



Clinical Safety & Effectiveness  
Cohort # 8

# The "Garfield" Project

September 16, 2011

**Greg Orr, MBA** has no relevant financial relationships with commercial interests to disclose.

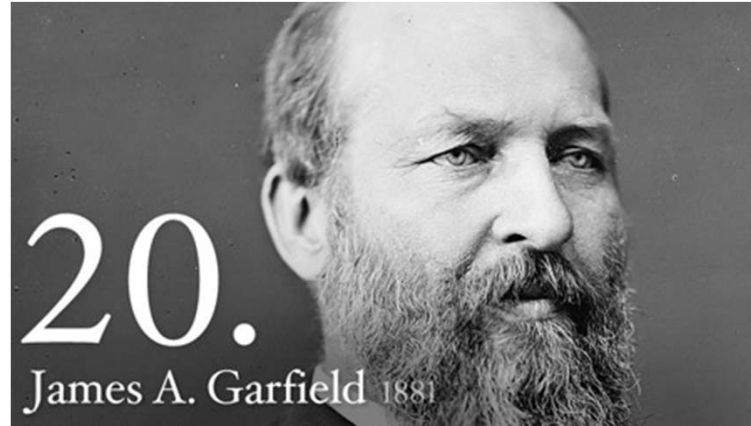
**James Souza's, MD** financial relationships with commercial interests will be disclosed prior to her presentation.

**Geoffrey Swanson's, MD** financial relationships with commercial interests will be disclosed prior to her presentation.

**Samantha Collier's, MD, MBA** financial relationships with commercial interests will be disclosed prior to her presentation.

# James A. Garfield

- 20<sup>th</sup> US President
- Assassination or Malpractice ???
- Unwashed Surgeon
- Died from the Infection—Not the Bullet



# The Team



| CS & E Team  | ICU/CCU Leadership   | Infection Control                           | Hospital Administration |
|--|--|---|-------------------------|
| Samantha Collier, MD<br>Greg Orr, MBA<br>James Souza, MD<br>Geoff Swanson, MD<br><br>Katie Robinson* | Rick Bassett, RN<br>Carol Bodnar, RN<br>Bill Dittrich, MD<br>Sheri Grabowski, RN<br>Candy Prouty, RN<br>Kristen Blincoe, RN<br>Kristy Gempler, RN<br>Keely Cardwell, RN<br>Jen Brown, RN | Nikki Grae, MS<br>Meredith Hotchkiss,<br>RN | Bart Hill, MD           |

# Project Milestones



- Team Created Apr 2011
- AIM statement created May 2011
- Weekly Team Meetings May 16, 2011 – Sep 8 2011
- Background Data, Brainstorming Jun 1, 2011 to Aug 2011
- Workflow and Fishbone Analyses June 2011
- Interventions Implemented July – September 2011
- Data Gathering & Analysis July – September 2011
- CS&E Presentation September 16, 2011

# Description of the Problem



- Compliance is positively correlated with decreases in hospital infection rates
- House-wide compliance with HH policy is 41%
  - High of 100% and low of 20%
- Many attempts at education, posters, cajoling, etc. have been made to address the problem.

*None have made an impact on compliance rates.*
- Board of Directors is concerned and demanding improvement
  - System-wide policy proposed that is punitive and inequitably applied

