

System Redesign in Action: An Approach to Frontline Quality Improvement

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Institute for Healthcare Quality, Safety, Efficiency



Our Goals

- Develop approaches to address improvement opportunities
- Gain inspiration from real-world stories of system redesign
- Identify local improvement opportunities



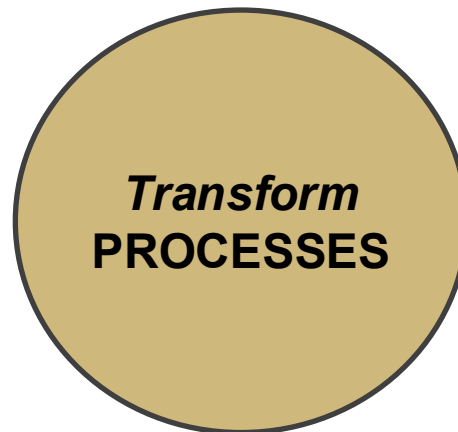
Who are we?

**Institute for Healthcare Quality,
Safety, Efficiency**

Institute for Healthcare Quality, Safety and Efficiency

Transformation, not just Education

At the IHQSE our goal is to fundamentally improve the care provided to patients by developing people, improving care processes, and building higher - achieving organizations.



Our Programs

- Quality / Process Improvement
- Safety
- Leadership
- Project focused
- Longitudinal training
- Individual or Team based

**~300 Improvement
Project teams**



QI Writing Group

This program will provide a structured and mentored manuscript preparation experience for QI scholars or those looking to share their QI outcomes. Applicants should have a current or past project with results ready to publish.



Quality Systems Leadership

An interactive, virtual series to help you understand the drivers for quality and safety and build the skills to lead organizational quality programs.



Clinical Effectiveness & Patient Safety (CEPS) Grant Program

The CU School of Medicine established a small grant program to fund quality improvement projects in a clinical setting.



Facilitative Leadership

A two-day course that helps participants expand their ability to lead sustainable change, generate greater engagement, and bring out the best in individuals and teams.



Foundations in Healthcare Leadership

A professional development course for early-phase leaders, blending in person training, application, and intensive coaching.



Fellowship in Health Quality Leadership

A rigorous year-long program for individuals seeking to develop the skills to lead quality and safety programs.



Quality & Safety Academy

Live, virtual workshops designed to equip participants with the foundations of quality improvement and patient safety work in the clinical setting. Participants can mix and match single sessions or enroll in all six sessions.



Improvement Academy

Through two-day structured group didactic sessions and longitudinal coaching, this course helps teams develop skills in using quality improvement and change management tools to solve a problem or make improvements.



Certificate Training Program in Health Quality Transformation

A year-long training program emphasizing development and enhancement of high-functioning teams capable of systematically improving the quality, safety, cost of care.

