

Using Human Centered Design to Achieve Operational Impact

POMS College of Healthcare Operations Management

May 6th, 2010

Who is Kaiser Permanente (KP)?

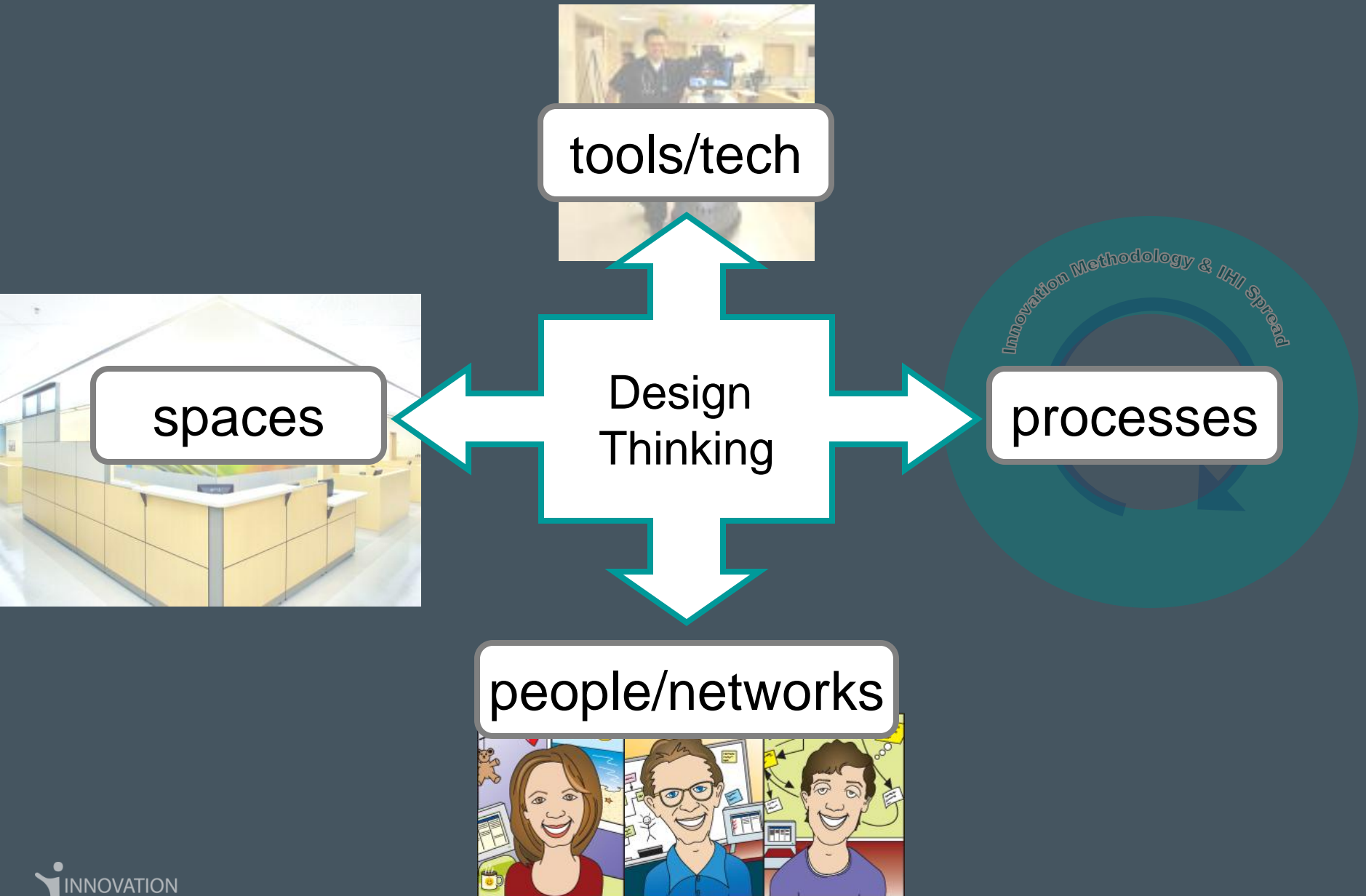




FAST COMPANY

2010 MOST
INNOVATIVE
COMPANIES

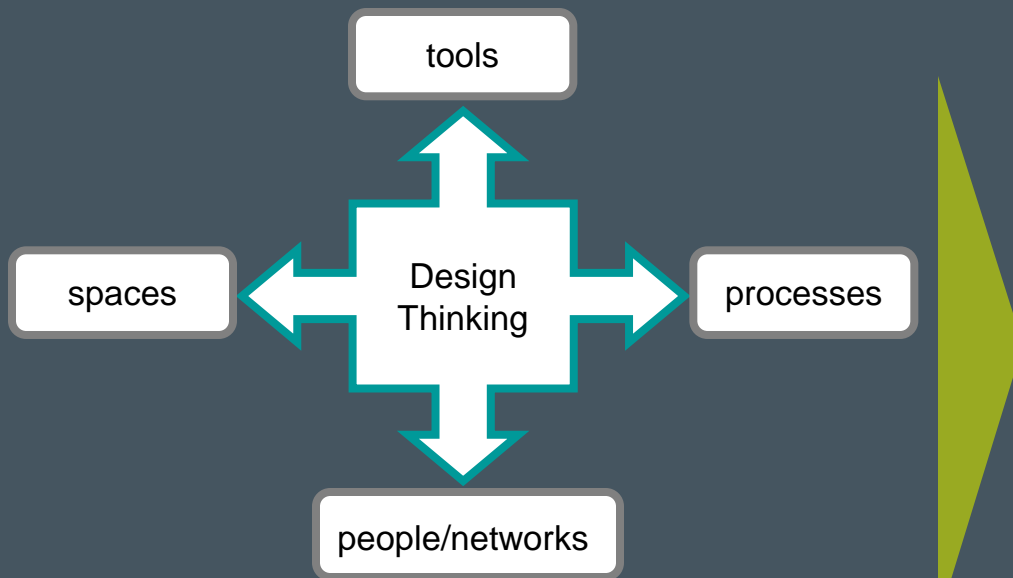
Innovation and Design Thinking at KP



Innovation Consultancy – Who are we?

Innovation and Design Thinking on the Frontlines of Healthcare

We leverage design-thinking to develop human-centered solutions to impact patient care and the work experience of our care providers.



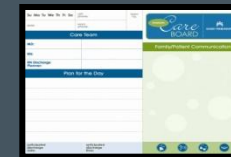
How you might know our work...

 MedRite



Medication Administration: Interruptions dropped by 50%, Process reliability increased, Medication errors reduced; spread across KP and abroad

NKE



Nurse Shift Changes: Nurses got to see patients at the start of their shift 3x faster under NKE pilot.

Destination Bedside: Project Focus and summary

Minimizing Distractions and Enriching Patient Interactions

Key Measurements: Increase time at bedside by 15% and have measurable clinical patient outcomes

Background – why its important

We have a nationwide need to address the fragmentation of bedside nursing care.

