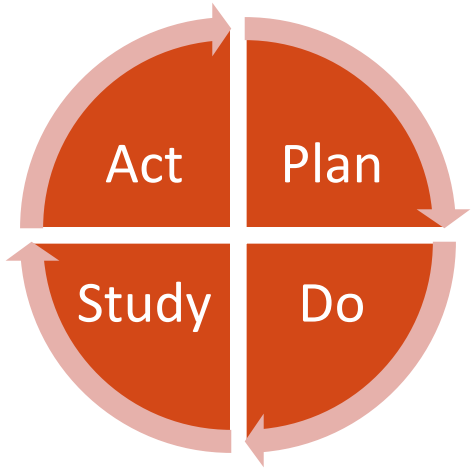
A Model for Learning and Change

Model for Improvement

What are we trying to accomplish

How will we know a change is an improvement

What changes can we make that will result in improvement?



The Improvement Guide, API, 2009

What Are We Trying to Accomplish?

Aim statement:

- What?
- For whom?
- By when?
- How much?

Aim adds

Direction

Constancy of purpose

Predictor of team success

And communicates magnitude of change

What might your aim be to improve screening?

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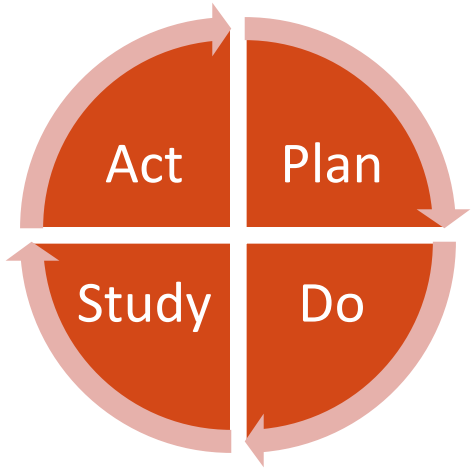


The Improvement Guide, API, 2009

How Do We Know That a Change is an Improvement?

Improvement is *not*

just about measurement

However… without measurement you will never be able to answer the question!

Aspect	Improvement	Accountability	Research
Aim	Improve care	Compare, reassure, spur change	New knowledge
Methods Test Observable	Yes	N/A. Evaluate current performance	Test blind or controlled
Bias	Accept stable bias	Adjust data to reduce bias	Design to eliminate
Sample Size	Just enough data, small sequential samples	N/A. Report 100%	Just in case data
Hypothesis Flexible	Yes. Revised as learn and test	No hypothesis	Fixed hypothesis
How to determine improvement	Run or Shewhart charts	No focus on change	Hypothesis, Statistical tests: F-test, t-test, chi square, p value
Testing Strategy	Small sequential tests	No tests	1 large test
Data confidential	Data used only by those involved in improvement	No subjects. Data is for public	Subjects protected

