

# Crushing the Backlog:

## *How We Went from 850 to 150 Pending Physicals In 8 Weeks*

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**2023 LEAN TRANSFORMATIONAL CONFERENCE**

**OCTOBER 26, 2023**

DOC Health Services – Patient Centered Medical Home Project



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# Washington State Department of Corrections Reception

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Washington Corrections Center (WCC) is the reception center for newly incarcerated men

DOC policy requires physicals within 14 days of arrival

- Medical
- Dental
- Infection Prevention
- Mental Health

Classification activities to determine appropriate custody level and placement: target within 30 days of arrival



# The Problem.....

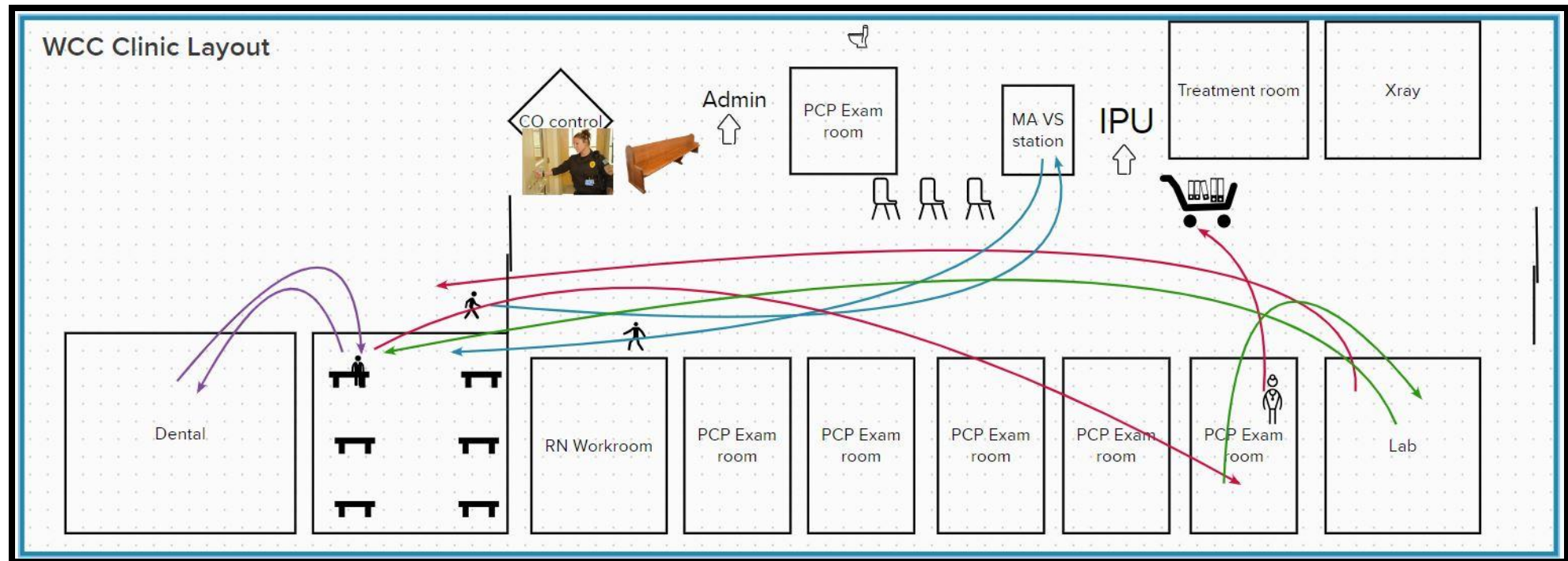
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- Physicals backlogged for many years compounded by COVID restrictions
- Use of strike teams failed to solve issue
- Reduction of county buses to every two weeks instead of every week also failed
- Modification of the clinic space in an attempt to improve flow also fell short
- Time from admission to physicals continued to hover at around 4 months, regardless of tactics attempted



# What we started with....

Non-linear flow, too many steps, restricted movement making it all the harder, processes that did not fully utilize all team members...





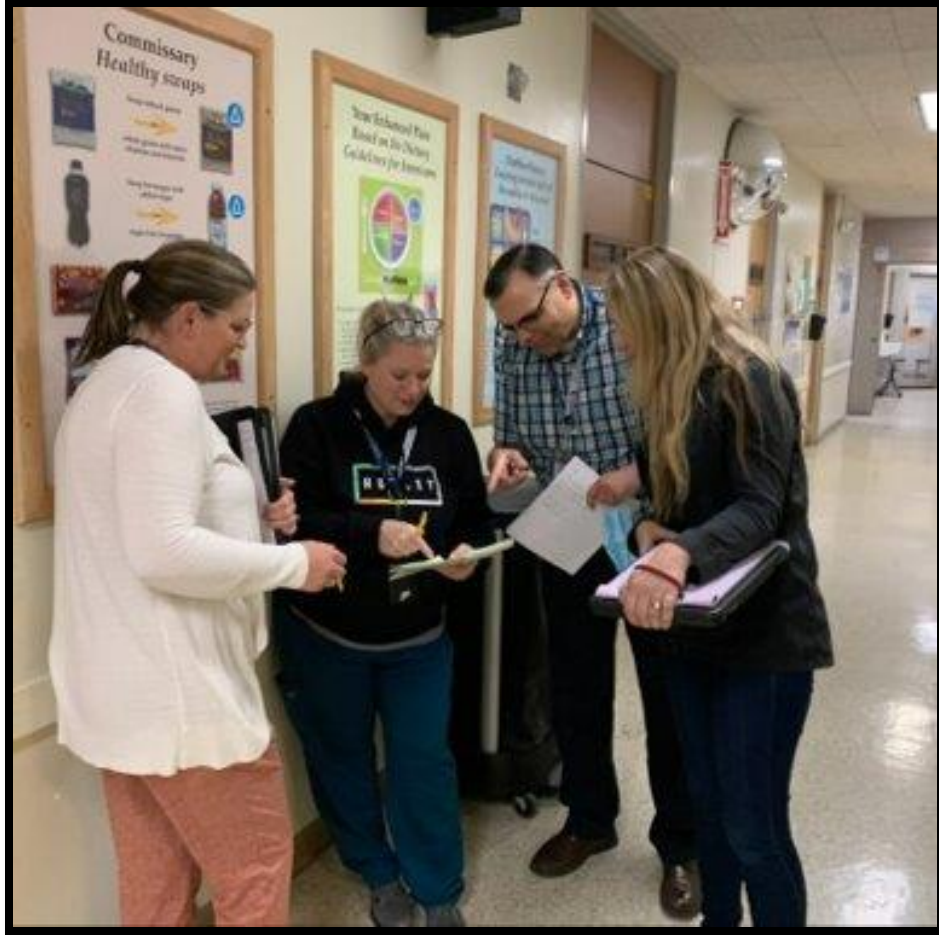
# A thought breakthrough changed our focus...



