Improvement Academy



SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Emily Gottenborg, MD Laura Rosenthal, DNP

- Team Updates
- Return to DMAIC
- An Approach to Data in QI
- Change Management
- LUNCH
- Change Management & SCARF Model
- Creating a Great Presentation

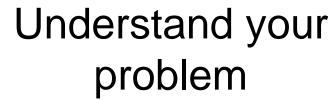
Agenda

Team Updates - Key Realizations

What have you learned about your problem since the last session?

Return to DMAIC

Define, Measure, Analyze, Improve, Control









Sustain



Define

- Problem Statement
- Voice of Customer

Measure

- Gemba
- Process Map
- Identify Process, Outcome, Balancing



Analyze

- Affinity Diagram Identify Root Causes
- Pareto Rank Root Causes



D, M, A - <u>SMART AIM</u>



<u>Improve</u>

- Identify Key Targets for Intervention from Pareto Chart
- Design Interventions using Positive Deviance, Pre-Mortem

Control

- Sustainability Plan



Define, Measure, Analyze,

Understand your problem







The Problem Statement

DO you have a problem?

What is your problem?

What is the scope?

Problem Statement

Our patients wait too long in the Emergency Room before they see a provider (an average of 80 minutes), as evidenced by recent complaints on HCAPHS surveys, poor satisfaction scores, excessive wait times and long Door to Doctor times, ultimately resulting in patients leaving the ER without being evaluated.

Define the problem

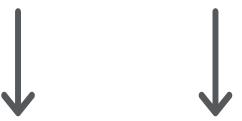


Please write down your problem statement and reflect on your status in Measure / Analyze phase.

<u>Define</u>, <u>Measure</u>, <u>Analyze</u>, <u>Improve</u>, <u>Control</u>

Understand your problem





Fix it

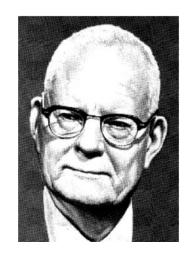








An Approach to Data in QI



"In God we trust. All others must bring data."

- W. Edwards Deming



"The goal is to turn data into information, and information into insight."

- Carly Fiorina, former executive, president, and chair of Hewlett-Packard Co.

OUTCOME

- Patient Satisfaction
- ·LOS
- Readmission Rate
- Adverse Events

Can act as proxy for outcomes

PROCESS

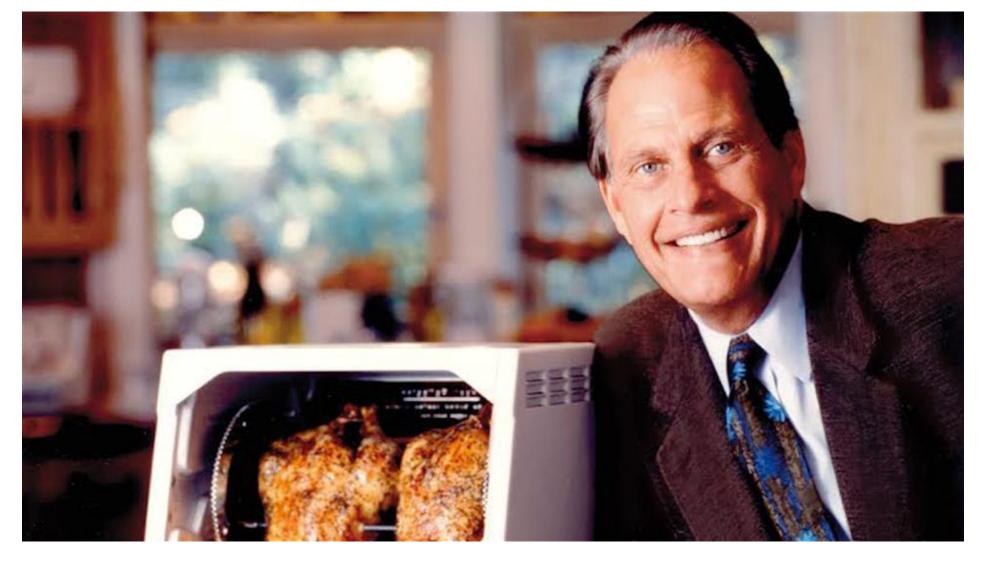
- Use of checklists
- Lab orders

STRUCTURE

- Order Sets
- Medications
- Hand sanitizer

BALANCE

R



Outcome Measure - "Set it...and forget it!"

Focus on the process, NOT the results. Take one step at a time. You don't climb a mountain by simply looking at the top.



How do you know your intervention is happening?

ie process measures

#squadgoals

- AIM: By 6/1/22, we aim to increase percentage of BMT chemotherapy admissions by 1200, from 4.2% to 60%.
- How: transform chemotherapy admission process
- Vision: Cancer sucks and chemo is scary. We owe
 it to our patients to try to make the process of
 receiving treatment as reliable, efficient, and
 pleasant as possible.



Breakout:

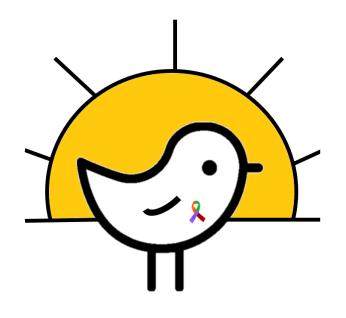


What are your process or structural metrics?

15 minutes

How do you know your intervention is working?

ie outcome measures





Breakout:

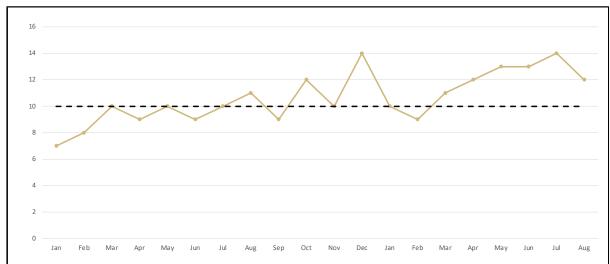


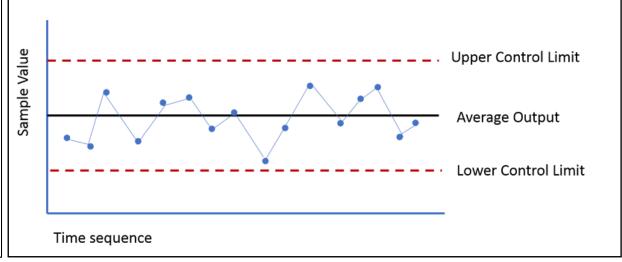
What are your outcome metrics?

15 minutes

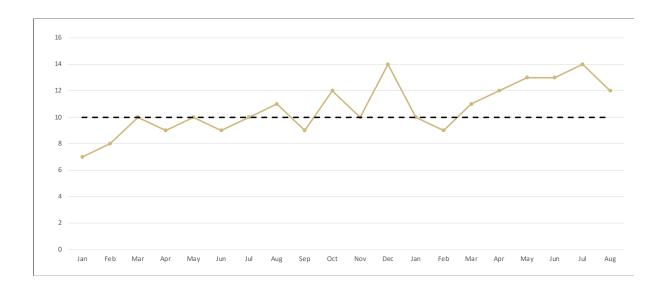
Run Chart

SPC Chart





Run Chart





Easy to construct

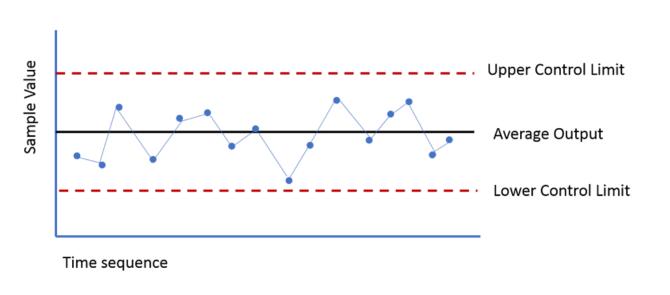


Easy to interpret (no advanced stats required)



Assess the impact of process changes (AKA something happened)

Statistical Process Control (SPC) Chart





Make informed decisions about which processes to leave alone and which to subject to an improvement cycle.



Predict future performance if the system is stable and in control.



