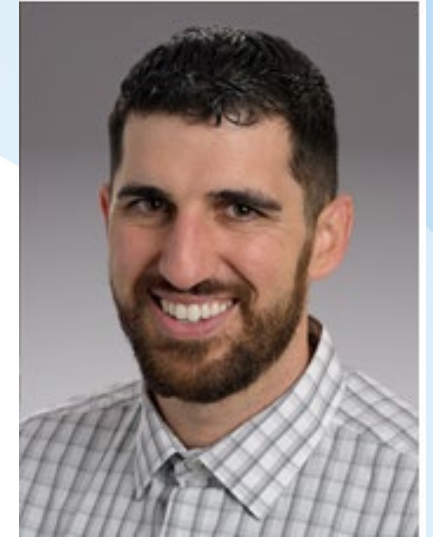# Root Cause Analysis and Action (RCAA)

Part 2

Who we are:

Adam Isaacs, BSN, RN, HACP-CMS

- 9 years of nursing experience
- 2 years in quality as a Clinical Quality Nurse

Billie Delauder, DNP, MSN,RN

- 37 years of nursing experience
- 17 years in quality as a PI Supervisor & Clinical Abstraction Specialist

What to expect:

- Type in your question(s) in the chat was we go, and we will also address them at the end of the presentation.

- We may ask for a show of hands at times, and feel free to use the reaction icons and emojis!

The RCAA:

- A Root Cause Analysis is a method of determining the core cause(s) of problem(s) to appropriately identify solutions for those problem(s).

- The RCA looks beyond the superficial "cause and effect" and will show where processes or systems failed or caused an issue in the first place.

- The product of the RCA is an **Action plan** that shows what strategies an organization intends to implement to reduce the risk of a similar events from occurring in the future.[3]

The Electronic Safety Report (ESR)

Received call from inpatient nurse on 1/23/24 at 00:45 This pharmacist received a call from the admitting nurse on 2B who found that the patient Juan Ramirez had an allergy that was not in the chart and that antibiotic was due in an hour. Called asking how to proceed. This pharmacist indicated that patients prior chart needed to be referenced and merged. Then contacted admitting doctor to obtain order for new antibiotics for pneumonia that patient was not allergic to.

1/22/24 18:20
Registration: New chart created for Mr. Ramirez with transposed birthday MM/DD/YYYY vs. DD/MM/YYYY

1/22/24 18:35
Triage: Patient identifiers and questions asked before interpreter available. Allergies not clarified to medication when patient reported Allergy medicine.

1/22/24 19:45
ER Doctor: used interpreter only used name as identifier.

1/22/24 20:50
Radiology tech took patient for x-ray only asked for patient name.

1/22/24 21:04
Blood draw: No interpreter asked name and used patient wrist band

1/22/24 21:20
Medication administration: Used understaning of "Spanish numbers" to figure out DOB.

1/22/24 21:40
Reaction to medication patient recieved,
0.5mg EPINEPHrine IM, 50mg Diphenhydramine IV, and 2,400 ml Normal Saline over 90 min.

1/22/24 21:50
Blood draw: Mr. Ramirez was sleeping tech just used wrist band

1/22/24 22:10 Admitting doctor: used interpreter asked patient name and verified address as second identifier.

1/22/24 22:50
Transferred from ED to Inpatient

1/23/24 0:00 Admission to inpatient:
Used interpreter, Only incomplete admission information was medications and allergies when left room.

1/23/24 0:20 Called outpatient pharmacy: DOB and allergy discrepancy.

1/23/24 0:45 Nurse spoke to inpatient pharmacy to inform of allergy to Penicillin next antibiotic.

1/23/24 0:56 Registration marked charts to be merged

Mr. Ramirez spent 3 days in hosptial due to swelling after allergic reaction.

Gemba

Do a Gemba.

"Japanese term for "Go and See" or (literally translated): "The Actual Place".
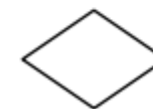
What do you see?

Flow chart

- **Flowcharts:** Diagrams that use shapes to show the types and movement of steps in a process.

✓Highlights decision points and outcomes.

✓Aids in understand whether a process occurred in one way or various ways.

✓Provides visualization of the complexity of a process and problem areas which can suggest where simplification, elimination of unnecessary steps, and standardization is possible.