# AIM Statement

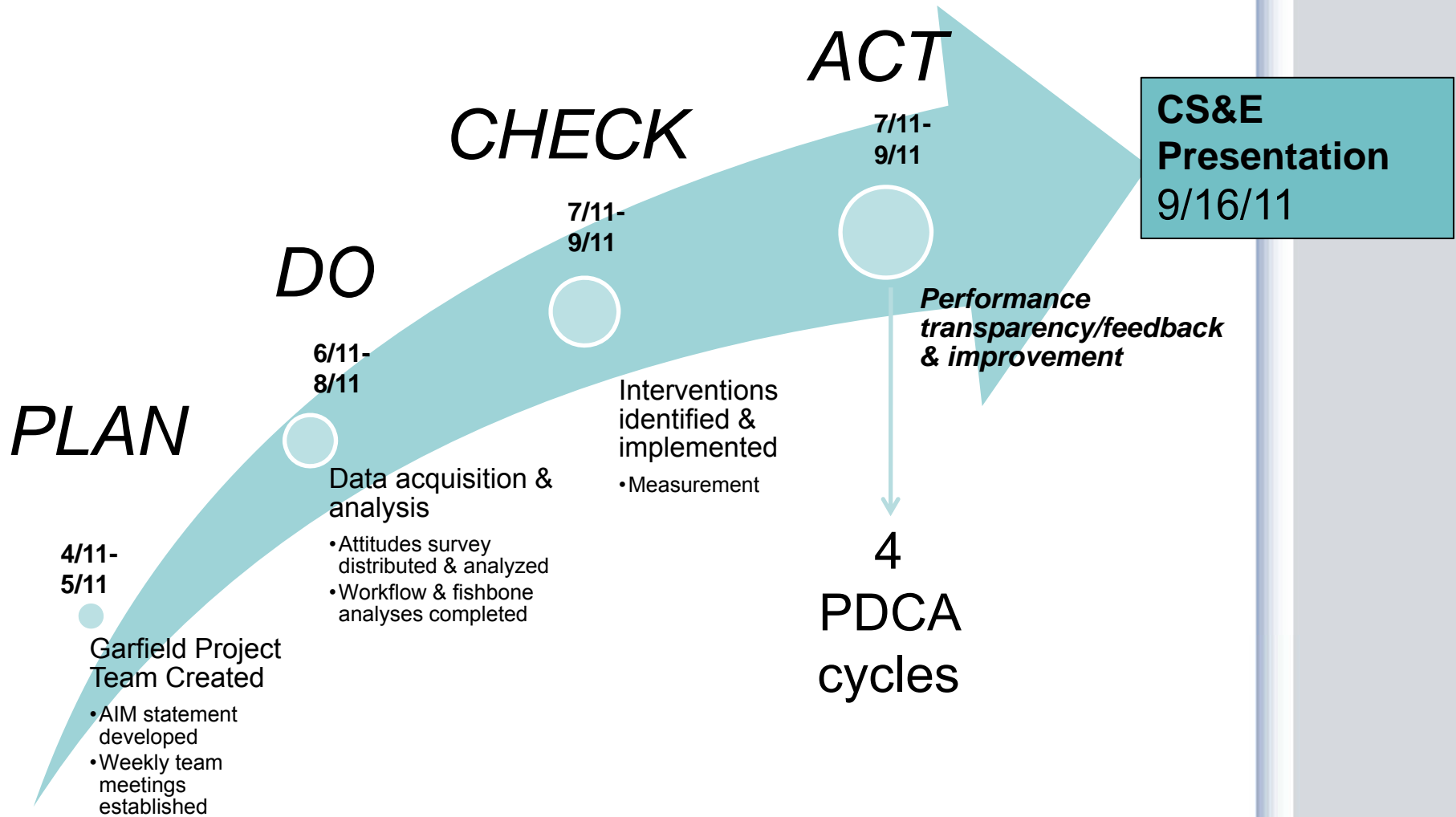


## The Garfield Project



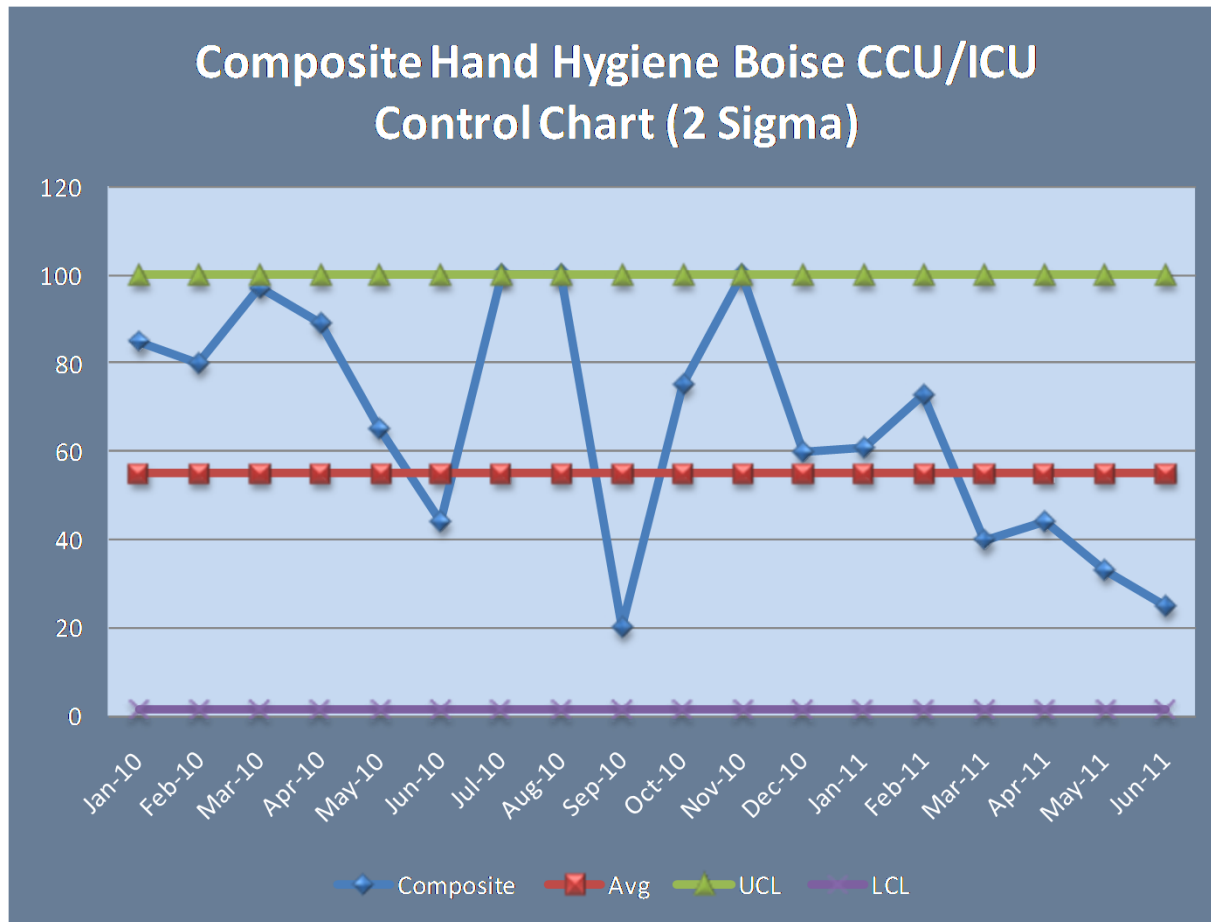
**"Achieve 100% compliance with SLHS's hand hygiene policy, by September 2011 in the SL-B ICU and all St. Luke's Treasure Valley inpatient units by March 2012."**

# Garfield Project Timeline





# Baseline Data for ICU/CCU



- Variable observation methodology

- Process appears to have control issues:

