Today’s Session

Clinical Variation Reduction

Sutter Health’s Approach
What if...

all of our patients, staff and physicians felt safer?
and satisfied?
What if...

we re-design how we care for our patients?

― "Your x-ray showed a broken rib, but we fixed it with Photoshop."
How do you get professionals to change their behavior?

1. Make the case for the need for change
2. Offer help
→ Use Meaningful, **Actionable** information

- Address an important outcome metric
- Identify a specific behavior that leads to that outcome
- Measure the behavior and show variation
- Offer help on how to change
Sports Analogy: Is Medicine a Solo, or Team Sport?
Buster Posey | #28
C | B/T: R/R | 6'1"/215 | Age: 28

Gerald Dempsey Posey
Pronunciation: BUH-ster POH-zee
Born: 3/27/1987 in Leesburg, GA
Draft: 2008, San Francisco Giants, 1st rd. (5th overall)
College: Florida State

Summary

<table>
<thead>
<tr>
<th>Year</th>
<th>AB</th>
<th>R</th>
<th>H</th>
<th>HR</th>
<th>RBI</th>
<th>SB</th>
<th>AVG</th>
<th>OBP</th>
<th>OPS</th>
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<tbody>
<tr>
<td>2015 Stats</td>
<td>557</td>
<td>74</td>
<td>177</td>
<td>19</td>
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<td>MLB Career Stats</td>
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<td>850</td>
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<td>447</td>
<td>8</td>
<td>.310</td>
<td>.375</td>
<td>.859</td>
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Status: Active

Buster Posey Statcast Averages

<table>
<thead>
<tr>
<th>Year</th>
<th>Team</th>
<th>LG</th>
<th>PA</th>
<th>HIP</th>
<th>Avg Launch Speed (mph)</th>
<th>Avg Distance (feet)</th>
<th>Avg Gen Velocity (mph)</th>
<th>Avg Launch Angle (deg)</th>
<th>Avg Height (feet)</th>
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<tbody>
<tr>
<td>2015</td>
<td>Giants</td>
<td>NL</td>
<td>623</td>
<td>420</td>
<td>89.77</td>
<td>214.11</td>
<td>0.24</td>
<td>8.90</td>
<td>32.17</td>
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<tr>
<td>MLB Avg</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>89.28</td>
<td>211.39</td>
<td>0.43</td>
<td>8.99</td>
<td>33.42</td>
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</table>
Actionable Metrics?

I want you to go out there and get your On Base Percentage at 0.400!
Actionable Metrics?

“Bam Bam”
Hensley Meulens, SF Giants Hitting Coach
Position 2: The Ready-to-Hit Position

When your front foot touches down, you should be in the no-step approach, you will need to shift into this position.

- The feet are one-bat length apart, front foot is on the back foot
- The front knee is flexed forward
- Your weight is centered or slightly (60%) back
- The hips are square or slightly open
- The front shoulder is closed (turned away from the pitcher), the back shoulder is level with or slightly higher than the front shoulder
- The upper body is vertically aligned over your belly button and not tilted
- The head is level, both eyes are on the pitcher
- The hands are shoulder high and back. Push the hands back a bit as you step to create separation between the hands and the body; that is, “Step away from your hands”
- The sweet spot of the bat should be about over the back ear. Do not wrap that bat behind your head or drop the barrel below your hands

Check List of Behaviors

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes</th>
<th>No</th>
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Learning occurs best in a group
Learning from Trusted Peers
Creates Group Culture
SUTTER’S APPROACH
Our Proven Solution

• Clinician engagement
  • Clinician coaching and group facilitation
  • Local leader(s) onboarding

• Analytics
  • Project identification and implementation
  • Feedback and monitoring
  • Creation of system benchmarks

• Sustained results
Track Record

Current as of July 2016:

- 902 projects in total
- 2,615 clinicians have participated
- 1,028,472 patients affected
- $ 6.4 M in total savings over last 24 months
- $ 57 M in savings since inception
- Research evaluation: impact over control groups
How it works

1. Feedback w/ peer comparison
2. In a face to face group setting
3. Respectful, helpful, actionable
IMAGING FOR HEADACHE
Add a graphic for someone that has a headache

“I think I need a CT Scan...”
Lodi Family Medicine
Gould Medical Group

David Duncan, MD
Average Cost of Imaging Ordered Per Visit for Headache
Percent of Visits for Headache Where MRI Was Ordered
Reducing the ordering of imaging for headache

Most providers have significantly changed!

### PERCENT OF PATIENTS WITH UNCOMPLICATED HEADACHE WHO RECEIVED AN ORDER FOR IMAGING WITHIN 30 DAYS

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Performance since project start</th>
<th>Current</th>
<th>Savings*</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>9%</td>
<td>6%</td>
<td>6%</td>
<td>$10.612</td>
<td>High performer (rate exceeds 75th percentile)</td>
</tr>
</tbody>
</table>

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The numbers in parentheses next to the clinician names are the denominator for the Baseline and the denominator for the After Rate.

**Measure criteria**

Denominator: Count of patients with a visit for uncomplicated headache in the month prior to the measurement month

Numerator: Count of patients who received an order for imaging within 30 days of visit

*Savings stop accumulating 24 months after project launch. If project is terminated prior to 24 months savings is frozen as of term date.
Reducing the ordering of imaging for headache

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Reducing the ordering of imaging for headache

### AVERAGE COST FOR IMAGING FOR UNCOMPLICATED HEADACHE

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<td>$102.69</td>
<td>$48.55</td>
<td>$54.13</td>
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The numbers in parentheses next to the department/care centers are the denominator for the Baseline and the denominator for the After Rate.

