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Quality and Safety in Global Health

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Learning Objectives

- What is the framework for improving quality and safety in health care systems?
- What do we know about quality and safety in resource-poor settings?
- What are the methods for conducting a quality improvement initiative in a resource-poor setting?
- PRACTICE creating a quality initiative

“Care is ineffective, inefficient, not timely, unsafe, not patient-centered, and inequitable….A child dies in the OR due to improper administration of medication… A woman delivers at home because she has been poorly treated by facility staff... These are all real cases I have encountered here…what are we doing to ensure that women receive high quality care at these facilities? This is an issue I have struggled with over the last 1.5 years.”

—American Provider in a Resource Poor Setting

Roadmap

Introduction and didactics: Principles of Quality, Safety, and Value

Breakout: Defining the problem

Didactic: Methods of QI

Breakout: Implementing your vision for Quality

Conclusion: Leading the change

Pair Share

Can you think of a situation in which your patient has not received high quality care?

- What was happening?
- Where was the gap?
- Was there a system for change?
- What did you do?
- Who did you talk to?
- Did things get better?
- What is the status of things now?

Scope of the problem

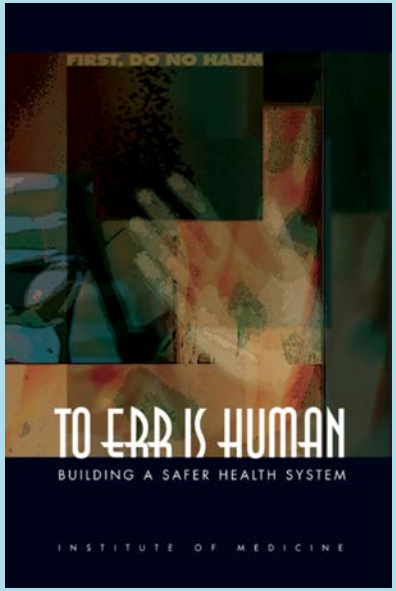
Of 8.6 million deaths in LMICs in 2018 from deaths treatable by health care, 3.6 million were from not utilizing health care, and 5 million were from not receiving high-quality care.

–Lancet Global Health Commission, **chaired by Associate Professor of Global Health Dr. Margaret Kruk of the Harvard T.H. Chan School of Public Health**

To Err is Human….

- **Institute of Medicine (IOM): To Err is Human (1999)**

- **IOM Six Aims of Quality Care**
  - Safe
  - Effective
  - Efficient
  - Timely
  - Patient-centered
  - Equitable



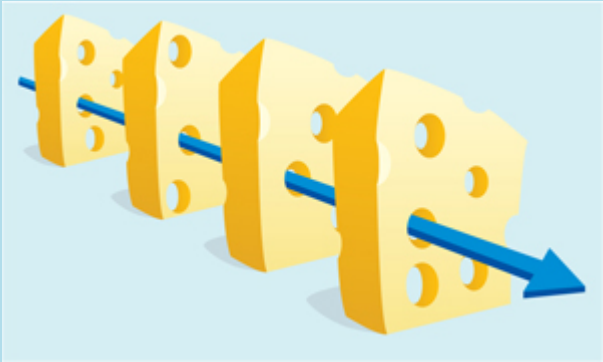
Quality, Safety, and Value

Some Definitions (IOM):

- **Quality**: “the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge”
- **Safety**: “prevention of errors and adverse effects to patients associated with health care.”
- **Value**: “health outcomes achieved per dollar spent”

Safety: The Case of Medical Errors

- Systems Analysis: James Reason
- The Swiss Cheese Model of Medical Errors



- Active (sharp end) versus Latent (blunt end) Errors

What safety issues does the data show?

