



Sutter Medical Network
With You. For Life.



Achieving Affordability with Visual Analytics: Variation Reduction as a Tool to Engage Clinicians

Learning Objectives

- 1) Implement physician specific efficiency metrics and develop a program of feedback to physicians to effect advantageous practice changes
- 2) Describe how visual analytics can motivate physicians to change their behavior to achieve affordability.
- 3) Apply concepts of adult learning and change management to lead peer groups of physicians.

What is Variation Reduction?

- New Program
- New Methodology
- With Results
 - Physician behavior change
 - Affordability projects
 - Significant savings (waste elimination)
 - Well received by clinicians

Variation Reduction - Purpose

- Affordability ... and Quality
- Change Physician Behavior
 - Respectful
 - Welcomed
 - Effective

Origins/Evolution

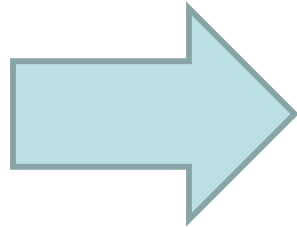
How can we support clinicians in practicing better?

The Old Way

- Policies
- Guidelines
- Pay for performance
- Counseling outliers
- Utilization review
- Begging



- Frustration
- Resentment



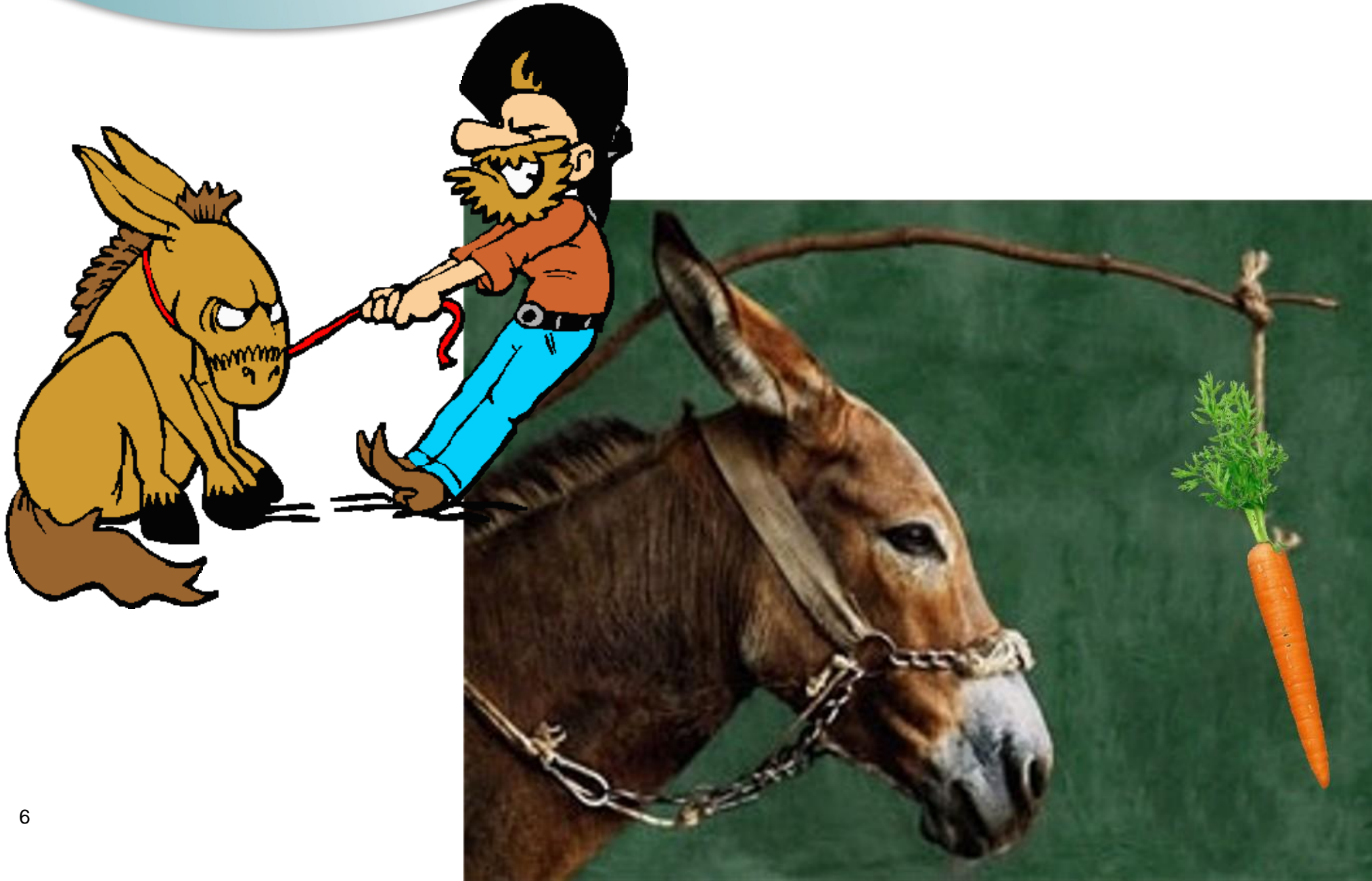
New Way: Variation Reduction

- Curiosity as the driver
- Respectful communication
- Helpful feedback
- Bottom up approach
- Visual impact (right brain)
- Live drill down