Rapid changes in health care



Creating challenges to bedside care



Nurses "Band-aid" just to survive



But nurses still have little time to be bedside



Participating Health Systems



Data Collection Results

Protocol A

385 Participants



Protocol B

382 Participants



Protocol C

750 Participants



Protocol D

288 Participants



767 licensed nurses (RNs, LPNs/LVNs) participated

In total, study data has been collected on **2,201** work shifts resulting in **21,882** hours of data

7.2% of nursing practice time is spent on **patient assessment**

17.2% of nursing practice time is spent on **medication administration**

35.3% of *all* reported nurse time is spent on **documentation**

Nurses spend **30.8%** of their time **in the patient rooms** and **38.6%** of their time at the **nurse station**

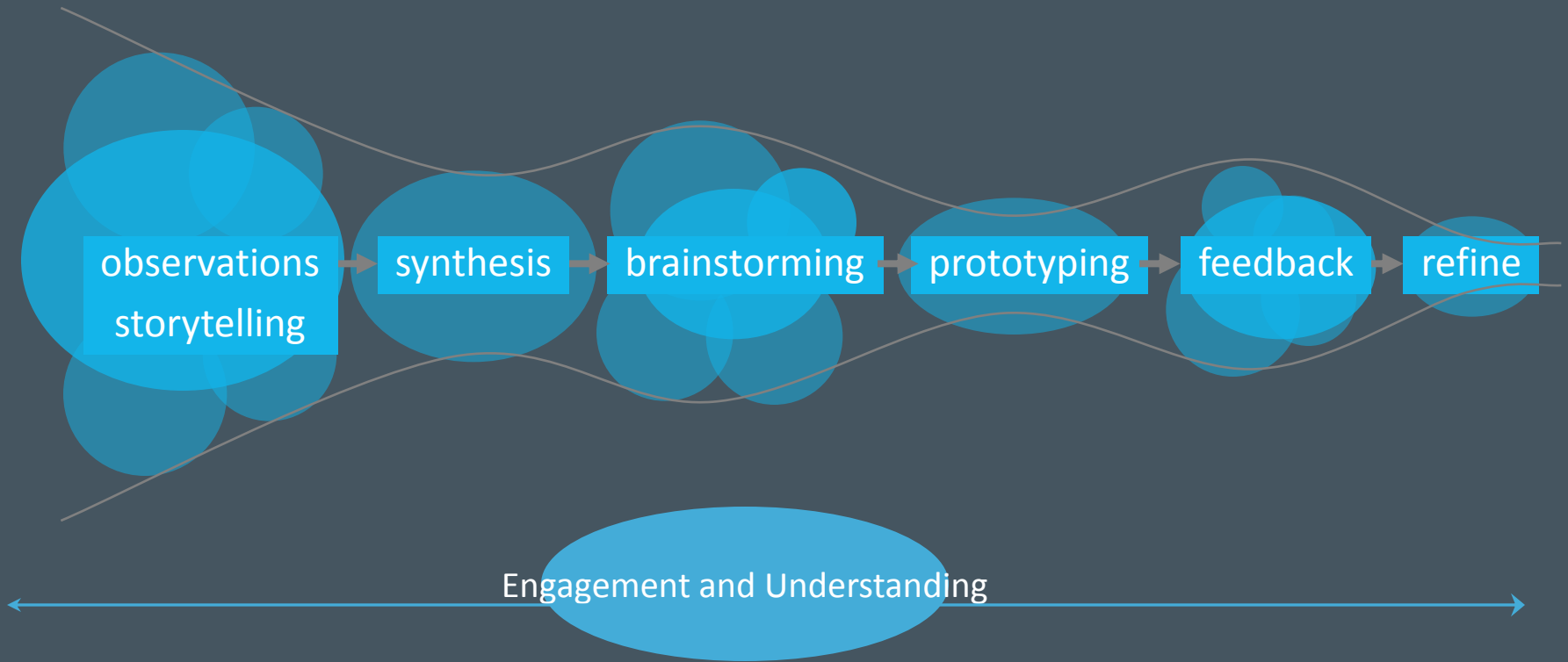
During a typical **10-hour day**, a nurse travels **1-5 miles**



Other Results

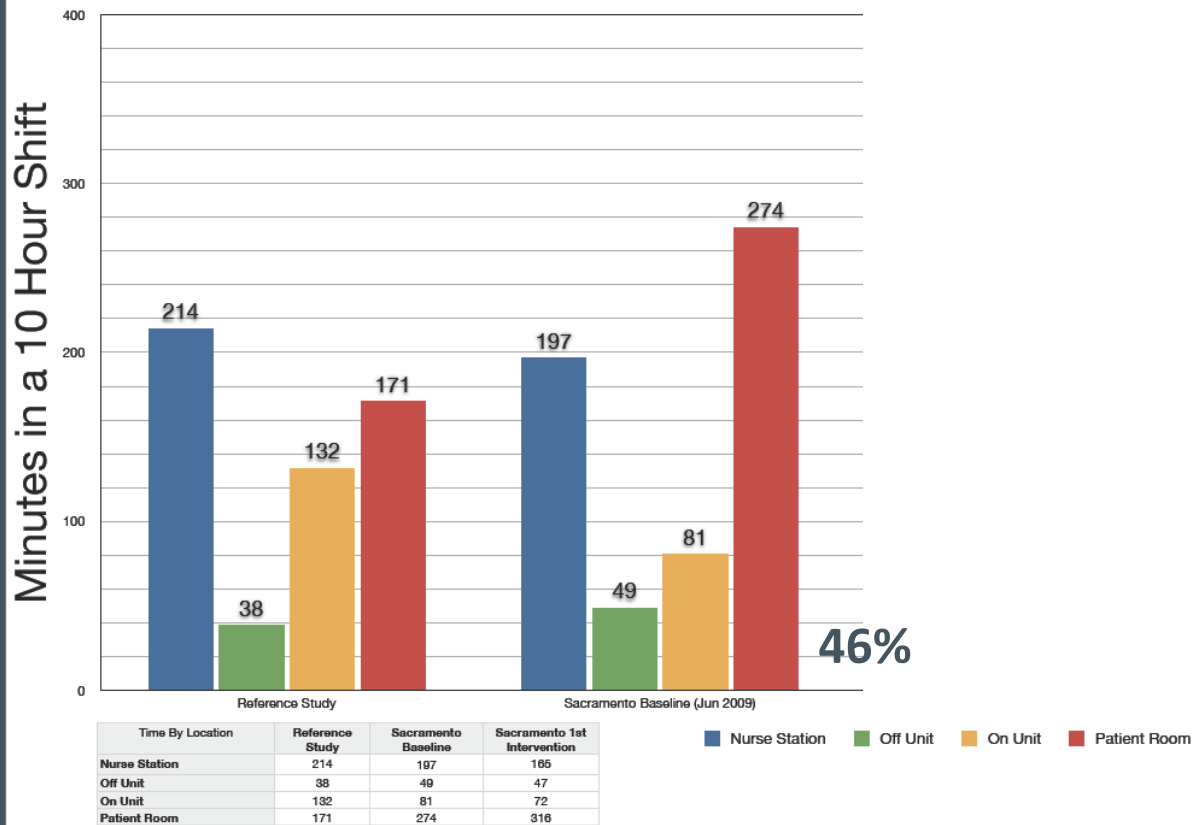
- No consistent, statistically significant relationship was found between various unit architecture types and nursing time spent with patients
- Distances traveled and time spent on activities varied considerably between shifts.
- Variability between individual nurses on the same unit was often greater than the variance across different hospital units.

