

# Transforming Healthcare via Lean Systems Application



WA Department of Corrections Health Services

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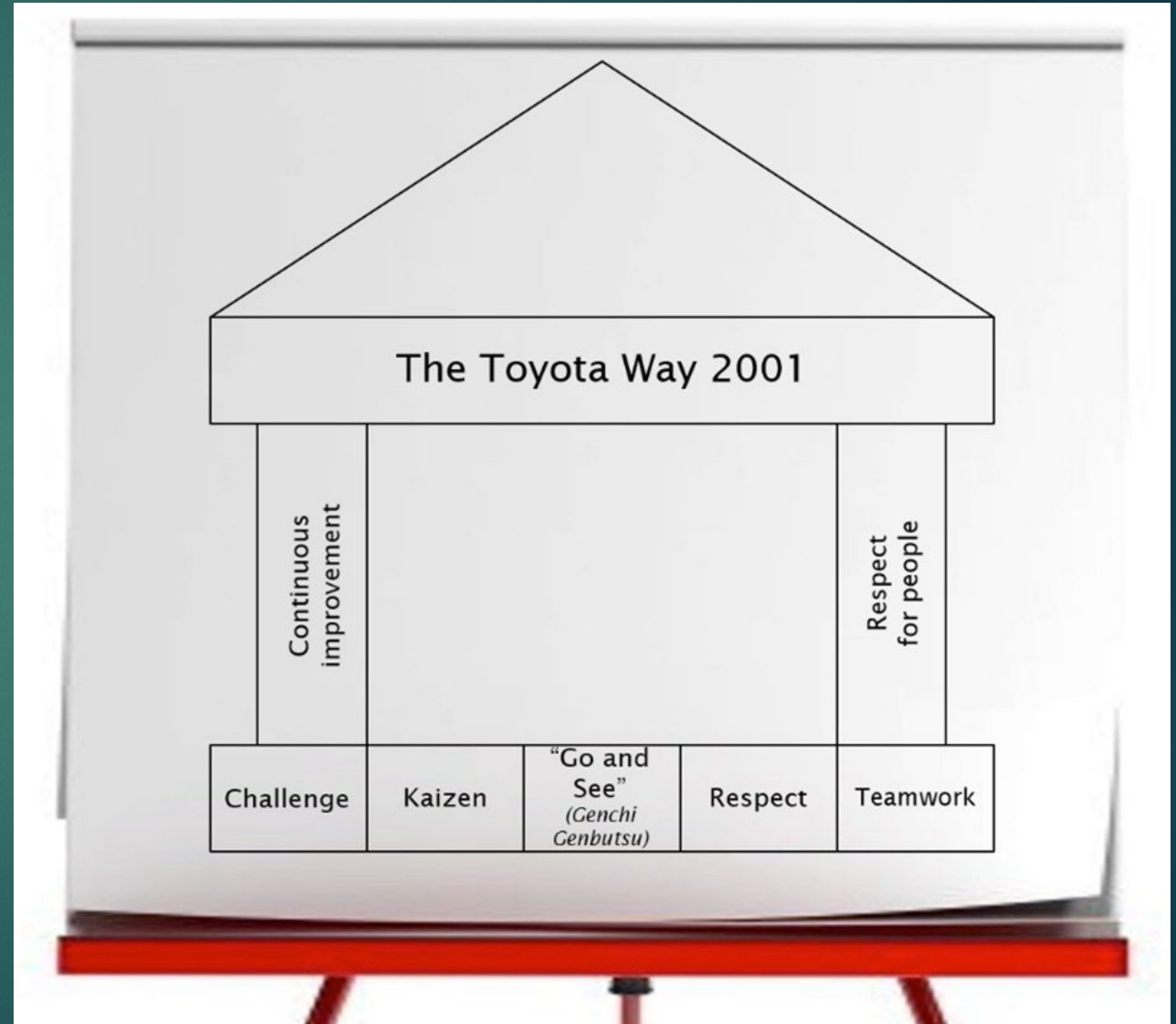
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# Lean philosophy

Value can always be increased for our patients and communities; and

...it should be done first through little to no additional space, equipment or technology

...and most importantly, with a greater respect for humans, embracing a spirit of continuous improvement





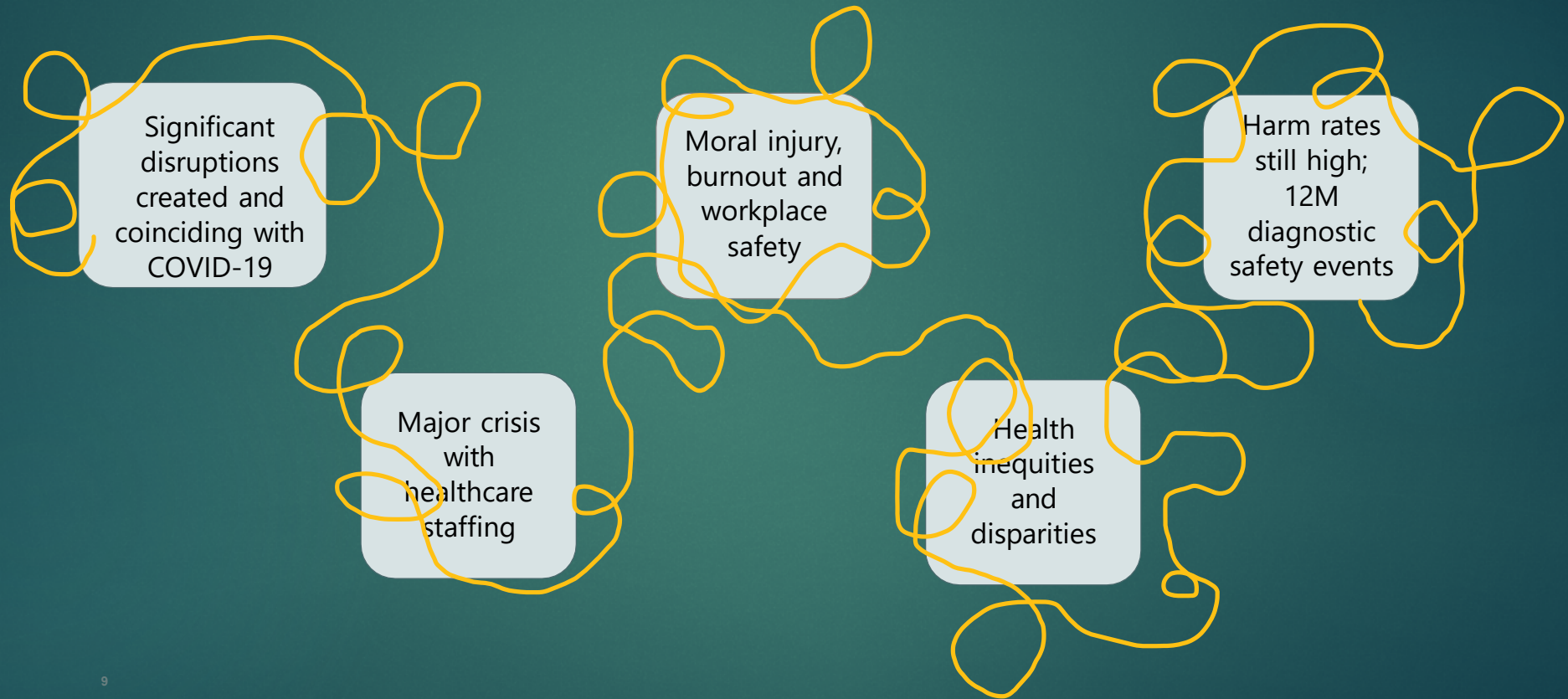
# The possibilities for Lean in healthcare -



## Lean Management System



# Industry obstacles to better performance...



How do we unravel the mess?