Easy to construct



Data Collection Tips

Conceptual vs Operational definitions

- Conceptual is what you are going to measure
- Operational is how

Daily order of CBCs and BMPs on inpatients ordered by residents

Number of CBCs

+

Number BMPs on inpatients ordered by day team residents between 1200am – 1159pm

Total medicine team census per day

Variable name label	Data type	Definition/ purpose	Possible values	Restrictions/ checks			
Patient information							
Gender	Categorical	Male or female	M or F	Must be M or F			
Age	Numerical	Age in years to nearest year	1-110 years	Must be a whole number			
Height	Numerical	Height in centimetres	0-300cm	Measure to one decimal point			
Weight	Numerical	Weight in kilograms	0–250kg	Measure to one decimal point			
Operation							
Operation	Description	Name of operation	Text (refer checklist)	Must be from checklist			
Surgeon	Description	Surname and first initial	Text (refer checklist	Must be from checklist			
Duration	Numerical	Duration of operation from full anaesthesia in hours and minutes	Hours	To one decimal point			
Antibiotics administe							
Antibiotic	Description	Full generic name of antibiotic	Text (refer checklist)	Must be from checklist			
Dose	Numerical	Dose of antibiotic in milligrams	Any	Must be a whole number			
Number of doses	Numerical	Number of doses of antibiotic given	0–10	Must be a whole number			
Frequency	Numerical	Number of doses ordered per 24-hour period	0–6	Must be a whole number			
Qualitative data							
Barriers to change	Description	Barriers identified in interviews	Text	Up to 100 characters			

DATA DICTIONARY

- Repository of all your data points
- Provides a detailed description of each data point including:
 - Definition
 - Source
 - Other notes
- Built over-time as you get more data
- Especially helpful for EHR data

	A	В	C	D	E	F
1	Date	Item	Sales Rep	Quantity	Price	Commission
2	01-07-2018	Projector	Bob	13	150	11%
3	01-07-2018	White Board	Mark	8	40	9%
4	02-07-2018	White Board	Stacey	7	40	7%
5	03-07-2018	White Board	Mark	18	40	8%
6	05-07-2018	Office Chair	Stacey	19	230	6%
7	05-07-2018	Projector	John	4	150	10%
8	08-07-2018	Printer	Bob	9	80	6%
9	10-07-2018	Printer	Laura	16	80	2%
10	10-07-2018	Office Chair	Mark	15	230	9%
11	10-07-2018	Diary	Bob	15	16	1%
12	10-07-2018	Office Chair	John	7	230	2%
13	13-07-2018	Diary	Laura	23	16	11%
14	17-07-2018	White Board	Bob	20	40	5%
15	17-07-2018	Office Chair	Mark	9	230	3%
16	20-07-2018	White Board	Stacey	23	40	6%
17	20-07-2018	White Board	Stacey	4	40	5%



- 1. ORGANIZE by columns
- 2. DON'T use color coding
- 3. Set up BEFORE you start collecting data

What is Data?







Data Collection Plan (Miro template)

Key Question	Data Element Name	Operational Definition	Parameters	Source	Who	Frequency
What is the length of stay?	Length of stay (LOS)	LOS = Admit time to Discharge time	• Date range: 1/1/2020 - 12/31/2020 • One listed for every patient by CSN • Format: time in hours	EHR ADT	Which team member is in charge of collecting?	Monthly data pull, 1st of month

Breakout: Create a Data Plan



Discuss your Data Collection Plan with your team.

What information are you missing?

Are data collection roles assigned?

15 minutes

Change Management

How to Get People to Follow You

You've designed the PERFECT Intervention.

What next?



Make Others Jump (Change).

Change Lessons

1. People (generally) dislike change.

2. Change is hard.

3. "Good enough" is the enemy of great.

Change Lesson 1

People (generally) dislike change.

Change Lesson 2

Change is hard.