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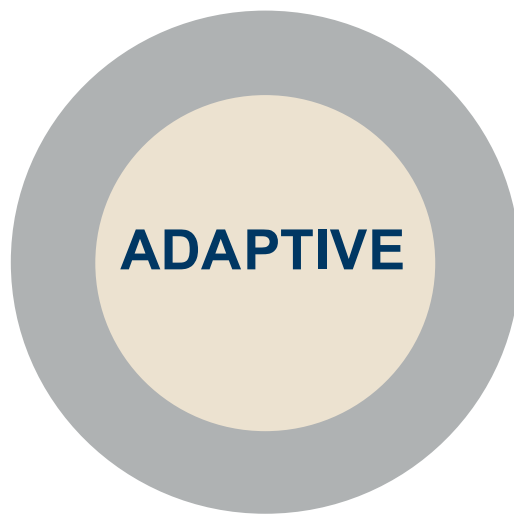
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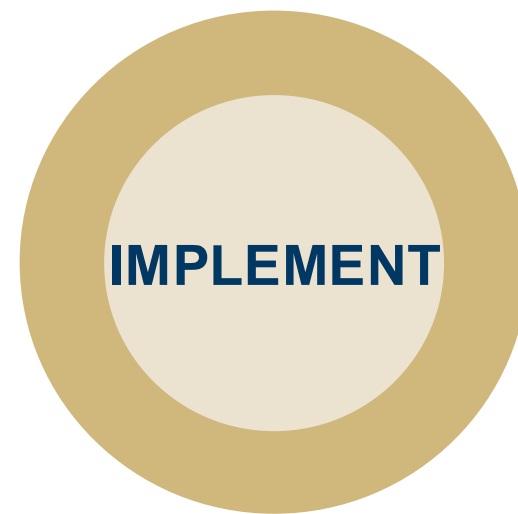
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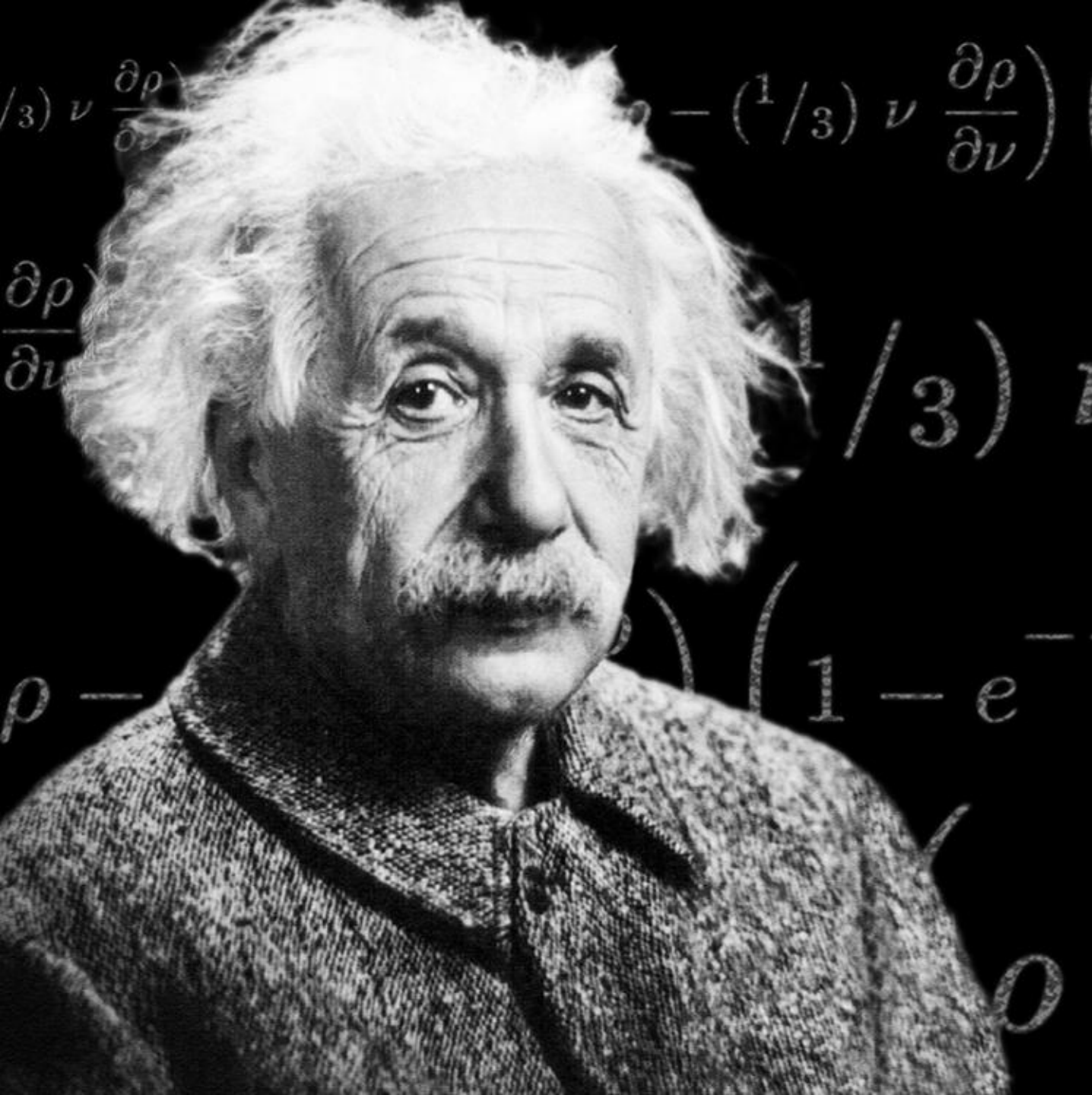
Process improvement

Change Management

Coaching

Lesson 1

Understand the Problem



“If I had an hour to solve a problem, I'd spend 55 minutes thinking about the problem and five minutes thinking about solutions.”