# Recent research on Lean in healthcare...foundations

- In the past few decades, many hospital and healthcare systems have begun to apply Lean methods to improvement
- Systems maturity and workforce saturation correlate positively to quality and safety gains; sticking with it is worth the investment
- Lean takes time and longitudinal commitment to demonstrate durable results – average 5.2 years; self reported “mature” organizations are 7.8 years since inception
- To quote one of our mentors, Marnee Iseman, “It has been shown over and over again that you cannot make change happen without leadership will.”





# Where we were...



Historically, DOC had a policy directed health care model focused on cost containment; stringent definitions of “medically necessary” care were upheld... Patient care had gaps, staff satisfaction was strained, and we feared there may be access disparities for incarcerated Washingtonians as compared to community dwelling neighbors. One barrier to our success was highly independent systems run at the facility level and not coordinated statewide. In short, it seemed like we had fiefdoms with local rulers rather than a system. A little GOT...



# We got pivotal help from some experts...



Invited by leadership, Dr. Homer Venters, the former Medical Director for Rikers Island, NY surveyed our system and wrote a crucial report that demonstrated our gaps



Following the report, we gained approval to make a significant investment and initiate the transformation. We enlisted the consultation services of Moss Adams health services group and began the preparation



# Finding ourselves at a crossroads...



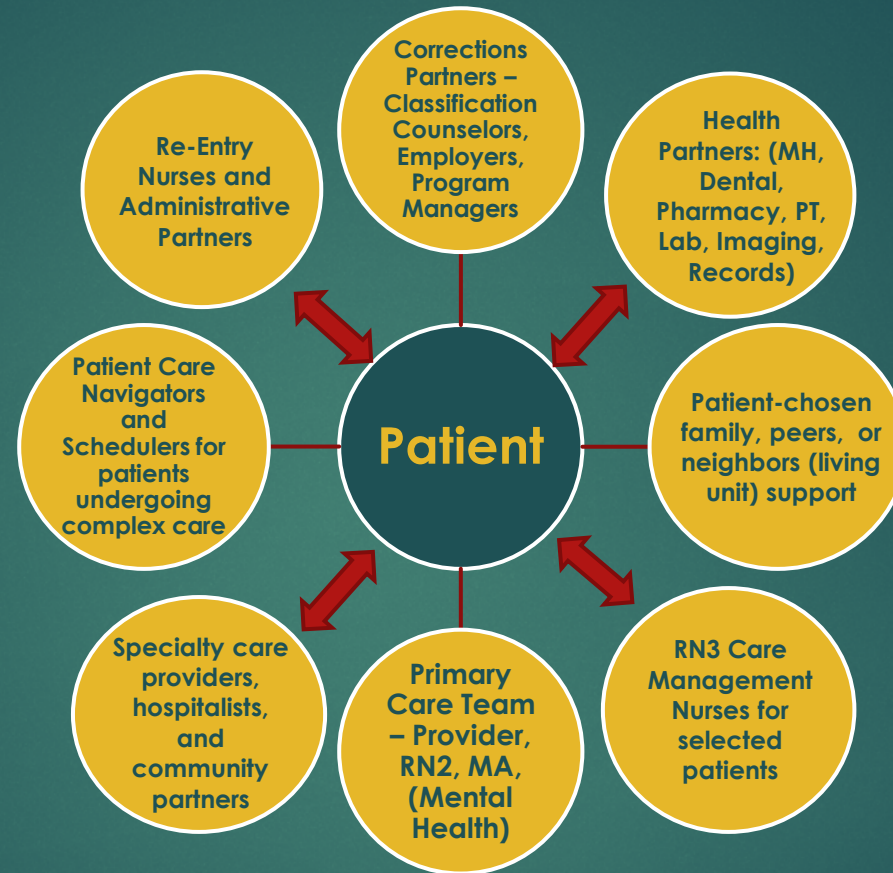
DOC embarked on a healthcare delivery transformation. The Patient Centered Medical Home (PCMH) focuses on meeting the patient where they are and investing the time we have with them to improve their healthcare literacy and efficacy. The patient is the focus and core of everything we do, the reason we come to work each day, and our motivation to continue striving toward perfection.



# The DOC PCMH Vision...

## The Patient's Care Team

Every single focus is geared to meeting the patient where they are and improving health literacy toward a goal of self-actualized health goal attainment. This can include supporting the patient in their end-of-life care decisions.



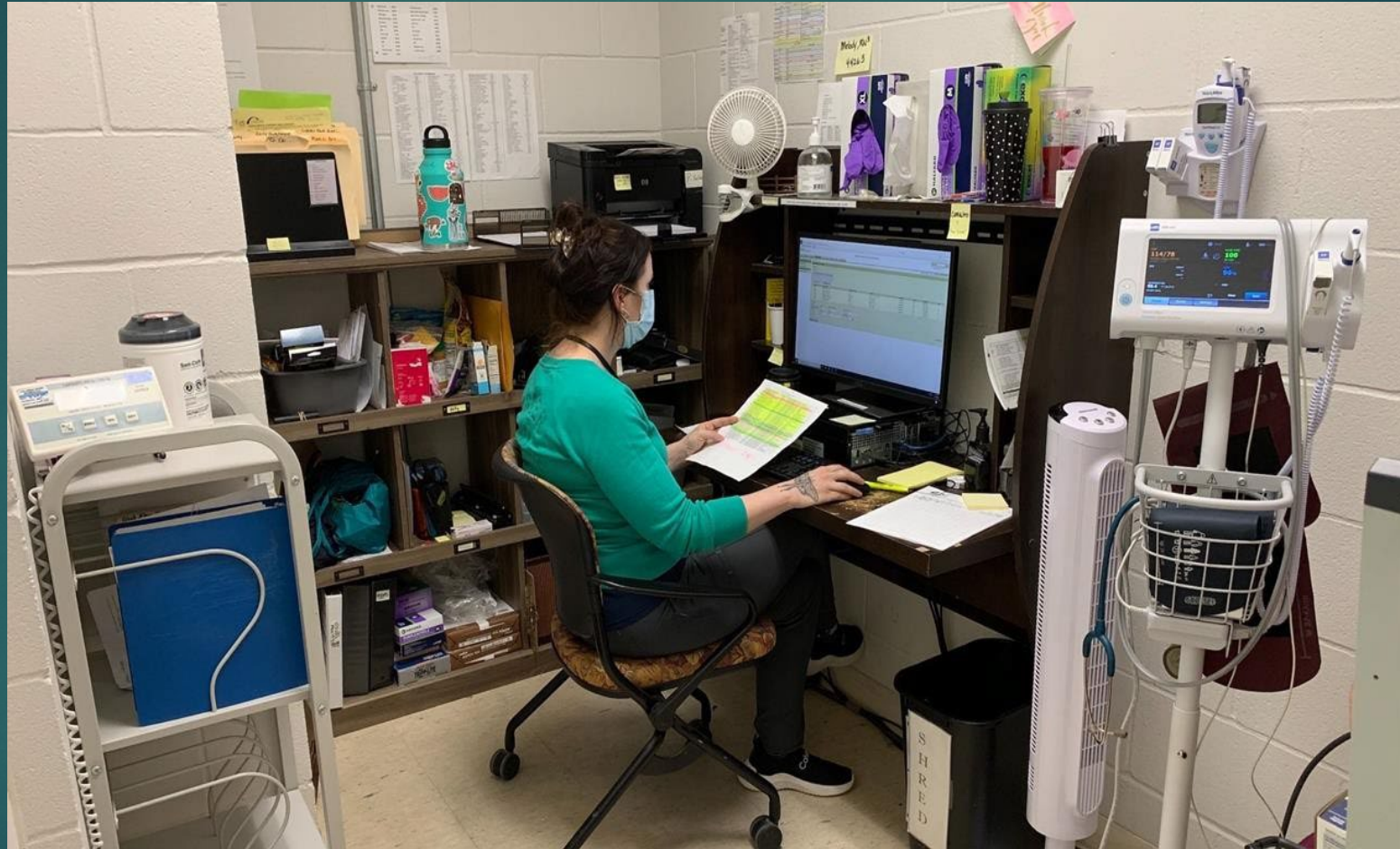
## Who defines goals?