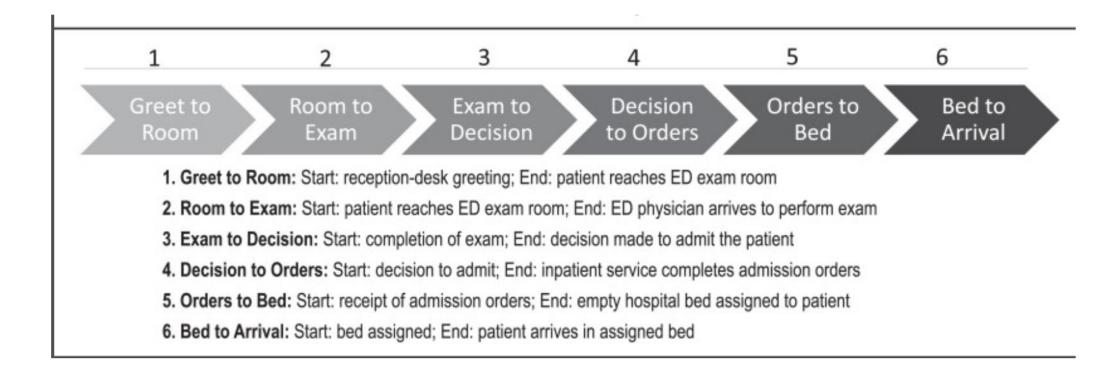


Door - to - Floor

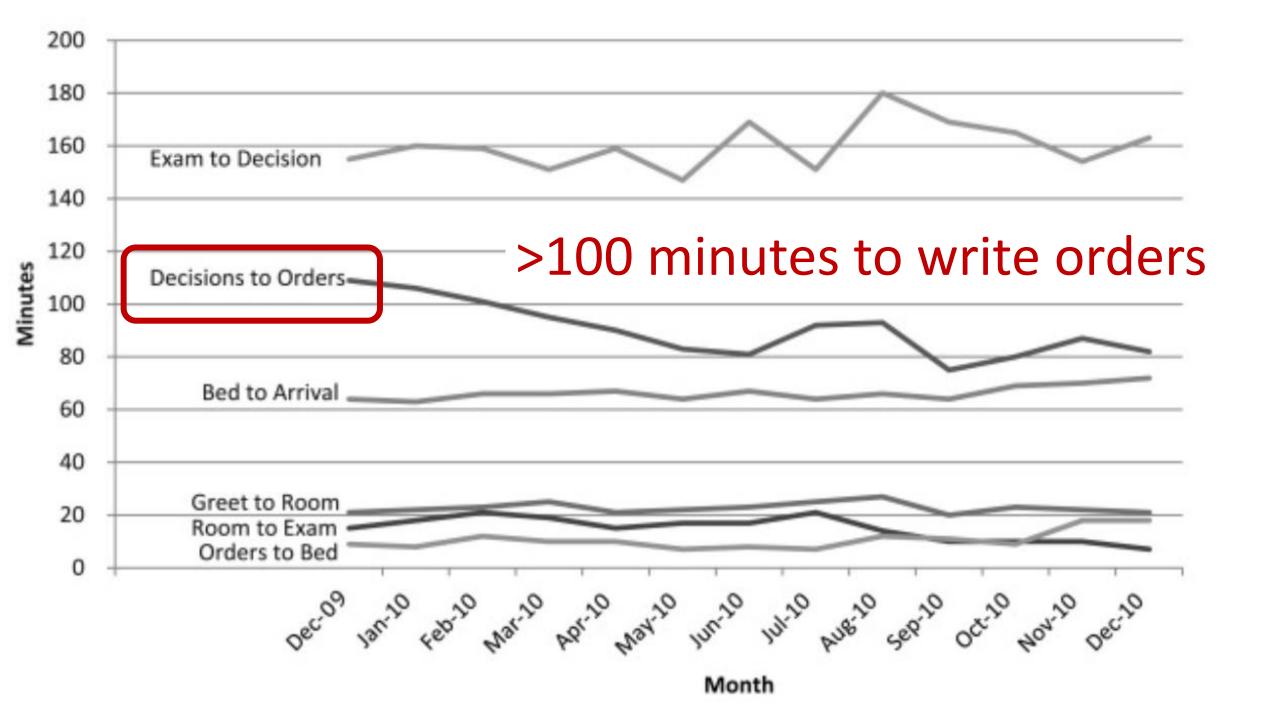
Door – to – Floor



The Problem: > 400 minutes to get a hospital bed





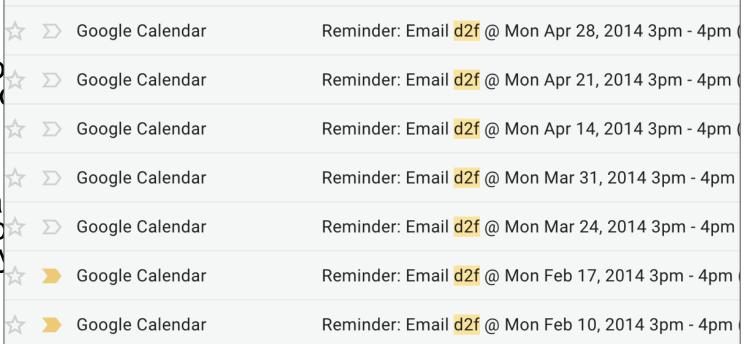


The Intervention

Dear Providers,

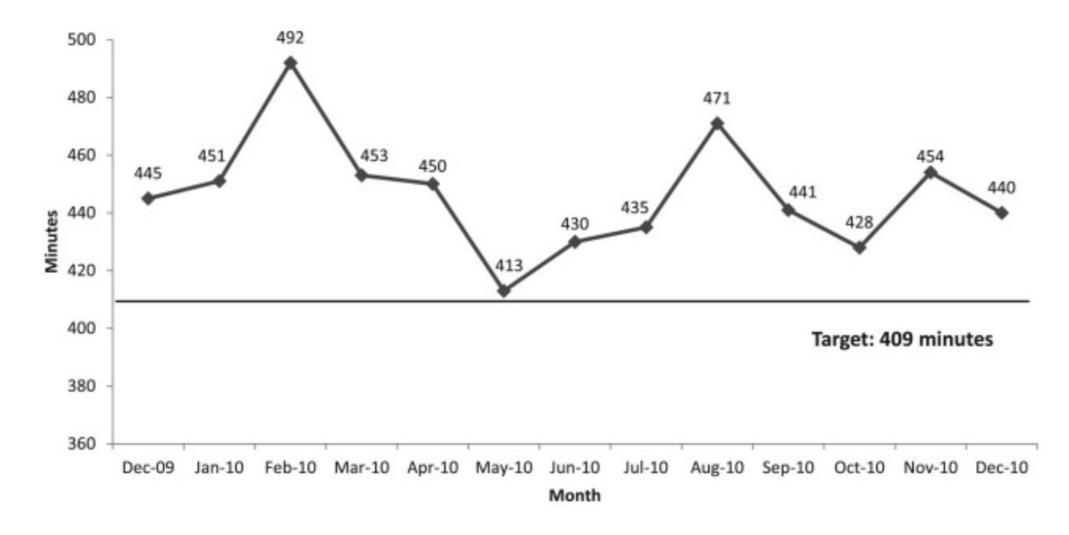
As you know, patients stay fo while they are waiting for a house per patient!

We know that most of the wa orders. As a result, we are so address this! We appreciate improvement project!



Please see the attached version of the order set, which you can print out and use for all future admissions.

Result: NO CHANGE







Why didn't the providers change their behavior?

What was wrong with this approach to leading change?

Why didn't providers change their behavior?

"Why should I do two order sets when I can do one?"

"It didn't make sense to go back to my email to print the order set each time."

"I thought it would be better for patients to stay in the ER until the treatment plan started working, so they were more stable when they arrived on the floor."

Change Lesson 2

Change is hard.

Change Lesson 3

"Good enough" is the enemy of great.

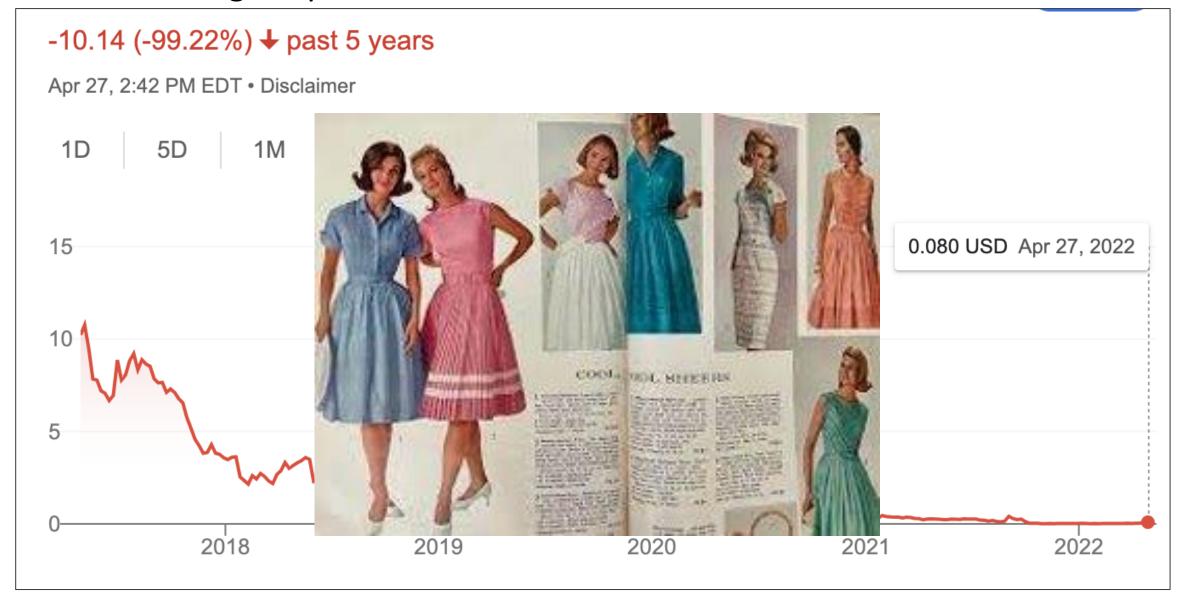




Apple Inc. Stock Price



Sears Holding Corp. Stock Price

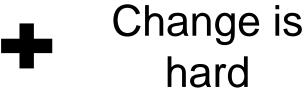


Change Lesson 3

"Good enough" is the enemy of great.

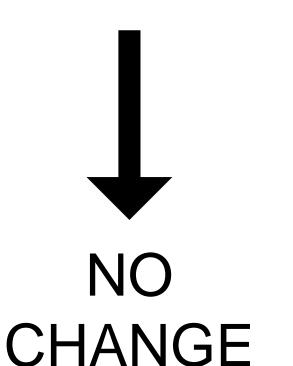
Human preference for complacency over transformation

People dislike change.