- Knowledge/training deficit
- Lack of effort (distracted environment)
- Doctor is getting paid to do something wrong (e.g. bunch of tests)
- “Know-do” gap (you do something different than what you know is right). In some studies, know-do gap is as high as 70%
- Time Spent With Doctor: Paraguay—10 min/patient, Tanzania: 5 min/patient, India/Ghana/Nigeria: 1-5 min/patient

Safety in Resource-Poor Settings

- Rate of adverse drug events is lower because fewer medications are given
- Rates of infections are higher
- Fetal/maternal mortality rates and birth injury are higher
- Counterfeit drugs
- Needle-associated injury in places where injections are common, like in India
- Lack of accreditation programs
- Lack of data about complications

Health Care Value

- Value = Quality/Cost = (Outcomes + Patient Experience)/(Direct Costs + Indirect Costs)
- Value is already playing a role in under-resourced settings
- Necessity spawns innovation
  - Hub and spoke configuration of systems
  - Task-shifting
  - Attraction and retention of physicians
  - Treatment protocols
  - Asserting frugality

Approaches to Quality Improvement

- **P**lan **D**o **S**tudy **A**ct Cycles

- Lean-Kaizen and Six Sigma: go to the *Gemba*

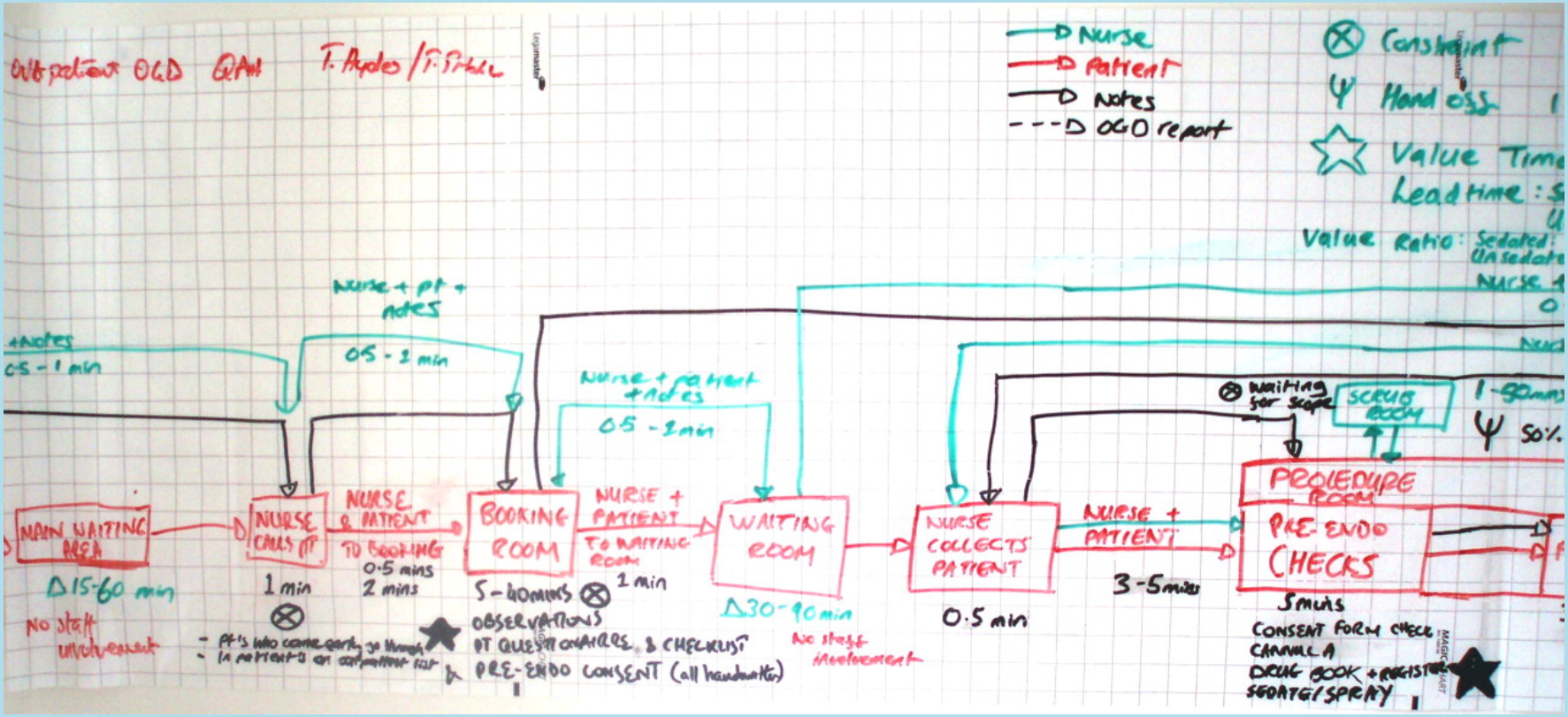
UCSF A3

The A3 is designed to build consensus around improvement strategies and experiments. It is a tool that the team can use to communicate and validate improvement work. A3s also help to direct the implementation of the action plan proposed. The A3 format incorporates PDCA problem-solving process.

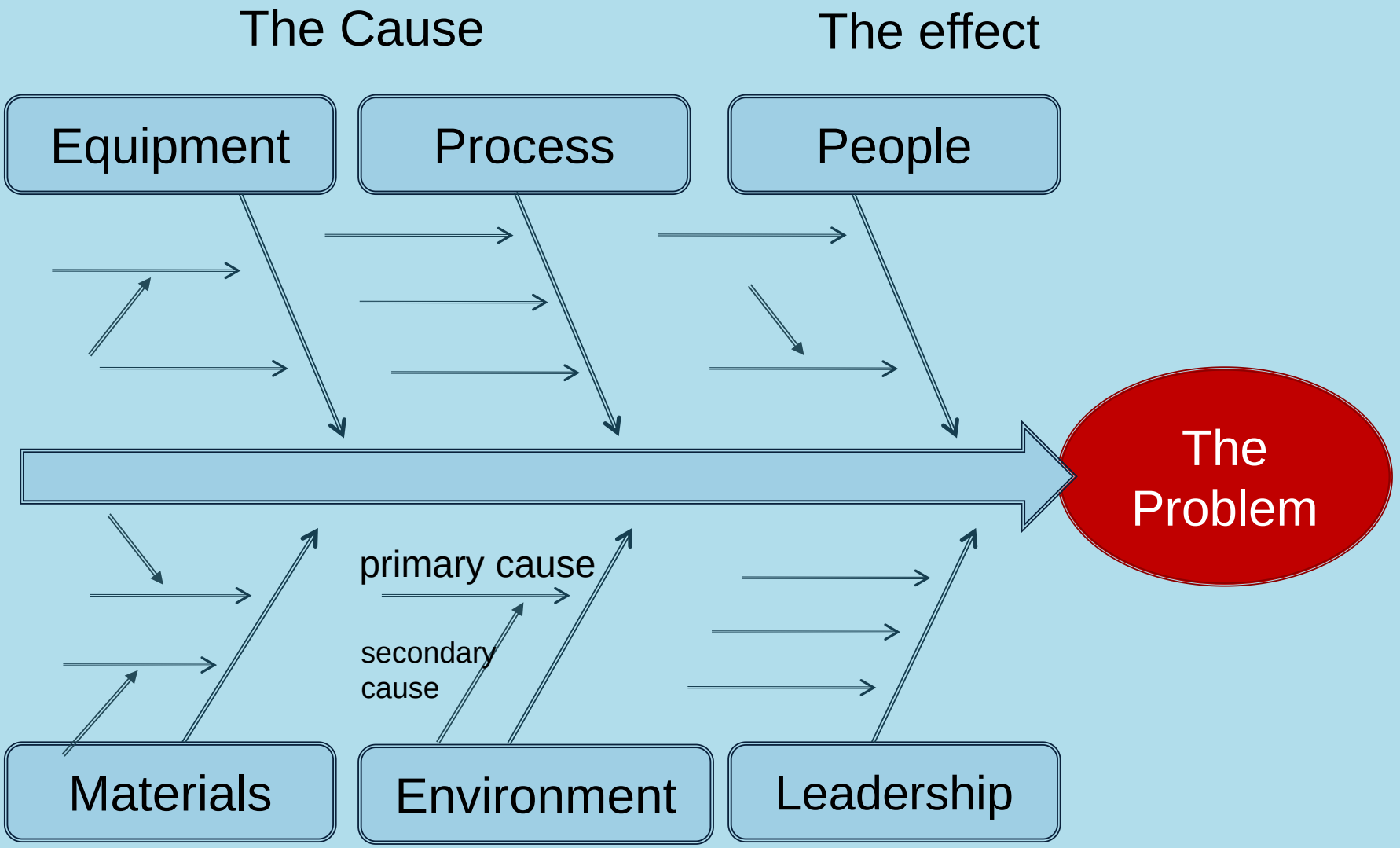
Residency/Fellowship Program:
Residency/Fellowship Team Leaders:
Faculty QI Mentor / UBLT (see list online):