- Patient
- Patient's trusted circle of people
- Primary team + MH
- Shaped by others
  - Navigators
  - Care Managers
  - Health partners
  - Consultants
  - Corrections partners

Administrative, Quality, Patient Safety, and Clinical Informatics Partners form our vital base for healthy operations



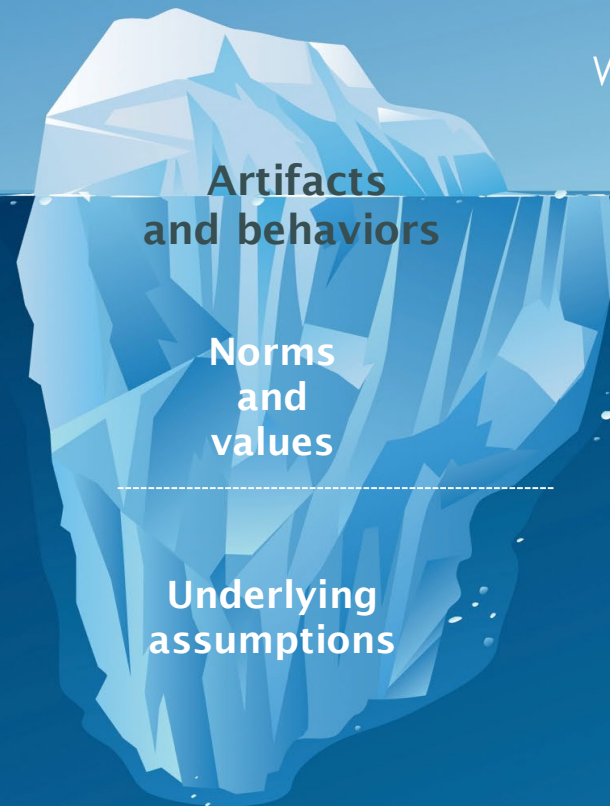
First things first... an unflinching inventory  
and mapping out a plan



Culture, Lean knowledge, and steady calm steps...



# Three levels of culture



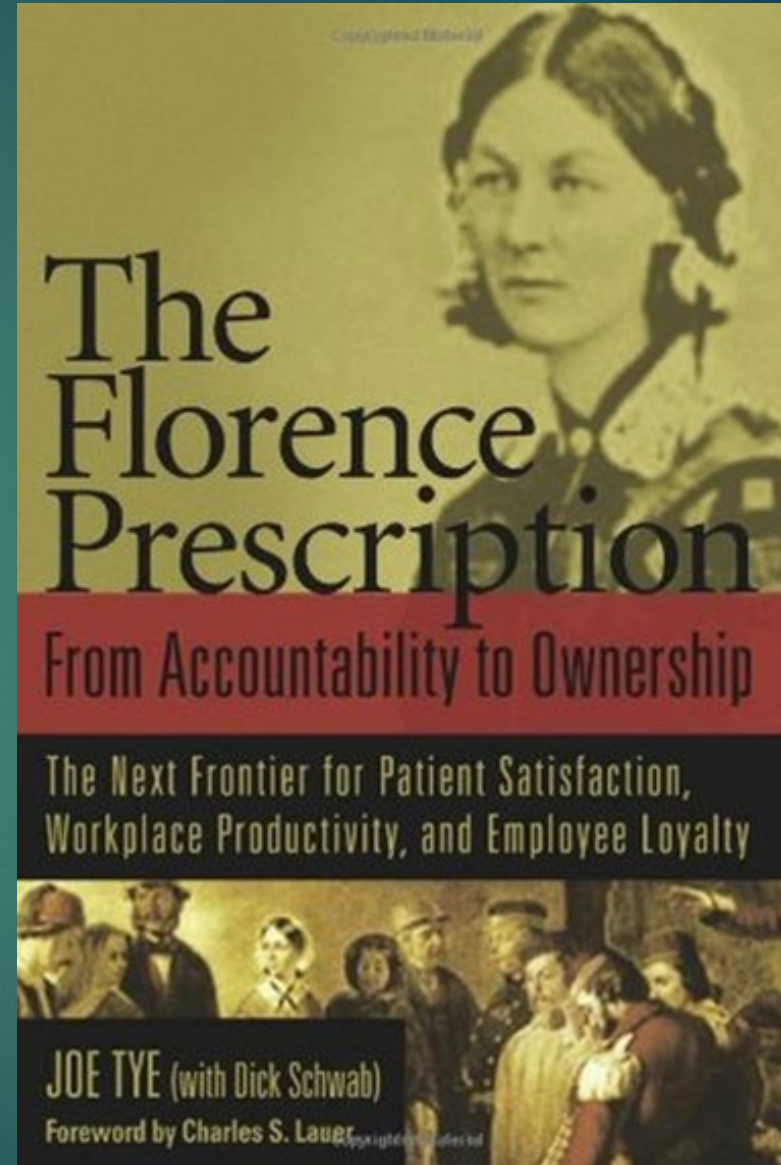
What we  
see

What they  
say

What they  
deeply  
believe and  
act upon

## Setting the foundation - a culture of ownership and belief

- ▶ One of the deep principles of Lean is respect for all
- ▶ Respect means humble inquiry and laying out a vision... aka preparing the soil
- ▶ We took time to lay out a vision and asked our staff to explore our cultural readiness to change
- ▶ We bought 1400 books and gave a copy to each employee; For 17 weeks, we read a chapter a week and discussed in a statewide huddle





A statewide survey within the context of the Florence Prescription book club indicated that it is more the norm than the exception that toxic emotional negativity and non-productive culture steals **10% or more** of our work week. A positive, productive culture has the power to give our lives back!

We believe that antiquated systems are mooring us in a negative space and it is time for liberation.

Our answers to the call are:

1. Lean Systems Thinking
2. Propagation of a Positive Culture of Ownership and Pride
3. Patient Centered Medical Home
4. Electronic Health Record
5. High Integrity, Wellness-Minded Interactions





# Reflections from the book club and leadership discussions

## Current culture

- ▶ Clique oriented; exclusive
- ▶ Resistant to change
- ▶ Territorial within services; "silo'd"
- ▶ Hierarchical – boss always right
- ▶ Fear-provoking and punitive
- ▶ Rife with "toxic emotional negativity"
- ▶ Seemingly conflicted in priorities
- ▶ Exhausted; high burnout; irritable
- ▶ Hopeless and helpless

## Desired culture

- ▶ Equitable and inclusive
- ▶ Innovative; open-minded
- ▶ Collaborative decision-making
- ▶ "A rounder table"
- ▶ Psychologically safe
- ▶ Solutions oriented and emphasizing civility and respect
- ▶ Clear, unified priority
- ▶ Refreshed; renewed; supported – one that encourages SELF CARE
- ▶ Hope-filled, capable, connected



## THE PROMISES

### Monday's Promise: Responsibility

I will take complete responsibility for my health, my happiness, my success, and my life, and will not blame others for my problems or predicaments.

### Tuesday's Promise: Accountability

I will not allow low self-esteem, self-limiting beliefs, or the negativity of others to prevent me from achieving my authentic goals and from becoming the person I am meant to be.

### Wednesday's Promise: Determination

I will do things I'm afraid to do, but which I know should be done. Sometimes this will mean asking for help to do that which I cannot do for myself.