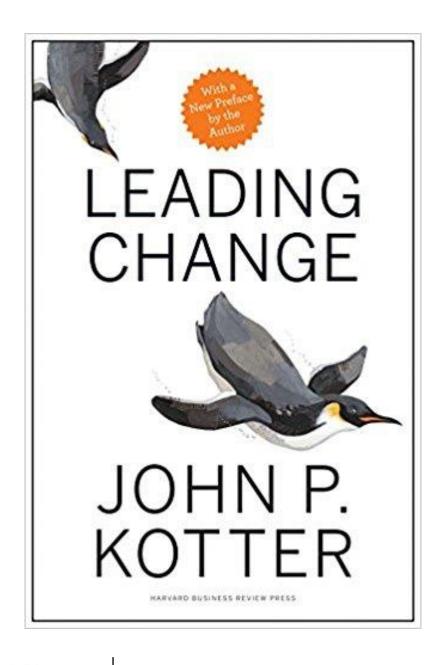


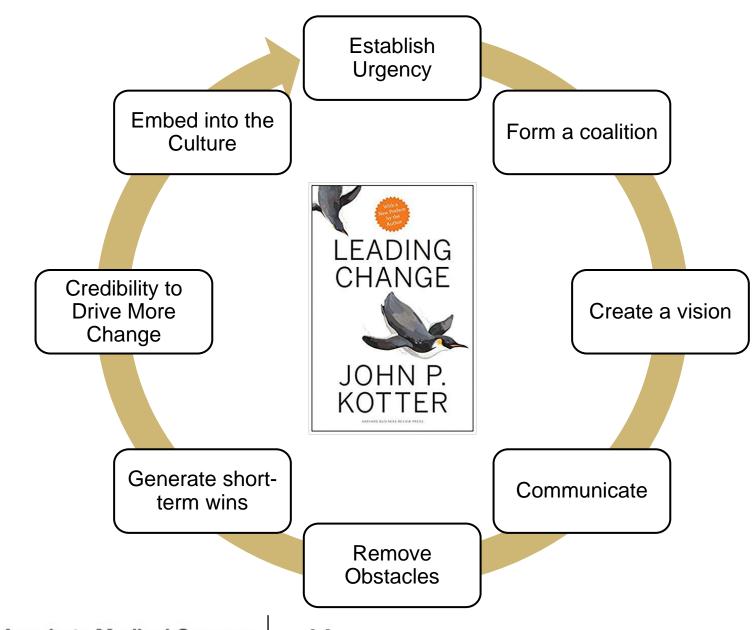


Good Enough

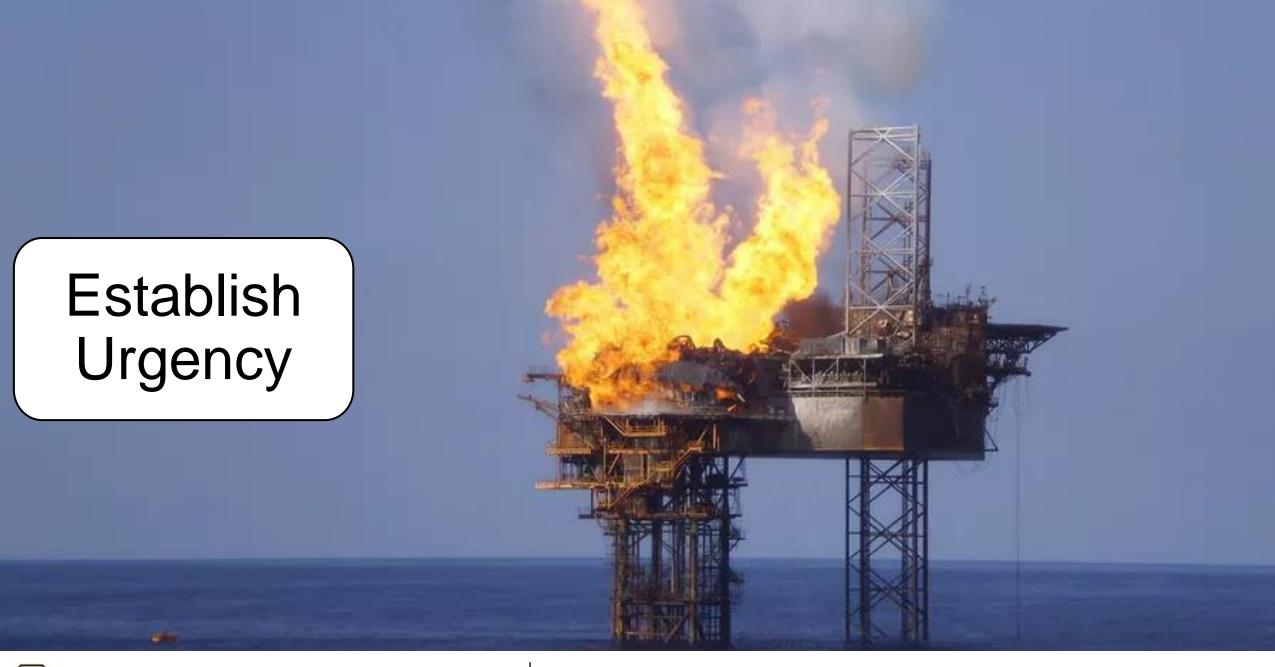








Establish Urgency



Establish Urgency



1.0 - Survival

2.0 - Extrinsic Motivation: reward, punishment

3.0 - Intrinsic Motivation: autonomy, mastery, purpose

Burning Aspiration

"Provocative and fascinating." — MALCOLM GLADWELL

Daniel H. Pink

author of A Whole New Mind

The Surprising Truth
About What Motivates Us

AUTONOMY

MASTERY

PURPOSE

Establish

Urgency

Breakout:

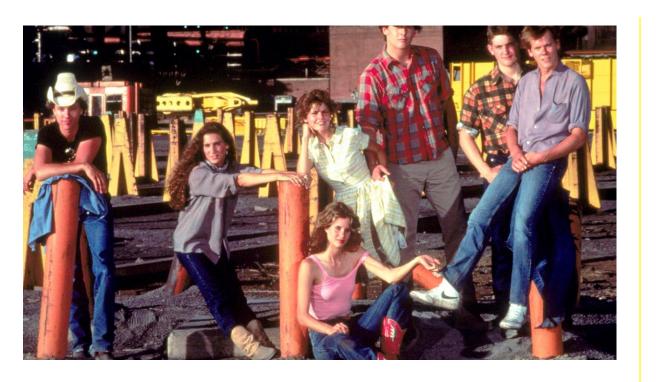


What is your burning platform / aspiration for project work?

10 minutes



Form a Guiding Coalition





Stakeholder Engagement

Who - Anyone impacted by your work

- Various levels of organization
- Interprofessional
- Patients

Why - Gathering crucial input

- Gaining more resources
- Building Trust
- Planning ahead

Breakout:



Who is your guiding coalition?

Consider anyone impacted, all professions and levels of leadership

Create a Vision



Earth's most customer centric company.

Create a Vision

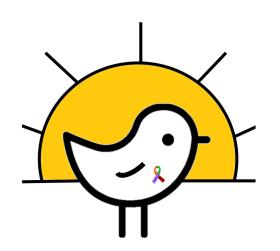


A world without Alzheimer's disease.



Eliminate all preventable harm.

Cancer sucks and chemo is scary. We owe it to our patients to try to make the process of receiving treatment as reliable, efficient, and pleasant as possible.



Breakout:



What is your vision?
What does the future look like if you achieve success?

Communicate

CHANGE WE CAN BELIEVE IN

Communicate





University of Colo

How much?

7 x 7

Hundreds..

$\stackrel{\wedge}{\Rightarrow}$	\supset	Google Calendar	Reminder: Email <mark>d2f</mark> @ Mon Apr 28, 2014 3pm - 4pm (
☆	\sum	Google Calendar	Reminder: Email d2f @ Mon Apr 21, 2014 3pm - 4pm (
*	\sum	Google Calendar	Reminder: Email d2f @ Mon Apr 14, 2014 3pm - 4pm (
\$	\sum	Google Calendar	Reminder: Email d2f @ Mon Mar 31, 2014 3pm - 4pm
\$	\sum	Google Calendar	Reminder: Email d2f @ Mon Mar 24, 2014 3pm - 4pm
*		Google Calendar	Reminder: Email d2f @ Mon Feb 17, 2014 3pm - 4pm
☆	>	Google Calendar	Reminder: Email d2f @ Mon Feb 10, 2014 3pm - 4pm

Remove Obstacles



ED Provider: 'Admit to Medicine'

Generate Short-Term Wins



Celebrating our Wins







Use Credibility to Drive More Change

MEET THE TEAM



EMILY GOTTENBORG, MD

IHQSE Faculty University of Colorado, Division of Hospital Medicine

The Joint Commission Journal on Quality and Patient Safety

Operations Management

"Not So Fast!" The Complexity of Attempting to Decrease Door-to-Floor Time for Emergency Department Admissions



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Embed it in the Culture

Culture Change









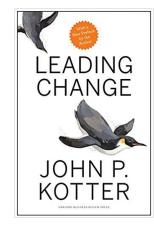
Establish Urgency

High Manage Closely Keep Informed Monitor

Form a coalition



Credibility to **Drive More** Change



Create a vision





Generate short-term

Embed into

the Culture

Communicate



Remove Obstacles





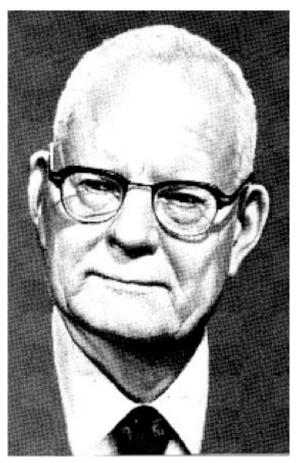
When you are struggling...

Ensure you have an urgency (Step 1)

Return to the 8 steps of change to see where you are failing

Consult your Change Management Playbook to make a plan

"Change is not mandatory. But neither is survival."