WCC Health Services Clinic Tent

- COVID restrictions are less
- Repurposed COVID resources and found a great central site
- Tent-based clinic enabled more agile processing and PDCA cycles
  - Ensured ADA accessibility
  - Maintained security
- Leadership focus and support for staffing made the plan come to life

# Patient-Centered Medical Home Workshop



Workshop team reviewing gemba observation forms in Health Services Clinic

Three workshops with 3-4 weeks of PDCA cycles in-between

## Target

Reduce WCC intake physical backlog of 800 in 40 clinic days

## Improvement Request

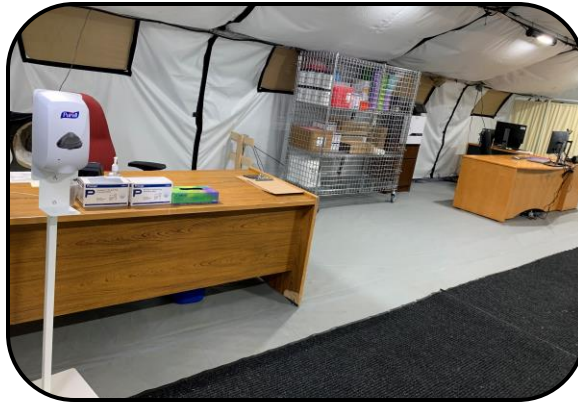
- Improve flow of patients
- Open access for more visits and non-visit care
- Standardize general workflows
- Maximize patient-facing time with providers

# Gemba – “Go and See”

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Supply & Lab



Provider Desks



Officer Area



Patient Waiting  
Area



# Physicals Backlog Data Gathering

Idea Summary Sheet			
Employee / Area	Problems	Measures Taken	Results
work tent	everyone is seen for all appts. in clinic	utilize tent for those under 40 and no meds in clinic for those over 40 w/ one+ med and/or transgender	

Before Improvement

After Improvement

## PCP Non-complex vs Complex Physicals

### Terms:

**Complex:** multiple diagnoses under treatment, new or resumed medications needed, consults needed, chronic condition(s) unstable. These may require a cycle time of 30 minutes for their PCP physical.

**Noncomplex:** no chronic conditions or single chronic conditions controlled under treatment (e.g. asthma, HTN at target, COT, etc). These appear to require 15 minutes for the PCP physical.

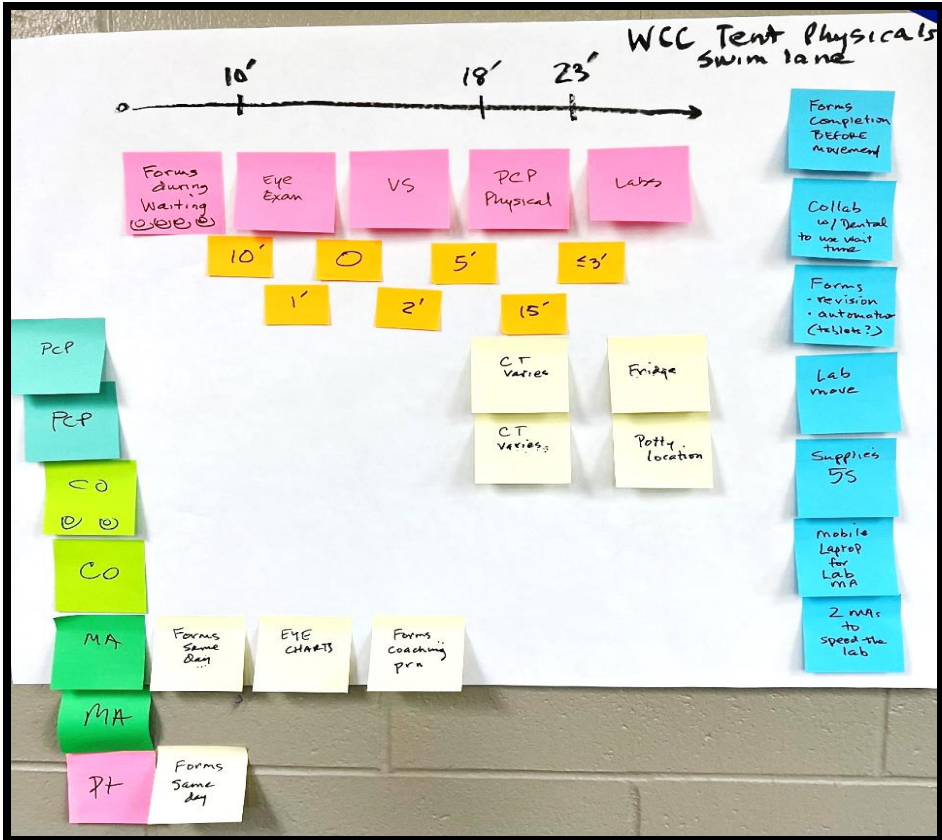
Date	Non-complex	Complex	Comments, details

With these data we may be able to understand the mix and inform a new schedule design.