### Thursday's Promise: Contribution

I will earn the help I need in advance by helping other people now, and repay the help I receive by serving others later.

### Friday's Promise: Resilience

I will face rejection and failure with courage, awareness, and perseverance, making these experiences the platform for future acceptance and success.

### Saturday's Promise: Perspective

Though I might not understand why adversity happens, by my conscious choice I will find strength, compassion, and grace through my trials.



### Sunday's Promise: Faith

My faith and my gratitude for all that I have been blessed with will shine through in my attitudes and in my actions.

# Humble inquiry and sincerity are the foundations to growth

After COVID-19 and a prolonged season of high leadership turnover, Health Services frontline staff and leadership had to confront our collective history, work to heal trauma, honor our fatigue and burnout, and examine our disbelief. We had to decide to trust one another and ourselves. This is the ongoing work. We honor these truths as we proceed.



# Our Employee Education Plan



- Issues in healthcare
- Lean in healthcare
- Philosophy, culture and behaviors
- Toyota Management & Production System



- Definition of waste
- **5S Workplace Organization**
- Mistake proofing
- Setup reduction
- Continuous flow
- Value Stream Mapping



- Leader as teacher
- Art of the question
- Barriers to humble inquiry
- Humble inquiry as foundation for coaching
- Improvement plan



- Coach approach
- Types of coaching
- Kata
- Improvement plan



- Hoshin basics
- Setting the future condition
- A3 Thinking and catchball
- Hoshin discipline
- Leader standard work
- Ongoing practice



Poor space utilization and uneven processes are two of the highest stressors on our staff which in turn lead to inefficiencies and frustrations







5S workshop was chosen for its accessibility and immediate applicability

Airway Heights was chosen for first site. Partner sites are WSP, MCC, and CBCC



# The science says...

- ❑ Workplace organization affects attitudes & quality
- ❑ Correlation between facility appearance & patient perceptions of:
  - ❑ Quality,
  - ❑ Staff courtesy, and
  - ❑ Politeness (1)
- ❑ Physical environment can have an immediate effect on the attitudes and behaviors of customers and employees (2)
- ❑ Attractiveness of physical environment influenced patients' perception of quality, & perception of care quality; also reduced anxiety levels (3)

## Sources:

(1)Becker, Sweeney, Parsons, 2008, "Ambulatory Facility Design and Patient's Perceptions of Healthcare Quality"

(2)Bitner, 'Measuring the Prototypicality and Meaning of Retail Environments, Journal of Retail, 1992.

(3)Becker and Douglass, "The Ecology of the Patient Visit", Ambulatory Care Management, 2008.





# Baseline

**Before – Trauma Room**



**Before – Supply Room**





# Baseline – Med Room

Before



Before



Before





# Two phases of the AHCC 5S workshop

## September 27 & 28, 2022

- ▶ Just in time learning and prep
- ▶ Sort
- ▶ Set in order
- ▶ Shine

## October 19 & 20, 2022

- ▶ Standardize
- ▶ Sustain
- ▶ Spread (our 6<sup>th</sup> S)



Acknowledgment and thanks -- without the Herculean efforts by HSM Kathleen O'Connor and many people she enlisted to bring these workshops to life, they never would have happened



# S1: SORT -- What's the function of the space?

~~Trauma Room~~





# Sorting:

- What's needed?
- How much?
- What's missing?



Determining the quantity needed



Sorting out what's expired



# Red tagging

- Reflects the idea that we are testing hypotheses about what and how much we need; you red tag an item if you think it's excess and put it in the red tag room to see if you were right or wrong
- Builds in respect to the process of sorting by enabling quick recovery if our hypothesis is wrong
- A tool for making 5S part of your culture of how we manage our work environment in DOC

red tag		
Category (circle one)	1. Clinical equipment 2. Clinical tools 3. Medicines 4. Clinical supplies 5. Clinical documents	6. Clerical equipment 7. Clerical tools 8. Clerical supplies 9. Clerical supplies 10. Other
Item name	Surgical gloves	
Item No.	42	
Quantity	500 pairs	Value \$2,000
Reason	1. Not needed	
	2. Defective	
	3. Infrequently used	
	4. Other	
Disposal by: (department / division / section)		
Central Red Tag Holding Area		
Today's date:	Posting date:	Disposal date:
February 21, 2010	February 28, 2010	March 30, 2010
Red tag file no. 12345		



# The Red Tag Room also needed an inventory management system...



Even the Red Tag area has to be managed



Red Tag Master



# S2: Set-in-Order



Goal #1: Everything has a place



Goal #2: A person can find anything in 30 seconds even if they do not normally work in this area



# Set-in-Order – Examining supply



“Kitting” of supplies to speed retrieval and minimize searching



Most frequently used items in closest reach



# Deepening the Set-in-Order



Starting to plan locations



Putting 'families' of things together



# Removing doors to improve visibility...



A place  
for  
everything  
and  
everything  
in its  
place...  
almost





# Getting Input From The Team



Absolutely  
crucial...  
every step  
of the way!



# 5S Feedback – verbal, written...

## 5S Feedback

### What I like about 5S is...

the cupboard doors removed in Trauma 2  
look better

**Reduced clutter**

### More information I need about 5S is...

Where will back stock be stored?

Additional information about the impact PRIOR – not just hanging posters but e-mail with the date that 5S is taking place... tell us more!

### What I don't like about 5S is...

### How 5S makes me feel is...

Disrespected due to being done during patient care – belittled for trying to do patient care

### An idea I have to make 5S better is...



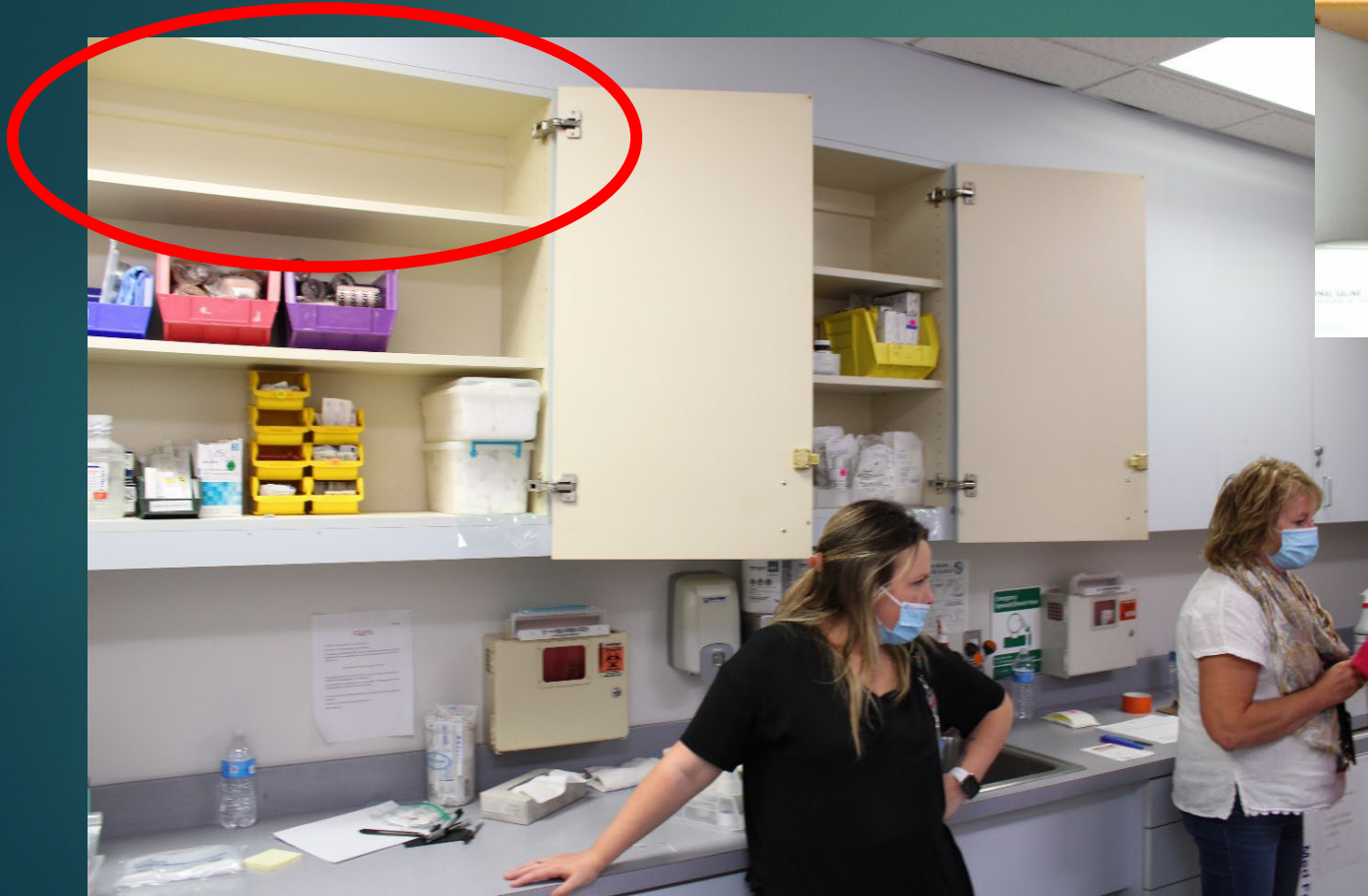
# Phase 2: Standardize, Sustain & Replenish