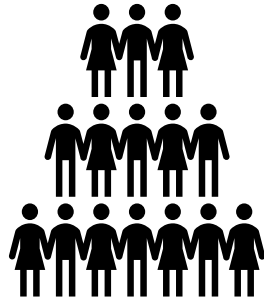
The SPARK



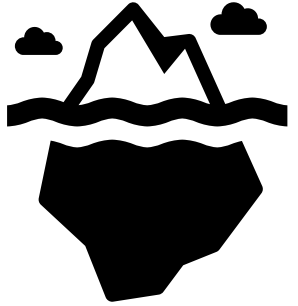
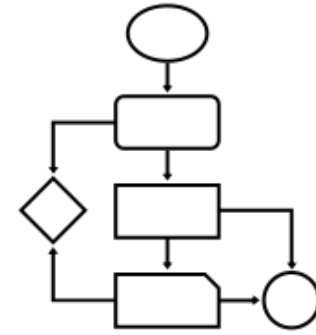
Sense a problem

Outpatient providers have a high turnover rate,
seem unhappy.

WHY Does the Problem Exist



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Sense a Problem

**Voice of
Customer**

**Gemba
The Place**

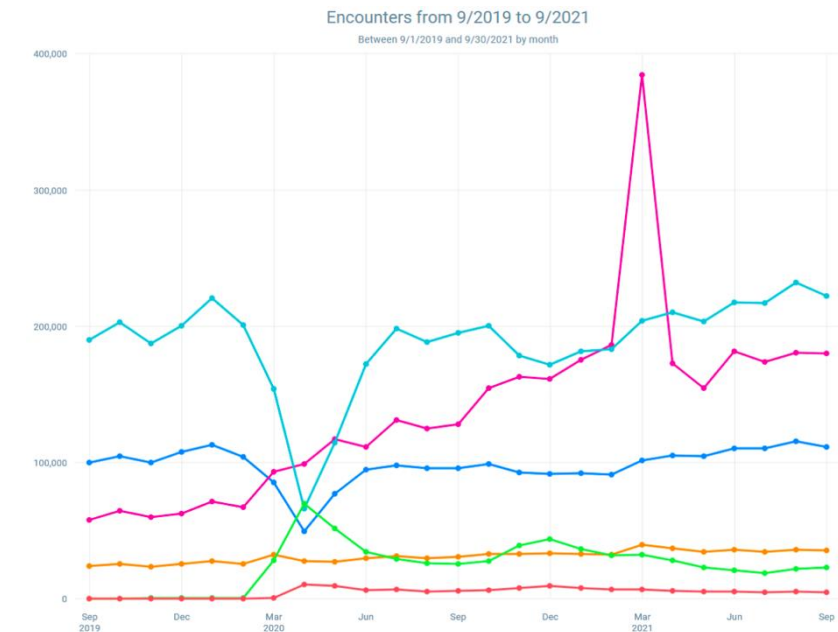
**Process
Map**

**Root Cause
Analysis**

The Problem

Patient Messages increased from **59k** to **183k / month** over the last 2 years for same number of providers.