Measurement of Improvement Work

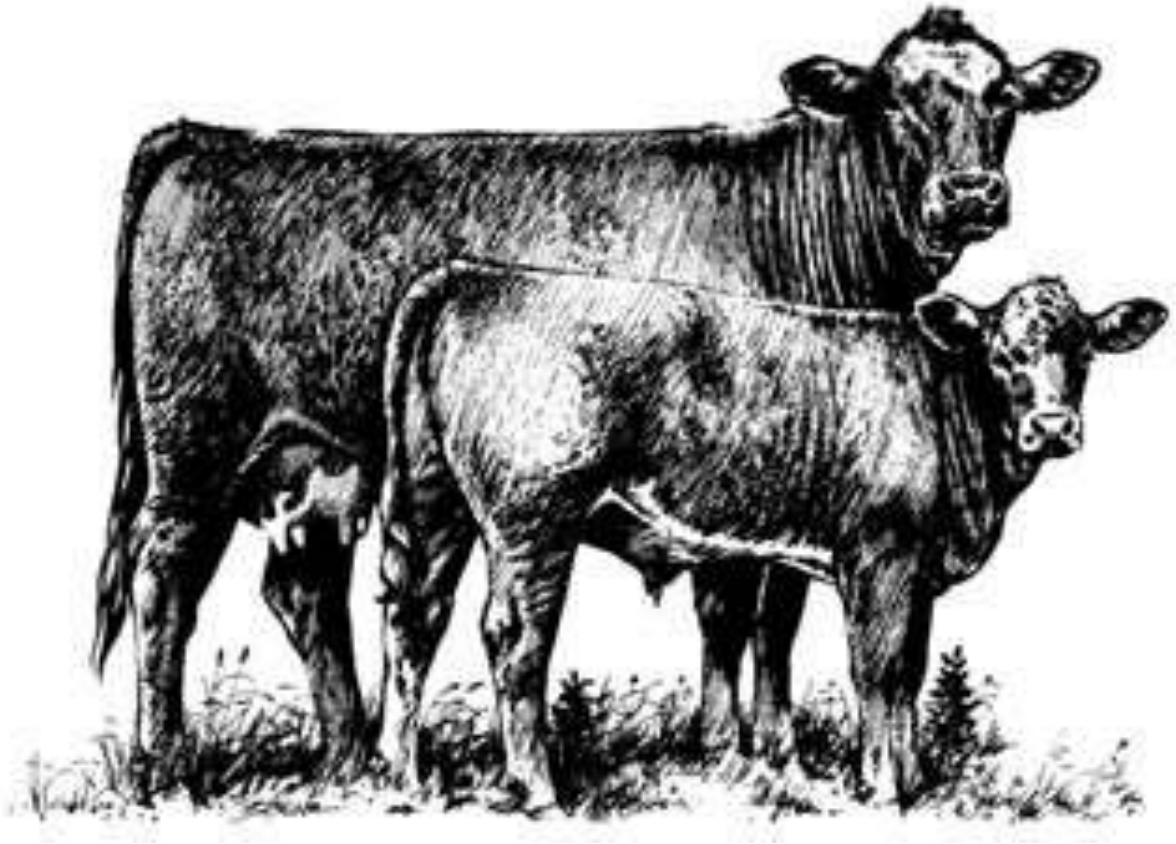
Define measures that will measure the impact of the Improvement work

They will monitor and guide your progress

This may take a number of different approaches:

- Percent compliance
- A count of correct attempts
- Verbal feedback

What might you measure while improving screening outcomes?



"You can't fatten a cow by weighing it"