W. Edwards Deming

Managing Resistance

SCARF Model of Social Behavior



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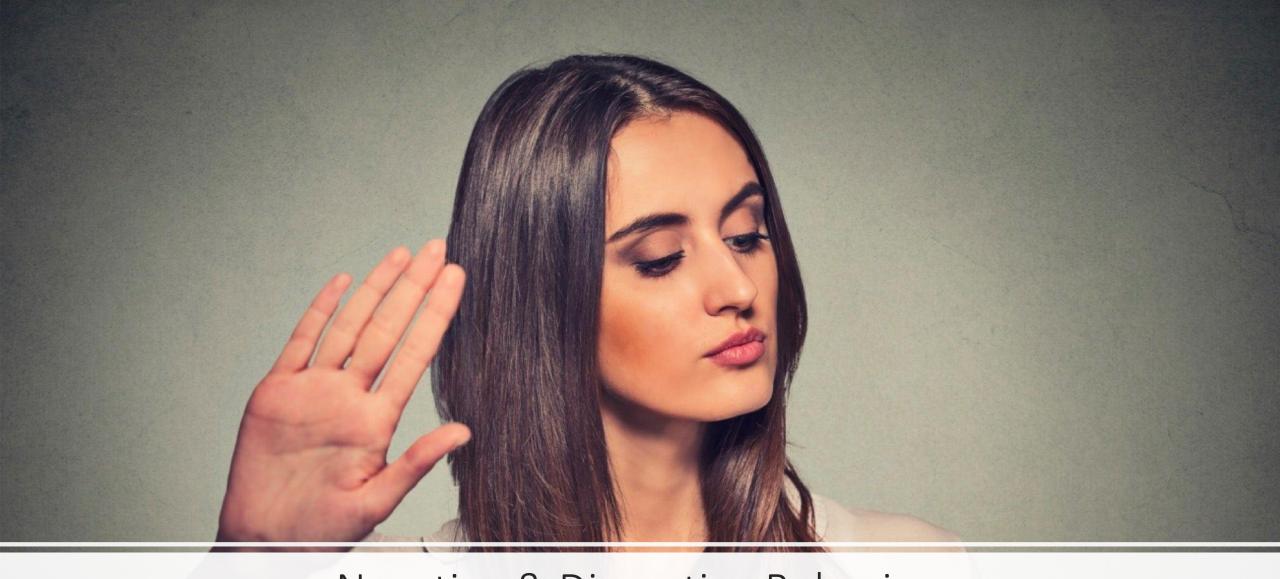
Resistance Reflection

Recall a time when you asked people to make a change and encountered resistance OR, when you you feel yourself resisting.

How did this manifest?

How did it feel?

What drove that resistance?

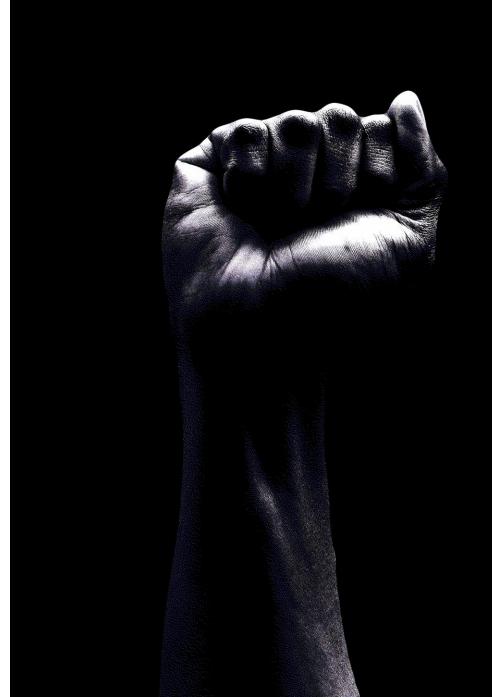


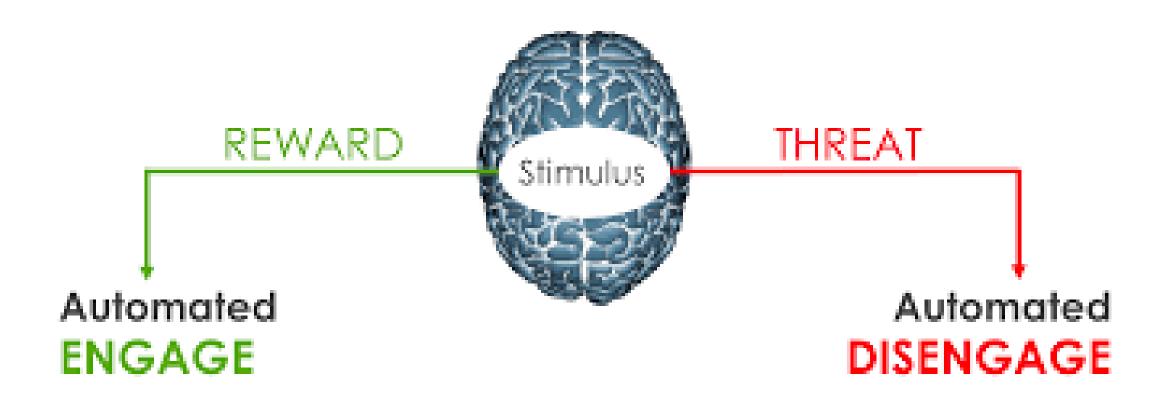
Negative & Disruptive Behaviors

Embrace Resistance

If I viewed resistance as feedback, what could I learn about how to refine the change effort?

What may be driving the resistance?





SCARF Model: Reaction to rewards and threats

Status
Certainty
Autonomy
Relatedness
Fairness

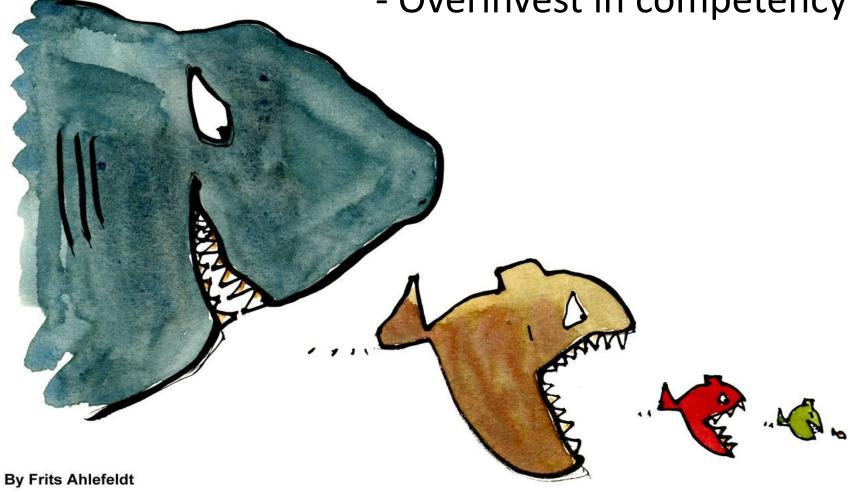


Status

- Early stakeholder engagement

- Celebrate aspects of past

- Overinvest in competency building



Certainty





Resistance Identification and Action

What resistance (are you / will you) encounter in your project work? Consider Status and Certainty

How may you manage the SCARF threat?

Name it.

Address it.

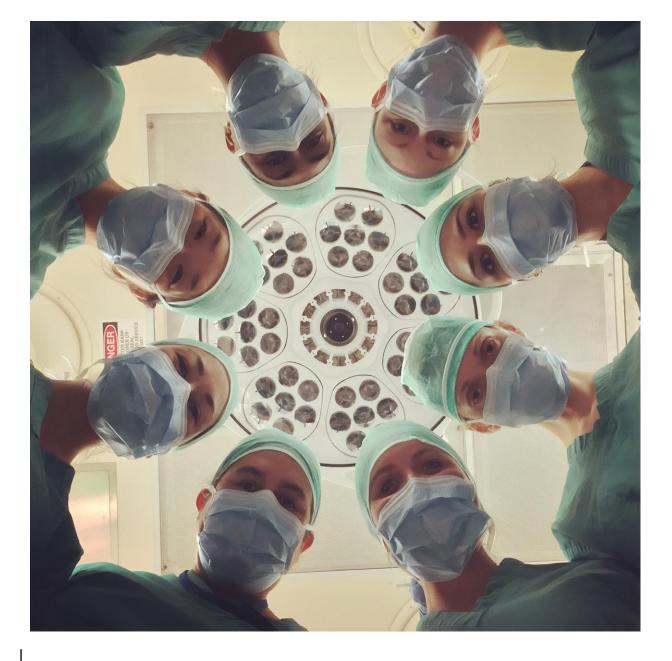
Autonomy

- Provide choices or options



Relatedness

- Shared goal creation
- Avoiding 'Us' versus'Them' mentality



Fairness

- Transparency



The Power of SCARF

- 1. Recognize resistance is happening.
- 2. Name the source of resistance.
- 3. Address it.

