



VIRTUAL
2020 NATIONAL
RYAN WHITE
CONFERENCE ON
HIV CARE & TREATMENT

Reducing Cycle Time of Initial HIV Visits Using Lean Methodology

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- Dr. Jameela J. Yusuff, Michelle Melendez and Christopher Jimenez have no relevant financial or non-financial interests to disclose

Learning Objectives



At the conclusion of this activity, the participant will be able to:

- Recognize key principles in Lean
- Illustrate how to incorporate lean in HIV service delivery
- Identify the importance of lean as a quality management tool

What is Lean?



- Objective
 - Management Philosophy based on Toyota
 - Defines Value based on customer viewpoint by eliminating waste
- Focus and Scope
 - Value streams or processes
 - Focused on improving process
 - Clear view of end (target) state
- Approach
 - Wide range of Lean methods and tools
 - Empowerment & Respect of team
 - Culture of continuous improvement

Lean Principles



1. Define Value from the Customers perspective and express value in terms of a specific product or service

5. The complete elimination of waste ensuring all activities create value for the customer through innovation & continuous improvement projects



2. Map all of the steps:
➢ Value added
➢ Non-Value added that bring a Product or Service to the Customer

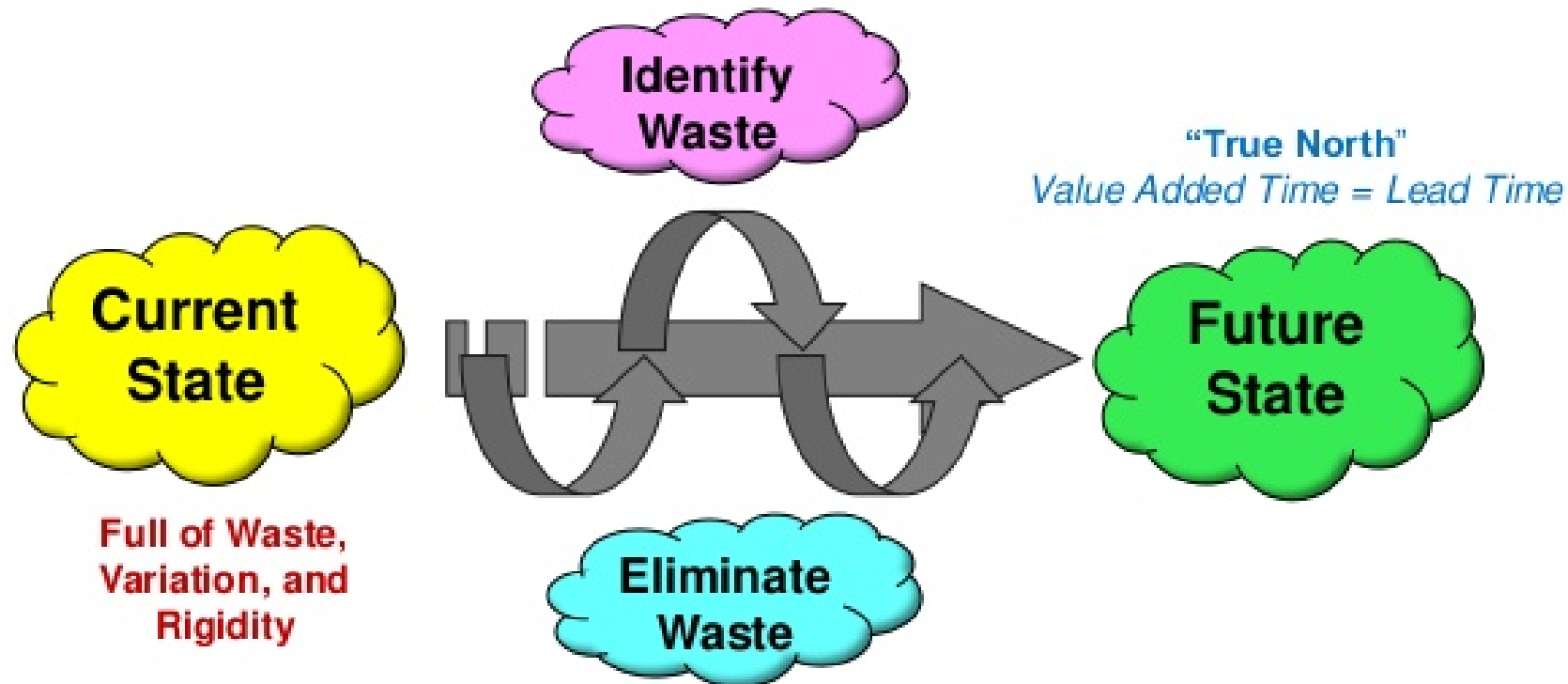
3. The continuous flow of products, services and information from end to end, through the process

4. Nothing is done by the upstream process until the downstream customer signals a need. Actual demand Pulls the product/service through the value stream