Palestinian Proverb

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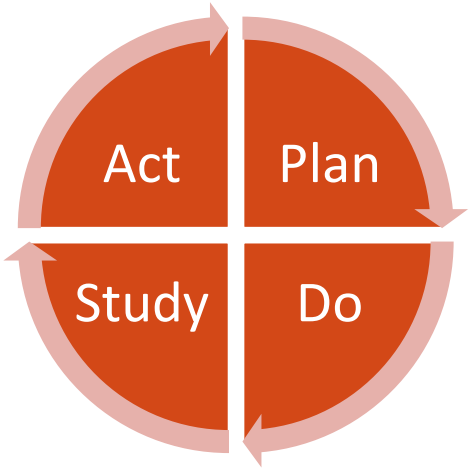
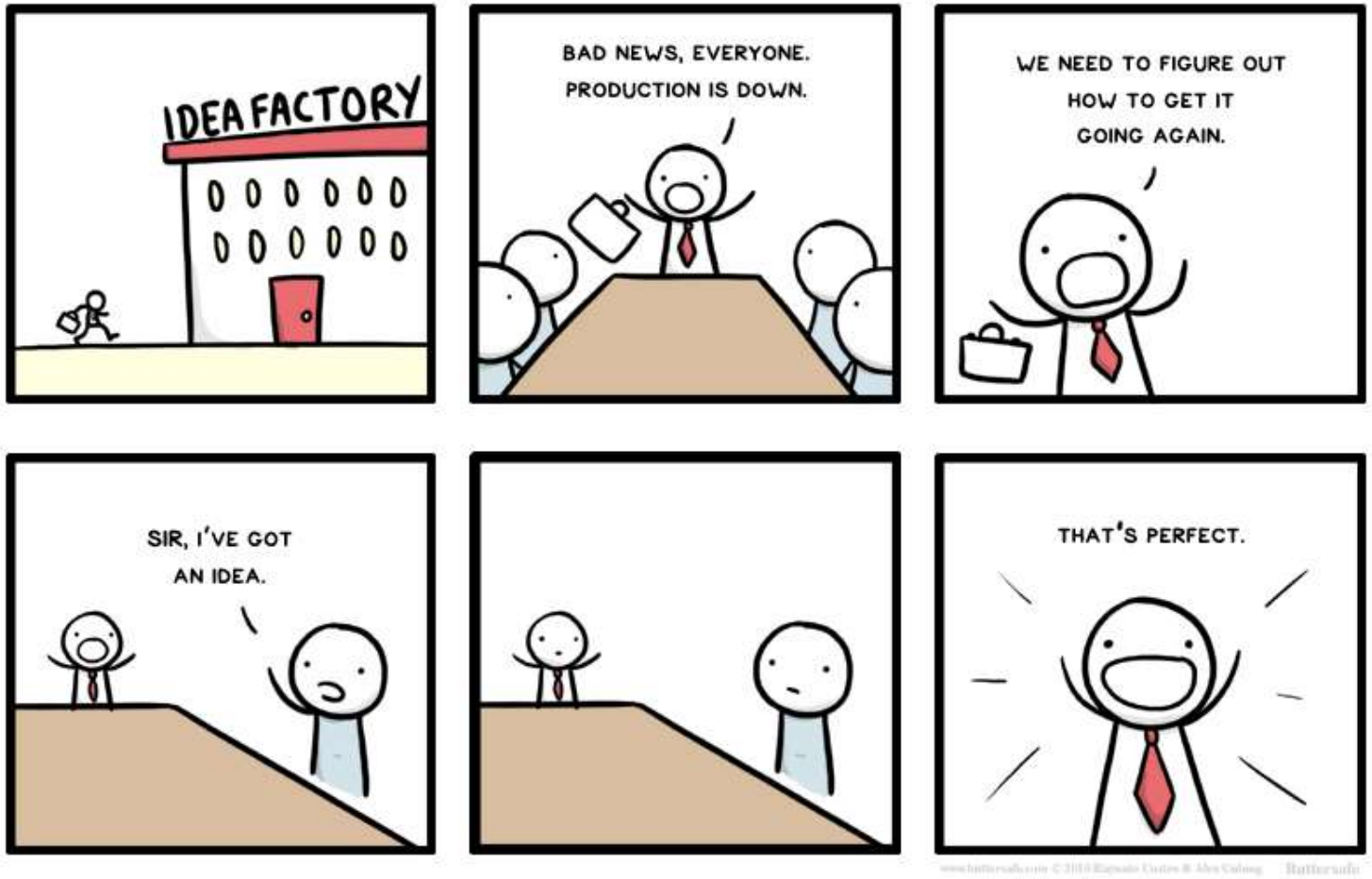


The Improvement Guide, API, 2009

Ideas


IDEA FACTORY
BAD NEWS, EVERYONE.
PRODUCTION IS DOWN.
WE NEED TO FIGURE OUT
HOW TO GET IT
GOING AGAIN.
SIR, I'VE GOT
AN IDEA.
THAT'S PERFECT.