- ❖ 1. Review of what's happened since we left in September
- ❖ 2. Take time for more education on the 4<sup>th</sup> & 5<sup>th</sup> S's
- ❖ 3. It includes creating systems for reliable replenishment





Freeing up once cluttered space – no one could see way up here...



Good rule of thumb:  
If you can't see it,  
you can't manage it...  
  
Out of sight, out of mind



# More Easing Our Ability to See...



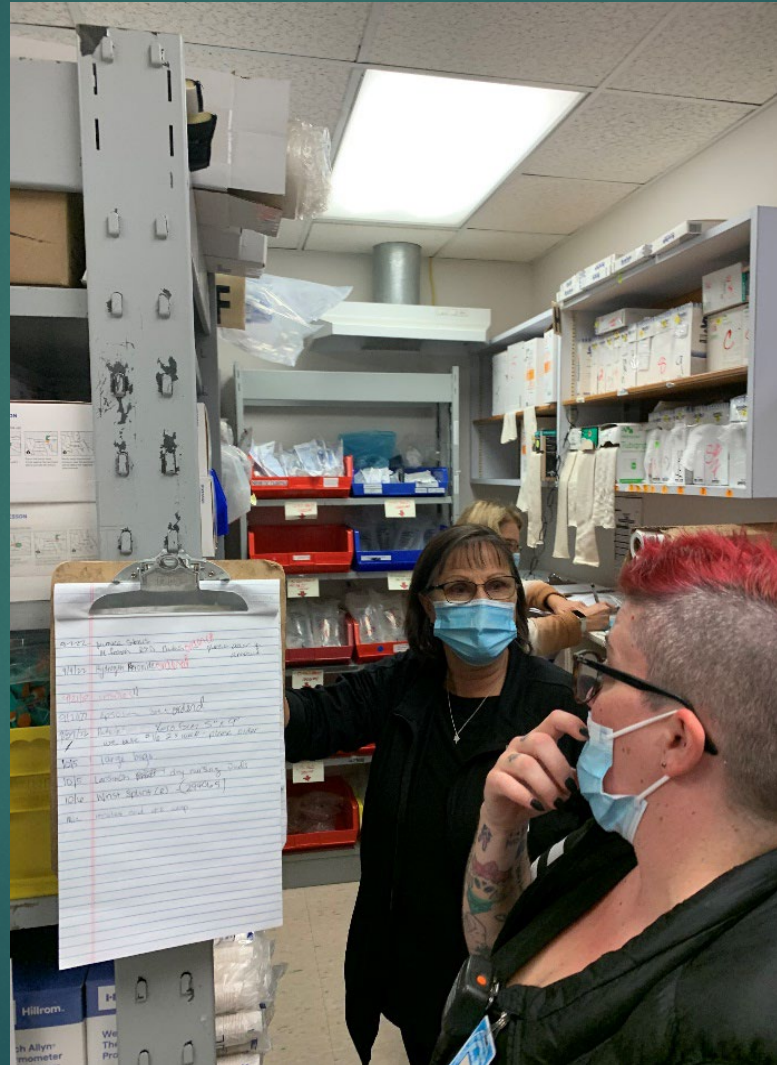
What's lurking behind the doors?



I can see where everything is!



# More Staff Engagement...



- ❑ Engaging staff who aren't part of the 5S team enhances the knowledge of how things work at AHCC
- ❑ Engaging staff during the event provides an opportunity for just-in-time training and feedback to make improvement ideas even better



# S4: Standardize



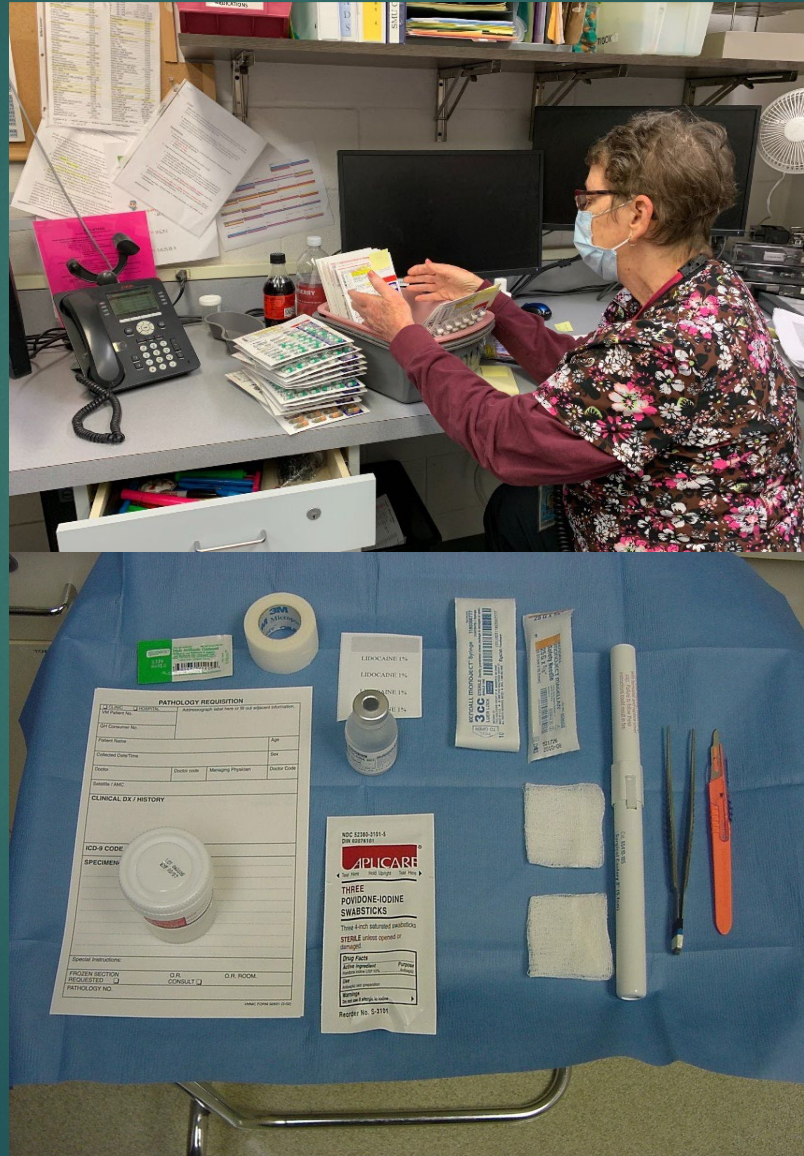


# Eliminating Defects with Visual Control

**RESTOCK KANBAN**

<b>Bullets 1</b>	
McKesson # <b>16-20059</b>	Re-order <b>54 4</b>
Manufct. # <b>2</b>	Min QTY <b>6 5</b>
	Max QTY <b>60 6</b>
Restock FROM Address <b>Stock Room</b>	Restock TO Address <b>LTx Rm 7 Bullets</b>