Our Methodology



Time and Motion Baseline

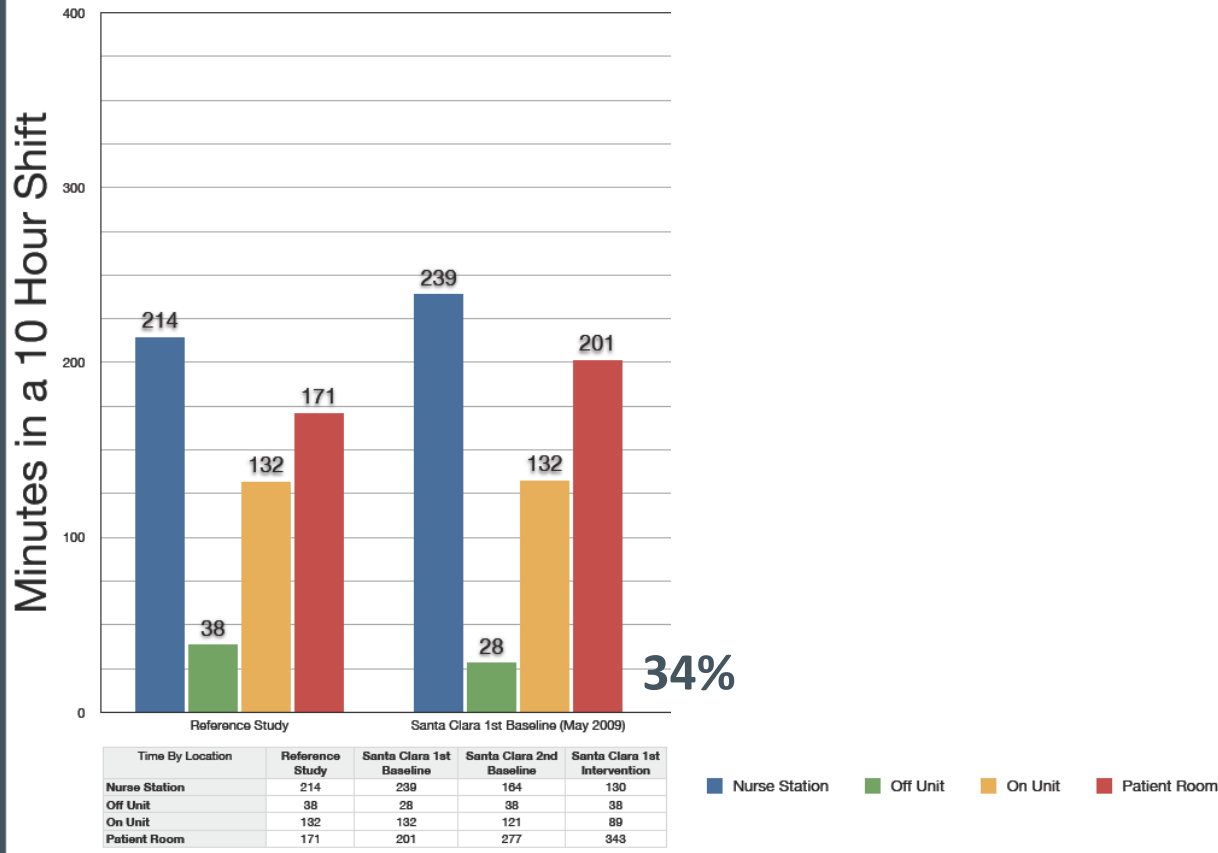
1. Nurse Time By Location (Sacramento)



Monday, April 5, 2010

Time and Motion Baseline

1. Nurse Time By Location (Santa Clara)



Monday, April 5, 2010

Observations



Our Journey to Understanding

- Time and Motion study conducted with nurses across the country
- Over 300 hours in observations:
 - nurses
 - patients
 - ancillary staff
 - physicians
 - support staff
- Over 20 hours formally interviewing RNs, UA, CNA, Unit Manager, ANM, Charge Nurse, Hospitalist, Bedhub, Pharmacy Tech, Engineering, Biomed, EVS, PCC, RSTC, Improvement Advisors



Hiding equipment

An example of problem solving happened when a patient needed to be weighed; The nurse had to go to the end of the other unit to *find a scale*. She wheeled it back and it took both nurses to weigh the patient

The scale was then “hidden” in a closet for use later to save time.

The scales were needed in the first place *because the bed was broken*. Engineering was called and they didn’t know how to fix the bed and “would be back later.”



The power of conversation

RN to patient: "I have your pain medicine, you said it was 10 out of 10, right?"

Patient: "It was, now it's kind of gone down a little."

RN: Ok.

Later...

Patient to wife on phone:

"...I have to go to the bathroom every 4 hours, and it hurts."

"...It's a sharp pain."

"...I'm not feeling the ache anymore, but I wonder if the [kidney] stone is sitting in one spot, and is that what it causing the pain?"

"..but my breathing is better, much better."



Hectic Starts

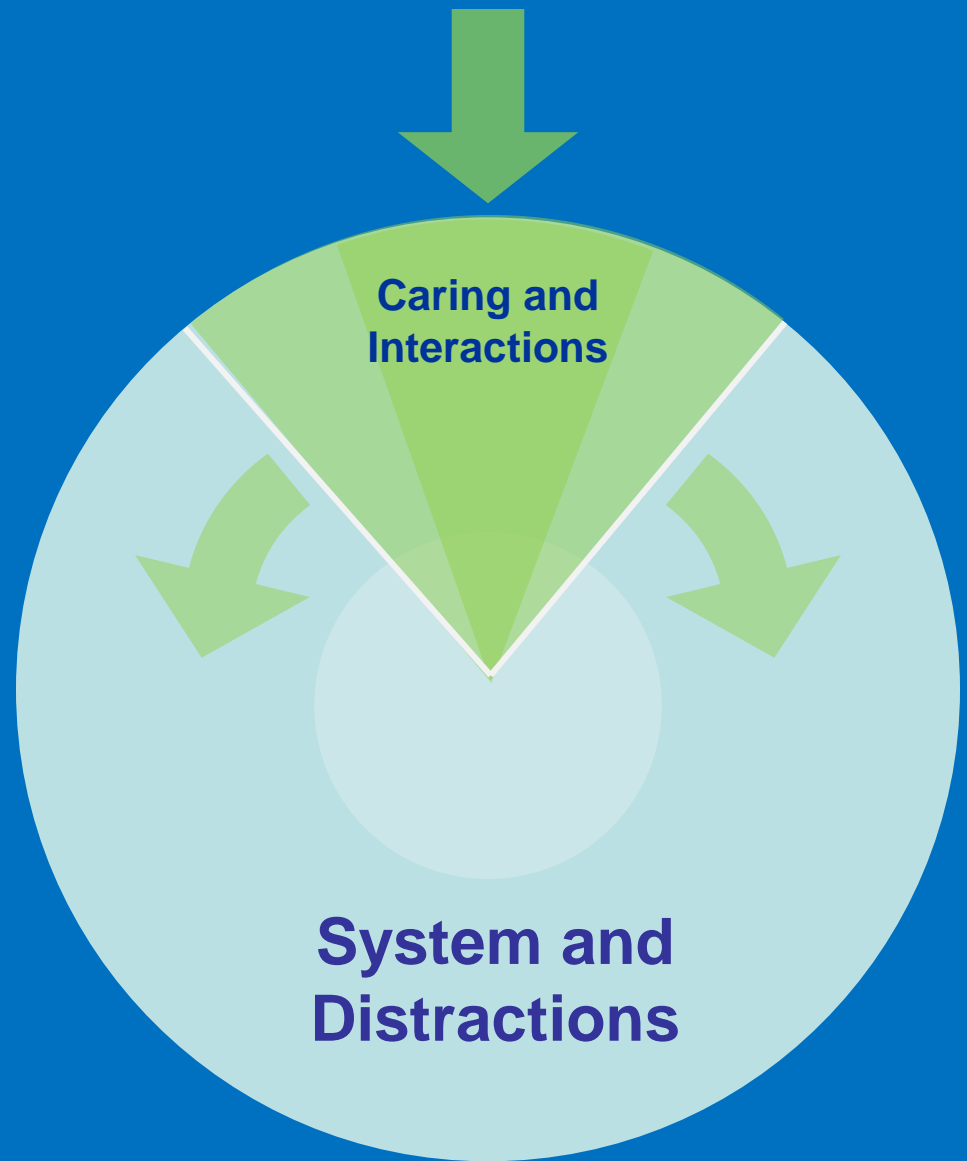


“The worst possible shift you can come into is with patients in pain.”