THE HOUSE OF LEAN

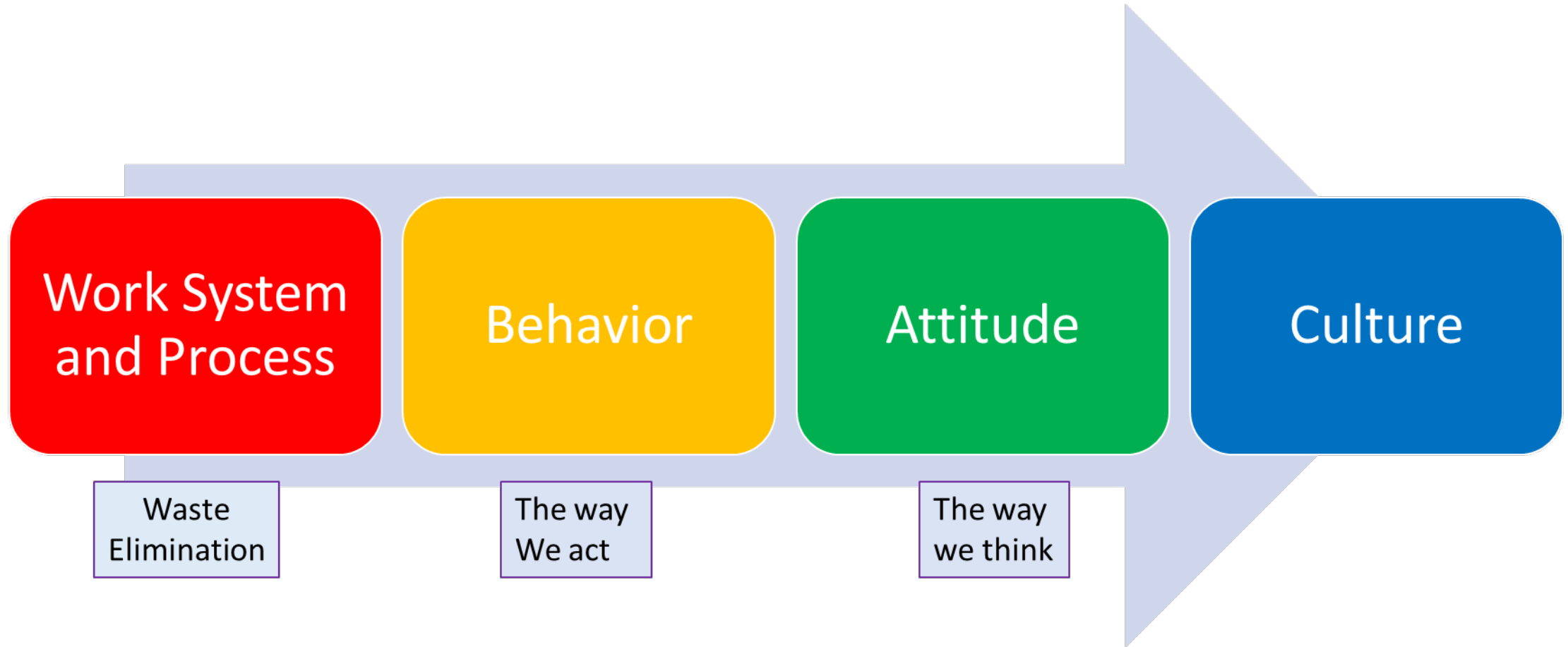


Lean Thinking Philosophy



*Identify and eliminate all activities that are waste.
Focus on optimal flow throughout the process.
Focus on creating value for customers/patients.*

Lean Facilitates Culture Change



Benefits of Lean Culture



- Lean cuts out wasted time and resources
- Increases efficiency of patient care
- Improves direct patient care processes
- Allows more patients to be treated
- Allows hospitals to leverage resources and improve margins

- To understand value we must listen to the voice of the customer
- Value is defined by customer not the producer
- Per customer, 90% of work adds no value
- Some work is regulatory but steps should be eliminated
 - That's why we need to eliminate the waste!
 - We need to continuously improve

8 Wastes

The 8 Wastes are eight types of process obstacles that get in the way of providing value to the customer.



Defects

Efforts caused by rework, scrap, and incorrect information.



Overproduction

Production that is more than needed or before it is needed.



Waiting

Wasted time waiting for the next step in a process.



Non-Utilized Talent

Underutilizing people's talents, skills, & knowledge.



Transportation

Unnecessary movements of products & materials.



Inventory

Excess products and materials not being processed.



Motion

Unnecessary movements by people (e.g., walking).



Extra-Processing

More work or higher quality than is required by the customer.

What is Five S?

	Principles	General Description
1S	Sort	Remove what's not needed, keep what is
2S	Set	Arrange essential items for easy access
3S	Shine	Keep things tidy
4S	Standardize	Establish Standards
5S	Sustain	Make 5S habit and teach others