- 1 What to order
- 2 Order numbers to simplify purchasing
- 3 Where to get it
- 4 How many to order
- 5 Where to replace the signal (kanban)
- 6 How many of the item we should have (Max quantity)
- 7 Where to restock the supply

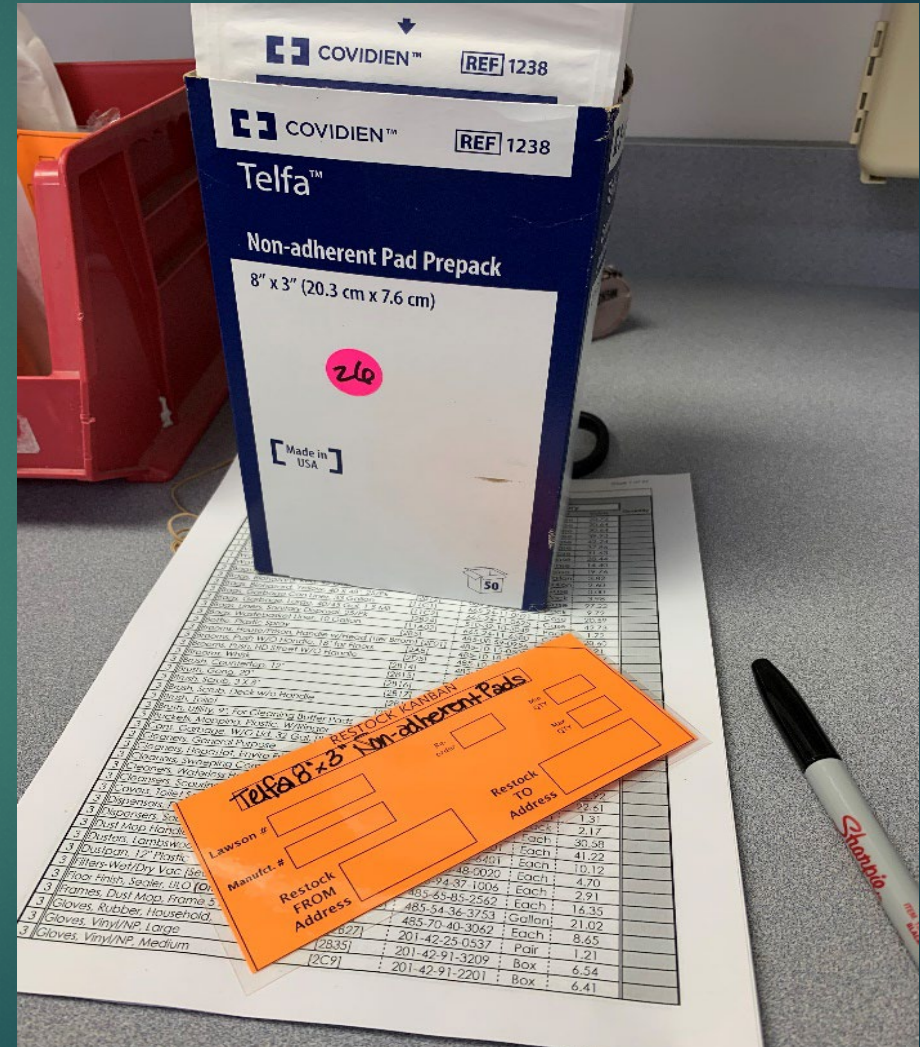


January – Light Pink  
February – Orange  
March – Light Blue  
April – Red  
May – Blue  
June – Purple  
July – Tan  
August – White  
September – Dark Pink  
October – Black  
November – Green  
December – Yellow



# Take Guessing out of Replenishment

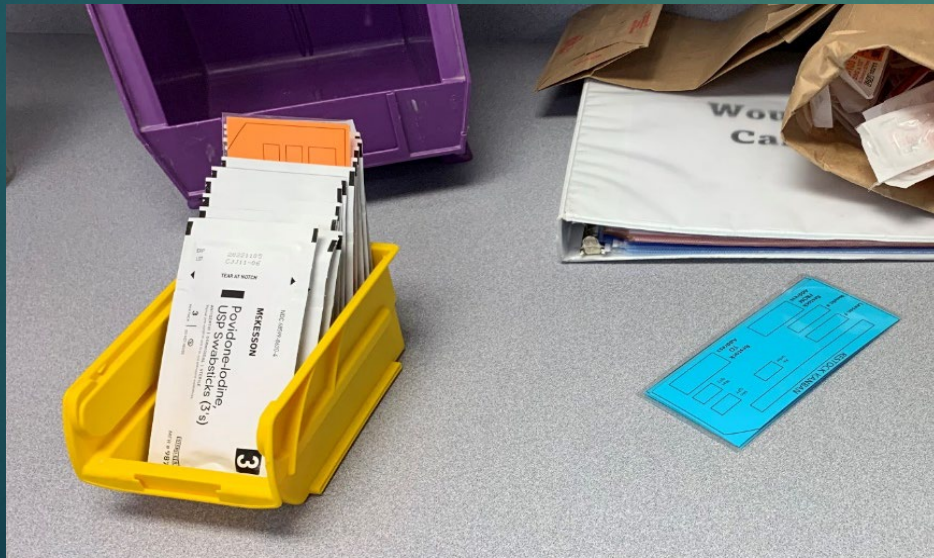
- ❑ Kanban" means signal
  - ❑ Just like the gas gauge in your car
- ❑ Specificity is the foundation of reliability
- ❑ Creating signals to replenish supplies eliminates the guesswork and variation in how much and when to replenish
- ❑ Ensuring just-in-time availability of supplies
  - ❑ Just what is needed
  - ❑ Just when it is needed
  - ❑ Just where it is needed
  - ❑ And in working order





# Tactics for placing kanban

- ❑ Make it obvious
- ❑ Make it easy
- ❑ Attach it/bag it if it's a loose supply
- ❑ Make it colorful to catch your eye
- ❑ Customize size to item



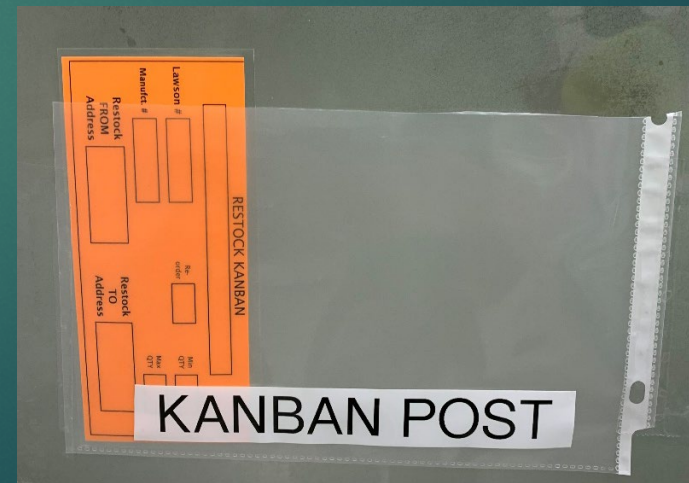


# Kanban Post: Leveraging Our Environment

## Kanban Post – Large Treatment Room



- ☐ Signals ensure we always have a reliable level of supply (within our minimum and maximum range)
- ☐ Everybody on the team participates:
  - ☐ **posting** them when triggered,
  - ☐ **responding** to them when posted,
  - ☐ **replacing** them when supply is restocked
- ☐ *If everybody plays, everybody wins!*