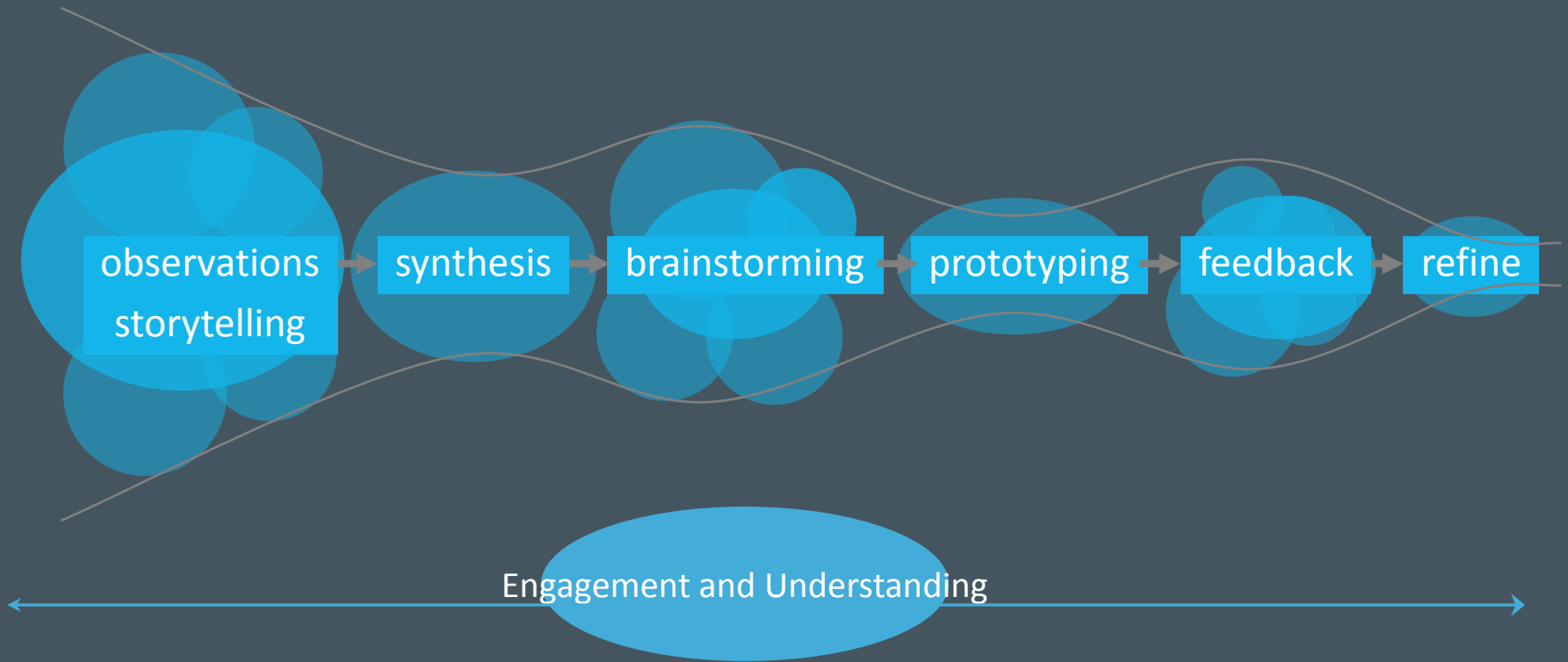
Synthesis

What is the root cause?

- The majority of nurse's attention is on the **System**
- System attention smothers attention to **Caring**
- Keeps RNs away from the bedside