Key realization – Major change in unpaid and unprotected administrative time



The SPARK



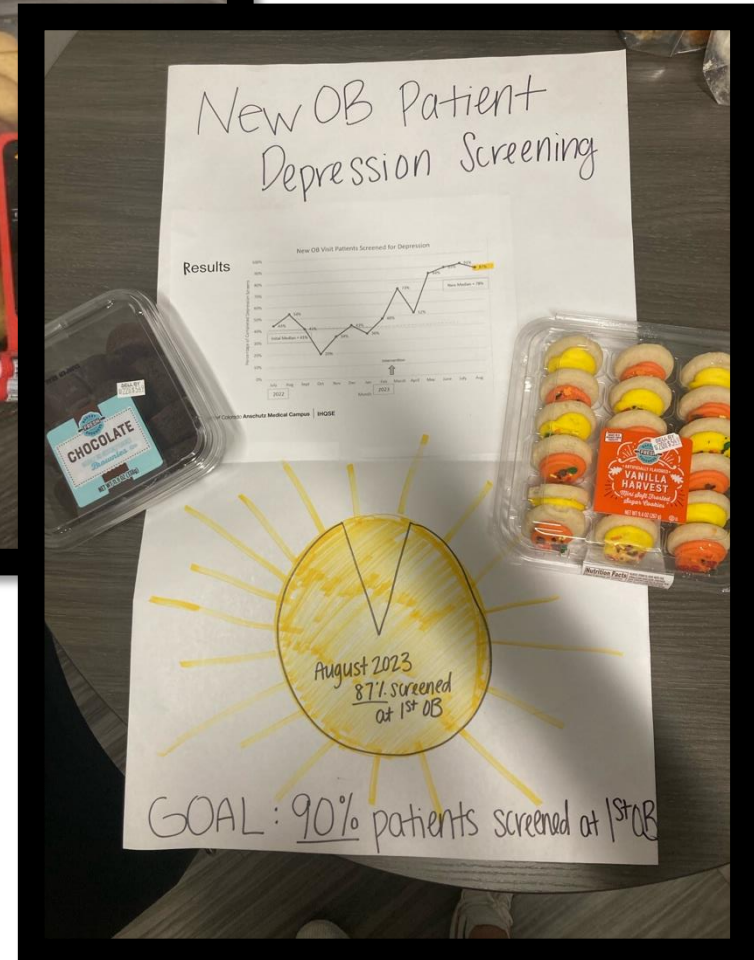