Build One Piece Flow



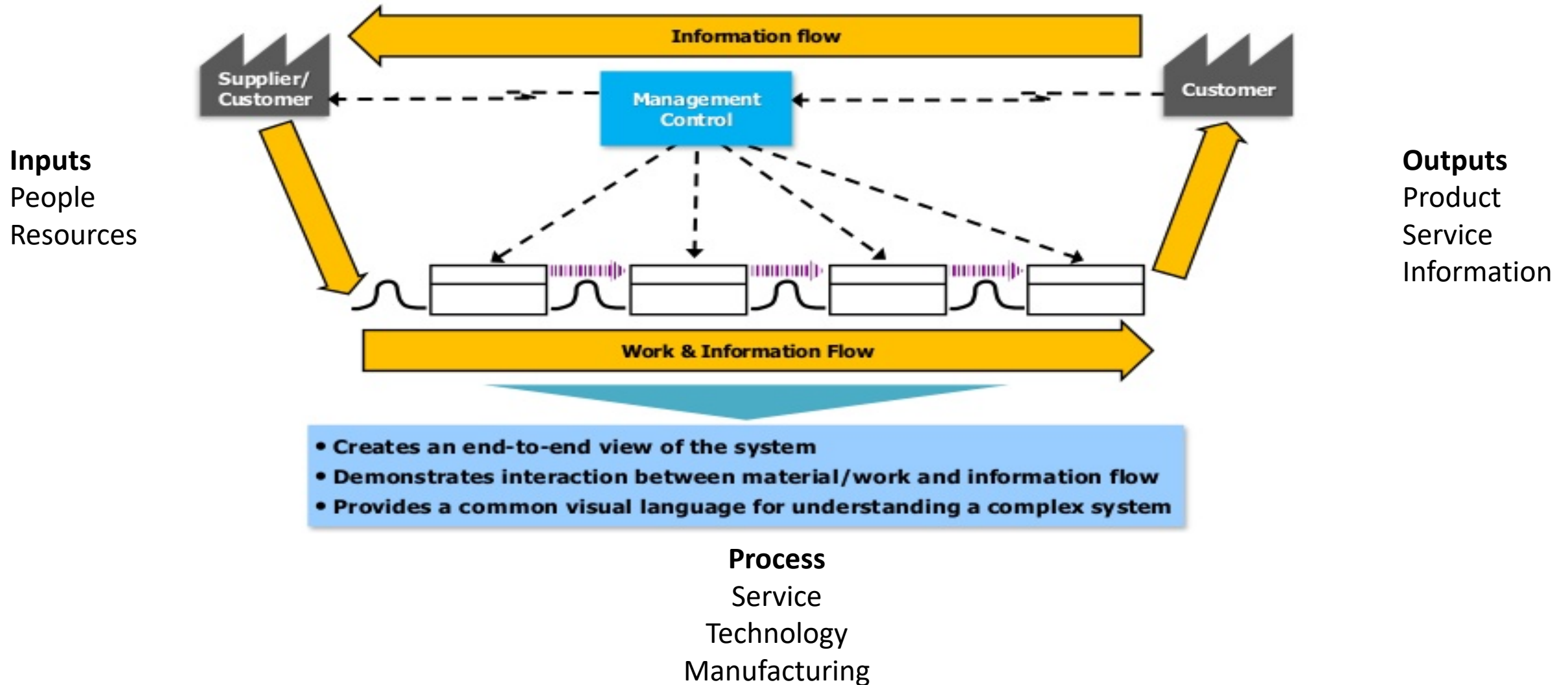
- When the customer pulls the process we eliminate process waste
- Think about subway sandwich
- Staff must pace to meet customers timeframe
- TAKT Time
 - Customer should pull the process
 - Need to set the time and back into it
 - Rate at which a finished product needs to be completed in order to meet customer demand

Use Visual Management

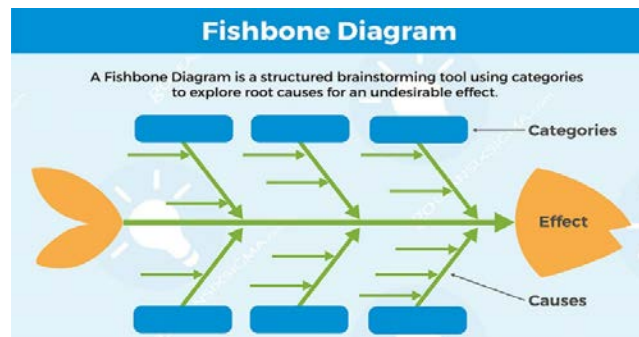


- Could we follow a ball game without a scoreboard?
- Would the game be interesting?
- Would the team and fans be engaged?

Value stream mapping provides an overview of the end-to-end administrative process