Where are the opportunities

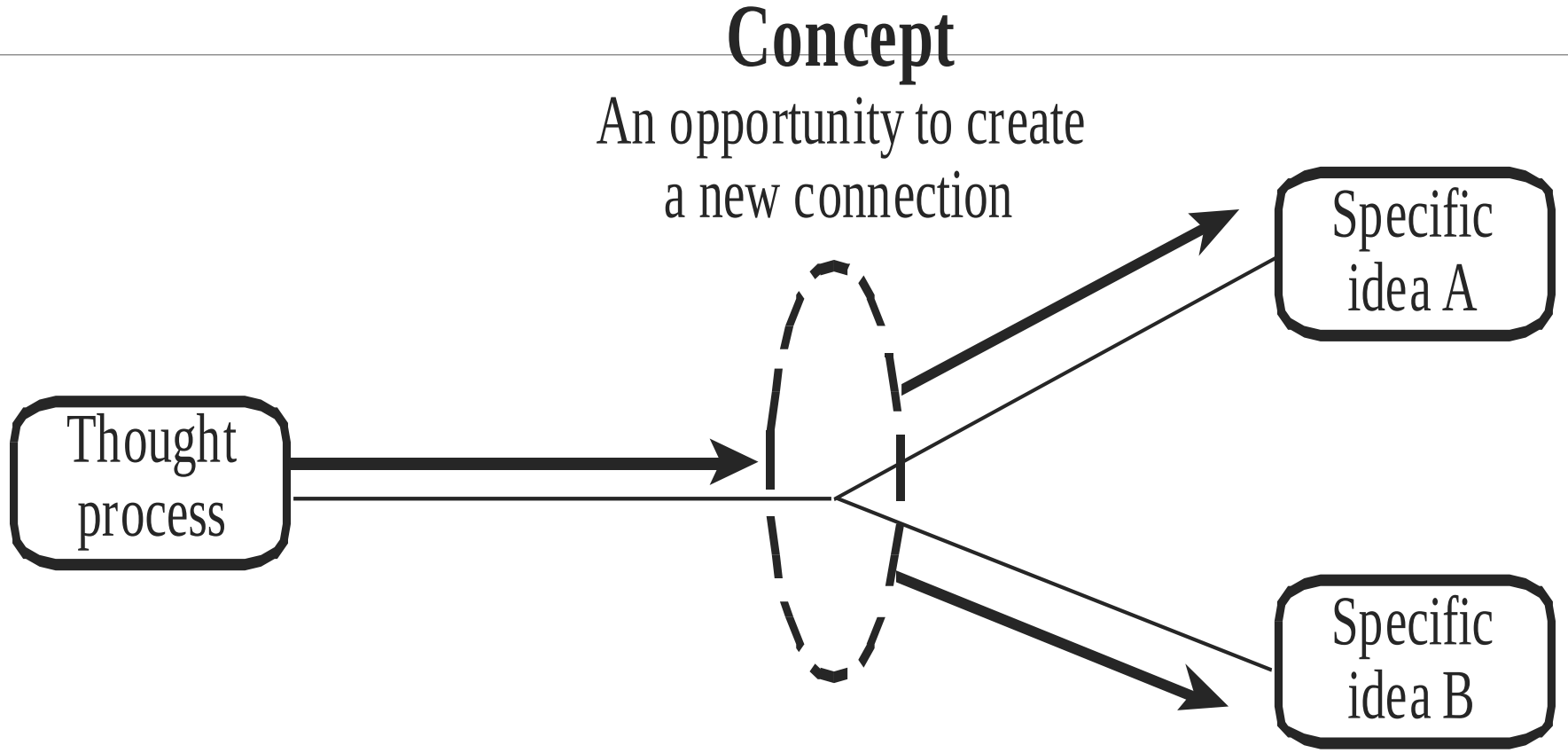
But there is more than one way to…

Bake a cake

Make a bed

Drive to work

Change Concept: *A general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement.*



The PDSA Cycle

Four Steps: Plan, Do, Study, Act

Also known as:

- Shewhart Cycle
- Deming Cycle
- Learning and Improvement Cycle

Learning with the PDSA cycle: Plan

ACT

Select an action based on the results of the test:

- Adopt
- Adapt
- Abandon

PLAN

Prediction If ____ Then____

Plan to carry out the test (who, what, when?)