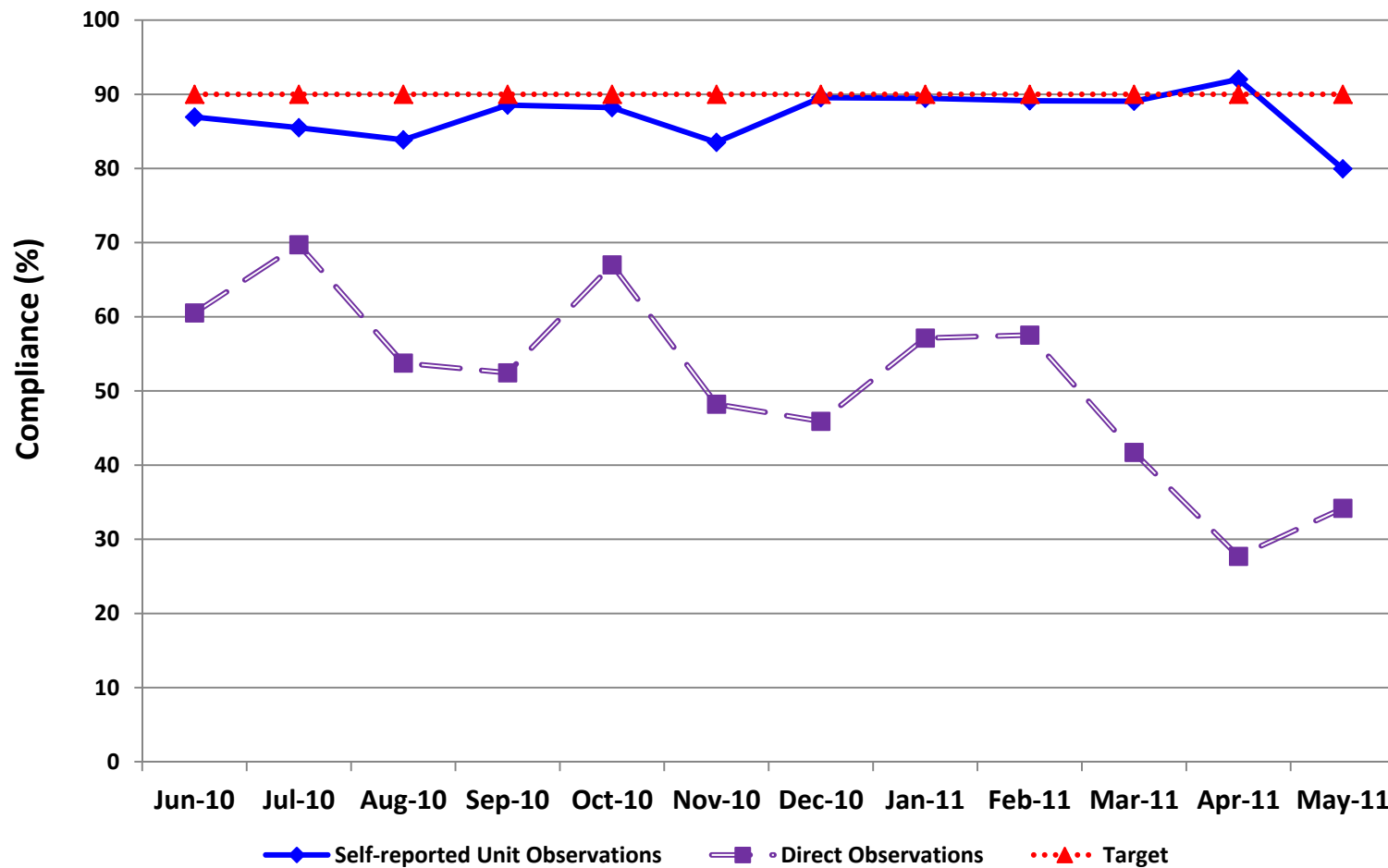
- Avg = 55%
- SD = 26%

- Compliance appears to be decreasing

# Self-Reported (Historical ) Hand Hygiene Observations



## Hand Hygiene Observations (Boise/Meridian)



- Gather Data and Review Literature
- Brainstorm and Initial Data Review