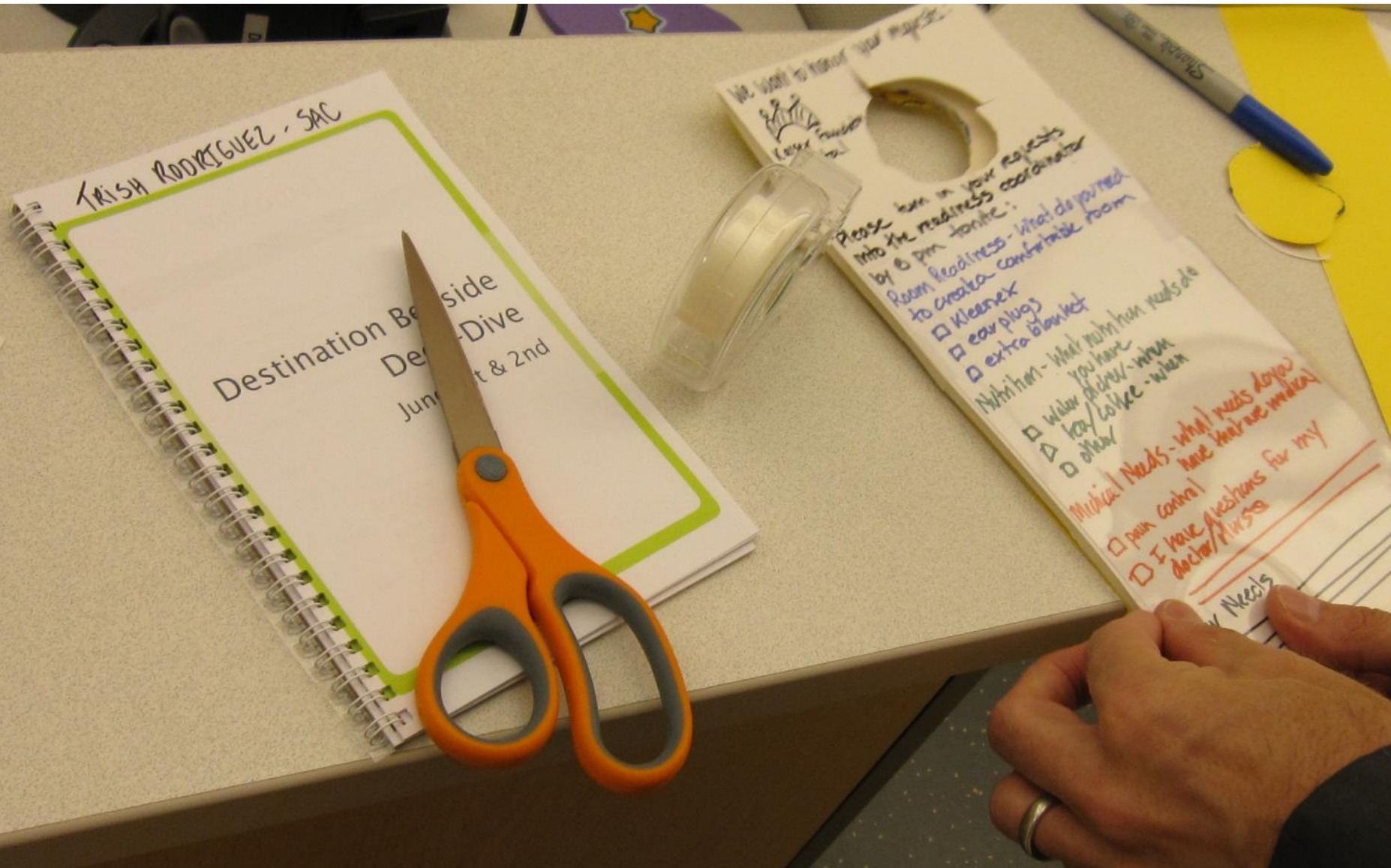
Our Methodology-a reminder



Storytelling and Brainstorm - Video



Prototype

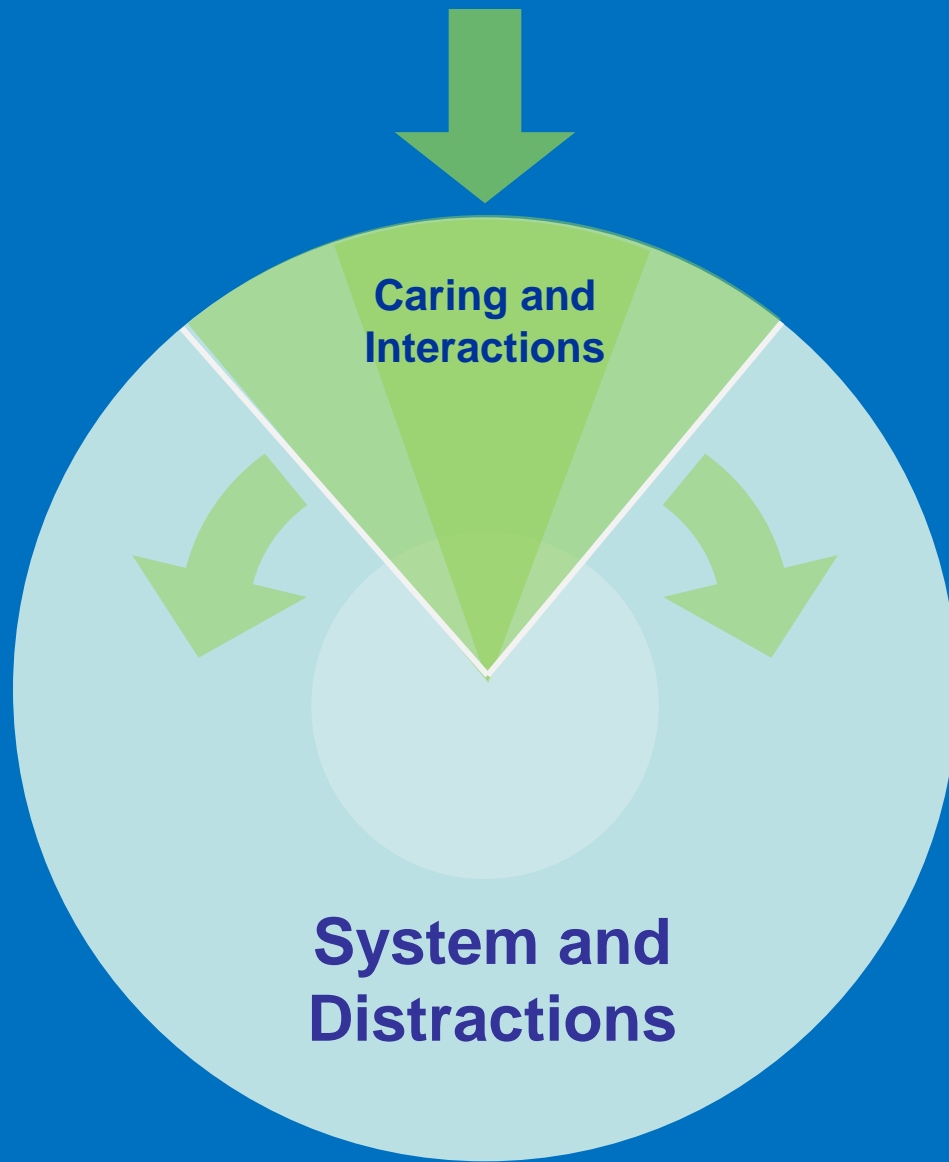


Prototype and enact – video snippet



Prototype and Field Test





2 Primary Content Areas

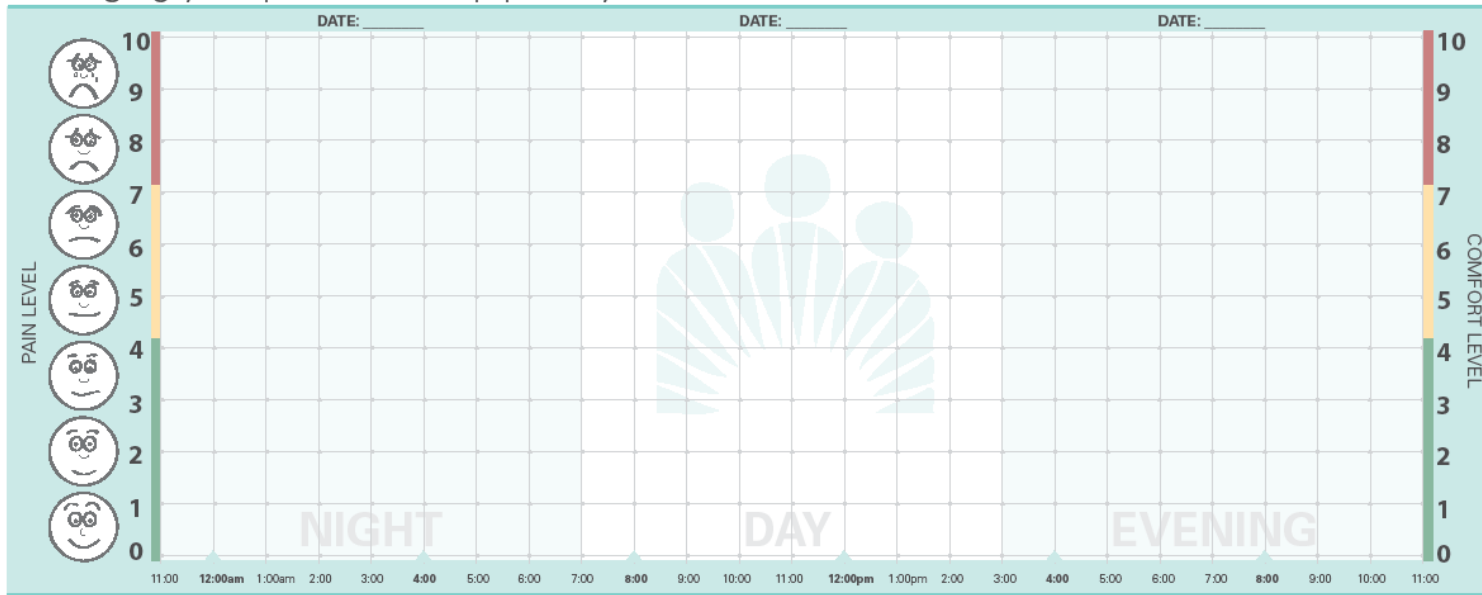
Pain – Assessment, measurement and understanding