- Fishbone Diagram



- 5 WHYS

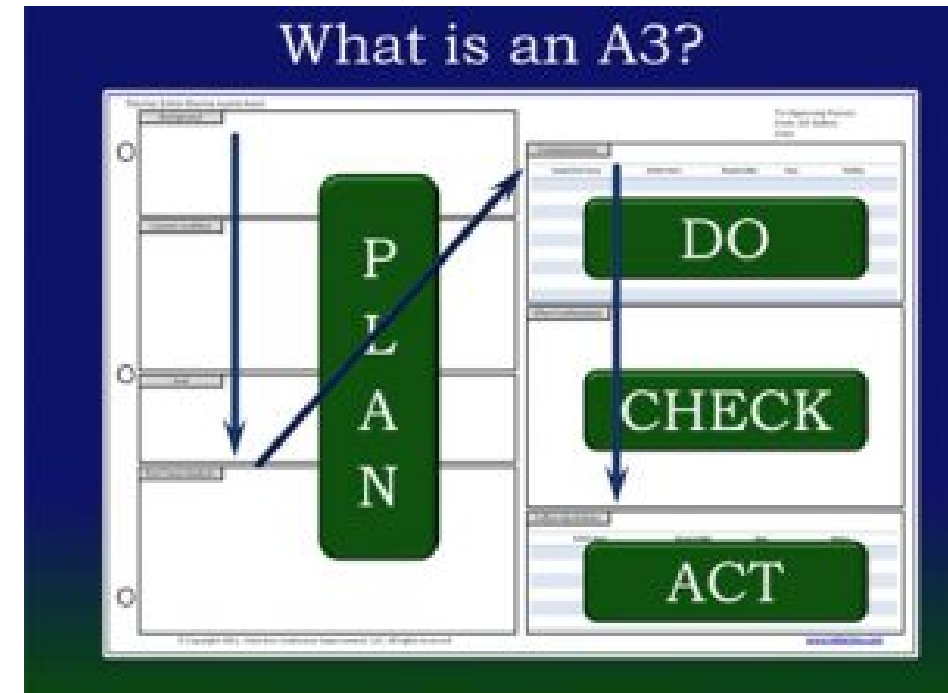


- **SIPOC**
- **S**upplier: Patients, Nurse, PCP, Phlebotomy, CM, Registrar
- **I**ntput: Demographic, Insurance, VS, Screenings, Diagnosis
- **P**rocess: Registration, VS, MH intake, PE, Labs, CM visit
- **O**utput: Bill, Dx, Treatment plan
- **C**ustomer: Pts, Grant, UHB, BK

What is an A3?



Background	Future State & Countermeasures
<ul style="list-style-type: none">- Why do we need to work on this?- Context- Importance	<ul style="list-style-type: none">- Actions being taken to address the issue (what, who, when)- Quick fixes (Containment actions)- To Be process map
Current State	Impact
<ul style="list-style-type: none">- Problem statement/definition- As Is process map- Scale of the problem (data)	<ul style="list-style-type: none">- Results achieved- Trend graph (before/after)
Objective	Follow-up
<ul style="list-style-type: none">- Target level of performance- Desired outcome	<ul style="list-style-type: none">- Actions still required (what, who, when)- Learning points to share
Root Cause Analysis	
<ul style="list-style-type: none">- Fishbone diagram- 5 Whys- Data (Pareto, Scatter diagram)	





STAR Health Lean Intervention

Michelle Melendez and Christopher Jimenez

STAR
PROGRAM

SPECIAL
TREATMENT
AND
RESEARCH



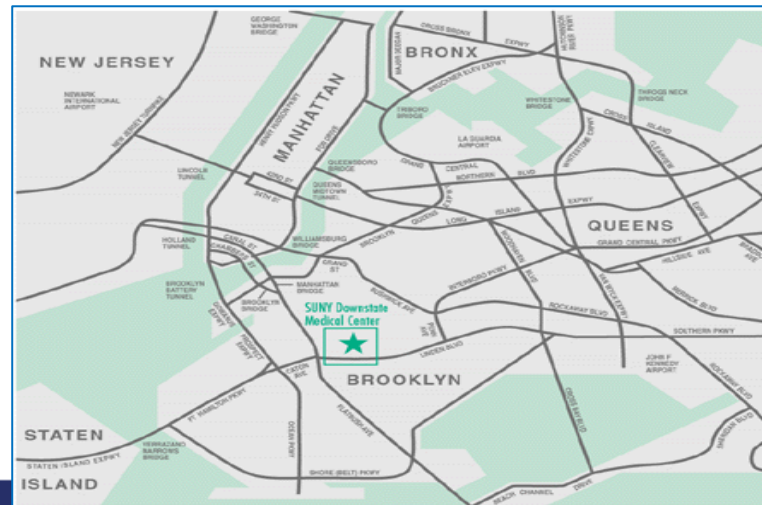
SUNY
DOWNSTATE
Medical Center
University Hospital of Brooklyn

Organizational Background



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- HIV Primary Care 1200pts
- PrEP and PEP 200pts
- HCV for mono/coinfected 50pts
- LGBTQ Primary Care
- Re-entry population
- Opioid Use treatment—MAT onsite & Narcan distribution
- Integrated Behavioral Health-400pts
- Psychiatry, Acupuncture/Reiki, Counselors, Peers and Support groups
- Clinical Pharmacist, Patient Navigators, Case Managers/SW, Nutrition and Phlebotomy
- HIV IM and PA Residency Track 20 trainees
- *STAR for Brooklyn* TV show Social Media



**SUNY Downstate Medical
Center-only Tertiary in BK**

Ryan White Part A and C

PCMH Level 3

Extramurally Funded

COMPLETELY INTEGRATED



Quality Improvement at STAR



- Long history of Quality Improvement at STAR
- Quality Improvement Coordinator
- Quality Improvement Subcommittees—clinic wide involvement
- PDSA
- Community advisory groups
- Care Cascades
- Organizational assessments
- But not Lean

Getting Started in Lean



- 2 STAR Staff meetings on Lean
- Allocate resources for trainings
 - Utilized a consultant to help initially
- On-boarded staff with Lean experience
- Offering Lean Training to other staff to help sustain



Intervention: Reducing Cycle time of Initial HIV Visit

Improvement efforts will focus on the entire process including: registration, vitals/triage, mental health intake, physical exam, case management visits, follow up scheduled, and encounter form completed by physician and handed to front desk staff

Terminology



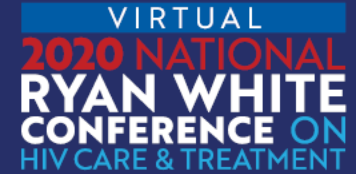
- Executive Sponsor established:
 - Leaders must inspire and support and remove obstacles
- Process Owner is engaged and oriented
 - They need to implement the improvements and sustain them over 30, 60, 90 and 180 days
- Improvement team is identified
 - Team must learn and grow and you are the organization
- Value Stream Steering Committee
 - Create an improvement program that respects patients by
 - Establish a leadership culture that respects staff by
 - Foster communication and training to enable improvements
 - Develop visual tools that show actual data to monitor and assess