OR

4. Pivot – provide SCARF reward

SCARF in Action

Colleague writing emails, disrupting meetings around new admitting schedule.

"I hear that you're worried your day will become less predictable (uncertainty)."

"Let's make a plan to ensure you sign out to cross-cover at 4PM."

Or.. "This new role will help build your visibility as a leader."

Resistance!

Uncertainty

Address Uncertainty

Pivot - Address Status



Resistance Identification and Action

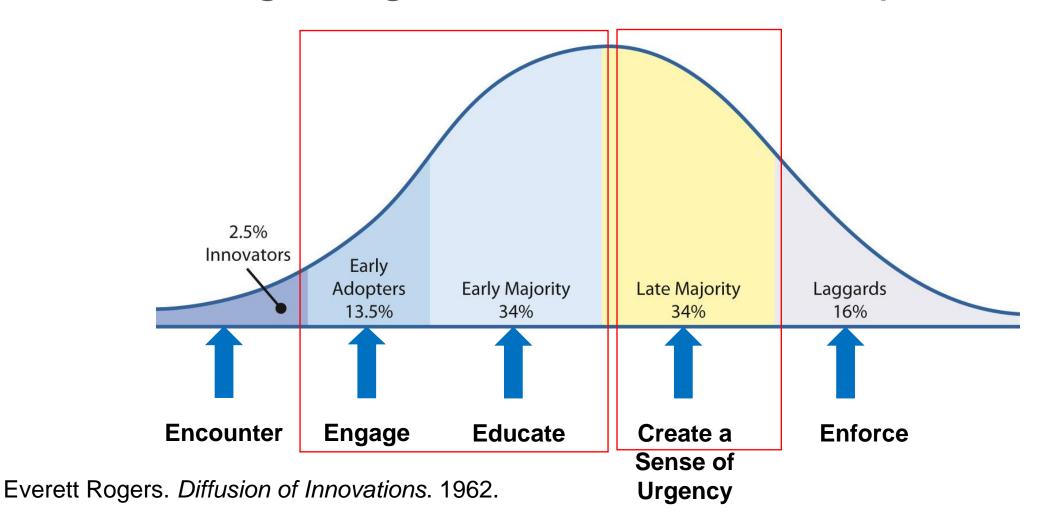
What resistance (are you / will you) encounter in your project work? Consider Autonomy, Relatedness, Fairness

How may you manage the SCARF threat? Name it.

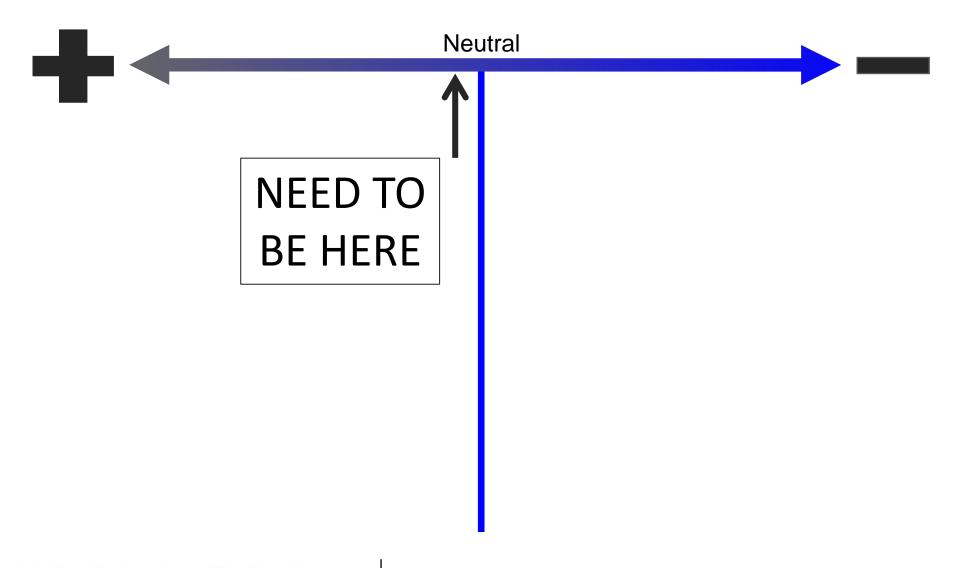
Address it.

Or, Pivot.

Spreading Change Recognizing Diverse Needs & Responses



When Your Feel/Hear Skepticism . . .







Summary

Understand Diffusion of Innovation theory
Identify why resistance occurs: SCARF Model
Apply strategies to manage SCARF resistance



Resistance Action Plan

What resistance (are you / will you) encounter in your project work?

Name it.

Address it.

Or, Pivot.

How to Create a Great Presentation









Strong Start



Visuals support message



Strong closing



Clear message



Strong Start

Click to add text



Visuals support message



Strong closing

WHAT IS YOUR "ASK"?



HOW GREAT LEADERS INSPIRE EVERYONE TO TAKE ACTION

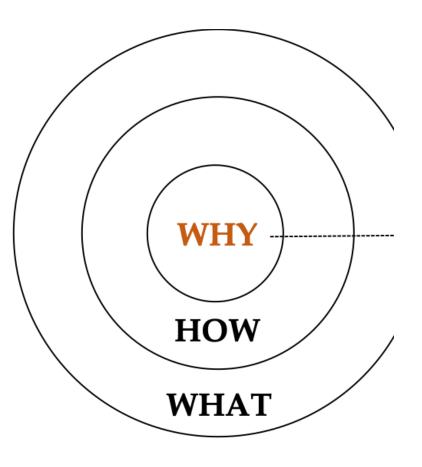
SIMON SINEK

New York Times bestselling author of Leaders Eat Last and Together Is Better

WHY: The purpose, cause or belief behind what you are doing.

HOW: The actions taken to realize the WHY

WHAT: The product, service or job function. Provides tangible proof of your purpose.



pus

IHQSE













Strong Start



Visuals support message



Strong closing

TELL A STORY!





- Engages the listener.
- Actively puts them in a position to be empathetic.
- Improves retention.

Why We Need More Nurses

- The Case of Mr. Smith
- 80 year old caucasian male with COVID
- History
- One day was not doing so well clinically and was recognized by a nurse
- Survived to leave the hospital after >200 days





72%

"The Slap"

Of patients **didn't know** they were being discharged that day.

- Statistics
- · Humor/sarcasm.
- NOTE: be authentic

FORBES: CONSUMER

TECH: 2016

Most Of Your Facebook Friends Are Not Your Real Friends, Says Study <u>Amit Chowdhry</u>











Strong Start



Visuals support message



Strong closing

Follow multi-media design principles





Avoid Brain Burnup

- Keep it simple
- Use a photo
- What words could you replace?



Bullet Points

In 2009, the AME started with

People

1 Leader

19 Members

Programs



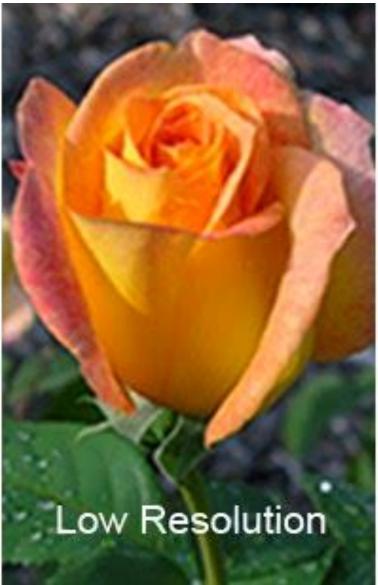
Faculty Development Sessions

In 2014, the AME has















Mortality rate soars in town of Bayton!







Strong Start



Visuals support message



Strong closing

Synthesize and....
Make your ask again





IN SUMMARY







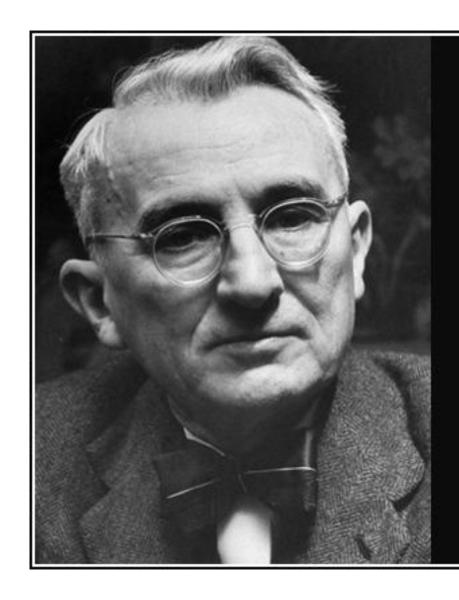
Strong Start



Visuals support message



Strong closing



Tell the audience what you're going to say, say it; then tell them what you've said.