1. Background: *What problem are you talking about and why?*

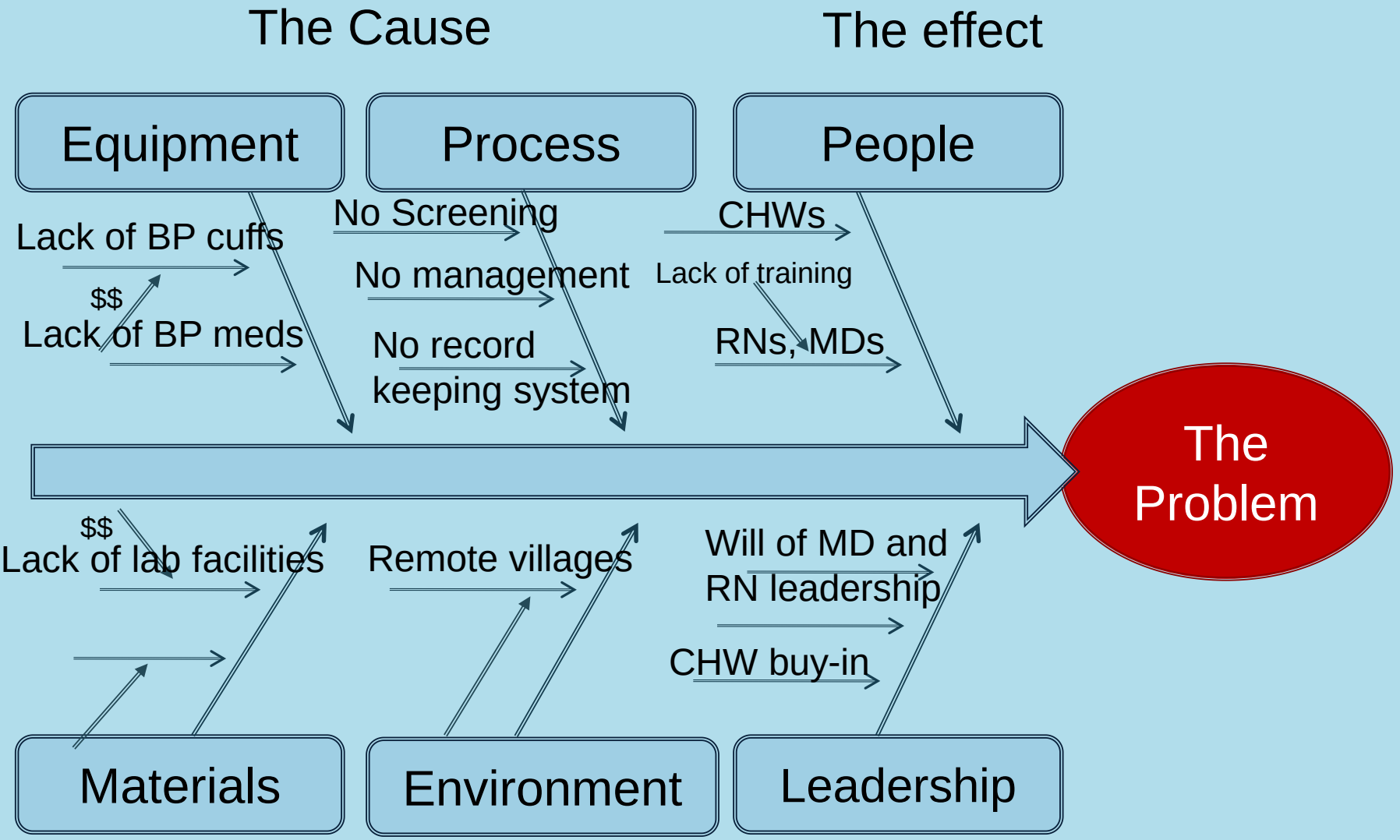
Process Mapping



Fishbone


The Cause
The effect
Equipment
Process
People
The Problem
primary cause
secondary cause
Materials
Environment
Leadership

Fishbone


The Cause
The effect
Equipment
Process
People
Lack of BP cuffs
$$
Lack of BP meds
No Screening
No management
No record keeping system
CHWs
Lack of training
RNs, MDs
The Problem
$$
Lack of lab facilities
Remote villages
Will of MD and RN leadership
CHW buy-in
Materials
Environment
Leadership

Process Mapping and Project Planning

- **Map out the current process at your facility**
- **How does this need to change to achieve your future state?**
- **Map out some early ideas for your project plan**
  - Do these changes address the problems you identified in your fishbone?
  - Who do you need to accomplish these changes – are they on your team already?
  - What resources do you need? Can your stakeholders get them for you?
- **What <u>processes</u> will you need to track to determine if your outcome can be achieved?**
- ***These are often trickier to measure and you may need to get creative***
- **What <u>structural elements</u> must be put in place for success?**

Breakout: Defining the problem

- You are an enthusiastic provider who has arrived at the global site where you will be working for the next month. You have been asked to help 4 half days a week at an outpatient clinic where the responsibilities are shared by both clinicians from your organization and nurses and physician assistants employed by the Ministry of Health (MOH).

Breakout: Defining the problem

- A week into your time in the clinic, you have seen many patients, but as you are limited by an inability to speak the local language, you have spent time waiting for an interpreter and during that time have also witnessed other patient-provider interactions.
- There are long lines with many people waiting to be seen. In order to get through as many patients as possible, the clinicians often end up spending about 2-3 minutes with each person. You notice that pharmacy stocks are in poor shape. One of the nurses tells you that they get new stock at the beginning of each month, but often by the middle of the month they run out.