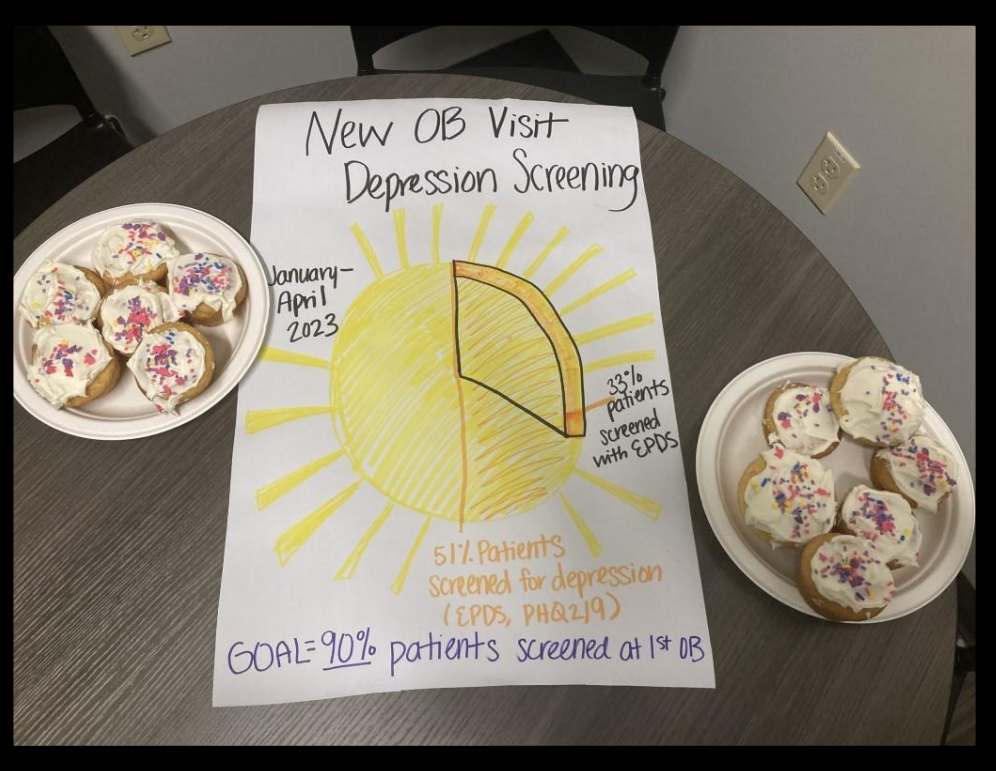
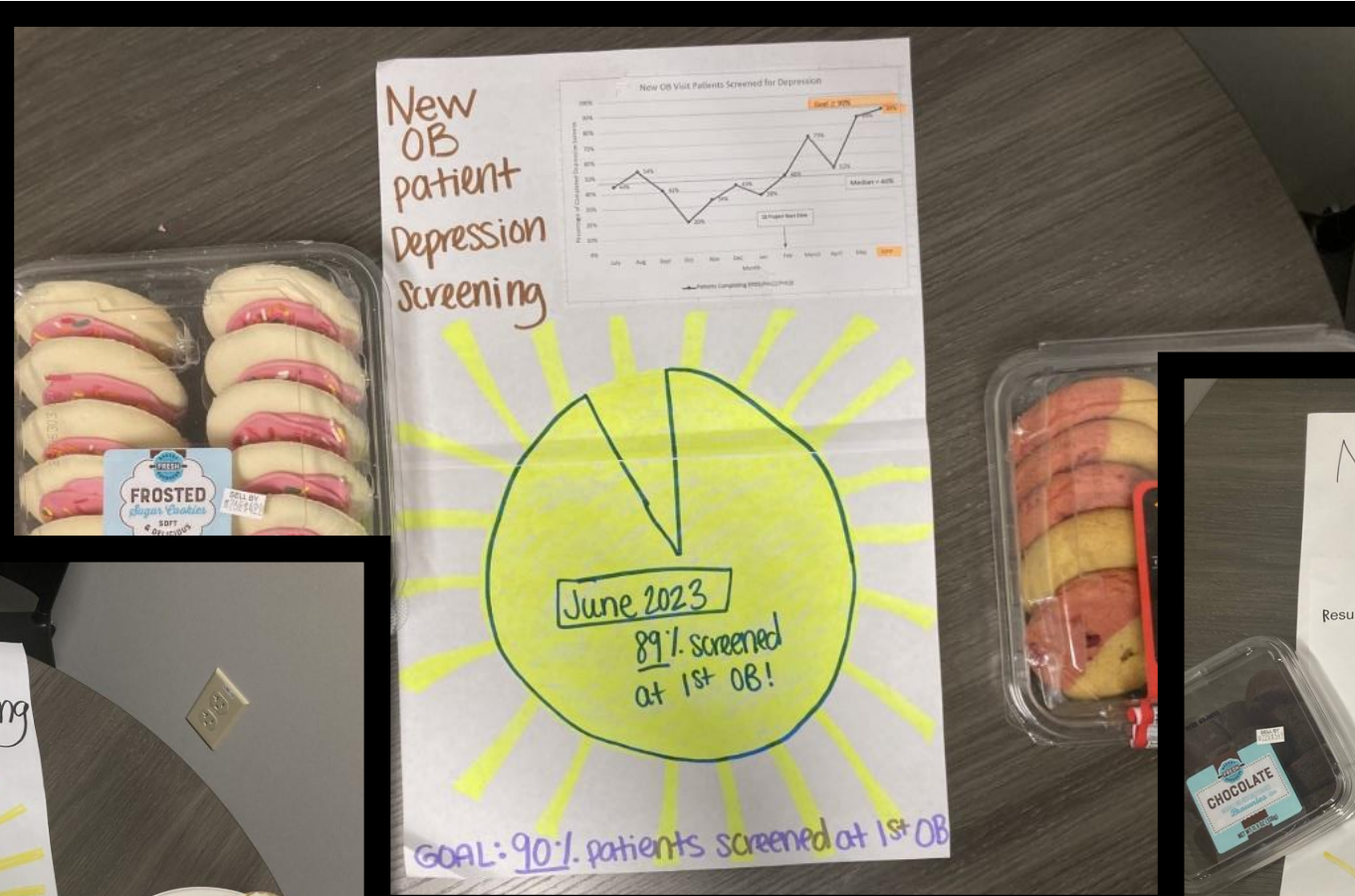
Sense a problem