- Fishbone Diagram
- Attitudes and Obstacles Survey
- Site Visit to Seattle by IC Staff
  - Seattle Children's Hospital
  - Swedish/Cherry Hill
- Weekly Interventions and Run Charts

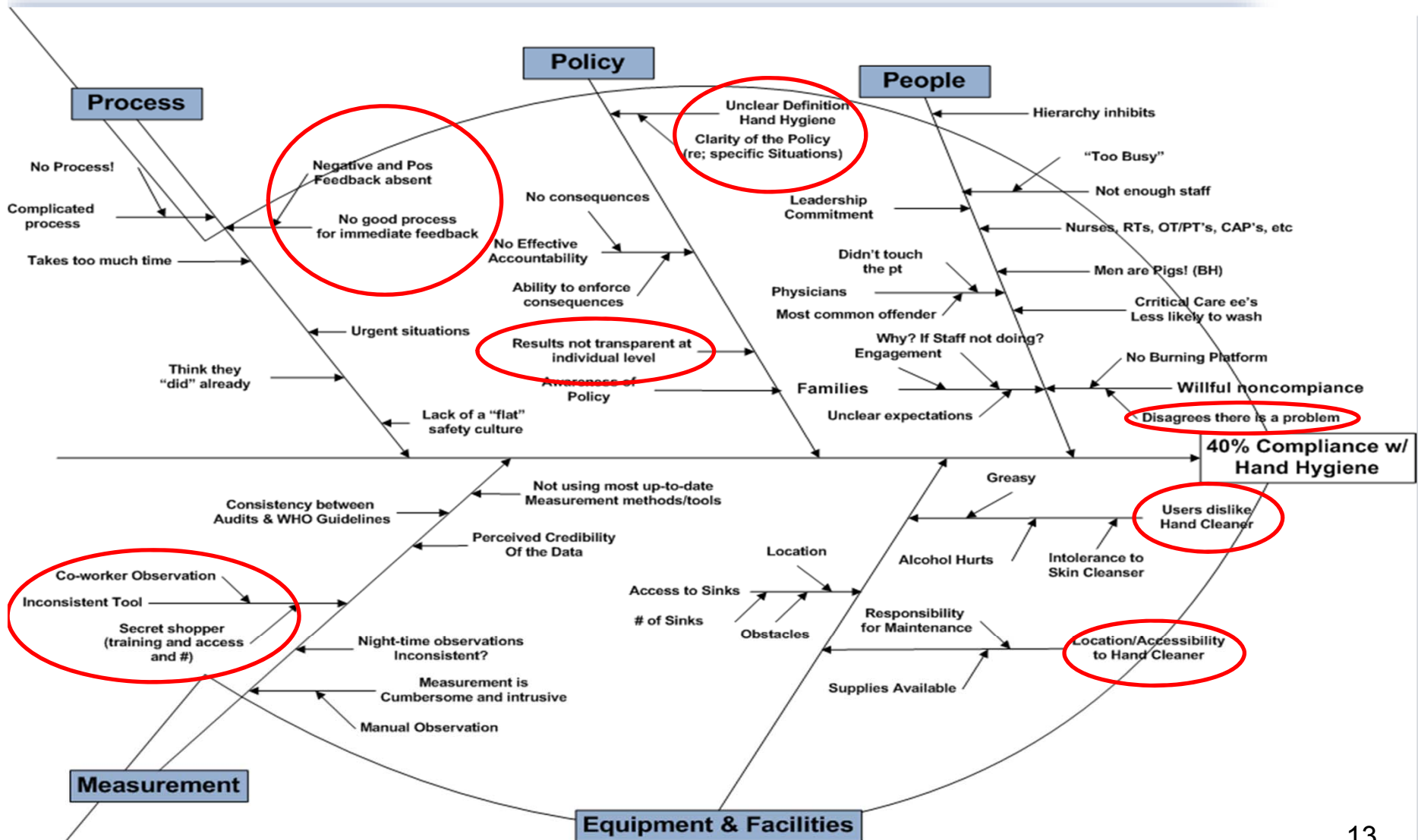
# Barriers, Observations and Opportunities