- Positive impact on results
- Positive impact on culture

Philosophy of Physician Behavior

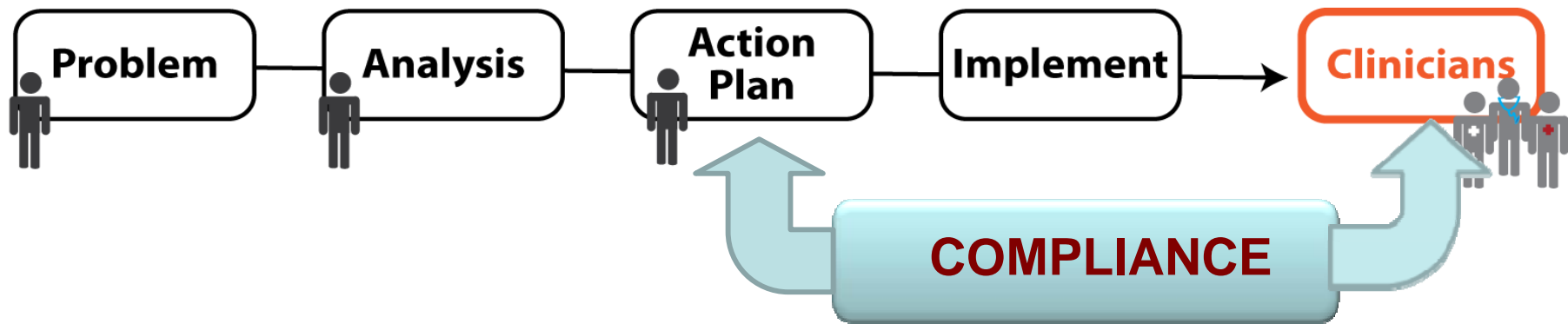


Philosophy of Physician Behavior

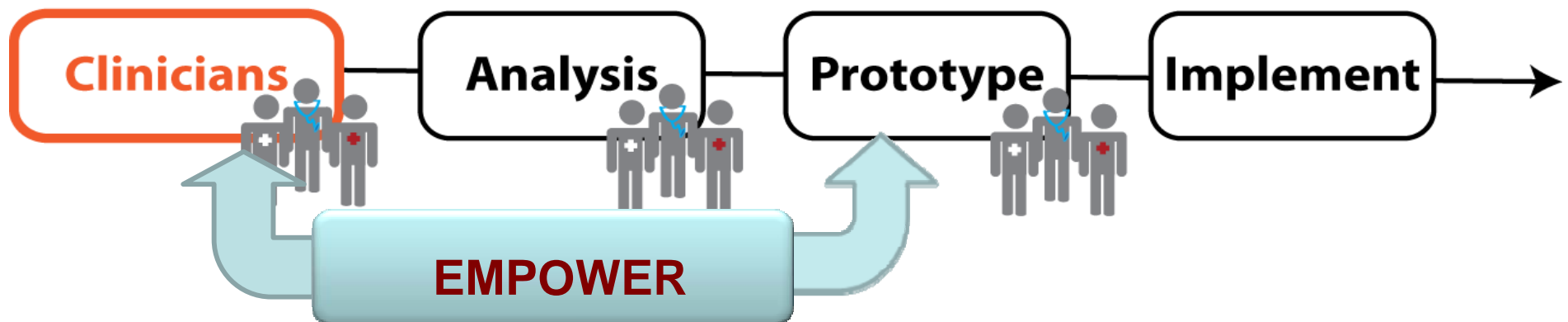


Contextualist Approach

Deductive Approach



Contextualist Approach



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Variation Reduction Program Components



Which is the most important component?

Remove any one and it won't work...

What is different? Why now?

How did variation reduction emerge as a new methodology?

- New technologies



- Old principles



- Serendipitous discoveries
 - (backed up by science)

New technologies

- Data warehousing
 - Large amounts of data standardized
- Business Intelligence tools
 - Visual data
 - Live drill down
- Electronic Health record
 - Allows clinical and outcomes analysis
- Report Automation
 - Facilitates scale and distribution