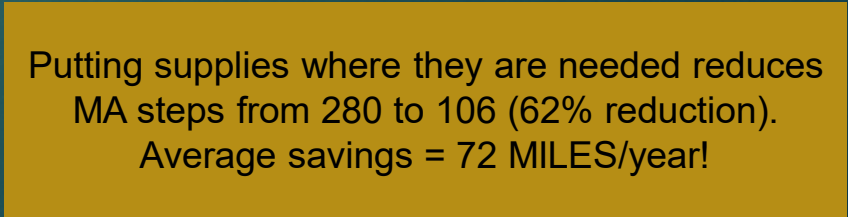
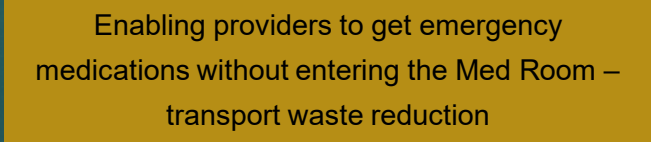








Simplify the ordering process –  
eliminating the waste of  
overprocessing

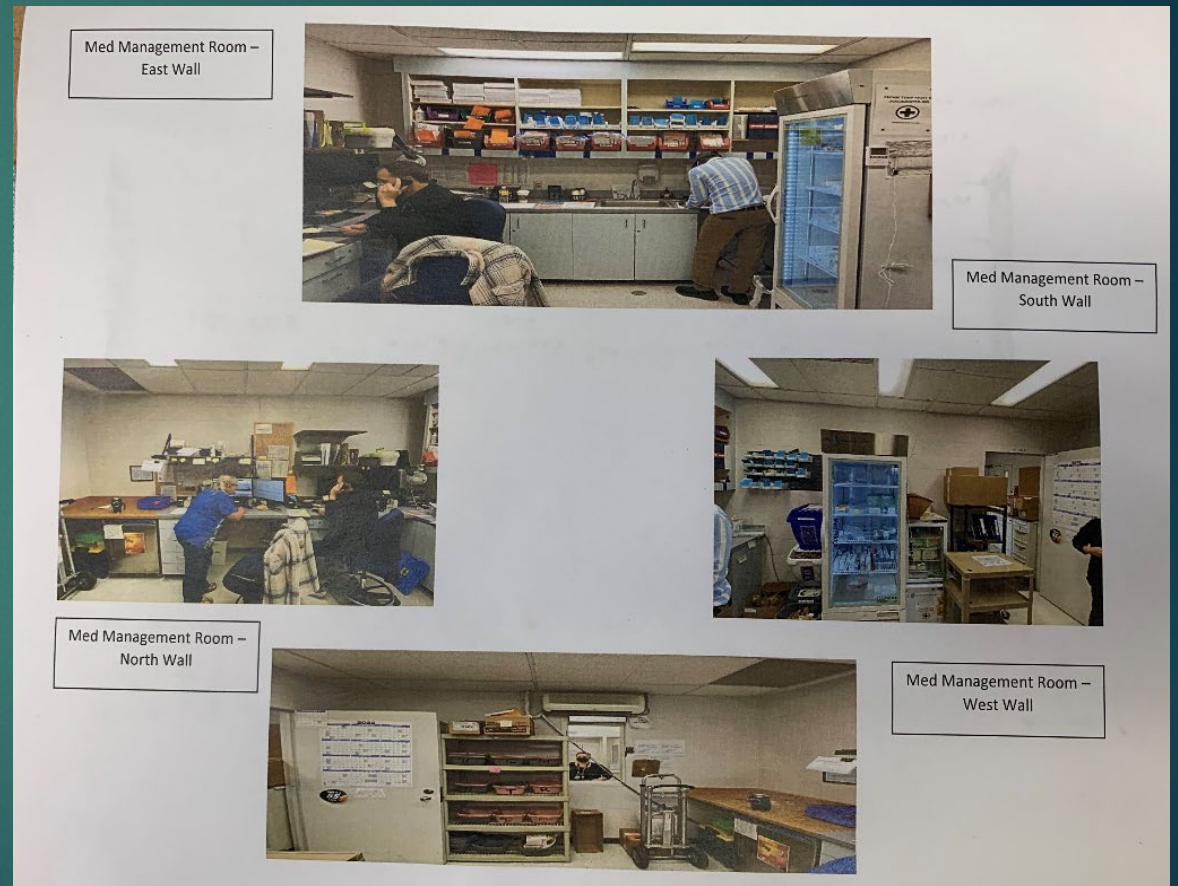




# Med Room 5-minute 5S – what sustains the gains we made...

5-minute 5S												
Department / Unit: AHCC			Zone: AHCC Medication Room						Week of:			
Each zone owner must complete and initial. See Zone Assignment Sheet for your assignment.			Monday		Tuesday		Wednesday		Thursday		Friday	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
SORT	Check medication expiration											
	Review Kanban's daily M-F											
SET IN ORDER	Check medication bins for proper order											
	Will Review 1 zone @ 10am & 4pm M-F (Completing 10 zones weekly) identifying zone # in AM/PM											
SHINE	Wipe counters											
	Pill Line nurse will do at end of each shift (Pill line and Med Mgmt Rm)											
Initials:												