Shift Change – Strong finish and strong start to a shift

PainScape – A tool for conversation and understanding

Interactions

Managing your pain is our top priority



Distractions



My IV Pain Medication

Last Given At _____

Due Next _____

My Oral Pain Medication

Last Given At _____

Due Next _____

While at home
Take the medicines the doctor ordered

What has been your experience with pain? **And why?**

Scared	Tough	Experienced	_____
Worried	Sensitive	Expressive	_____

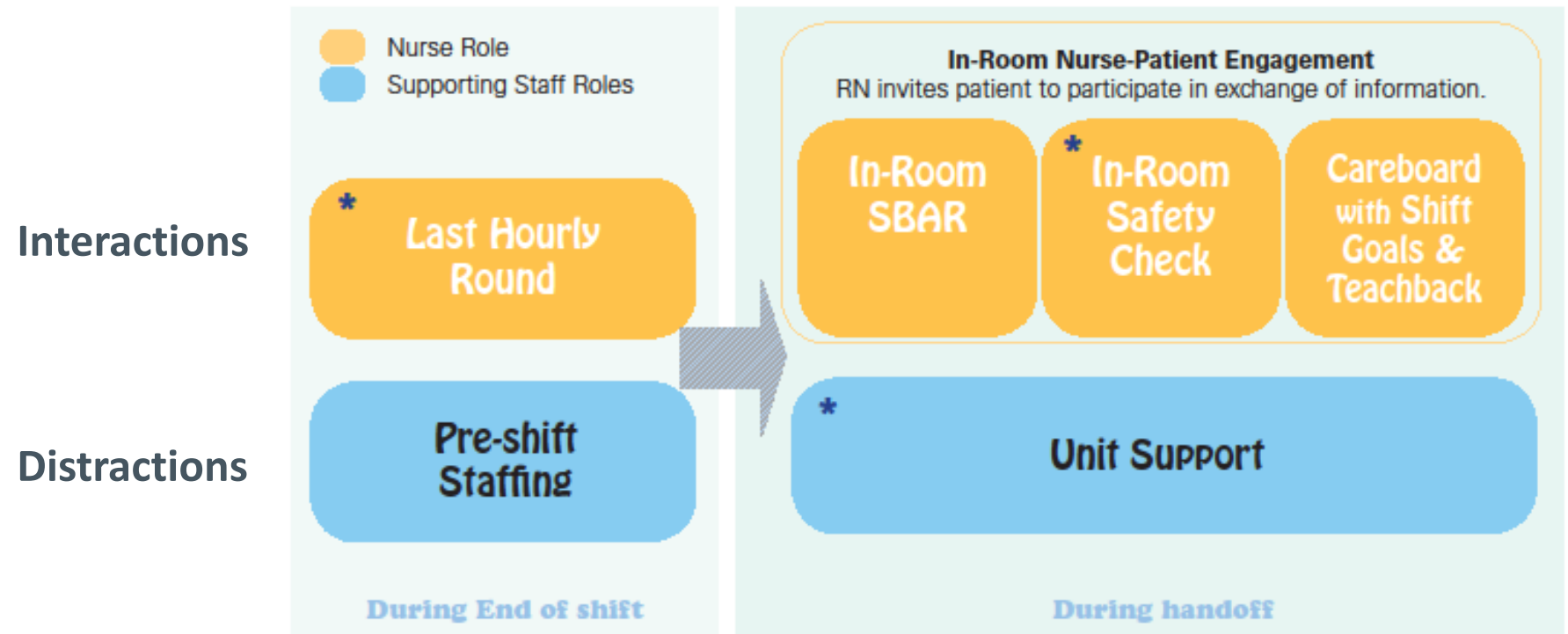
Additional methods to deal with pain

- Apply a warm or cool washcloth
- Reposition your body
- Breathe deeply
- Listen to music
- Clutch pillows
- Apply ice packs
- Walk

Product of the KP Innovation Consultancy and the frontline staff of Sacramento and Santa Clara Medical Centers © 2010

Nurse Knowledge Exchange Plus - A strong finish and start

* CUSTOM FITS: These components have built-in flexibility so they can be tailored to your unit.



Minimizing Interrupts: The Final Hourly Round

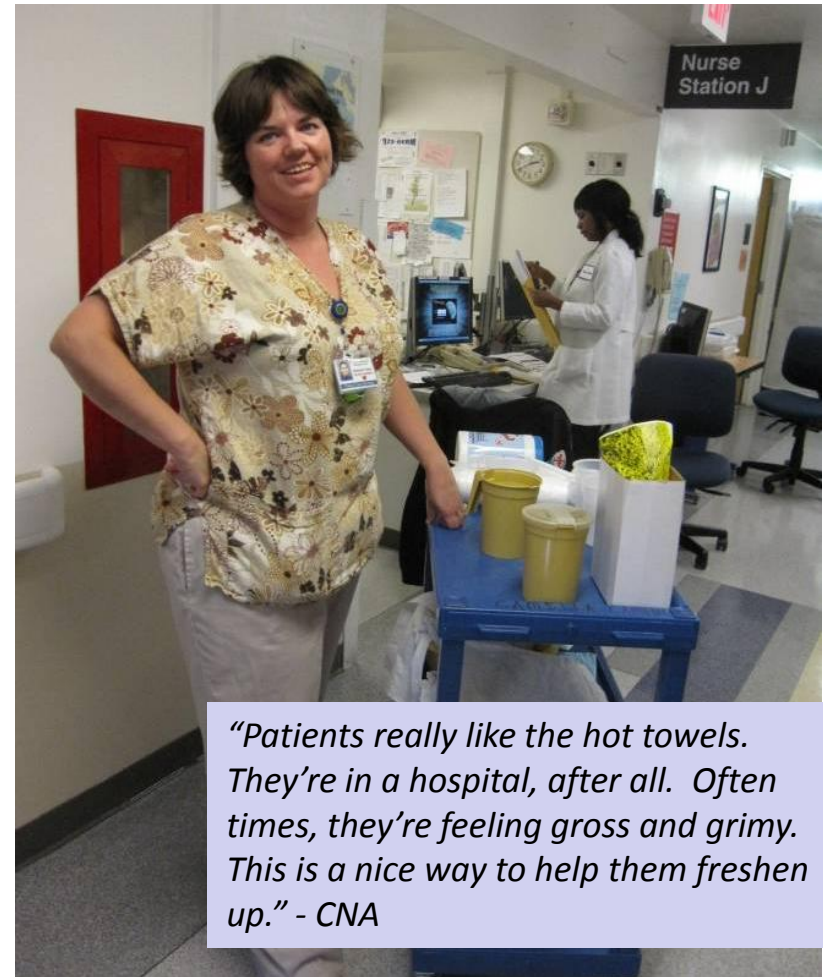
What is it?

A specialized final hourly round designed to ensure that patients are well situated before shift change.

- 4Ps (Pain, Potty, Positioning, Personal items)
- Double check IV fluids
- Hot Towels & Water (PCT'/CNA)

What's so great about it?

- Minimize avoidable interrupts during shift change.
- Reduced spill-over of patient needs to on-coming nurse.



"Patients really like the hot towels. They're in a hospital, after all. Often times, they're feeling gross and grimy. This is a nice way to help them freshen up." - CNA

Unit Support

What is it?

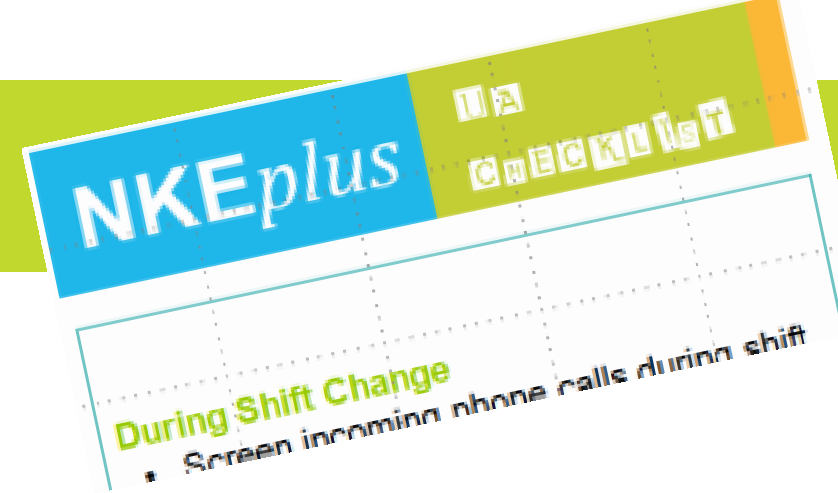
Coordinated support from support staff (UA, Charge RN, Mgrs) to minimize RN disruptions.

- answer call lights, clarify patient needs, direct to other support staff when possible
- respond to call light requests as appropriate
- assist in managing incoming admits during shift change and activities related to admits (i.e., taking report from off-unit RNs)

What's so great about it?

Prevents RNs from being taken out of the room during shift change.

Allows them to focus on exchanging information and set expectations with their patients.



Unit Specific Safety Check

What is it?

A unit-decided transitional safety check during shift change to ensure key safety issues are addressed by 2 nurses with regular frequency.

Examples:

- Signage check and reminder
- Groin site 2x check

What's so great about it?

Unit decides on safety issues they want and are able to address in the room with their patients – using shift change as a regular time.