— Dale Carnegie —

AZ QUOTES

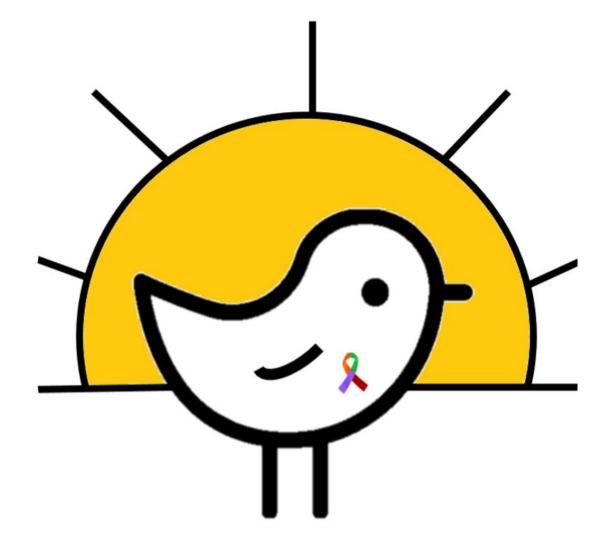
Example Presentation

BMT Early Bird Admissions

Director of Nursing: Kyle Hammond, RN, MSN, OCN BMT Inpatient Medical Director: Peter Forsberg, MD

BMT Nurse Manager: Sydney Redland, RN, BSN

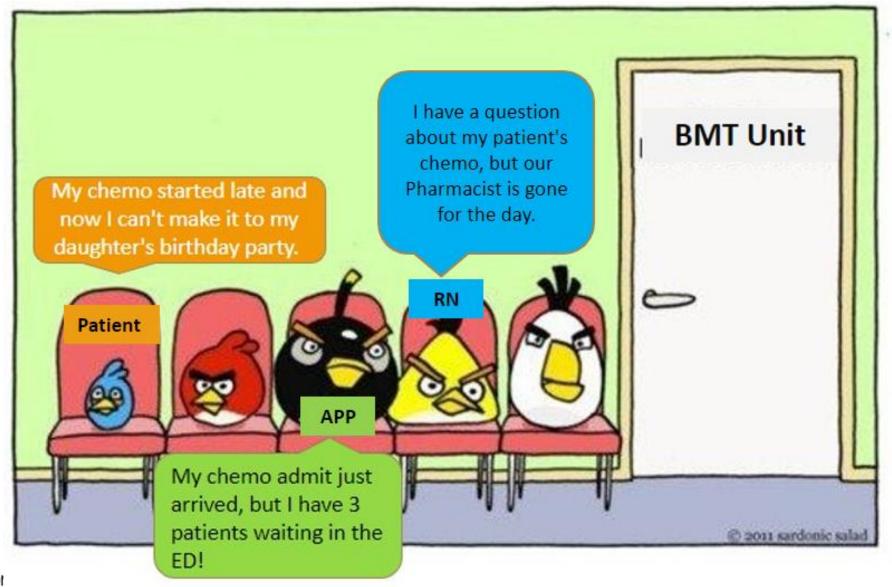
BMT APP Director: Meredith Beaton, RN, MSN, AG-ACNP







Angry Birds





Project Aim

<u>Problem:</u> Late day admissions contribute to continued capacity challenges, leading to inefficient unit flow, patient and provider dissatisfaction, potential increased risk for adverse events, and lost revenue.

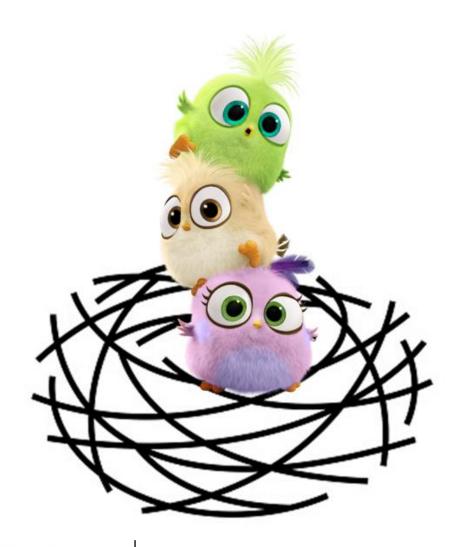
AIM Statement: By 6/1/22 we aim to increase the percentage of BMT chemotherapy admits by 1200 from 4.2% to 60%

<u>Vision</u>: Cancer sucks and chemo is scary. We owe it to our patients to try to make the process of receiving treatment as reliable, efficient, and pleasant as possible.

Building the Nest

Transform the current BMT conference room

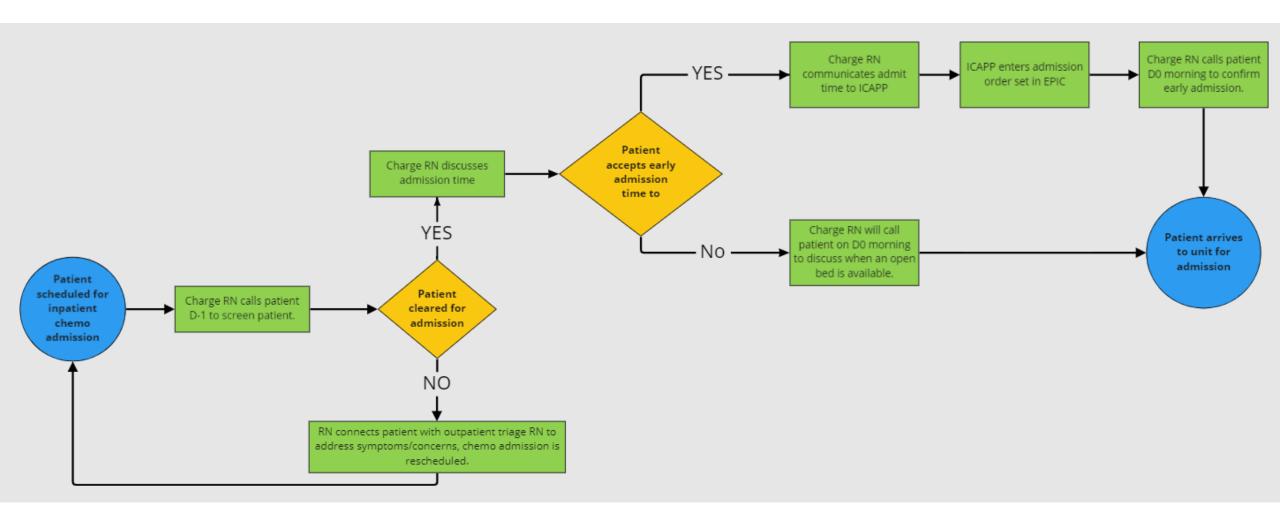
- Create three patient bays
- Dedicated equipment for admissions
- RN workstation



Optimize efficiencies, patient safety and flow

- Streamline early admission process
- Maximize optimal staffing
- Eliminate same day clinic appointments

Nest Process Map



Nest Financing

Non-Financial Benefits/Indirect Financial Benefits:

- Capacity (inpatient and outpatient)
- Patient satisfaction
- Staff satisfaction
- Patient safety

Financial Benefits:

- Intention: Increase early chemotherapy admissions to improve efficiencies and decrease LOS by 0.2 days (4.8 hours)
- One hospital day for chemotherapy admission = \$4523
- \$4523 x 0.2 x 280 scheduled chemo admits/year = \$253,000 savings/year



Measurement Plan

Key Measures	Definitions	Baseline (3/2021-3/2022)	Goal
Outcome	 Primary outcome: Scheduled chemotherapy patients admitted by 1200. Secondary outcomes: LOS Secondary outcome: Decrease unnecessary outpatient visits 	4.2% (early admits)4.9 days (LOS)0 (avoided outpt visits)	60% (early admits)4.61 days (LOS)1/week (avoided outpt visits)
Process	 Number of eligible patients called day prior to admission Percent of patients declining early admission 	 0 called 0 declining	5-10/week1/week
Balancing	Cancelled Admissions	• 2%	• < 10%