- Generated multiple ideas for improvement
- Categorized physical complexity and % of demand for each. PCP cycle time for each calculated.
- Idea to conduct non-complex physicals in tent by mass encounters and complex in clinic by scheduled appointment



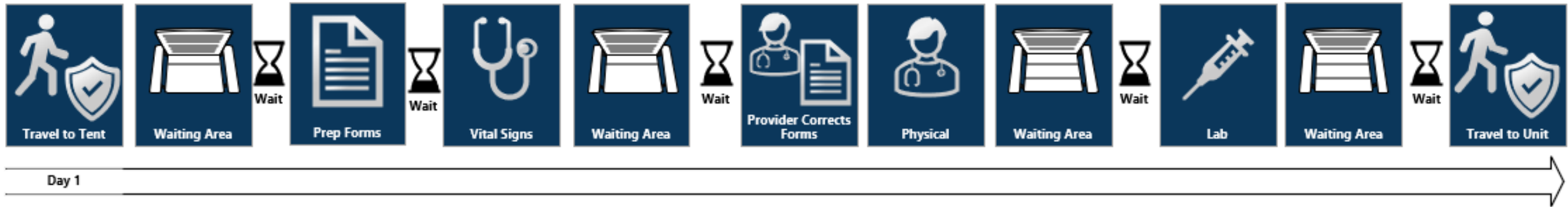
# Physicals Backlog Data Gathering



Area/location:				Date of observation:				
Subject observed: <i>Observation 2</i>				Start time:				
Process:				Observer:				
<i>Mary</i>		Observation time					Mode (task time occurring most frequently)	Remarks
Step no.	Description of operation	Observations						
		1	2	3	4	5		
1	eye exam	0.33						
2	Vital Signs	1.58						
3	wait	29.00						interrupted
4	Provider	11.53						interruption-asking question
5	wait	18.42						
6	lab	1.30						MA re-arranged stackables for easier access
7	Completed <i>waiting for movement</i>							
								Lab interruption: Talking to lab tech

- Conducted time observations of both complex and non-complex physicals
- Documented patient movement and operation steps
- Calculated lead time and cycle times

# Gemba and Waste Walk: Wastes We Observed



## Skills

- Providers spent time correcting forms
- PCPs conducting RN duties & administrative tasks
- RNs conducting MA duties and administrative tasks