Old Principles

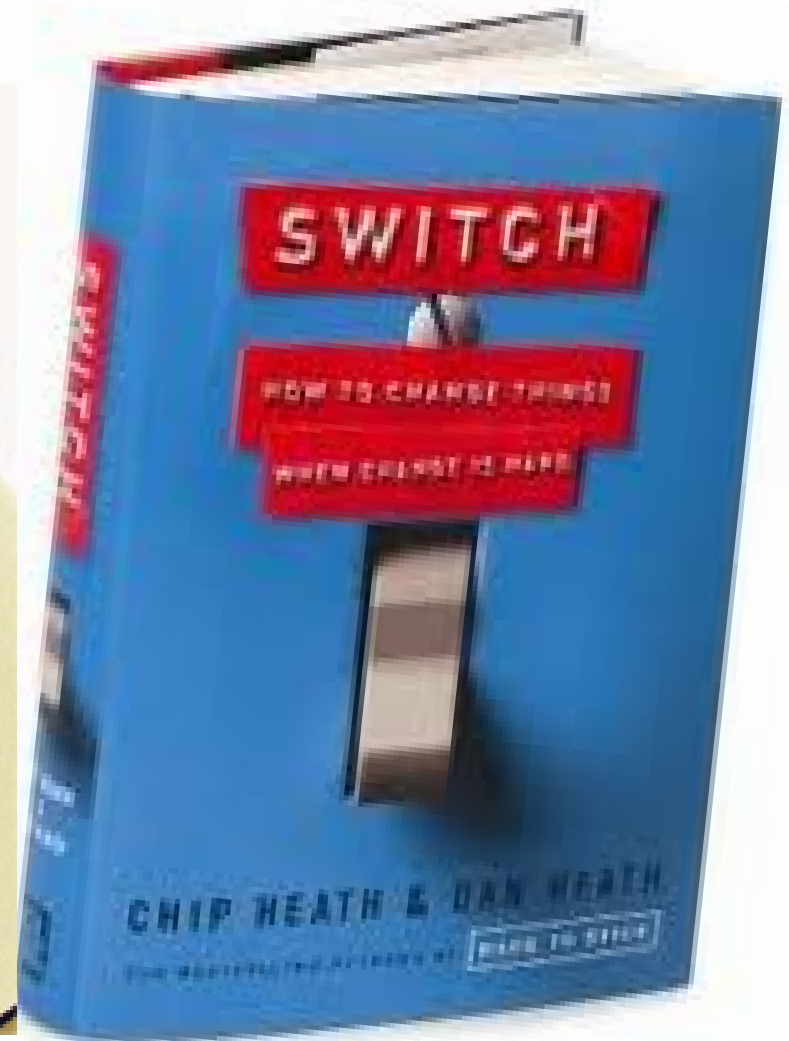
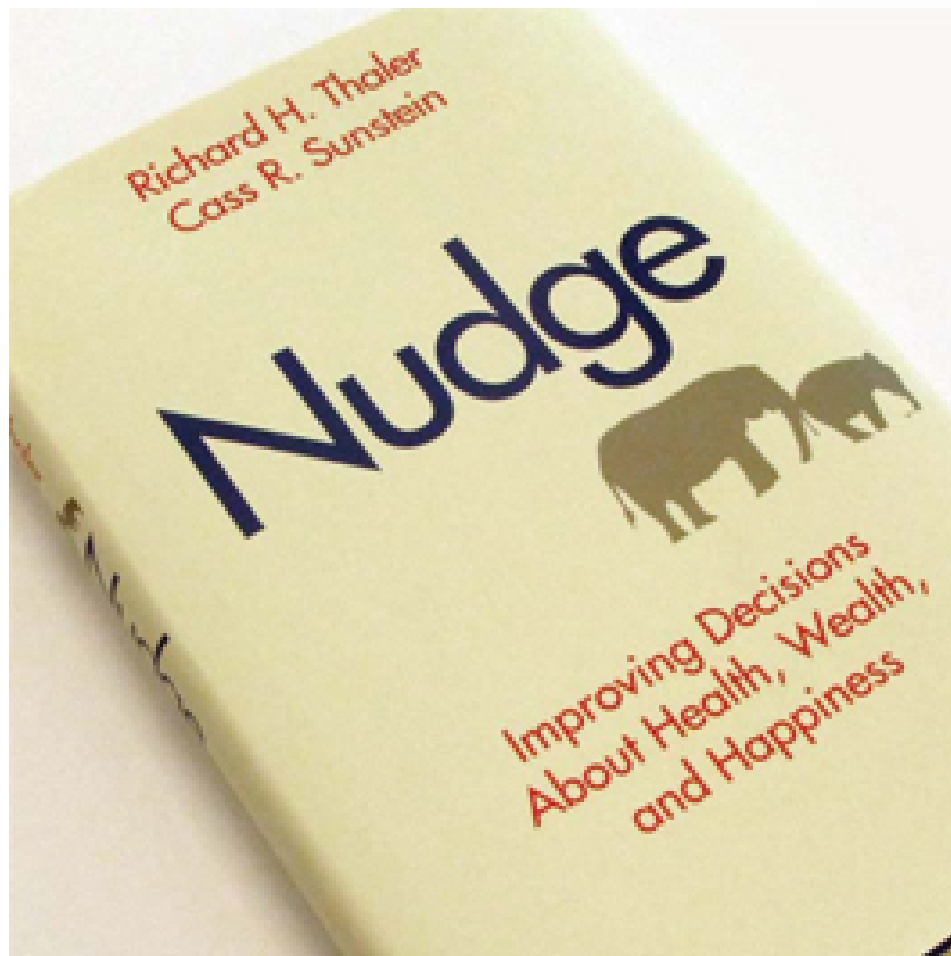
- Curiosity
- Personal feedback
- Competitiveness / peer pressure
- Process Improvement Methodology
 - Demming
 - Toyota
 - IHI

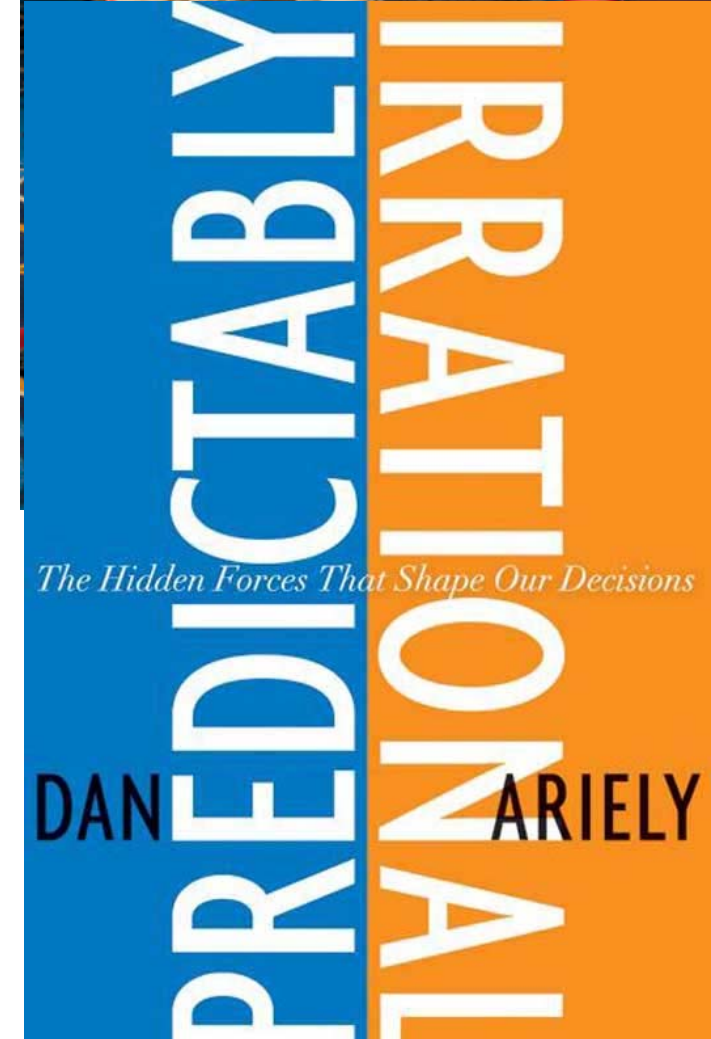
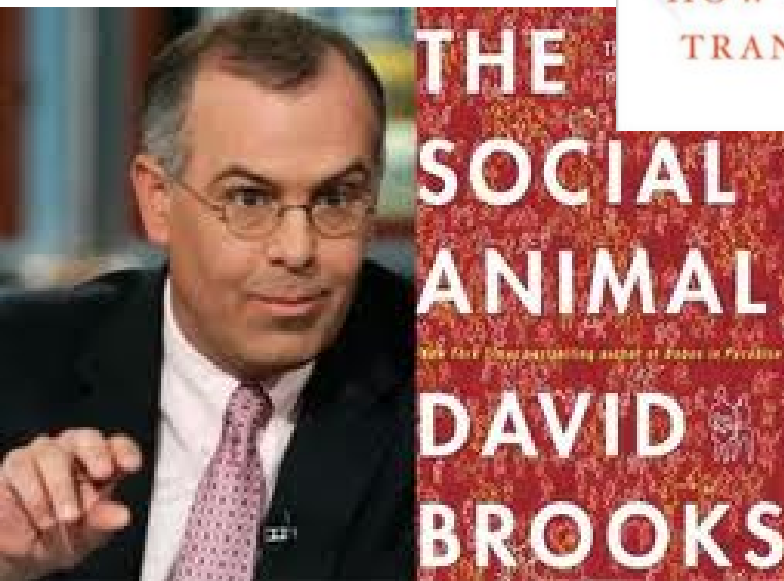
Serendipitous Discoveries