Plan for data collection

STUDY

Compare to prediction

What did you learn

What was unexpected

What about the data

DO

Carry out the plan

Document observations – successes/unexpected issues

Begin analysis of data

Planning for change: PDSA cycles

SMALL (VERY SMALL) tests of change

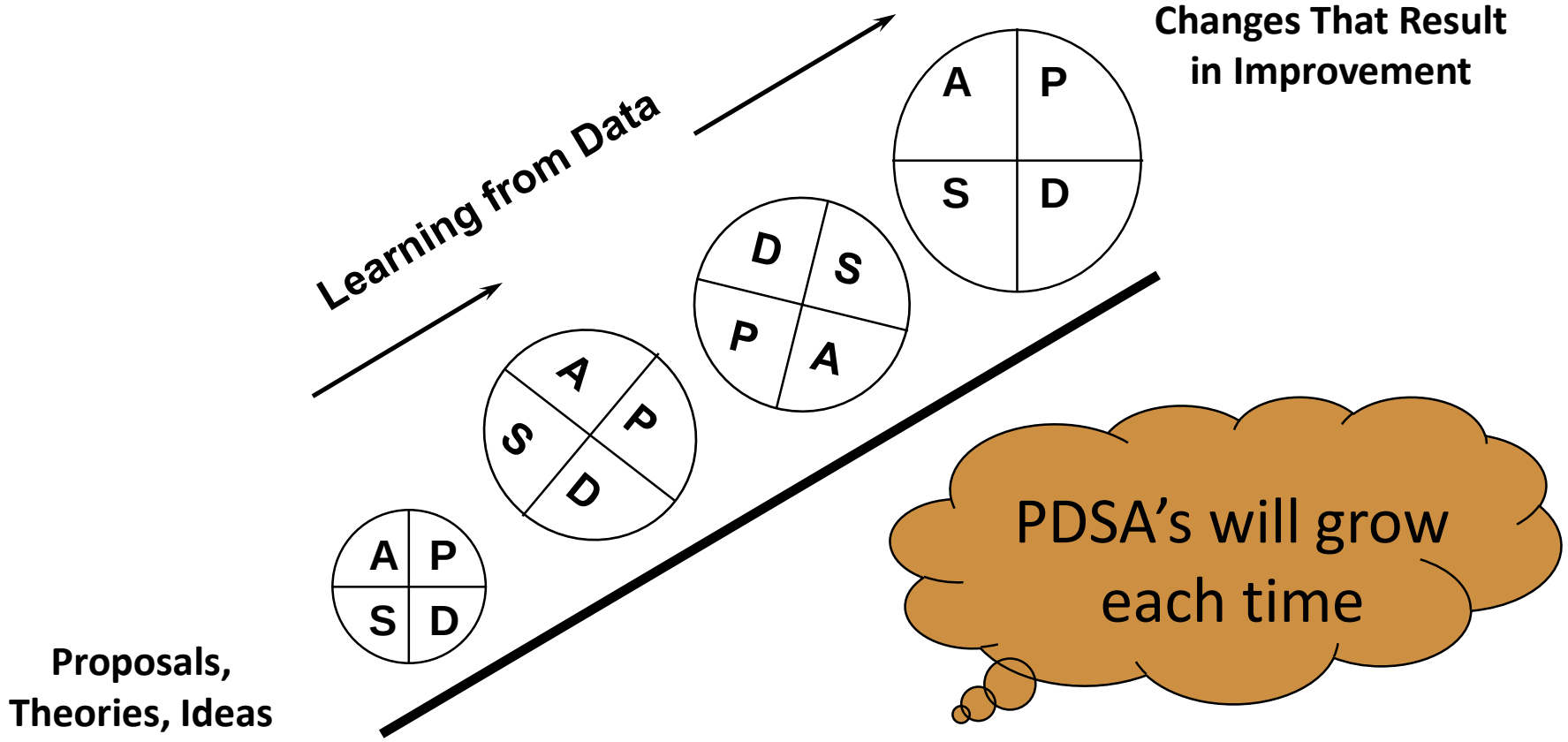
1 shift, 1 nurse, 1 patient, 1 intervention