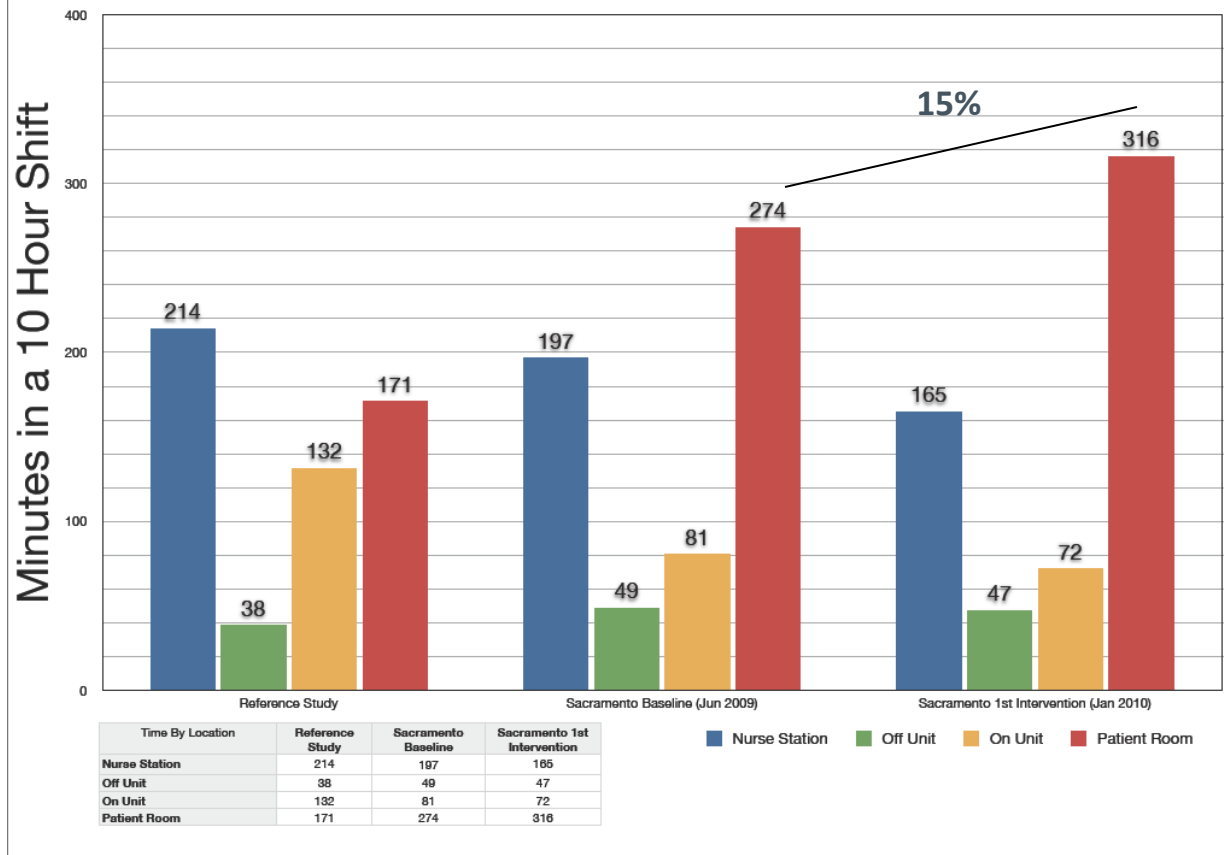


Metrics

What are our metrics showing?

Time and Motion

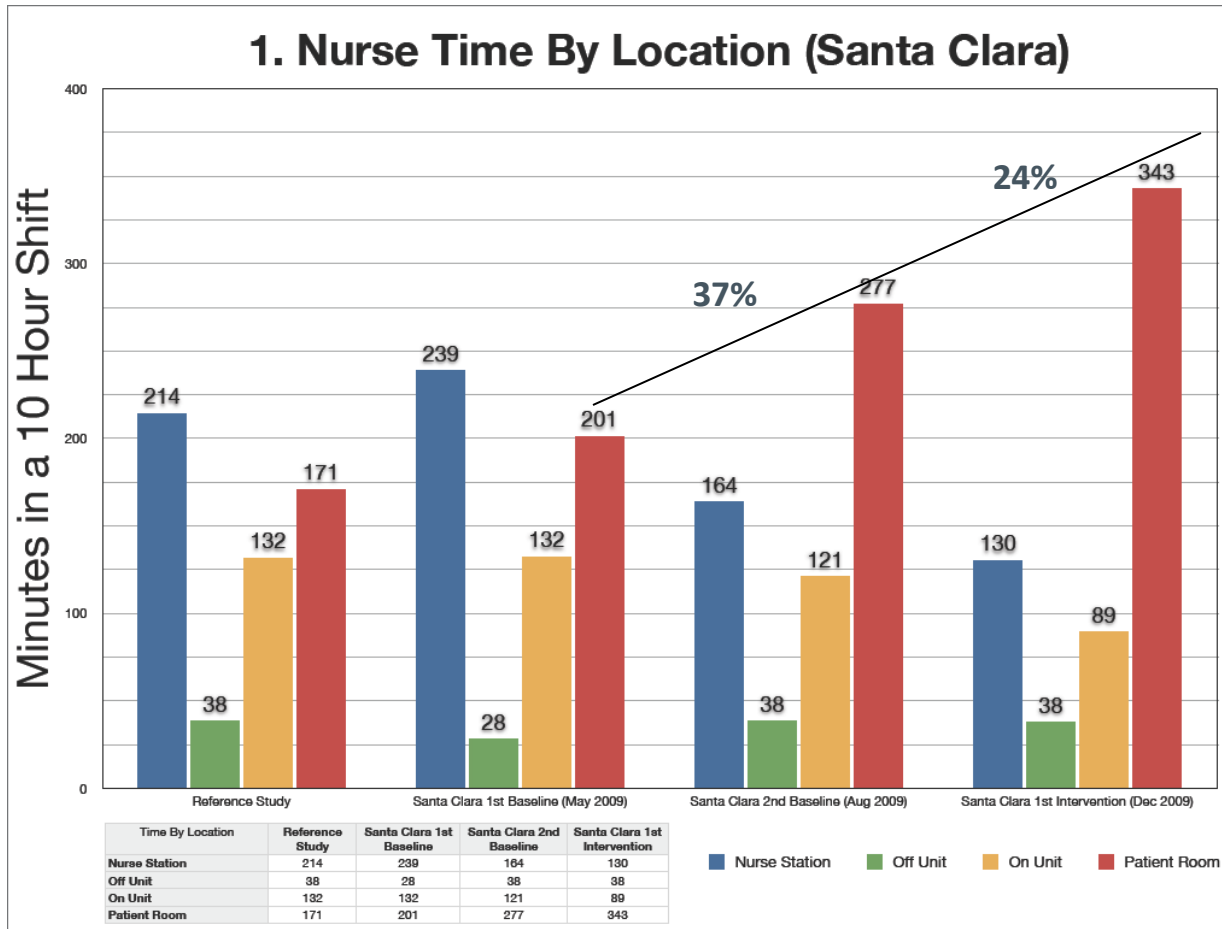
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53%