## Waiting

Wasting patient's time waiting for the next step of their visit

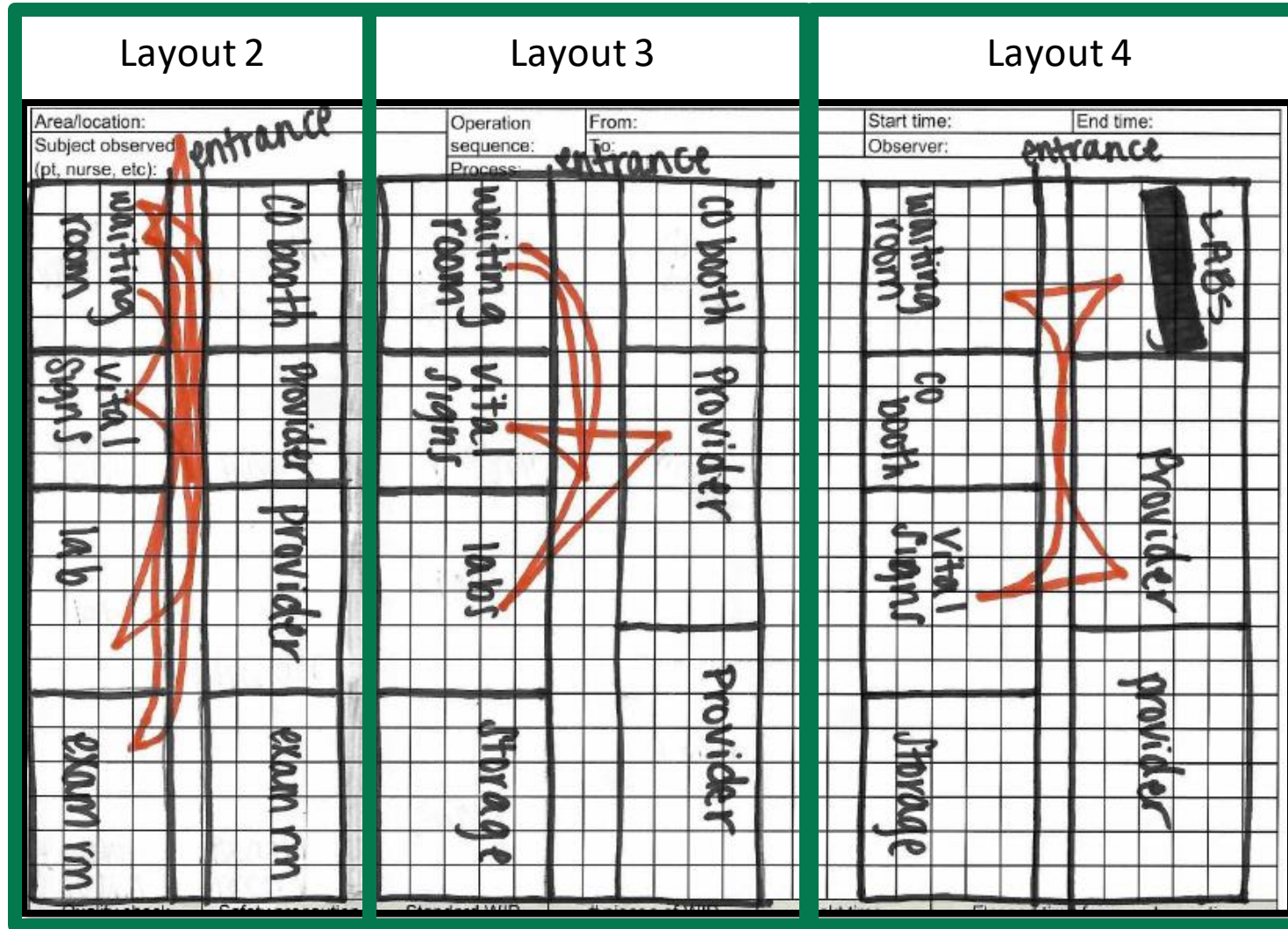
## Motion

Unnecessary movement of patient

## Defect

Patient form not complete upon arrival. Provider completes with patient during visit.

# Improved Clinic Tent Flow: Applied Lean Concepts



## Modified physical layout

- Changed to u-shaped cell to optimize the flow of processes
- Consistent staffing working to pace of demand
- Proximity: work close to care delivery point to reduce waste of motion. Co-locate provider and MA.
- Continuous flow (no batching)



# Tent Layout After



New Layout



Provider 1



Provider 2



Lab



Vitals



Waiting Area



# Improved Clinic Flow: Forms/Documentation Defect

- Developed patient instructions
- Medical Assistants coach patients to ensure forms complete prior to provider visit
- Eliminated provider time spent on forms

**Explaining the Intake Physical Process**

**Medical History and Physical Exam:**

The Washington State Department of Corrections health services department wants to make sure you stay healthy and improve your health. This is also to help protect the health of others like your family, friends, and acquaintances. The health care professionals will ask you some questions and give you a physical exam to understand your medical history and make sure you get the right healthcare. They will ask personal questions, which are private and confidential.

Follow these instructions to complete the physical exam form accurately and quickly.

**Do not fill out any area you do not know the answer. If you have any questions, ask the medical staff for help. If you do not know, just write you do not know.**

**There are some technical words, and their definitions are on page #2.**

**If you do not have a history and physical, you will not be able to go to camp and some other facilities because we will not know anything about your health and will have to classify you as having a lot of health problems.**

**Health History:** on page 1, 2 and top of 3.  
Health services will ask about your health history. This is an area to help us focus on your health care needs. There are some technical words and there are definitions in regular terms to help you understand what is being asked.

**Social History:** on the rest of page 3.  
This is an important area to help you. This is an area to tell health services to help address any family, occupational (your job), recreational parts of their life. It is important to look for possible medical problems.

**Immunizations and Preventative Health:** top portion of page 4.  
These are your vaccinations (shots to protect you from disease) you have had and recommended that you have immunizations to protect you from diseases.  
Preventative medicine is to check for diseases like colon cancer, lung cancer, prostate cancer, check for eye disease, and other health care areas.

**Family History:** This is the middle of page 4.  
Many health problems can be present in families and give clues if you have the same medical problems. Please fill out as best as you can. If you are adopted or do not know your family history, just write that on the form. It is very important to know the ages of your family members alive or deceased. Do your best to fill in this area.

**OB/Gynecologic History: DOES NOT APPLY**

**Lab Tests:**  
Any health services provider who sees you for your physical may offer you standard tests (labs). If any of these tests show a possible disease, you will see a medical provider who will discuss further tests and treatment options with you. Some of these tests are to check for infectious diseases like TB; HIV; hepatitis A, B, C, and syphilis tests. Other tests are to check for diabetes, kidney disease, liver disease, and cholesterol. There is also testing for colon cancer. If you are a female, you will have a pregnancy test.  
**Having a lab test will not put a medical hold on you or keep you from going to your permanent facility.**

can happen through surgery or medication.  
up of infected fluids.  
cells, this affects the amount of oxygen your body can carry.  
mouth and throat from an allergy or medication.  
difficulty breathing, wheezing, and coughing.  
is in your body to grow in a way that is not normal and harmful.  
y during childhood.  
am having sex with someone who has it.  
ur blood.  
nesses that cause stomach pain and a person's poop.  
sugar and inability for your body to process sugar.  
n called Dilatation and Curettage.  
s problem with a dry, itchy rash.  
re to smoking cigarettes for years. People may need oxygen.