**Measure criteria**

Denominator: Count of patients with a visit for uncomplicated headache in the month prior to the measurement month.

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“This scan may not have been necessary...”
APPROPRIATE IMAGING FOR PATIENTS WITH STAGE 4 BREAST CANCER
Appropriate imaging for patients with stage 4 breast cancer

• Are PET/CT scans necessary for patients with stage 4 breast cancer?
Appropriate imaging for patients with stage 4 breast cancer baseline data
Appropriate imaging for patients with stage 4 breast cancer

- Always consider a CT/bone scan over a PET scan when it is appropriate.
- If the circumstance allows the use of CT/bone scan.
Appropriate imaging for patients with stage 4 breast cancer

PERCENT OF PATIENTS WITH PET/CT SCANS FOR BREAST CANCER

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<tbody>
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<td>1%</td>
<td>1%</td>
<td>$978,952</td>
<td>Achieved statistically significant improvement</td>
</tr>
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The numbers in parentheses next to the clinician names are the denominator for the Baseline and the denominator for the After Rate.

Measure criteria
Denominator: Count of unique patients with an encounter for breast cancer with a participating oncologist in the prior 12 months
Numerator: Of these patients in the denominator, count of patients with a PET/CT scan ordered in the measurement month ordered by a participating oncologist.

*Savings stop accumulating 24 months after project launch. If project is terminated prior to 24 months savings is frozen as of term date.
Appropriate imaging for patients with stage 4 breast cancer

PERCENT OF PATIENTS WITH PET/CT SCANS FOR BREAST CANCER

Baseline

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Achieved statistically significant improvement

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APPROPRIATE IMAGING FOR ABDOMINAL PAIN
Gould Medical Group
Urgent Care

James G. Misslbeck, MD
Appropriate imaging for abdominal pain – baseline data
Appropriate imaging for abdominal pain

PERCENT OF PATIENTS WITH ABDOMINAL PAIN WHO RECEIVED AN IMAGING STUDY (COMBINED X-RAY AND CT SCAN)

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<tbody>
<tr>
<td>37 %</td>
<td>26 %</td>
<td>28 %</td>
<td>$127,502</td>
<td>Achieved statistically significant improvement</td>
</tr>
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</table>

Not always easy to sustain results

The number in parentheses next to the month label below the x-axis is the denominator for that month.

Measure criteria
Denominator: Count of all patients with an urgent care visit for abdominal pain in the measurement month
Numerator: Count of patients with an order for an x-ray or CT scan with a diagnosis of abdominal pain in the measurement month

*Savings stop accumulating 24 months after project launch. If project is terminated prior to 24 months savings is frozen as of term date.*
Appropriate imaging for abdominal pain

Most providers have significantly changed!
Appropriate imaging for abdominal pain

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GMG went from the highest to one of the lowest
Use of CT Scan in the Emergency Department
CT Scan Use Triples in 15 Years; Radiation Risk Justified?

June 12, 2012

By SHEILA REDDY, M.D., ABC News Medical Unit via WORLD NEWS

Rise in CT Scans Increases Radiation Exposure

Data presented to ED physicians

Percent of Patients who received CT Scan in ED

All diagnoses included. CPMC Pacific Campus. Time frame November 1, 2013 – September 30, 2014
Clinician Feedback

• “We had no idea!”

• “Some of these were required for the admission…”

• “What about the ones that were positive?”

• Need to do “severity adjustment” →
  • Count only the non-admitted patients
PERCENT OF PATIENTS SEEN IN THE ED WHO RECEIVED AN ABDOMINAL CT SCAN FOR NON-ADMITTED PATIENTS

- **Baseline**: 7%
- **Performance since project start**: 7%
- **Current**: 6%
- **Savings**: $8,418
- **Status**: Achieved statistically significant improvement
## PERCENT OF PATIENTS SEEN IN THE ED WHO RECEIVED AN ABDOMINAL CT SCAN FOR NON-ADMITTED PATIENTS

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- **Upper Control Limit**
- **Lower Control Limit**
- **Mean**

### Measure criteria

**Denominator:** Count of all patients with an emergency department visit who were discharged home in the measurement month

**Numerator:** Of the patients in the denominator, count of patients who received an abdominal CT scan
What about the patient?
Patient Perspective?

5,213 Blood draws avoided

8,620 mSv radiation avoided

46 transfusions avoided

Patient Experience Impacted!
Online Questions

HAVE A HEALTH QUESTION?
Ask the Expert

Featured on mylifestages.org

Dr. Gary Mcleod
Question of the Week

What can a doctor do to diagnose my headache besides ordering imaging?

Gary McLeod, M.D. answered: Many patients choose to see physicians for head and neck pain. These symptoms are often due to stress, tension, posture, etc. They can cause lots of pain and discomfort to patients. However, an office visit can help diagnose the pain, whereas imaging rarely helps with this concern. During an office visit, your physician will ask questions about your medical history, health, symptoms, and conduct a physical and neurological exam. During this, the physician will look for any signs of an illness that could be causing the headache. After this full evaluation, the physician should be able to determine what type of
For More Information

Please contact:

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Director, Variation Reduction
(916) 622-0732
GiustoA@sutterhealth.org