Breakout: Defining the problem

- You notice many cases similar to Mrs. P, who is a generally healthy 34 year-old with 3 children, and has been having a cough for 3 days, but otherwise has no other symptoms. Nurse M talks briefly with the patient, skips over the physical exam and Mrs. P is prescribed co-trimoxazole and a diagnosis of pneumonia is written in her chart.

Breakout: Defining the Problem

In your small group:

20 minutes: Discuss and work on your problem, brainstorm using left side of A3

10 minutes: Report back: Summarize the components of the problem

- Group 1: Improving quality
- Group 2: Improving patient safety
- Group 3: Improving patient communication
- Group 4: Improving value

Breakout: Defining the Problem

- **Group 1: Improving quality:** You want to improve the quality of care provided to patients by helping providers make accurate diagnoses and provide more thorough assessments. *What are all the components of this problem? Brainstorm on left side of A3*
- **Group 2: Improving patient safety:** You want to improve patient safety by decreasing inappropriate use of antibiotics. *What are all the components of this problem? Brainstorm on left side of A3*
- **Group 3: Improving patient communication:** You want to improve patient satisfaction by improving patient communication. *What are all the components of this problem? Brainstorm on left side of A3*
- **Group 4: Improving value:** You want to decrease waste by making sure the right medications are stocked in the pharmacy and that medications don't expire before they are used. *What are all the components of this problem? Brainstorm on left side of A3*

QI Methodology

- **Aim and Vision:** What is the problem we're trying to solve? Why do we care about solving it? What will things look like when we're done?
- **Stakeholders and Fishbone:** Why do we have this problem? Who else is invested in fixing it? How do we solve this together?
- **Areas for Improvement:** What does the current process look like? What changes can we implement to get us to our desired future state?