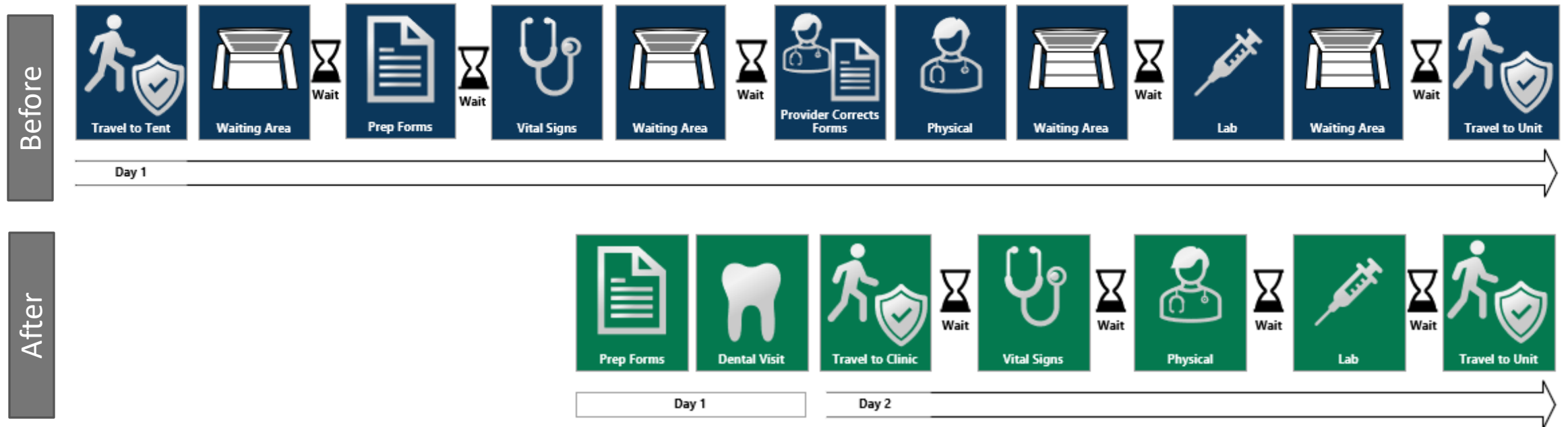
men, stomach, and "guts."  
om having sex with someone who has it.  
gs that are not there.  
g where you will not stop bleeding even from a small cut.  
having sex with someone who has it.  
s, a disease that weakens the immune system and that (can lead to

of a woman's reproductive organs.  
s. A risk factor for heart attack and stroke. It is called; "The silent  
not feel high blood pressure.  
rde.  
throw up.  
ur body or body parts.  
ung disease).  
art of the ejaculate (come).  
y untreated Strep throat, which can affect the heart and blood

kin that causes a rash and itching.  
s on one side of the body that hurts. P, people who had chicken pox

es blood.  
having sex with someone who has it.  
se that affects the lungs.

# Meeting Demand for Backlog Reduction



Reduced Waste: Motion & Waiting  
U-shaped layout reduced patient movement. No longer returning to waiting room and less waiting.

Calculated Target Date to Eliminate Backlog  
Time Available: 14,400 minutes in 8 weeks  
Divided by Demand: 700 physicals  
Equals: 21 minutes per physical

Reduce Physical Cycle Time  
15 minutes non-complex  
(2/3 of total)  
30 minutes complex  
(1/2 of total)

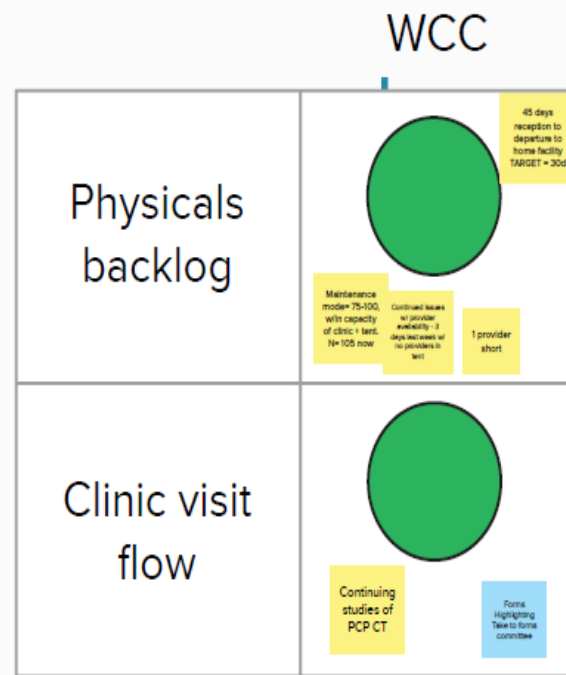
# PDCA Cycles & Status Board

## PHASE III PDCA STATUS BOARD

9/26/2023

### Coaching cycle Report Out

- What new process and condition are we working toward?
- What is the actual condition now?
- What did you plan as your last step
  - What did you expect?
  - What actually happened?
  - What did you learn?
  - What obstacles do you think are preventing you from reaching your target condition? Which one are you addressing now?
  - What is your next step? What do you expect?
  - When can we go and see what you have learned from taking that step?