## From Staff During Project



- Isolation room
- **Left room with glove to chart**
- Entered room to check on the computer
- MD took phone call
- Pt with possible r/o C.diff sanitized hands when exiting room
- Putting on isolation gear
- **Hands full**
- Left room to get supplies with gloves
- Exited room with phone
- Cookie and phone in hand
- **No hand hygiene at all (entry or exit)**
- **Using phone**
- Pushing equipment out of room
- On phone; answered phone while walking out of room
- family meeting
- didn't know had to wash hands enter/exit empty patient room
- Busy with patient decreasing BP; starting pressors
- Went to IV pump
- **Busy with new admit (x7)**
- Wheeling in BiPAP
- MD grabbed chart from room
- **Carrying multiple supplies/equipment into room (x3)**
- Patient desaturating; took off BiPAP
- Admitting OH pt (x2)
- Carrying towel into room

# A Fish Called "Garfield"



- Revised Hand Hygiene Policy
  - Modified the “5 Moments” of HH
    - Before and After contact with patient and/or environment and/or gloves
- Education
  - All Staff & Physicians (intensivists) in ICU/CCU
- Garfield Boards in each unit
- Posted data by dept & caregiver type
  - RN’s, CAPs/USAs, Physicians, RT’s
- Pizza Incentive
- “Have you Seen Dr. Garfield?”
- Transparent compliance data

# PDCA # 1



| Plan                                   | Do   | Check       | Act  |
|--|--|-------------|--|
| <b>Staff &amp; Physician Education</b> | Drs. Souza/Dittrich presented education to each unit and each shift.   | Gather Data | 1. Review and share data with Work Team<br>2. Review feedback regarding opportunities and barriers |
| <b>Remove Barriers</b>                 | Increase frequency of Sanitizer refills/purchasing and added locations |             | 3. Continue Secret Shopper   |

# PDCA # 2



| Plan                            | Do   | Check       | Act  |
|---------------------------------|--|-------------|--|
| <b><i>Display unit data</i></b> | Placed the "Garfield Boards" in each unit.<br>Displayed compliance data by specialty (RN, RT, MD, CAP/USA) | Gather Data | 1. Review and share data with Work Team<br>2. Review feedback regarding opportunities and barriers |
| <b><i>Incentives</i></b>        | Announced opportunity for pizza after 2 consecutive weeks at $\geq 75\%$ compliance                        |             | 3. Continue w/ Secret Shopper  |



# Garfield Project Boards



## Magnetic Whiteboards in Units

In central work area (physician dictation and nurse work areas)