(backed up by science)

- Bottom up methodology
 - choice = ownership
- Respectful, helpful approach
 - non-threatening
- Visual data
 - emotional impact, accuracy is not a distraction
 - choice architecture
- Group process
 - adult learning, positive deviants

Science behind Data & Emotions:





Adult Learners

- We are naturally curious
- We like to learn
- We are motivated to improve
- We learn by reflecting on our own experience
- With others



Magic of the group process



- We are social beings
- We are naturally competitive
- We want to look good in front of our peers
- We learn from each other

“Hey! Look what Zog do!”



Guiding Principles for VR Facilitation

- Follow Curiosity
- Pull, not push
- Bottom up, not top down
- Safety, fun
- Non-punitive
- Respect – sincere
 - (no agenda other than being helpful)
- Talk about emotions
 - (before talking about the data)



Change Management

You can't tell
me what to
do...



- Anticipate resistance
- Focus on winning the hearts and minds of your people



Questions

- Is this a new approach?

1

Yes,
this turns the
traditional
approach
upside down &
engages the
physician

2

3

Maybe,
it might be
new, but I'm
not sure it's
going to work


4

5

No,
same
methodology
we've been
using for
decades



Why Is Visual Data Display So Important?




**Source =
information &
emotion**

**Driver =
engagement
& motivation**

**Goal =
behavior
change**

- Can not afford distractions:
 - Accuracy
 - Methodology
 - Detailed questions

Why Is Visual Data Display So Important?



Source =
information &
emotion

Driver =
engagement
& motivation

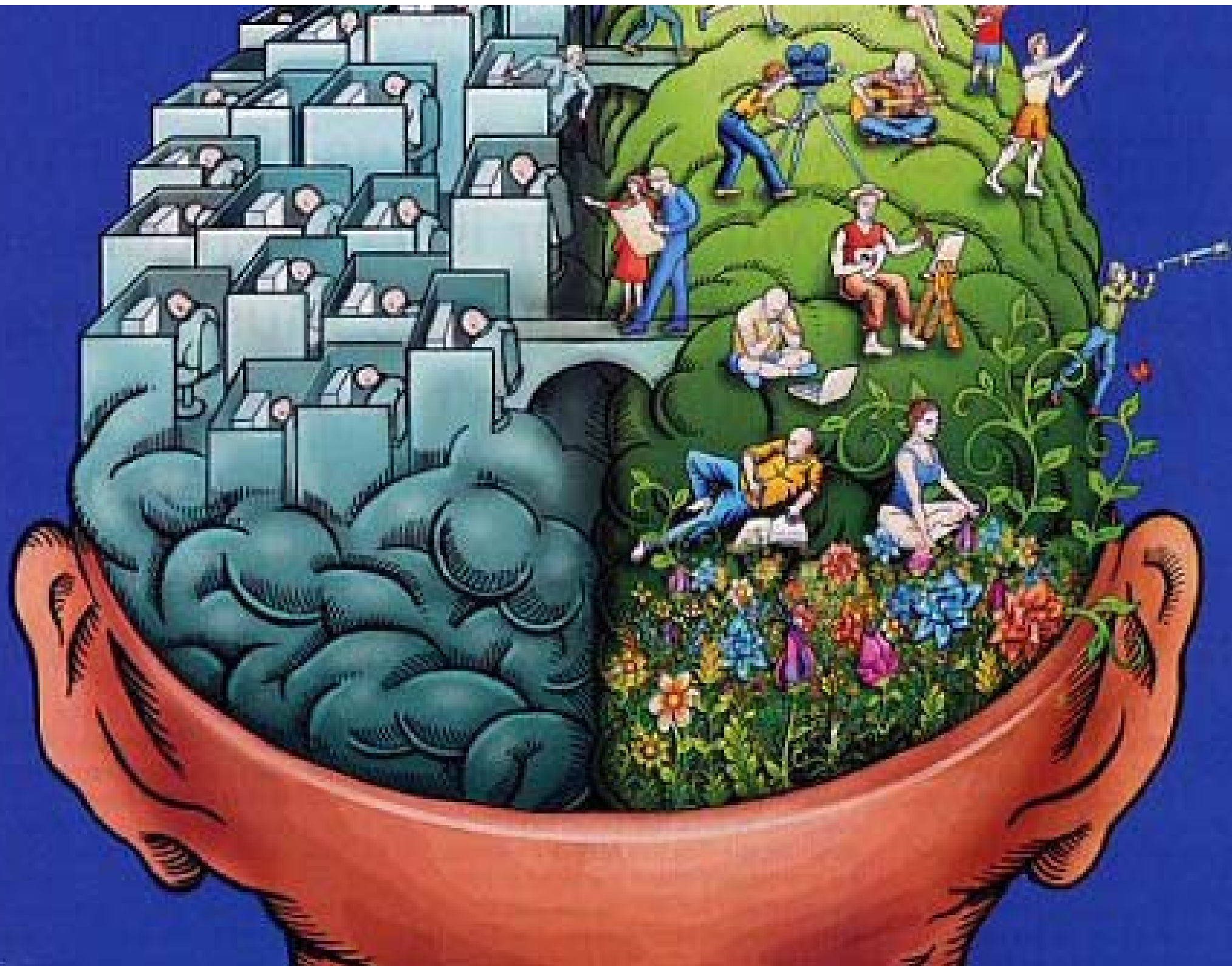
Goal =
behavior
change

- Must be all right brain, gut level, intuitive

“Aha, I see I am an outlier. I know what I should do differently!”