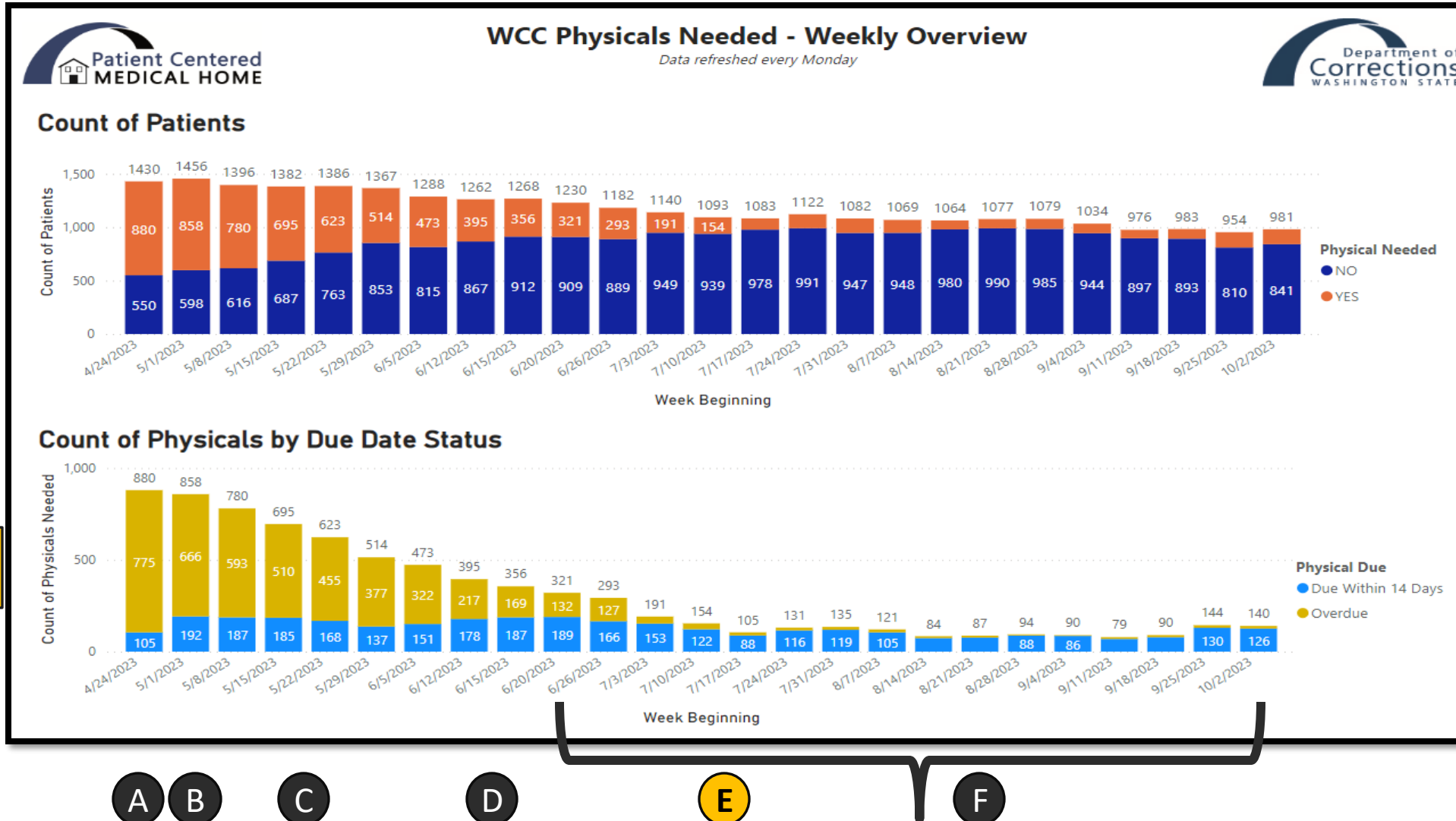
Cycle	Prediction side		Coaching cycle
1	Date / Next step / By who <i>move cow cart for MA &amp; computer</i>	What do we expect? What will we measure to know if we achieved it? <i>remove MA from using provider space</i>	
2	Date / Next step / By who <i>move CO Desk and ethernet cable &amp; lab to opposite sides</i>	What do we expect? What will we measure to know if we achieved it? <i>1. move lab closer to door or decrease movement walking turn into a "U" shape.</i>	
3	Date / Next step / By who <i>staff ensures 1/1 finishes forms before appt.</i>	What do we expect? What will we measure to know if we achieved it? <i>forms are more complete saving time</i>	
4	Date / Next step / By who <i>have an additional MA in tent</i>	What do we expect? What will we measure to know if we achieved it? <i>creates more fluid movement, shortens wait time</i>	

# Crushed it!!

## 99% reduction of initial physicals backlog!

Orange =  
physical  
needed

Gold =  
backlog



**A: April 24**  
880 due, 775  
overdue

**B: April 26 – 28,**  
First Workshop

**C: May 17 –**  
18, Second Work  
shop

**D: June 15,**  
Last Workshop

**E: Crushed it!**

**F: PDCA &**  
Continuous  
Improvement



# Partnered with Facility Custody Staff

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- Modified unit movements to accommodate tent physicals schedule
- Two officers for continuous patient flow to tent