QI Methodology

- **Measurement and Goals:** What will we measure to know if we succeeded? What is our end goal?
- **Small Tests of Change:** What are our initial changes? How will we know if they are working?
- **Re-Evaluation and Sustainability:** Are our changes working? What new actions do we take to improve our results?

Areas for Improvement

Four Domains of Health Care In Resource-Poor Settings

- Cultural
- System
- Training/Education
- Material

SMART Objective

- **S**PECIFIC
- **M**EASURABLE
- **A**CHIEVABLE
- **R**ELEVANT
- **T**IME BOUND

Small Tests of Change (Plan and Do)

- What interventions will you take on first?
- How are you involving your team in these interventions?
- What will you be measuring to know if they are working?
- How long will you measure before you reassess your strategy? (Deliberate vs. Emergent Strategy)

Re-Evaluation and Sustainability (Study and Act)

- Are your changes working as well as you hoped?
- What needs to change? What should be sustained?

Breakout: Thinking through solutions

20 minutes: Discuss and work on your solution

10 minutes: Report back on your solutions: what they are, who and what you will need to implement them, and how you will incorporate continuous monitoring

- Group 1: Improving quality
- Group 2: Improving patient safety
- Group 3: Improving patient communication
- Group 4: Improving value

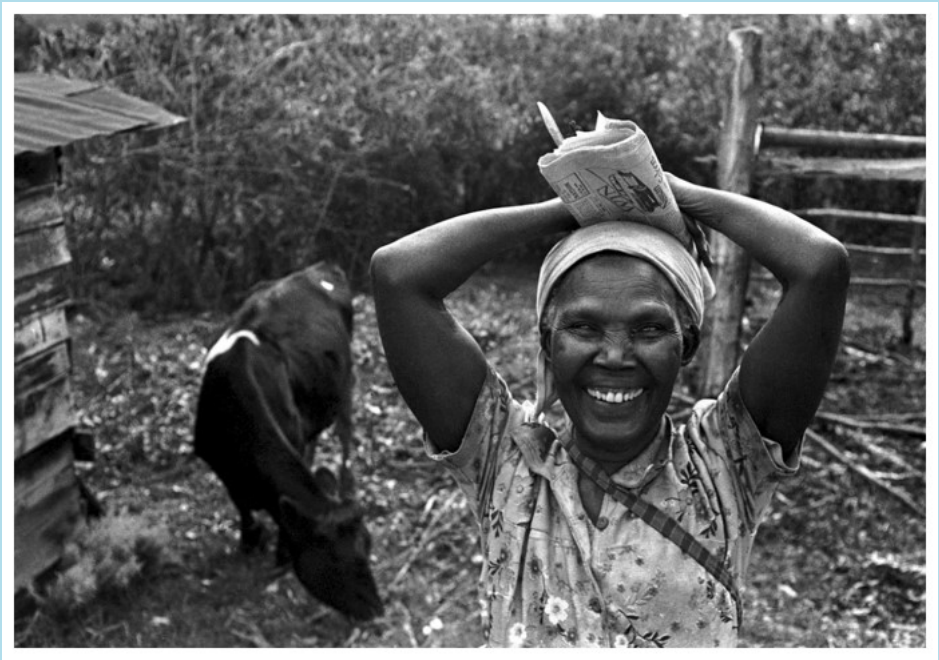
Breakout: Thinking through solutions

- **All groups**
  - On the right side of your A3, map out current state and ideal state, and brainstorm possible solutions to get from current to ideal state
  - Think through who and what you will need to get on board to go from current to ideal state
  - Think about whether your solutions account for all of the aspects of the problem outlined on the left side
  - Brainstorm what structural elements and processes will be needed in order to monitor and evaluate your solutions

Conclusion: Leading the change

- Advocating for health care quality in your health system is not easy. **Keep practicing.**
- Promote local expertise and problem-solving
- You can apply what you learned today every day
- Promote collaboration and leadership for quality improvement: find partners at your sites and keep advocating with them

Thank you!



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