- Need to achieve this in seconds, without words





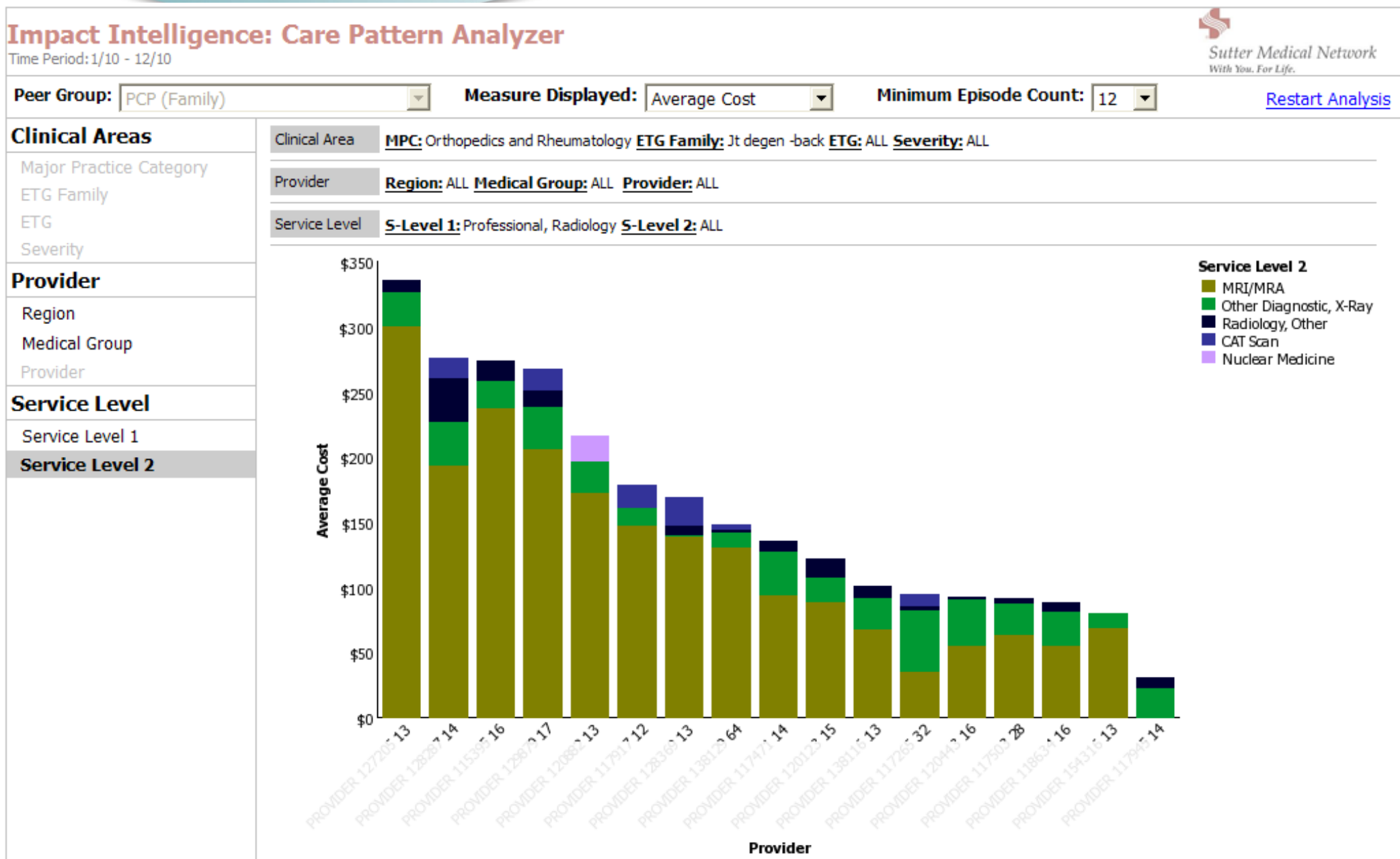




How to Speak to the Right Brain?

- Visual data; not words or numbers
- Message must jump out on its own
- Remove all extraneous text
- Personal impact
- Change needed must be obvious
 - Choice architecture