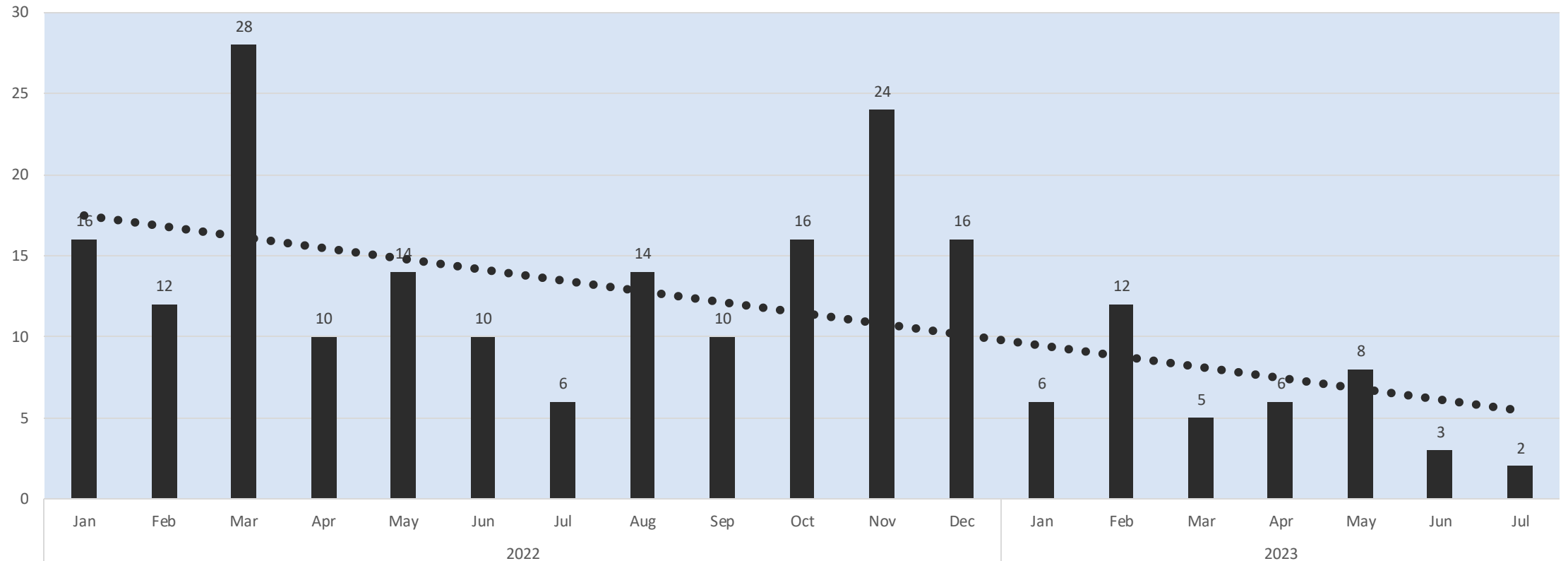
## Immediate impacts include:

- Improved security by limiting movements to specific units
- Reduced workload for corrections related to population decrease
- Decrease in classification time of individuals
- Reduced violence due to decreased population
- Reduced Security Threat Group activity



# Reduction in Violence

Use Of Force IMRS At WCC-RC 1/1/2022-7/12/2023



# How did the Lean Project Benefit Facility Custody?

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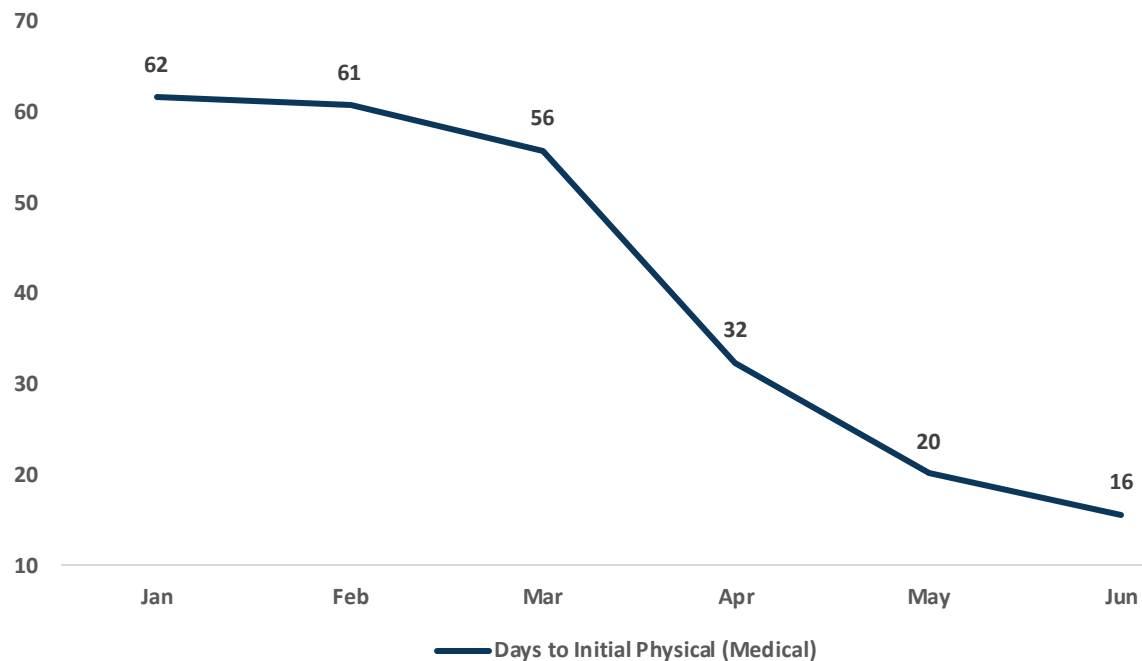


Reduction in the overall institution population decreases daily workloads:

- Reduced shower demand
- Reduced meal time
- Lowered living unit operating costs
- Reduced staffing demands
- Reduced overtime
- Increased morale