## Purpose

- Raise Awareness of Project
- Provide Education
- Provide Feedback in the form of data & encouragement
- **Solicit feedback and ideas from staff**

Maintained by the unit

# PDCA #3



| Plan  | Do   | Check   | Act   |
|---|--|---|---|
| <b><i>Individual and 'Real-time' Feedback</i></b> | Leaders and staff coached on how to remind co-workers using the phrase:<br><br><b><i>"Have you seen Dr. Garfield?"</i></b> | <ol style="list-style-type: none"><li>1. Gather, review and share data with work Team</li><li>2. Limited success...</li></ol> | <ol style="list-style-type: none"><li>1. Continue monitoring</li><li>2. Review feedback regarding opportunities and barriers</li><li>3. Move to Week # 4 Intervention</li></ol> |

# PDCA # 4



| Plan                                 | Do  | Check       | Act   |
|--------------------------------------|---|-------------|---|
| <b><i>Implement Transparency</i></b> | Letter from Dr. Souza to Staff and Physicians<br><b>Post names of all staff and observed compliance on Garfield Board</b> | Gather Data | <ol style="list-style-type: none"><li>1. Review and share data with Work Team</li><li>2. Review feedback from unit staff</li><li>3. Continue to monitor</li></ol> |

# Transparency:



## Garfield Project

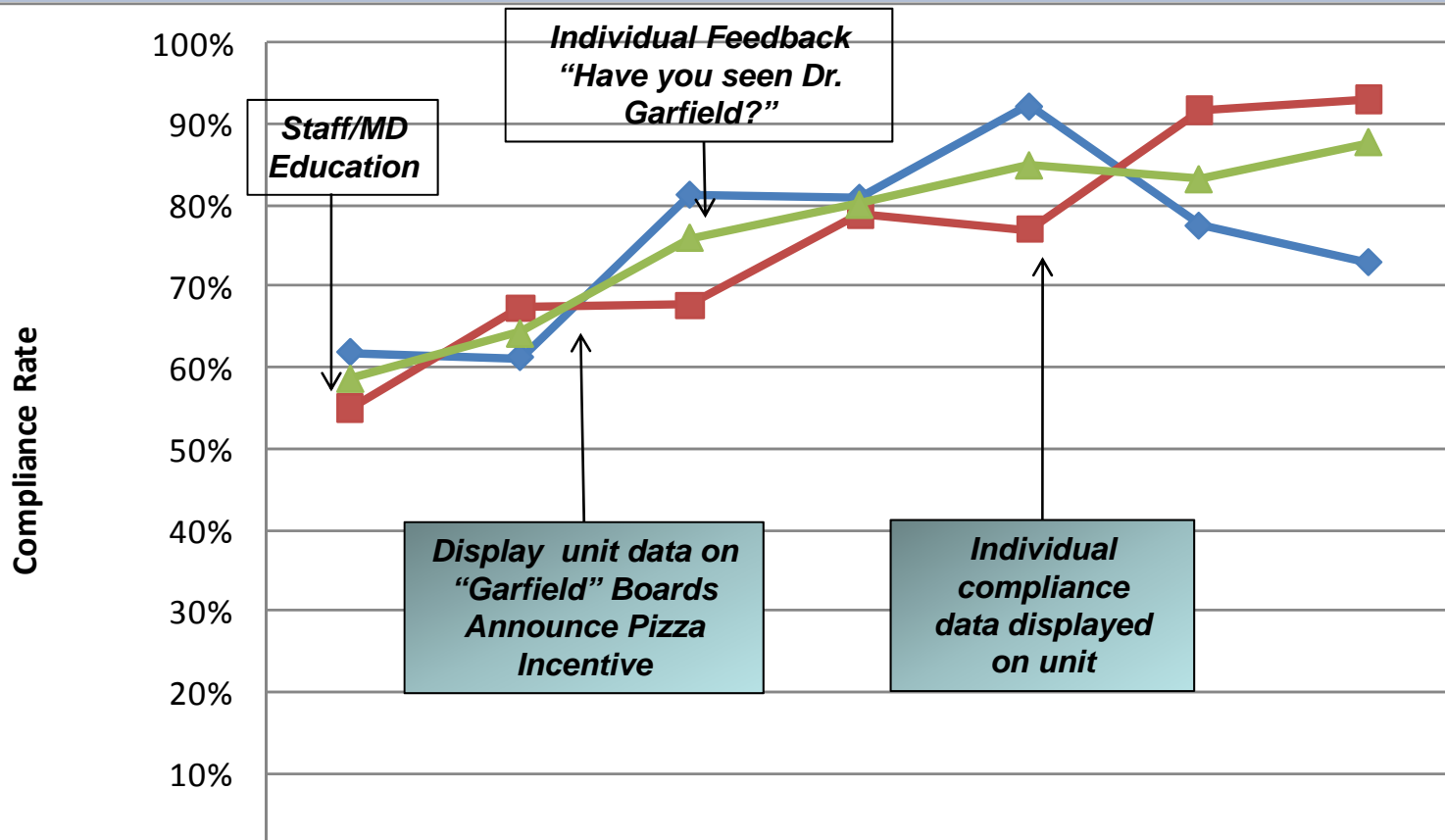
Our ICU core staff has been observed either washing or using gel on their hands while entering/exiting a room. This is a listing of the number of times each staff member was observed either yes (washing their hands) or no (not washing their hands).