A rise in patient safety adverse events related to poor maternal health outcomes (admission to inpatient psychiatry unit, suicide).

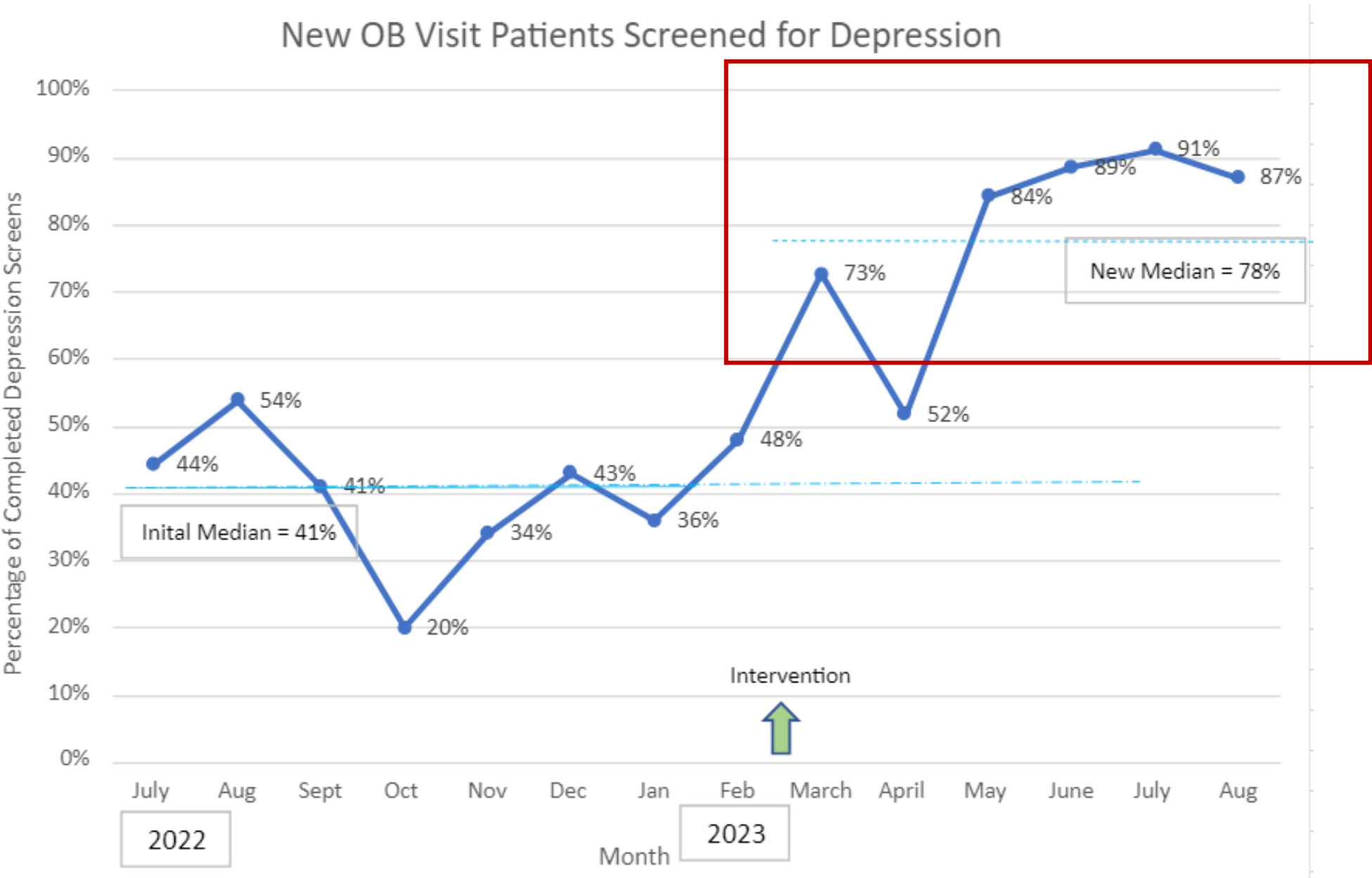
The Problem

In this Obstetrics clinic, we only screen for depression at the first post-natal visit **20%** of the time.

Key realization – patients not prompted to complete, relied on MA, provider memory



Results



The SPARK



Sense a problem

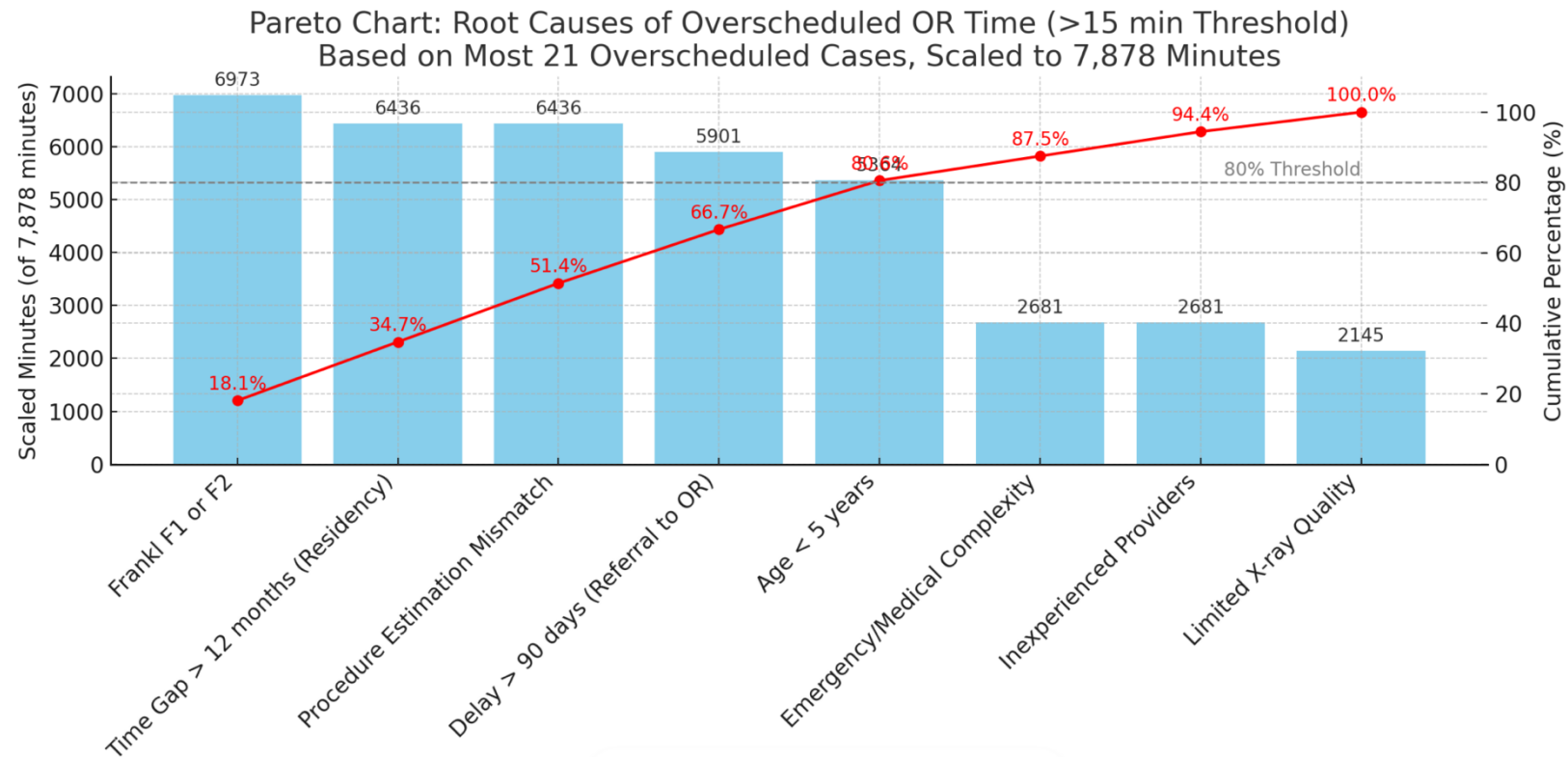
It takes a long time to schedule pediatric patients who need dental procedures under anesthesia.