Over and over (and over) again – same scenarios, different scenarios

Reflect on each one – adapt / adopt, real time change

What changes might you try to improve screening outcomes?

Use of the PDSA Cycle

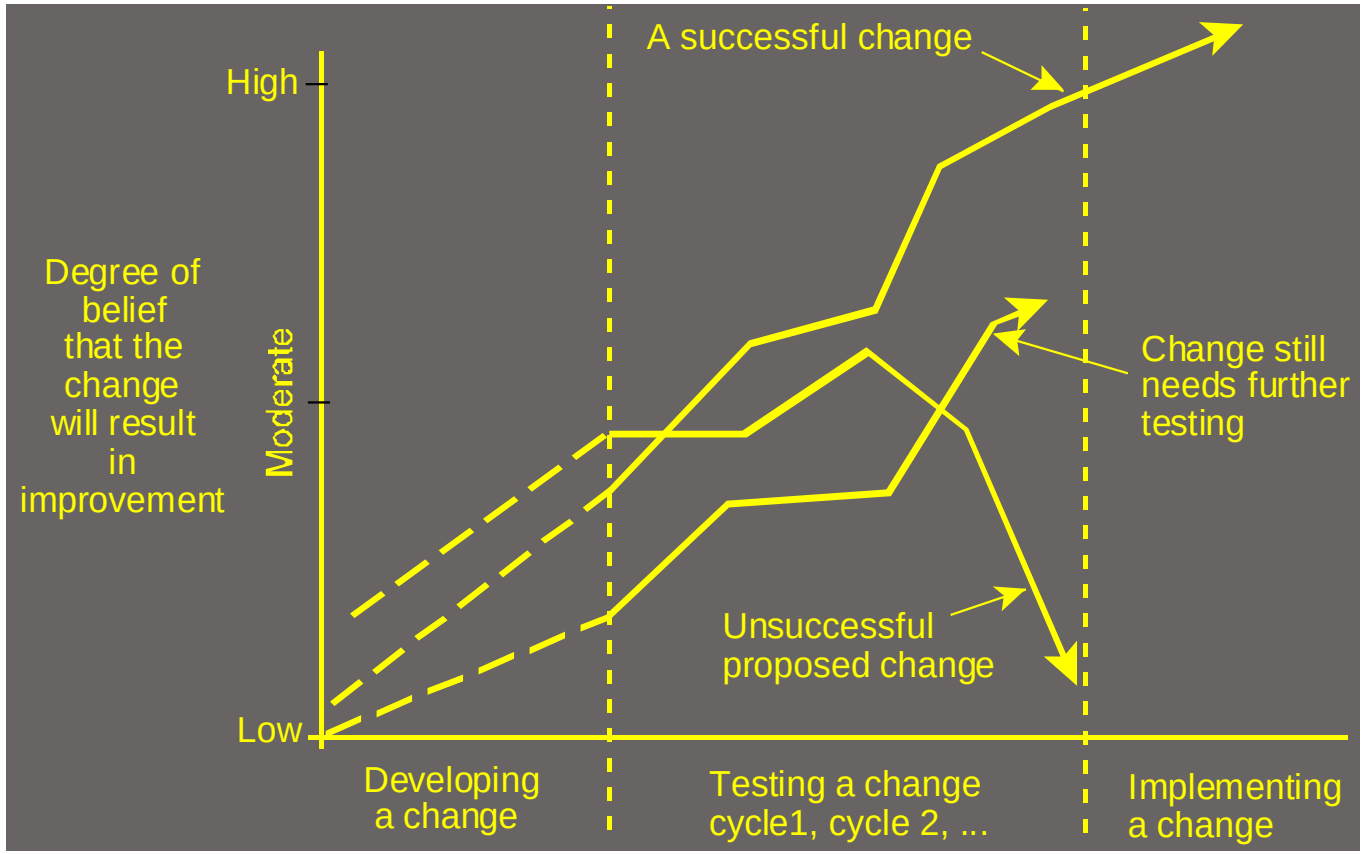


Why Test?

- Increase the belief that the change will result in improvement
- Predict how much improvement can be expected from the change
- Learn how to adapt the change to conditions in the local environment
- Evaluate costs and side-effects of the change
- Minimize resistance upon implementation

A Practical Need Often Drives Creativity!

Moving from Developing, to Testing, to Implementing a Change



Common Hang Ups

Starting too big

Decision by committee