|     |           | Week 1            |            | Week 2            |            | Week 3            |            | Week 4            |            | Week 5            |            |
|-----|-----------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
|     |           | # of Observations | Compliance | # of Observations | Compliance | # of Observations | Compliance | # of Observations | Compliance | # of Observations | Compliance |
| Ac  | Suzanne   | 0                 | na         | 5                 | 80%        | 2                 | 100%       | 0                 | na         | 4                 | 100%       |
| Al  | Kristen   | 0                 | na         | 0                 | na         | 0                 | na         | 0                 | na         | 0                 | na         |
| Al  | Tiffany   | 0                 | na         | 0                 | na         | 0                 | na         | 0                 | na         | 0                 | na         |
| Bar | Jana      | 1                 | 100%       | 0                 | na         | 4                 | 0%         |                   |            | 0                 | na         |
| Bar | Mark      | 0                 | na         | 2                 | 50%        | 1                 | 100%       | 0                 | na         | 0                 | na         |
| Bo  | Carol     | 0                 | na         | 1                 | 100%       | 0                 | na         | 0                 | na         | 0                 | na         |
| Ca  | Keely     | 0                 | na         | 3                 | 100%       | 2                 | 100%       | 0                 | na         | 0                 | na         |
| Cl  | Winston   | 0                 | na         | 5                 | 40%        | 1                 | 0%         |                   | 0          | 1                 | 100%       |
| Co  | Kristen   | 3                 | 66%        | 2                 | 100%       | 5                 | 100%       | 0                 | na         | 0                 | na         |
| Do  | Donna     | 1                 | 0%         | 0                 | na         | 0                 | na         | 1                 | 100%       | 0                 | na         |
| Fi  | Susan     | 0                 | na         | 1                 | 100%       | 0                 | na         | 3                 | 66%        | 3                 | 33%        |
| Fi  | Grace     | 1                 | 100%       | 1                 | 100%       | 0                 | na         | 0                 | na         | 2                 | 100%       |
| Fi  | Kristina  | 0                 | na         | 1                 | 100%       | 0                 | na         | 0                 | na         | 0                 | na         |
| Gl  | Traci     | 1                 | 100%       | 1                 | 100%       | 0                 | na         | 3                 | 100%       | 1                 | 100%       |
| Ha  | Memnuna   | 0                 | na         | 7                 | 58%        | 0                 | na         | 0                 | na         | 1                 | 100%       |
| Ha  | Katerine  | 0                 | na         | 2                 | 100%       | 0                 | na         | 0                 | na         | 0                 | na         |
| He  | Stephanie | 2                 | 50%        | 0                 | na         | 11                | 45%        | 3                 | 0%         | 5                 | 40%        |
| He  | Erica     | 0                 | na         | 2                 | 0%         | 4                 | 75%        | 3                 | 100%       | 0                 | na         |
| Ist | Britt     | 0                 | na         | 0                 | na         | 0                 | na         | 1                 | 100%       | 4                 | 100%       |
| Jo  | Kimberly  | 0                 | na         | 3                 | 100%       | 1                 | 100%       | 0                 | na         | 5                 | 80%        |
| Ke  | Angela    | 3                 | 66%        | 2                 | 100%       | 0                 | na         | 7                 | na         | 0                 | na         |
| La  | Becky     | 0                 | na         | 0                 | na         | 0                 | na         | 4                 | 100%       | 0                 | na         |
| Le  | Sang      | 3                 | 66%        | 2                 | 0%         | 3                 | 33%        | 2                 | 100%       | 0                 | na         |
| Ma  | Wendi     | 0                 | na         | 1                 | 100%       | 1                 | 100%       | 1                 | 0%         | 2                 | 100%       |
| Ma  | Catherine | 0                 | na         | 0                 | na         | 1                 | 100%       | 0                 | na         | 0                 | na         |
| Ni  | Troy      | 0                 | na         | 3                 | 66%        | 2                 | 100%       | 4                 | 100%       | 2                 | 0%         |
| Ni  | Heather   | 0                 | na         | 4                 | 100%       | 2                 | 100%       | 0                 | na         | 0                 | na         |
| Pa  | Cindy     | 0                 | 11%        | 5                 | 0%         | 6                 | 0%         | 0                 | na         | 4                 | 75%        |