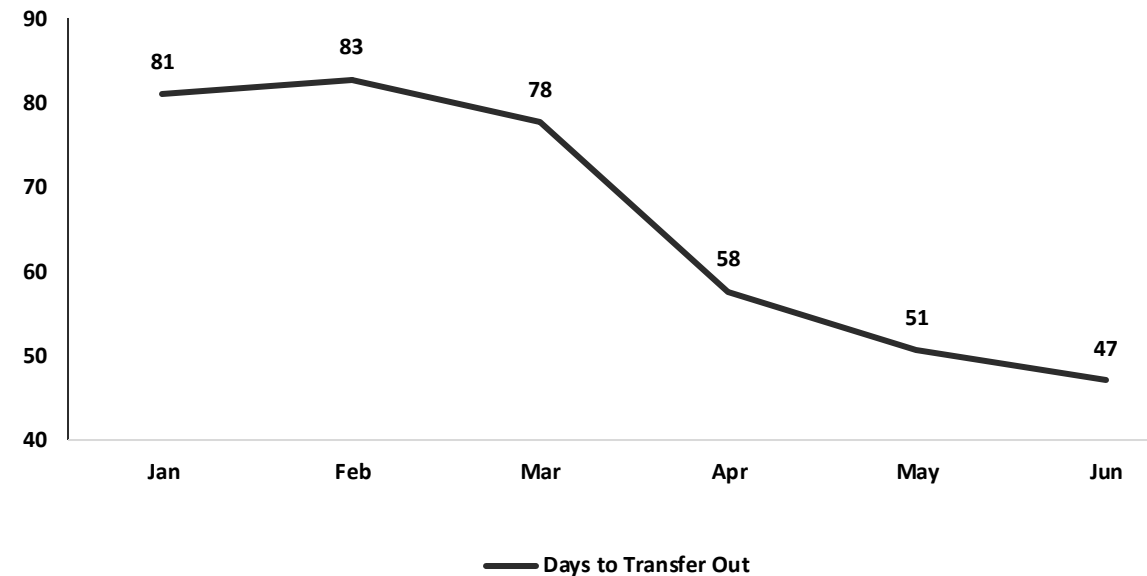
# Reduction in Days to Physical and to Transfer Out

Days to Initial Physical (Medical)



Physical exams from 62 days down to 16 days.

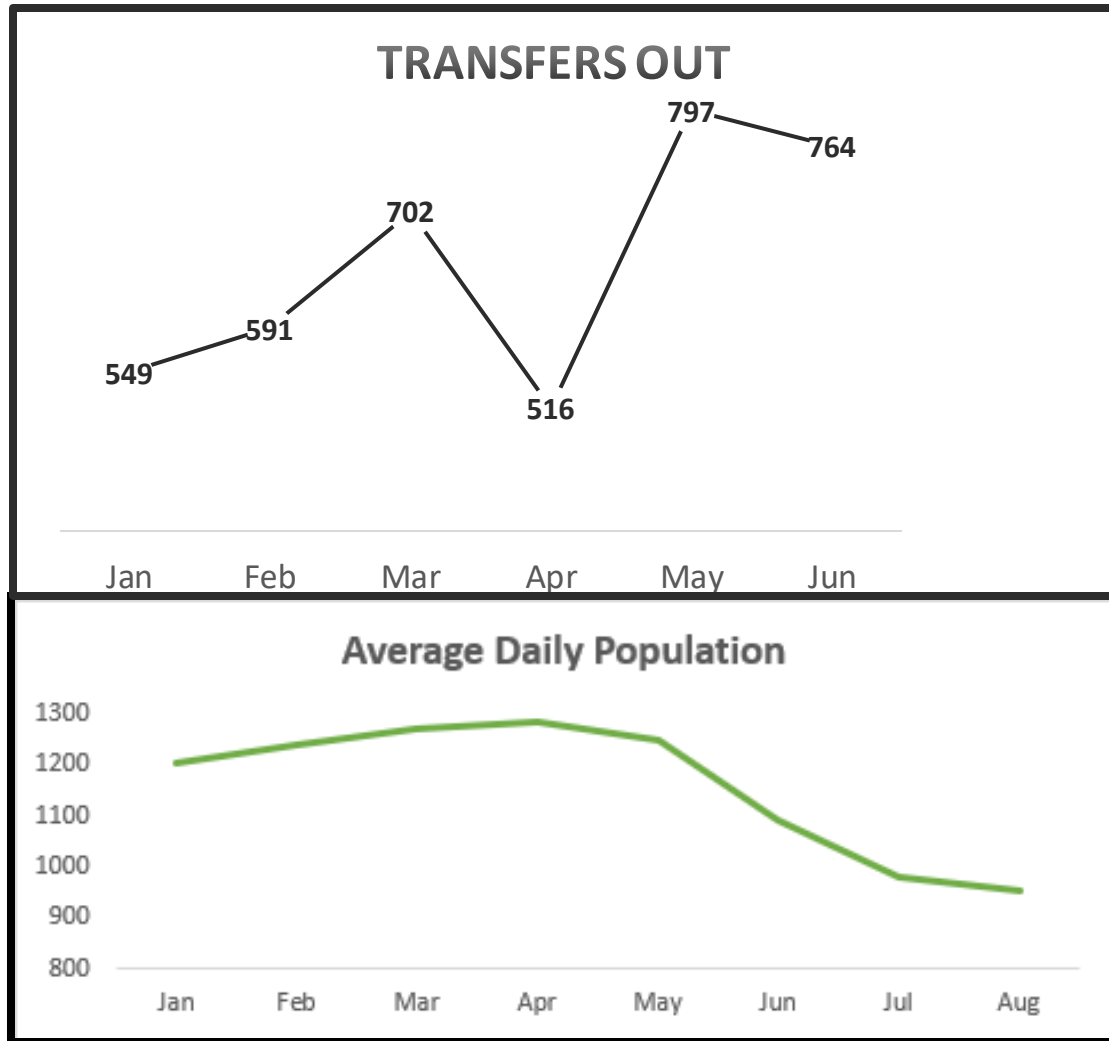
Average Days Between Admissions and Transfer Out



Arrival to transfer from 81 days down to 47 days.



# Impact of the Lean Process on the Prison



- Individuals stay fewer days at Washington Corrections Center
- Reduction of 253 individuals in the population average per day
- Cost per individual for 30 days is approximately \$4,868

Equals cost avoidance of  
\$1.2 million per month



And ...

Thank you!  
Questions?