Phases of Lean Intervention



- Pre-study
 - Week 1-3: Interview staff from various disciplines to draft first 3 boxes—Reason for Action, Current State and Target State
 - Work with Executive Sponsor to select Steering Committee and process owner. Facilitate Steering Committee to approve first 3 boxes
 - Week 4 Create SIPOC
- Event
 - Week 5-8 GEMBA—Work Observation
 - Week 9 Team training 2 day workshop and Kaizen event
 - Week 10 Report Preparation and presentation
- Follow up 12-24 weeks
 - Assist with preparation and facilitate 5 Steering Committee Meetings

STAR New Patient Intake



Start:Pt walks in→

End: Pt goes to get metrocard

- Registration→Triage→PE→SHC Intake→Labs→Urine→Check out

Step	Key Points	Expected Time
Registration	Completed screens in Eagle and OP and obtain consents scan into alpha	15 Minutes
Triage	Three questions and take VS. Change EMR color code	5minutes
Medical Exam	History, PE, Treatment plan, lab orders, Rx, and follow up appointment	30minutes
SHC Intake	Review PCP note, complete 70 Question survey	15minutes
Phlebotomist	Draws blood, give patient urine specimen	5 minutes
Urine	Patient goes to bathroom and returns urine to basket by checkout	3minutes
Checkout	Schedules f/u appt and give voucher for metrocard	5minutes



Michael Anderson, Lamont Bryant, Mary Crymes,
Nicolette Dakin, Gerardine Francois, Mariel
Hoepelman, Christopher Jimenez, Alex Joinville,
Verneal Kizer-Cooper, Tony Mills, Natalie Mitchell,
Magna Robinson, Debra Toyloy, Liza Valdivia,

Process Owner: Michelle Melendez

Executive Sponsor: Jameela Yusuff

Facilitators Marlene Zurack and Carol Ozgen

TEAM



Choose the Team

1/3 Suppliers

1/3 Customers

1/3 Fresh eyes

Box One: Reason for Action



- It is challenging for the STAR Program to offer a robust array of services to patients at the same time in this current space
- The new patient visit takes too long
- Patients report communication and access problems

- AIM: Improve the New Patient Intake process to reduce the time and improve patient and staff satisfaction

Box Two: Current State

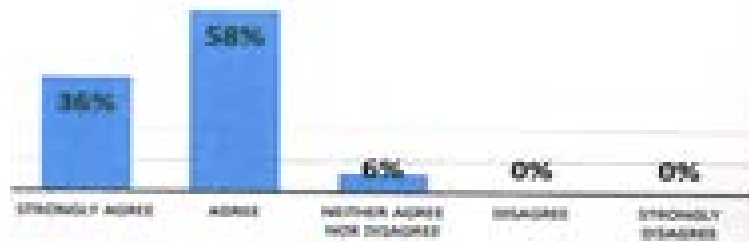


- Patients go back and forth from the waiting room between steps
- The process has too much variation and uses too many different systems
- Space is not well organized and does not promote privacy
- Use too many systems and have too many redundant questions

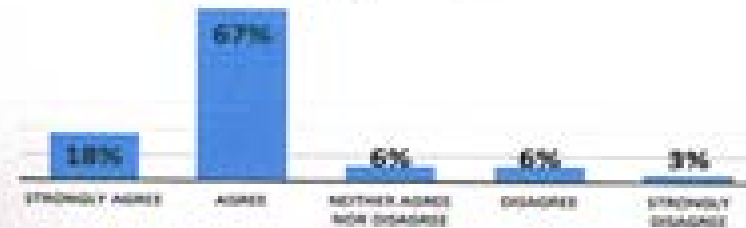
Current State 1

SHC orientation, training and job responsibility

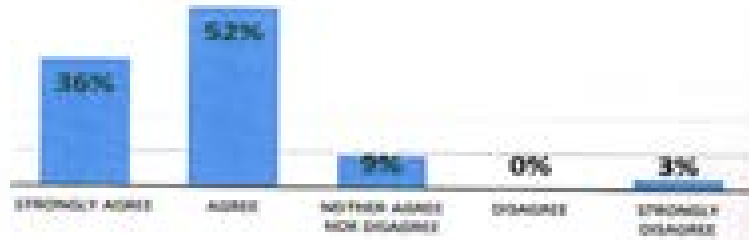
3.a. I have received a clear job description for my position



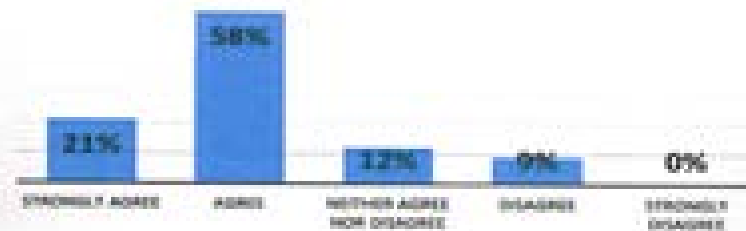
3.b. I have received sufficient training and resources to allow me to perform my job well