Visual Display of Variation

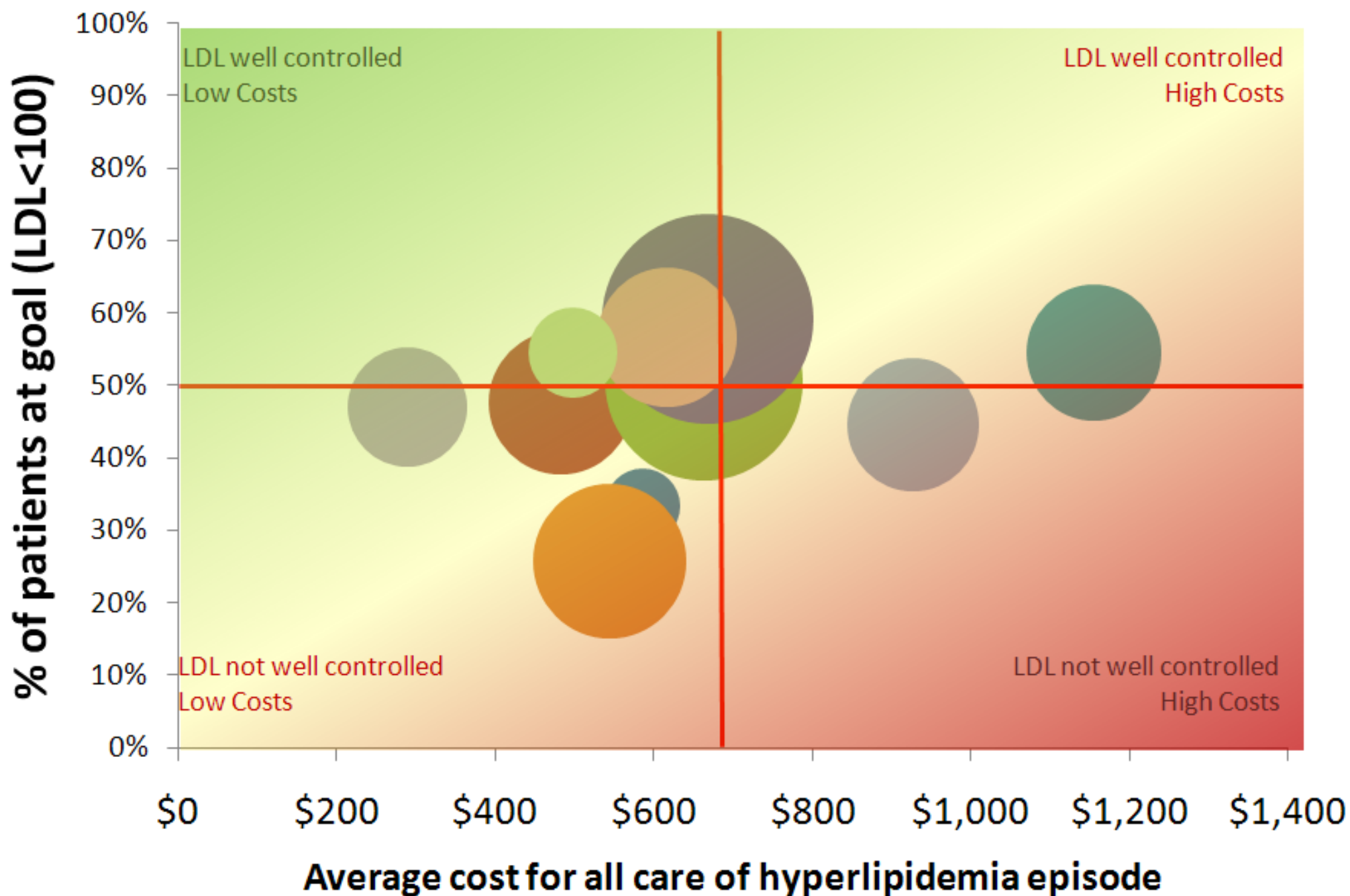


HMO Statin Prescription Volume

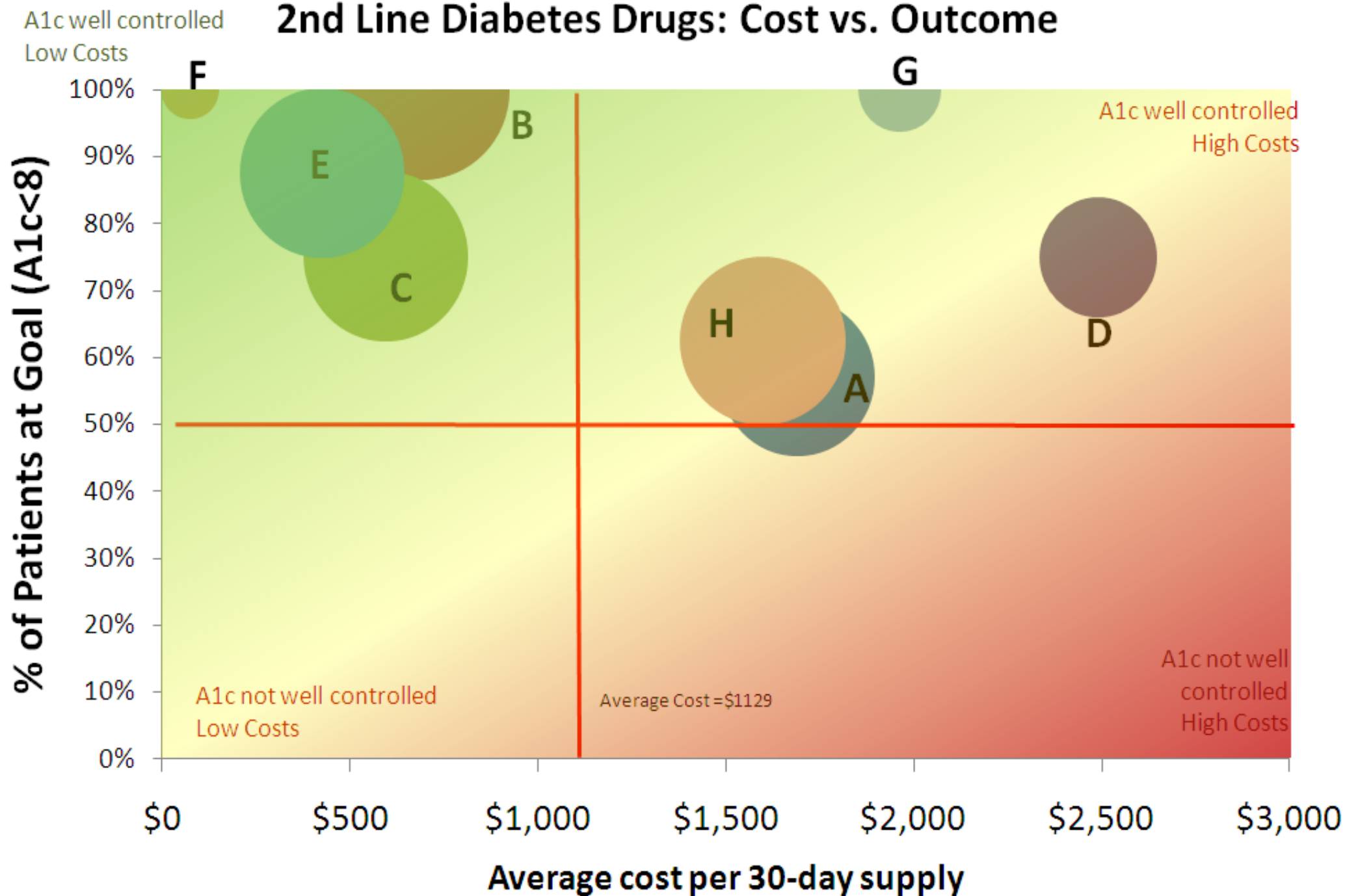
PPO volume not included

Average Cost/30 days		2010 approximate HMO volume	Total Cost
Simvastatin	\$10	154,788	\$1,544,784
Lovastatin	\$10	51,008	\$523,852
Pravastatin (Pravacol)	\$14	31,144	\$436,016
Fluvastatin (Lescol)	\$94	916	\$85,912
Pitavastatin (Livalo)	\$101	64	\$6,465
Niacin-Simvastatin(Simcor)	\$108	960	\$103,853
Rosuvastatin (Crestor)	\$115	13,948	\$1,602,207
Atorvastatin (Lipitor)	\$115	55,896	\$6,431,953

Hyperlipidemia Control: Cost vs. Outcome



2nd Line Diabetes Drugs: Cost vs. Outcome



Question

- Will the approach to data visualization engage physicians and elicit changes in behavior?

1

Yes,
the data
display is
compelling

2

3

Maybe,
approach
is
interesting

4