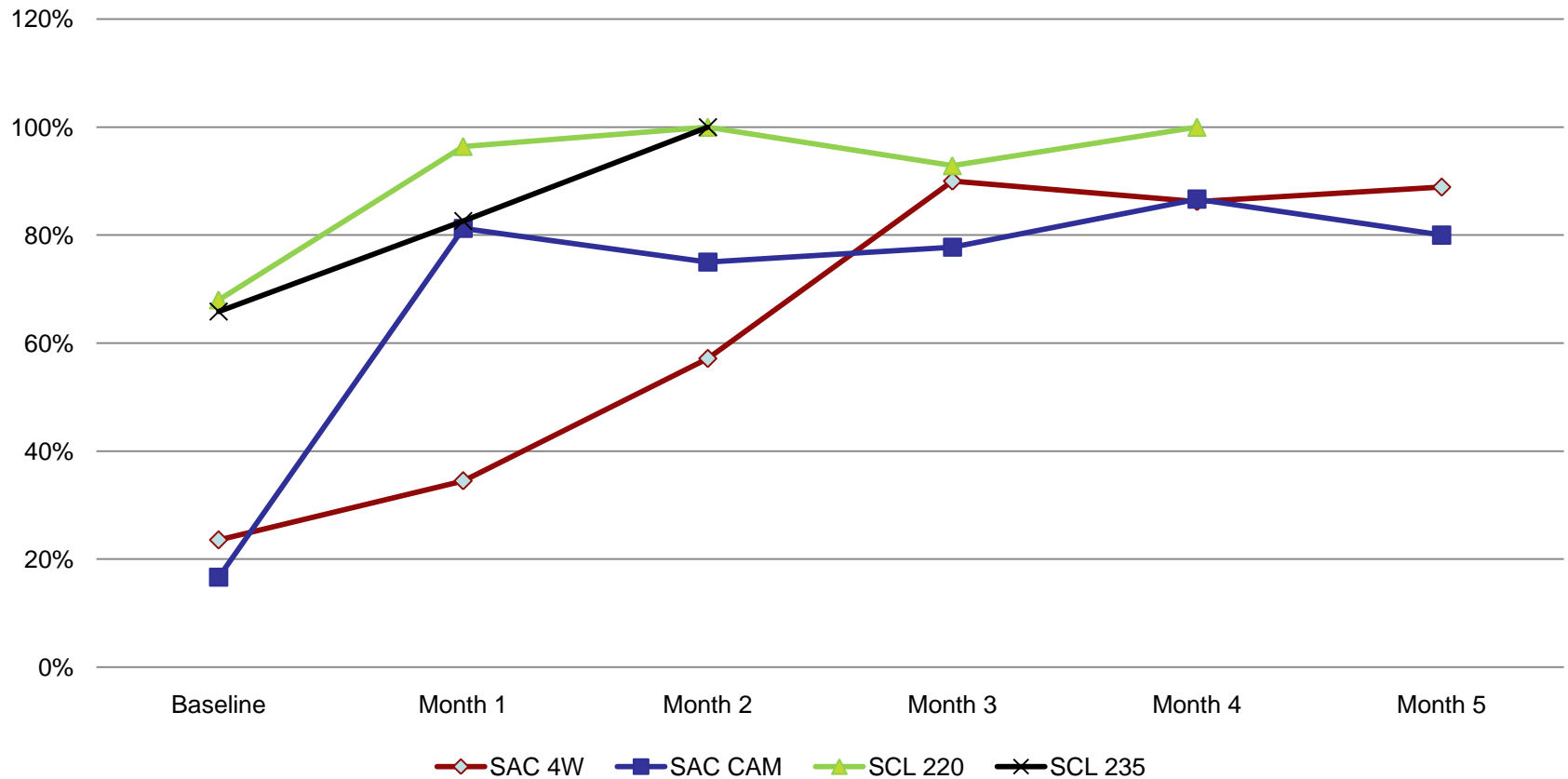
Time and Motion



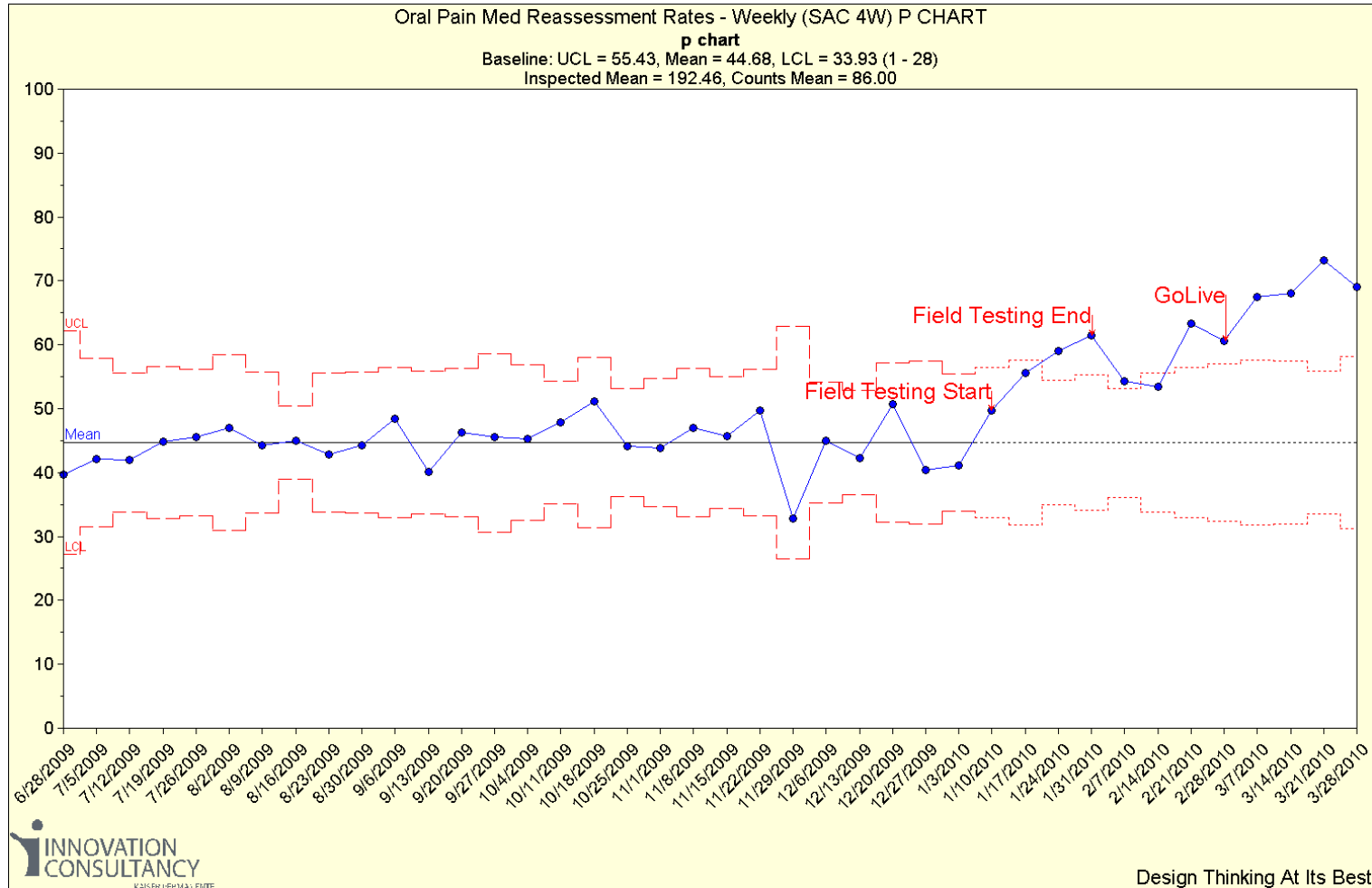
57%

Shift Change

NKEPlus: Patient Engagement



Pain reassessment rate



Sustainability and Continued Development

Meaningful and Fun

Unit Engagement

MAKING IT YOURS



Shonda

Emily Connie

Lily → 6 ABC 9, 35 39.1

Sofie → 10, 12, 14, 16, 19c 44.2

Malou → 17, 19 AB 28 40.1

Rosanna → 24 ABC 27, 30 46.5

Evelyn → 22, 21, 27 ABC 47.1



Distractions, Change Agent Coaching

Electronic Medical Record, Patient Room of the Future



Care Team

MD: DR. CHAVEZ

RN: Sarah Lee

RN ext.: 16593

Plan for the Day

> Pain Control

Diet FULL LIQUIDS

Ambulation - 3X a day

Incentive Spirometer > 10 times in 1 hour

Care BOARD

Family/Patient Commu

Discharge: Your Journey Home

Teaching Needs

	Needs	In Progress	Complete
Hand Hygiene			
Smoking Cessation			
Wound Care			
Medications			
Diet			

Equipment Needs

	Needs	Ordered	Received
Walker			
Specialty Bed			
Wound VAC			
Home Inflation			
Oxygen			

My Anticipated Discharge Date & Time: _____

Patient Discharge is typically at 11:00am. We will make every effort to make this a smooth transition. Please have your friend or family member arrive one hour prior to discharge to facilitate picking up prescriptions and review of instructions.

NKE Plus





The fun is just beginning!

Thank you!