3.c. I have adequate access to the policies and procedures of the SHC



3.d. My job makes good use of my skills and abilities



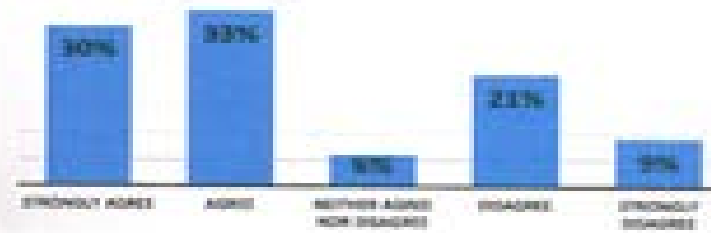
Current State 2

SHC orientation, training and job responsibility

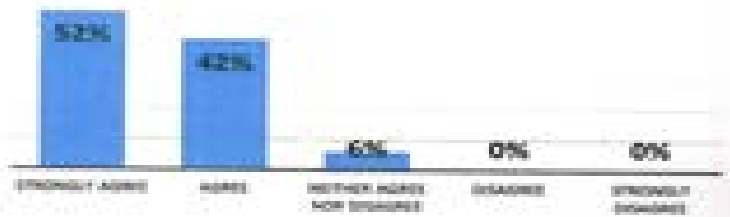
3.e. I am encouraged to help make decisions that affect my job



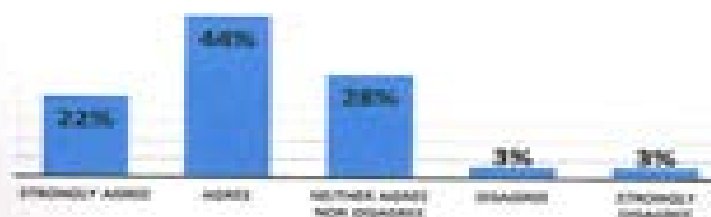
3.f. I have the appropriate space for me to perform required tasks



3.g. I go beyond what is expected of me to make patients happy



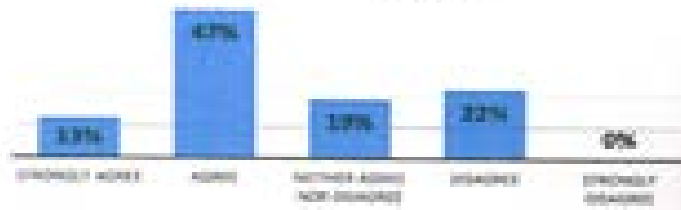
3.h. Overall, my work is satisfying to me



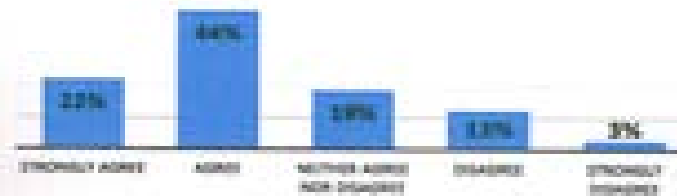
Current State 3

Other aspects of your work at SHC

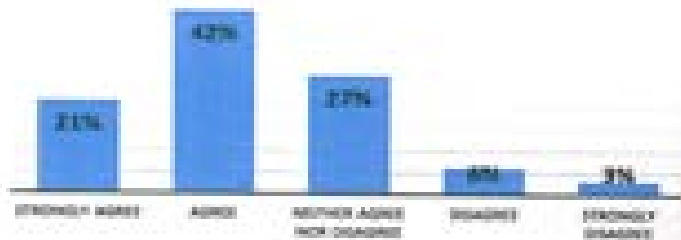
4.a. SHC does an excellent job of keeping employees informed about matters affecting us



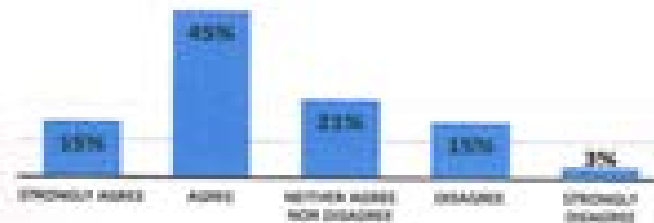
4.b. I have opportunities for professional growth such as updating skills and learning different jobs



4.c. SHC is very flexible when it comes to my family responsibilities



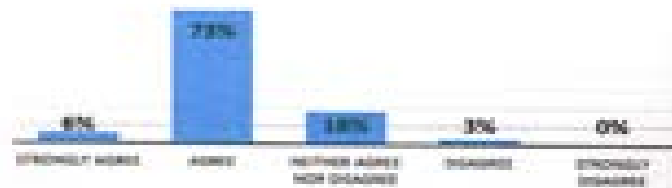
4.d. When there are opportunities to share my ideas about improving the services provided, my opinions count



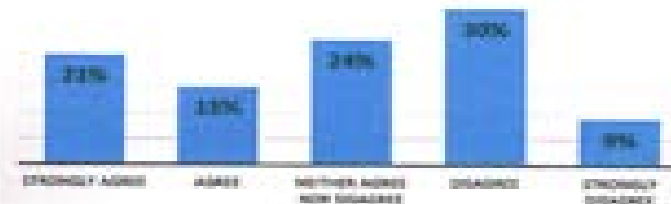
Current State 4

Other aspects of your work at SHC

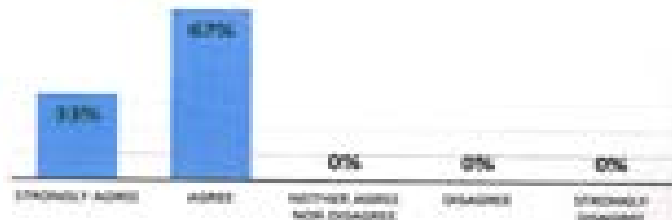
4.e. When a patient is dissatisfied, I can usually correct the problem to their satisfaction