5

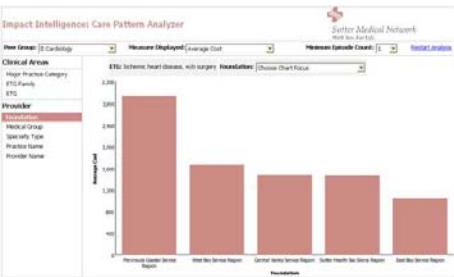
No,
same old,
same old



How it works

1. Face to face meeting of 5 -15 clinicians
 - Explore visual data as a group
 - Personal feedback on variation
 - Stimulates curiosity and learning
2. Select focus area
 - Agree on new clinical standard
 - Define performance metrics
3. Monthly metrics
 - Measure & report ongoing improvement efforts

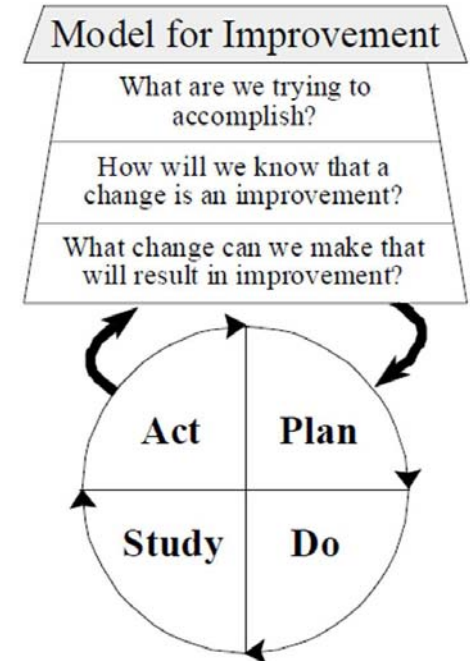
Improvement Project Sequence



Use SCPA to identify variation reduction opportunities



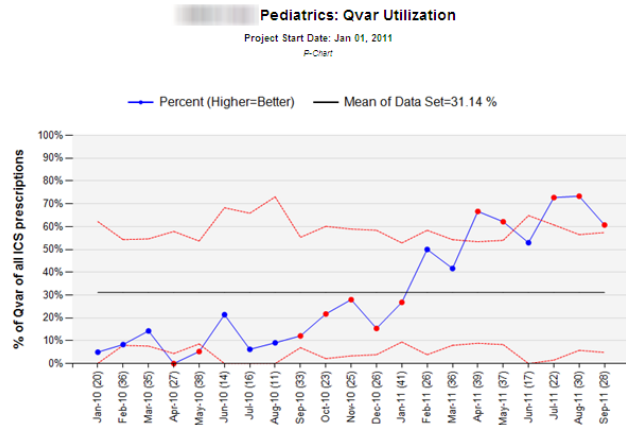
Clinicians agree on a standard and define performance metrics



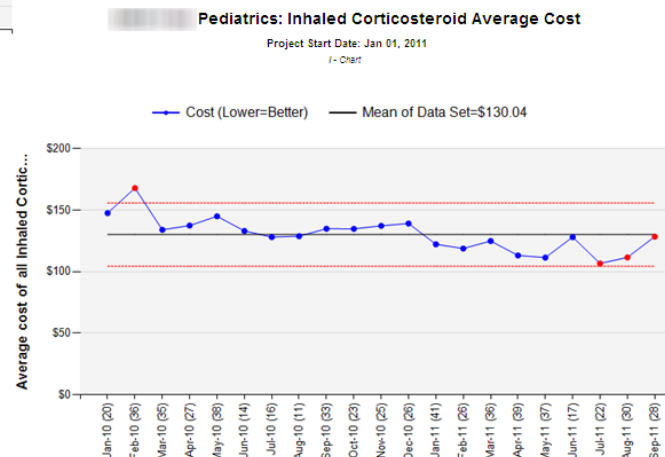
Clinicians agree to launch an improvement project

Highlighted Project: Asthma Steroids

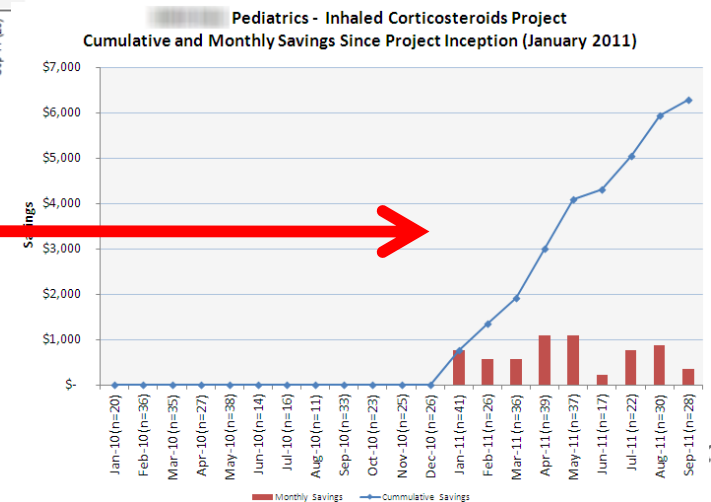
1. Prescribing of preferred drug increases