Interventions

- Implement new workflow for chemo admissions
 - Started 12/14/21, ongoing
 - Charge RNs, ICAPPs
- Eliminate pre-admit outpatient visits
 - Started 1/11/22, ongoing
 - BMT clinic RNs and Lymphoma Attending Physicians and Lymphoma APPs
- Designate protected spaces for scheduled chemo admissions
 - Started 3/14/22, ongoing
 - Patient Placement, Hospital Managers, Charge RNs

Celebrating our Wins







Opening a Can of Worms

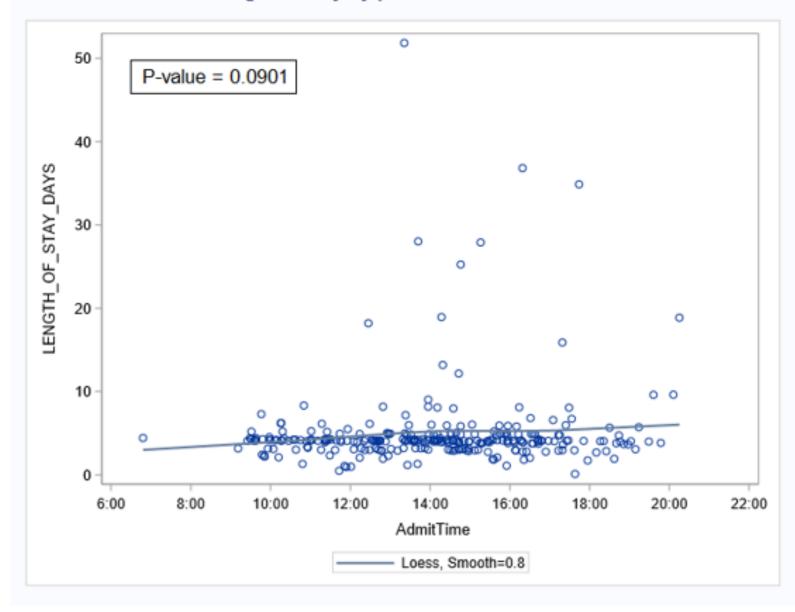
- Space
 - Capacity challenges
 - Construction is slow!
- Staff expectations
 - RN staffing challenges
 - Multidisciplinary team resistance for conference room relocation
- Patient Expectations
 - Re-setting expectations for admission time
 - Challenging patient resources
- Data



Outcomes

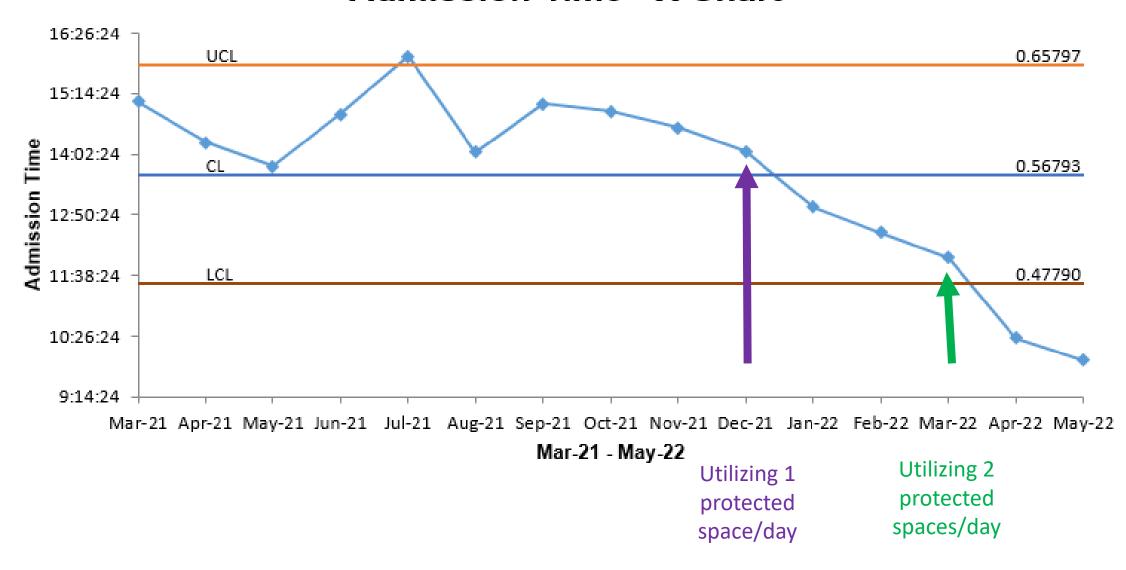
Key Measures	Definitions	Baseline (3/2021-3/2022)	Goal	Pilot Data (3/15/22-5/31/22)
Outcome	 Scheduled chemotherapy patients admitted by 1200 Length of Stay (LOS) Percent of pre-admit outpatient appointments 	4.2% (early admits)4.9 days (LOS)32% of admissions (outpt appts)	60% (early admits)4.61 days (LOS)Eliminate for lymphoma pts	 75% (early admits) 4.3 days (LOS) 13% of admits (outpt appts)
Process	 Percent of eligible patients called day prior Percent of patients declining early admission 	0% called0% declining	80% called<20% declining	53% called6% declined
Balancing	Cancelled Admissions	• 2%	• < 10%	• 3%

length of stay by patient admission time

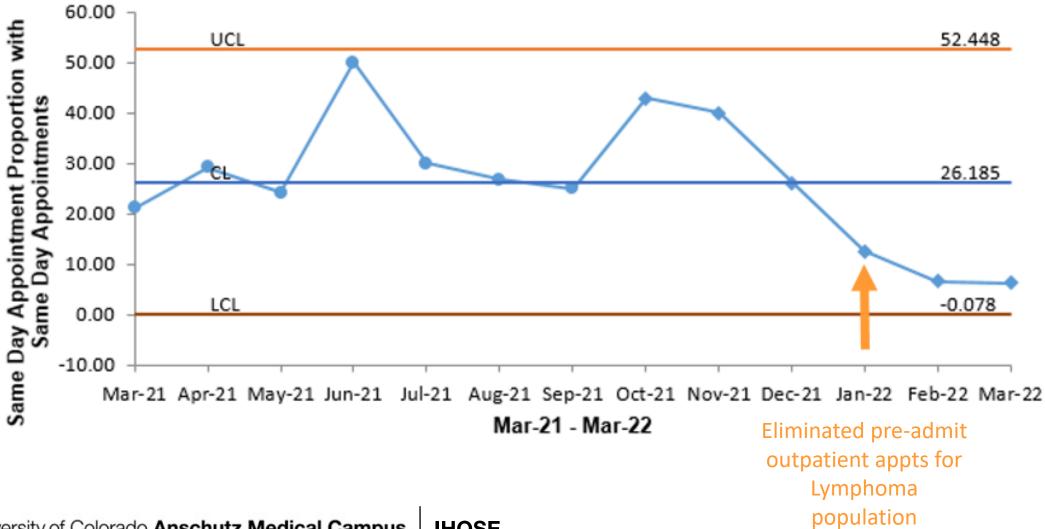


All scheduled chemo admissions 3/2021-5/2022

Admission Time - X Chart



Same Day Appointment Proportion with Same Day Appointments - X Chart





Making Change Stick

Step 1: Celebrate New Conference Room (with bagels and coffee)

Step 2: Launch the Nest (with ribbon cutting ceremony, stickers, T-shirts)

Step 3: Celebrate again (with cake)



Patient Story



https://beautiful.ai/ Nice for ideas for slide designs, a little clunky for actually making slides

https://venngage.com Great for infographics

<u>https://unsplash.com/</u> Free photos that you do not need permission to use

<u>https://thenounproject.com/</u> Decent place for finding icons. Free downloads are typically black only, but this can be modified in

Action Plan

- 1. Biweekly Meetings
- 2. Building your team (who else needs to be engaged)
- 3. Where are you in DMAIC?
 - Ensure Problem Statement, Sense of Urgency
- 4. Timeline for Success
- 5. Presentation to Stakeholders December



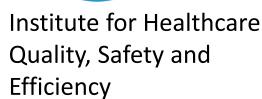














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