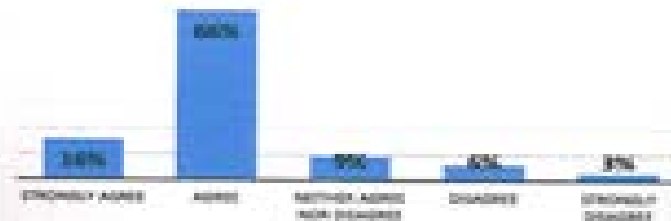
4.f. Communication between disciplines is poor



4.g. As an employee, I act in accordance with SHC's mission



4.h. My co-workers treat our patients with respect and dignity



2017

Research Foundation of SUNY - Downstate Medical Total Client Records: 1239

2011-2015	202	17%
After 2015	39	3%
Missing	0	0%
Total	1,215	100%

Core Medical Services Data

Services Delivered by Clients and Visits (Items 16, 18-19, 21-27)

Response category	Count of Clients	Count of Visits
Mental health services	423	1478
Medical nutrition therapy	406	608
Medical case management (including treatment adherence)	109	2002
Outpatient/ambulatory medical care	1253	5138
Total	2171	9316

Support Services Data

Services Delivered by Clients (Items 17, 20, 28-45)

Response category	Count of Clients
Case management (non-medical)	855
Medical transportation services	1172
Psychosocial support services	84
Referral for health care/supportive services	763
Total	2876

Client Clinical Information

HIV Risk-Reduction Screening/Counseling (Item 46)

Response category	Count	Percentage
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Current State 6



Access to Services	# Responses	Good or Very Good
Getting through to our Health Center on the phone	143	78%
Convenience of appointment times for your schedule	138	85%
Amount of time that you wait in the waiting area for your medical doctor/clinician to see you	139	73%
Help that you get from receptionist on the main (718-270-3745) when you call STAR Health Center	139	84%
Help that you get from the medical doctor/clinician who returns your call after-hours	131	76%

Patient responses about access need improvement

6/17/2020

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Current State 7



Quality of Services	# Responses	Good or Very Good
Way that the staff keeps your information confidential	136	96%
Appearance and comfort of the Health Center	134	96%
Educational materials that are available to you in the exam room and waiting area	129	90%
Overall quality of the services that you receive in the Health Center	134	92%
Likelihood of you recommending our facility to others	135	93%

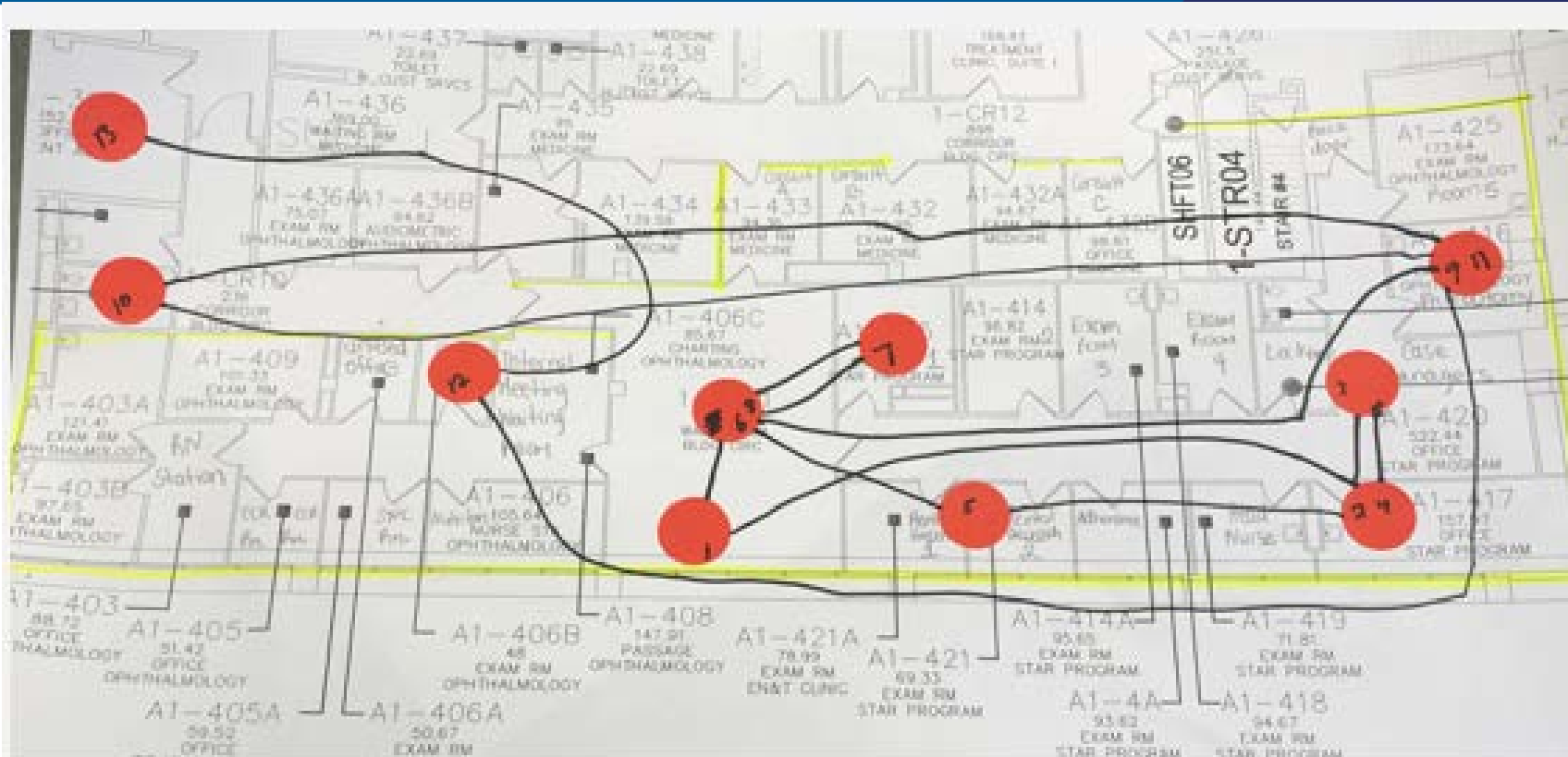
Patients rate quality of services very high!!!