Implementing too quickly

Decisions without data

Spreading too quickly

Tasking not testing

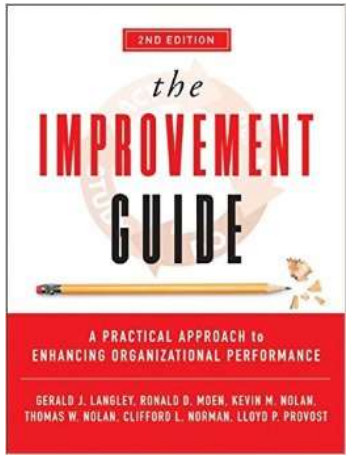
Talking not doing

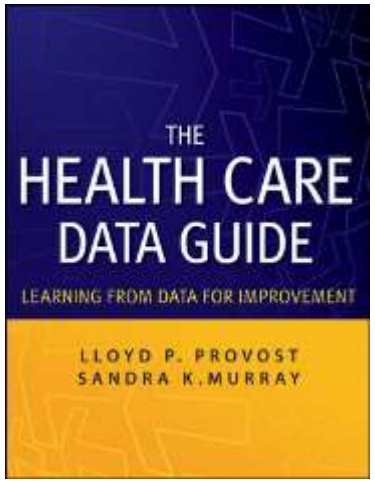
Resources

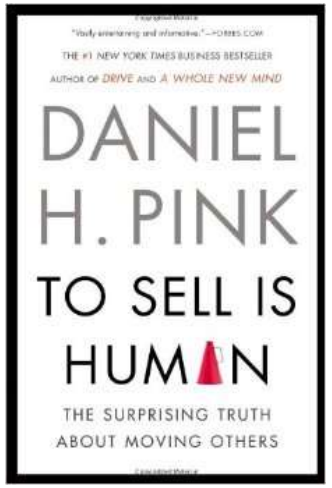
IHI - http://www.ihi.org/education/IHIOpenSchool/resources/_layouts/ihi/pages/videos/ViewAll.aspx?tc=14896aaa-7504-4ba1-88f6-647b6a096de9&tcOp=Or&ttl=Improvement+Capability&TargetWebPath=/education/ihiopenschool/resources&sort=ModifiedDate%7CDescending&xchildtags=1

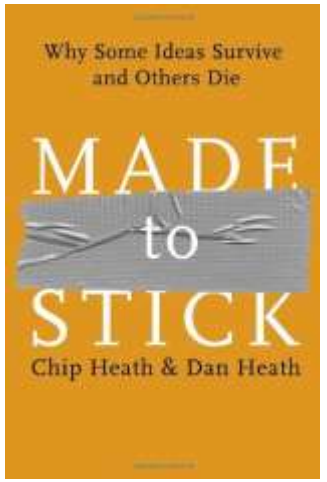
NICHQ - http://www.nichq.org/QI_101/story_html5.html?lms=1

Books:









Thank You!

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