Letter from Dr. Souza to all ICU/CCU staff and physicians

Each name & rate of compliance posted on the "Garfield" board of each unit.

# Hand Hygiene Compliance Rates Post Intervention Boise Adult CC Units



|          | July 2011 |     | Aug 2011 |     | Sept 2011 |     |     |
|----------|-----------|-----|----------|-----|-----------|-----|-----|
| CCU      | 62%       | 61% | 81%      | 81% | 92%       | 78% | 73% |
| ICU      | 55%       | 67% | 68%      | 79% | 77%       | 92% | 93% |
| Combined | 59%       | 64% | 76%      | 80% | 85%       | 83% | 88% |

# Return on Investment



## Cost of Hospital Acquired Infections

| <i>Summary of Total Excess Costs &amp; Hospital Days due to Hospital Associated Infections<br/>(Treasure Valley- CY2010)</i> |                         |                           |                                   |
|--|-------------------------|---------------------------|-----------------------------------|
|  | <b>Total Infections</b> | <b>Total Excess Costs</b> | <b>Total Excess Hospital Days</b> |
| Catheter Related Urinary Tract Infections  | 34                      | \$37,672.00               | 68                                |
| Catheter Related Bloodstream Infections  | 42                      | \$1,411,953.00            | 710                               |
| Ventilator Associated Pneumonia  | 8                       | \$217,408.00              | 92                                |
| Surgical Site Infections   | 66                      | \$1,274,130.00            | 792                               |
| MRSA infection   | 15                      | \$116,281.00              | 81                                |
| Clostridium difficile infection  | 100                     | \$409,622.00              | 600                               |
| <b>Total</b>   | <b>265</b>              | <b>\$3,467,066.00</b>     | <b>2343</b>                       |
| <b>Average Cost per Infection</b>  | <b>\$ 13,083</b>        |                           |                                   |
| <b>Excess Hospital Days per Infection</b>  | <b>8.8</b>              |                           |                                   |

**SL's Infection Control reports zero HAI's in the Boise Adult Critical Care Units since July. Too early to tell if related to project, but will continue to monitor rates of infection and HH Compliance.**

# Conclusions



- Change management can be difficult
- We were able to use rapid cycle improvement techniques to improve hand hygiene compliance in two units
- Monitoring compliance is labor-intensive
- It is likely that a “consequences” intervention will be needed to further increase compliance toward 100%
- Technology may be key to achieving our goal

# Lessons Learned On Change Management



- **Creating a sense of urgency**
  - System Hand Hygiene Proposal
  - St. Luke's move toward accountable care
- **Link the project to the organizational vision**
- **Engage the front line**
  - Identification of supply chain issues
  - Education of staff
  - Identification of "Unique Situations"
- **Celebrate short-term wins**



## Barriers We Still Need to Overcome



- The recalcitrant few: Some will not be able or willing to change
- Change the culture (it comes last, not first)
  - The shared value we hope to create is patient-centeredness
  - The failure of the “Dr. Garfield” intervention makes it clear that we are not there
  - The reaction of some to the public posting of results shows we are not yet there
- The best way to cement the change will be to demonstrate results

## Next Steps



- Continue the Garfield Team meetings to keep the momentum up
- Decide on a “consequences” component
- Measure, measure, measure—prove that it works
  - Track HAI rates against hand hygiene compliance as a long-term outcome measure
- Investigate the ROI on a technological solution to monitoring and compliance
- Take it out to other units

# Thank You San Antonio!



## Questions?