Box Three: Target State



- When a new patient calls, they can answer speak to a live person within 2minutes
- New Patients can get an initial appointment that meets their needs within 5 business days
- For new initial patients, they are roomed within 15 minutes and all clinical activities resolve around the patient
- Patient access satisfaction scores improves by 15 percent

Box Four: Gap Analysis



Patient movements during current process for a new patient intake

6/17/2020



Many steps for a new patient intake and lots of requests for information and consents. SHC intake alone has 112 questions

6/17/2020

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Box Five: Solution Approach



If We	Then We
Reduce the mental health screen by half and trim scheduling and nurse intake screens	Would cut time and reduce redundancy
Have new patient nurse intake, physician exam, SHC Intake all in Room 5	Would reduce excess motion and waiting for patients and ease access

Box Five: Solution Approach continued



If We	Then We
Route new patients to a phone line that is staffed during business hours and provide a phone directory at intake	Would improve access for new patients
Relocate new patient registration to smaller waiting room and have STAR front desk staff complete both Billing and EMR registration	Would reduce time for registration and allow for more privacy and improve flow

Box Six: Rapid Experiments



Solution	Expected	Actual	Team
Reduce Questions	Shorter visit with same quality	Able to cut questions in half	LV, MH, CJ, ND
Rooming	Reduce Steps by 70%	Need to use 403B not Room 5	LB, MC, DT, MR
Phones	Test a Plan and Develop a Script	Create a tree that has a dedicated line for new appointments	MA, AJ, VK
Registration moves to checkout area	Registration in less than 15 minutes	Move only for new patient intake and is done by STAR staff in Billing and EMR by checkout staff	GF, MM, NM

Box Seven: Completion Plan



What	Who	When
Eliminate or Replace Questions from EMR	CJ	10/26
Communicate and train staff on EMR changes	LV/CJ	11/1
Reassign Staff for new exam room	CJ/JY	11/1
Dual Screens in check	NM	11/1
Move triage equipment and cyracom phone to new exam room	MC	11/1
Set up basket for urine	LB	11/1
Billing system training	MR	11/1
Implement new phone triage and push out	YK, AJ	12/1

Box Eight: Metrics



Metric	Goal
Registration Time	15 minutes
Total Time	90 Minutes
Daily Patient Satisfaction for front desk and pre-registration	15% above baseline

Outcomes



Metric	Pre-Intervention	Post-Intervention
Cycle time for initial visits	3 hours	1:30 hours (90minutes)
Phone Access Satisfaction	72 %	78 %
Registration Time	35minutes	23 minutes (15minutes-goal)

LEAN Intake Passport

Time of Front Desk Check-in: 1:42 pm

- LEAN Intake: For the time being LEAN Intakes will be taking place Tuesdays and Wednesdays morning. The entire LEAN Intake will take place on the new side of the clinic (former internal medicine side).
- Pt will see front desk first, then nursing, and if possible the provider before MH.
- If the provider is with another pt, please send to MH first.
- After seeing MH and the medical provider the pt can have their labs drawn.

1) Registration With Front Desk (Please send tell pt to wait for nursing on the internal medicine side of the clinic after registration is completed)	Registration completed by: <u>2:03</u> AM (PM) <i>[Signature]</i> Notes:
2) Nursing Intake Note	Nursing Intake Note completed by: <u>2:14</u> AM (PM) <i>[Signature]</i> Notes: KD
3) Initial visit with medical provider (note to provider: please complete the visit and send to MH right after. Please do not send to case management before MH)	Initial visit completed by: <u>2:50</u> AM (PM) <i>[Signature]</i> Notes: NM
4) Mental Health (MH) Initial Psychosocial	Initial psychosocial completed by: <u>3:23</u> PM (AM) <i>[Signature]</i> Notes: <i>Jenaye Todd</i>
5) Phlebotomy (Draw labs)	Labs completed by: <u>3:04</u> AM (PM) <i>[Signature]</i> Notes: <i>Phorewood</i>
6. cm.	<i>Dr. Coleman</i> <u>3:15 pm</u>



Follow-up Post Lean



- Management Commitment
- Alignment to missions and vision
- Availability of resources
- Management Review—rewards and recognition
- Measure success and key performance indicators

- Second Lean event: Design and Implementation of team based care
- Post-COVID—adapt and enhanced Lean philosophy

Thank You



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