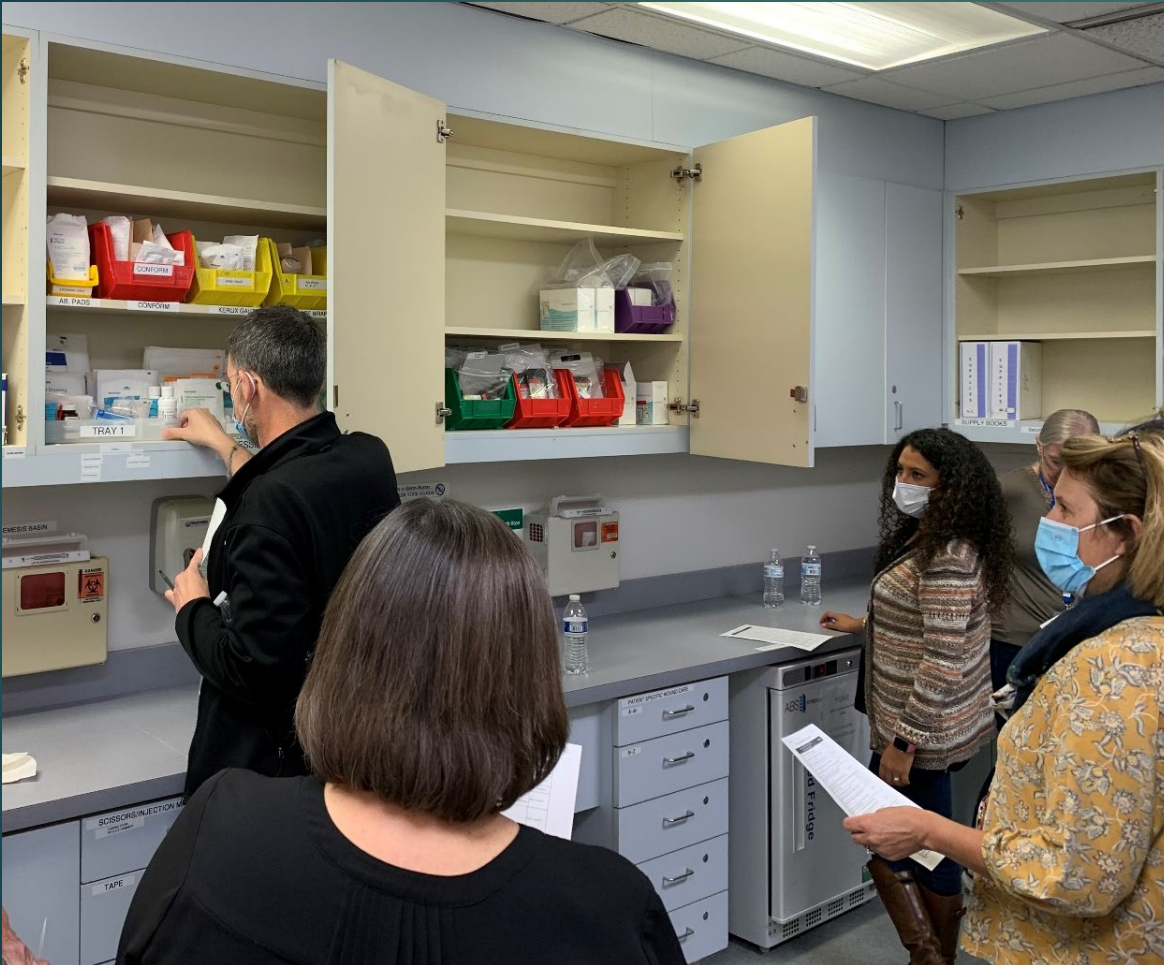
Front



Back



# Sustain With Leader Standard Work



5S five-point standardization level checklist

Select the statement below for each "S" that best describes the area you are auditing.		5S level
SORT	• It is impossible to distinguish between needed and unneeded items.	True = Level 1
	• It is possible (but not necessarily easy) to distinguish needed and unneeded items.	True = Level 2
	• It is possible for anyone to <b>easily</b> distinguish between needed and unneeded items.	True = Level 3
	• It is possible for anyone to <b>easily</b> distinguish between needed and unneeded items. AND • All unneeded or infrequently used items are routinely removed and stored away from the workplace.	True = Level 4
	• It is possible for anyone to <b>easily</b> distinguish between needed and unneeded items. AND • All unneeded or infrequently used items are routinely removed and stored away from the workplace. AND • Completely unneeded items have been disposed of and items that enter or reenter the workplace are strictly controlled.	True = Level 5
SET-IN-ORDER	• It is impossible to tell what goes where.	True = Level 1
	• It is possible (but not necessarily easy) to tell what goes where.	True = Level 2
	• General location signs make it possible for anyone to <b>easily</b> determine what goes where.	True = Level 3
	• General location signs make it possible for anyone to <b>easily</b> determine what goes where. AND • Location indicators, item indicators, and divider lines enable anyone to see <b>at a glance</b> what goes where AND in what amount.	True = Level 4
	• General location signs make it possible for anyone to <b>easily</b> determine what goes where. • Location indicators, item indicators, and divider lines enable anyone to see <b>at a glance</b> what goes where AND in what amount. AND • A FIFO replenishment system with specific indicators shows what goes where and in what amount.	True = Level 5
SHINE	• The workplace is left dirty.	True = Level 1
	• The workplace is cleaned once in a while but not on a regular basis.	True = Level 2
	• The workplace is cleaned regularly according to tasks listed on a 5-minute 5S checklist, frequencies established on the 5S job cycle chart, and accountabilities recorded on a 5S zone assignment sheet.	True = Level 3
	• The workplace is cleaned regularly according to tasks listed on a 5-minute 5S checklist, frequencies established on the 5S job cycle chart, and accountabilities recorded on a 5S zone assignment sheet. AND • Cleaning has been combined with inspection for sources of hospital-acquired infection.	True = Level 4
	• The workplace is cleaned regularly according to tasks listed on a 5-minute 5S checklist, frequencies established on the 5S job cycle chart, and accountabilities recorded on a 5S zone assignment sheet. • Cleaning has been combined with inspection for sources of hospital-acquired infection. AND • Techniques to prevent contamination and dirt have been implemented successfully.	True = Level 5



# Transformation

September 2022



October 2022





# Transformation – Supply Room

**August 2022**



**September 2022**



**October 2022**





# Kaizen action bulletin



MOSSADAMS

## Kaizen action bulletin



Department: AHCC 5S Workshop

Team name: AHCC 5S Workshop

Date: October 20, 2022

Process owner: Kathleen O'Connor

Item #	Problem	Countermeasure	Responsibility	Date	Status
1	Med room pill line window	Workorder	Melody/Kathleen	30 days	
2	No standard work for attaching expiration visual controls for new supplies in LTR	Write standard work for use of dots	<del>Julez</del>	30 days	
3	LTR – no kits needed	Create kits for basic tasks to obtain staff buy-in	<del>Julez</del>	30 days	
4	LTR – work orders outstanding	Follow up on completion	<del>Julez</del>	30 days	
5	Medication room – entry door does not close properly	Workorder – follow up	Melody	30 days	
6	Medication room – needs par levels	Complete <del>kanbans</del>	Melody	30 days	
7	Stock room – no par system	Complete placement of kanban in stock room	Justin	30 days	



# Team



*No longer strangers ☺*



*Friends doing kaizen ☺ ☺*



# Lessons Learned

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- Less is more
- There is never a good place to start – just get going
- Trust the system
- Openly share and listen with the staff that are working in the space
- Keep your sense of humor
- Educate, educate, educate
- Step back and look at what you accomplished
- Having the pharmacist attend has been a HUGE benefit
- Celebrate successes
- Teamwork makes the dream work
- Listen, listen, listen
- Fill the hole that may not be your specialty – find what you can do to help the process
- Be willing to learn
- Accept the change
- Spread positivity



# Spreading 5S

## Recipe for success:

Communicate – there is never too much. Multimodal and consistently across all shifts

Assume the best – not all resistance is real; some is just uncertainty and a desire to have a voice

Leaders cannot sit this one out! Jumping in with both feet was the difference in a workshop that didn't hit the targets and one that knocked it out of the ballpark!

## WSP Spread Plan

\* CREATE ACTION Plan....

\* Massive PR..... (Education, Education, Education)  
Via Email to All Hs Staff, Via department mtgs, & PSM's-Place Safety Musters <sup>-TSD</sup>, Executive Team,

\* Identify locations & Order Supplies & Prep documents (kan bans, Red tags etc.)

\* Establish Teams & Team leaders for specific areas  
• Goal: Involve the people in specific areas to take the lead. (ie. OPC, SC, etc), & Assume responsibility

\* Rollout: One step at a time, Small bite Size Pieces, fully complete b4 starting another section.

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## What will WSP need?

- Patience

Area	Who	When
1. Med room (1st 2nd Floor)		
2. Red Tag room (1st Floor)		
3. Red Tag Master		
4. OPC Supply Room 1		
5. OPC Supply Room 2		
6. IPA Supply Room		
7. SC Supply Room		
8. EC Supply Room		
9.		
10.		



# Share the excitement!

Communications team

Statewide culture huddles

Ongoing leadership listening sessions

Eastern WA vacations galore...  
make it an adventure

[5S Workshop Sorts and Shines at Airway Heights | iDOC Intranet](#)

## 5S Workshop Sorts and Shines at Airway Heights

October 19, 2022

By Robert Johnson, Communications Manager



Moss Adams consultant Kim Pittinger, right, and Department of Corrections Mental Health Director Kaire Rainer work on cleaning up the supply room of the Airway Heights Health Services building during a 5S workshop in September. (Photo courtesy of DOC Communications)



May all our dreams come true, then may we dismantle and rebuild them even better!



<https://www.gizmodo.com.au/2014/12/excavators-build-and-then-destroy-the-worlds-tallest-sand-castle/>