The Problem

In the last year, there were **131 hours** of **overscheduled OR hours**, which could allow 139 additional patients to have access to care annually.

The Problem

Key Insight – behavioral scale, delay in time, age



Credit: Dr. Abidin Tuncer

Lesson 1

You must *deeply* understand what your problem is, and why it is happening, before you can consider solutions.

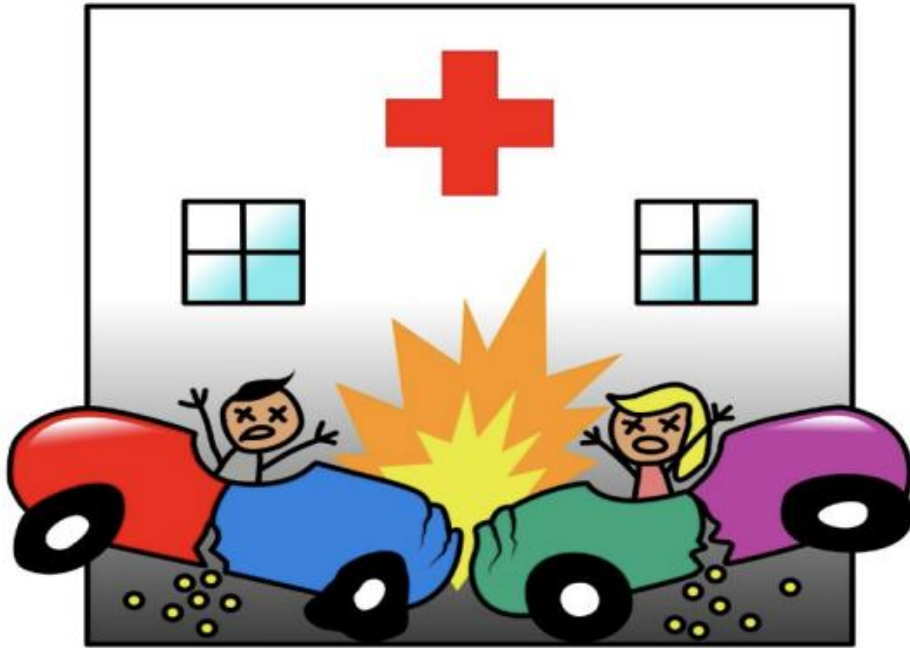
Lesson 2

Engage Your People

A Story

Only **50%** of patients receive a medication reconciliation when admitted to the hospital, and of those, only **42%** are accurate, with over a third resulting in errors in high-risk medications.

Engaging your People!



Avoiding a **MED WRECK!**

Credit: Dr. Adam Yazbeck



A Story

Opioid overdose is the leading cause of death amongst 18 – 45 yo people in Denver, and of those, **only 25%** receive access to Medication Assisted Therapy.