2. Average drug cost drops



3. Savings over baseline begin to accumulate

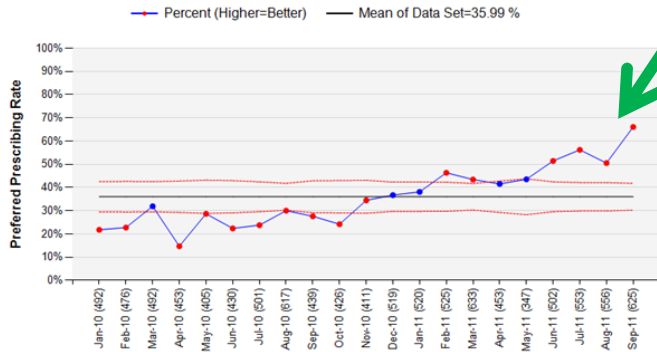


Highlighted Project: : Hypertension – Generic ARBs

**Average
drug cost
drops**

Internal/Family Medicine: Preferred ARB Prescribing Rate

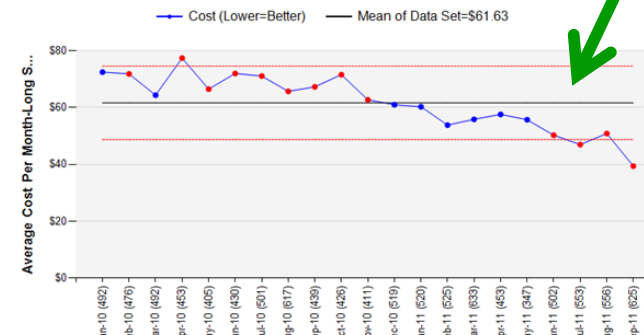
Project Start Date: Mar 01, 2011
P-Chart



**Prescribing of
preferred
drug
increases**

Internal/Family Medicine Average ARB Cost Per Month-Long Supply

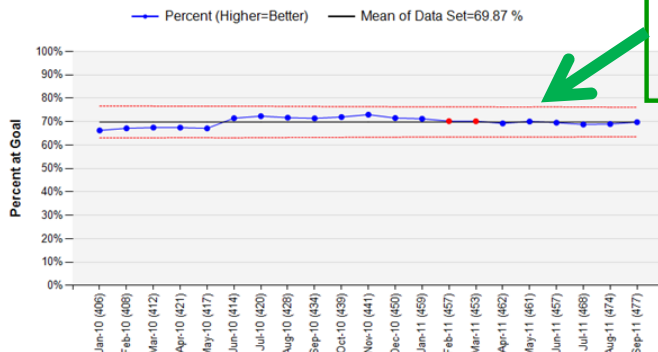
Project Start Date: Mar 01, 2011
I-Chart



**Savings
begin to
accrue**

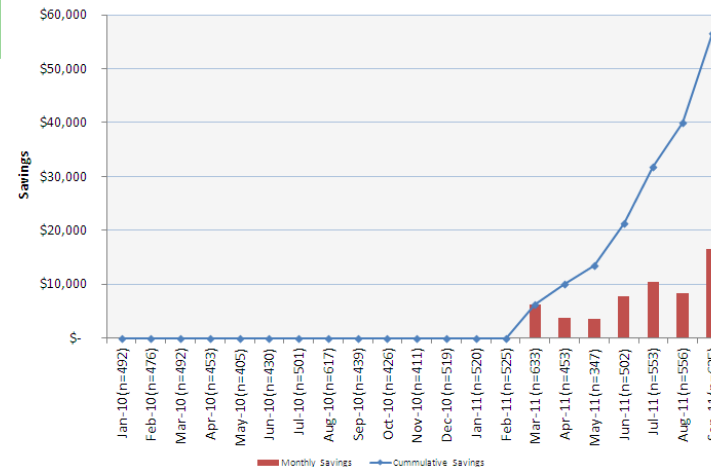
Internal/Family Medicine Percent on an ARB at Goal for Blood Pressure

Project Start Date: Mar 01, 2011
P-Chart



**No adverse
effect on
quality**

Internal and Family Medicine Preferred ARB Prescribing
Cumulative and Monthly Savings Since Project Inception (March 2011)



Total Savings: \$56,500

Results

- Palo Alto Medical Foundation (2008)
 - 24 projects started
 - \$12.4M savings
- Rest of Sutter Medical Network (2010)
 - 58 projects started
 - \$223,000 savings
 - (14 projects reporting out with 3 - 8 months history)

Reactions from Physicians

“I haven't had this much fun since residency”

“I have been waiting for this for ten years”

“That was a lot more fun than I expected from the title of the meeting”

“When are you guys coming back?”



Spread: medical group adoption 1 → 5

- Training/Staffing
 - Clinical leaders trained
 - Business/reporting analysts, project managers hired
- Incentives
 - Department chair incentives
 - SMN participation standard
- Regular reporting of results
 - 328 Statistical control charts per month
- Processes standardized, documented
 - Ready for embedding in more groups

Demo

- Sutter Care Pattern Analyzer
 - Sutter designed user interface
 - Front end for vendor product
 - Severity adjusted Episode Treatment Groups
 - Peer comparisons within specialty
 - Visual drill down to individual claim lines

Question

- Will the combination of physician engagement, data visualization, and regular feedback create an environment of sustainable change?

1

Yes,
this approach
is working
and can be
maintained

2

3

Maybe,
the effort to
get it started
is complex

4

5

No



For More Information

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