Mobile Methadone Unit

Lesson 2

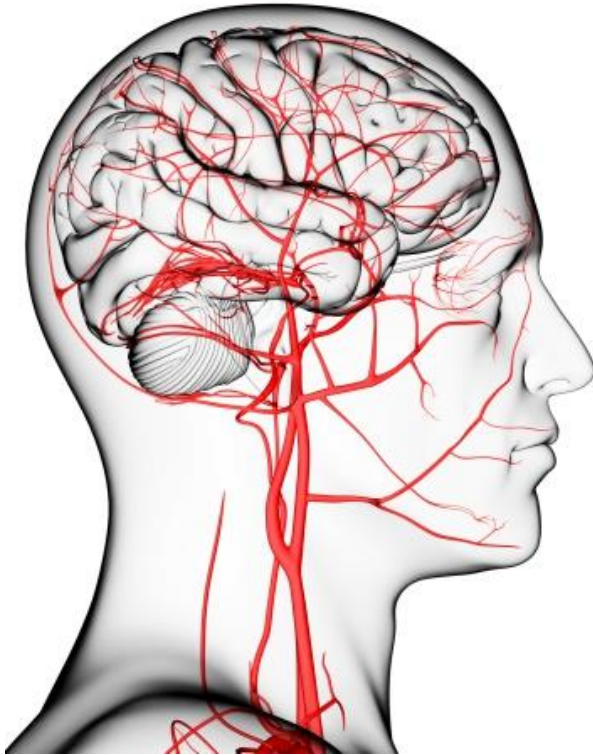
Engaged people
have **FUN!**

*And, get better
outcomes.*

Lesson 3

Align with System
Priorities

A Story



National Guidelines:

Thrombolytics (clot busters) within 30 minutes in 50% of stroke patients

UCH:

Only 19% of stroke patients receive this drug within 30 minutes

The Result?

- Success!
- Awards!

CY2025 TARGET STROKE PHASE III													
	CY24	Jan - Mar			Apr - Jun			Jul - Sep			Oct - Dec		CY25TD
GWTG Measures	%	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	%
DTD* ≤ 60mins direct arrived OR ≤ 90mins ED arrived (6hrs)	60.0%	55.6%	100.0%	50.0%	0.0%	100.0%	60.0%	100.0%	33.3%	100.0%	100.0%	0.0%	65.6%
DTD* ≤ 60mins direct arrived OR ≤ 90mins ED arrived (24hrs)	62.2%	58.3%	66.7%	66.7%	66.7%	100.0%	57.1%	100.0%	50.0%	100.0%	80.0%	50.0%	69.2%
Time to IV Thrombolytic ≤ 60 min	98.1%	100.0%	100.0%	85.7%	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	95.2%
Time to IV Thrombolytic ≤ 45 min	77.6%	80.0%	100.0%	85.7%	60.0%	100.0%	100.0%	66.7%	100.0%	80.0%	100.0%	100.0%	85.0%
Time to IV Thrombolytic ≤ 30 min	55.6%	50.0%	100.0%	40.0%	40.0%	50.0%	100.0%	50.0%	100.0%	50.0%	na	na	53.8%
Meets/Exceeds Target													
Needs Improvement													

Goal ≥ 50%

Goal ≥ 85%

Goal ≥ 75%

Goal ≥ 50%

Credit: Stephanie Cox

A Story

Inpatient rehabilitation therapists (PT, OT) aren't satisfied with their day- to - day work, reporting rising rates of burn out.

A Story

37% of Physical Therapy Consults are inappropriate, leading to **10,000 hours** of wasted therapist time per year.



The Result?

- Key Insight - fixed the order set, better consults...
- **Exceeding 100% productivity**

Lesson 3

Alignment gets you
more support!

Lesson 4

Money Matters

A Story

- 120 patients present every year to Trauma surgery with a hemothorax, requiring a chest tube.
- There is a failure rate of 30%, due to lack of thoracic irrigation.
- If we did this 100% of the time, we could save 36 VATS, and 3 ICU days per patient, or **~100 ICU days**, and **\$300,000**.
- Result – New kits stocked in ER with thoracic irrigation!

A Story

- We created a new Pulmonary Embolism Response Team to support care of patients with new PEs – but we only consulted **50%** of the time.
- Consulting PERT results in reduction in length of stay by 3 days!
- For the 200 patients appropriate for PERT consultation, this could result in 600 hospital days saved, or **\$1.2 million.**
- Result - new order set, additional resources to staff this team!

Lesson 3

Speak the
language of finance
(*and* the clinical
language)

Closing

- Deeply understand your problem
- Engage your people – and it is fun!
- Align with system priorities, when possible
- Speak the financial language



IHQSE