Visual Reference: Centers for Medicare and Medicaid Services. (2018, April). *Flowchart Guide - Centers for Medicare & Medicaid Services*. Flow Chart Guide. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/FlowchartGuide.pdf

= beginning and end of a process

= a task or activity performed in the process

= a decision point (yes/no)

⟶ = direction or flow of the process

2 Identifiers Ideal Flow Process
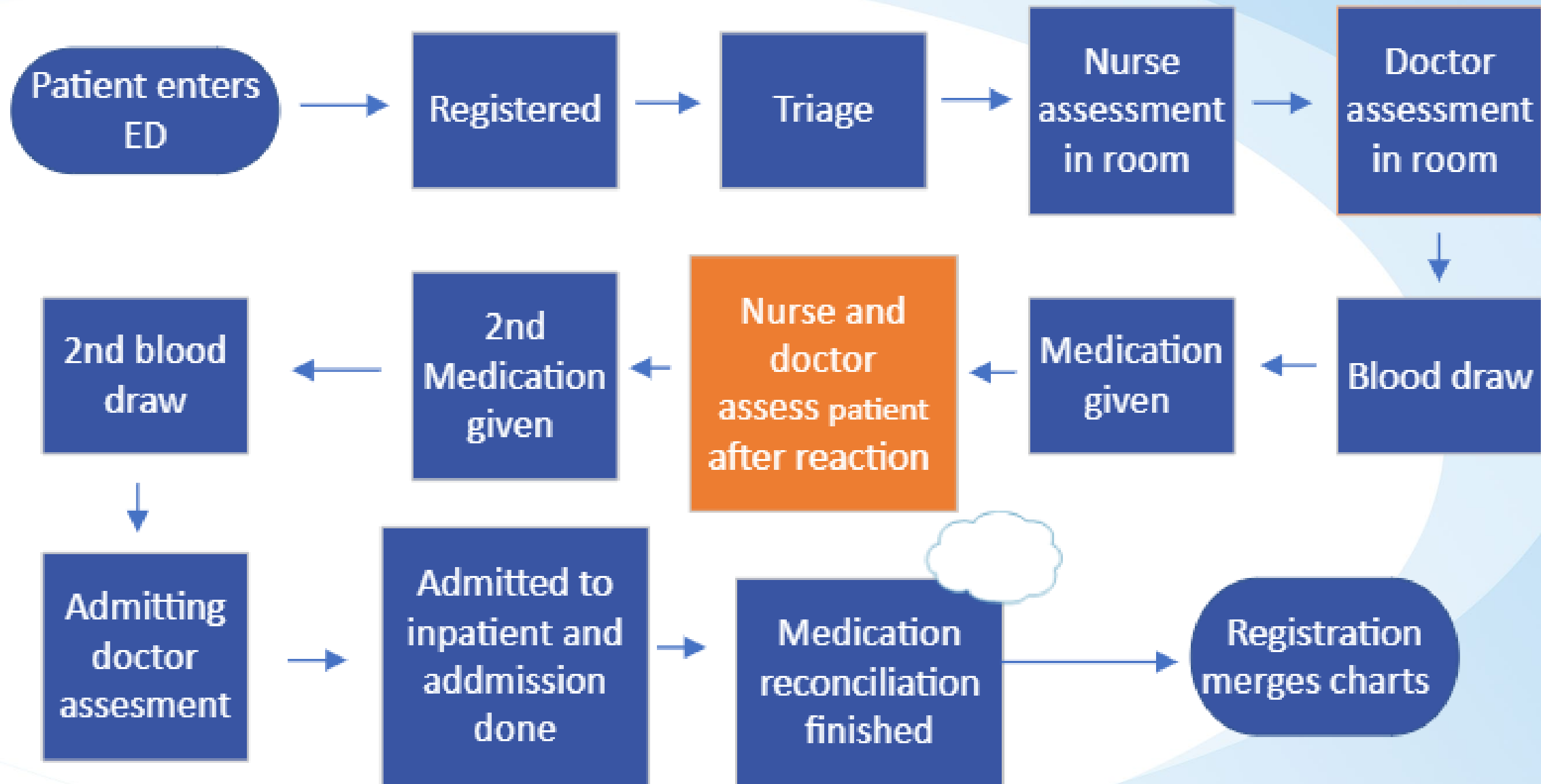
2 Identifiers Actual Flow Process

Patient enters ED → Registered → Triage → Nurse assessment in room → Doctor assessment in room

Doctor assessment in room → Blood draw → Medication given → Nurse and doctor assess paitnet after reaction → 2nd Medication given → 2nd blood draw

2nd blood draw → Admitting doctor assesment → Admitted to inpatient and addmission done → Medication reconciliation finished → Registration merges charts

Describe what happened

From the Discovery Phase of the RCAA and Gemba is where you answer:

- The "What"
- The "How"

Let's Build a Team

We then will present our findings in the Gemba and discovery phase to our team.

Representatives from roles where opportunities were found:

- Clinical and nonclinical.
- Peers better then person involved (consider emotions).
- Goal is to hear from staff closest to the problem as well as leaders.
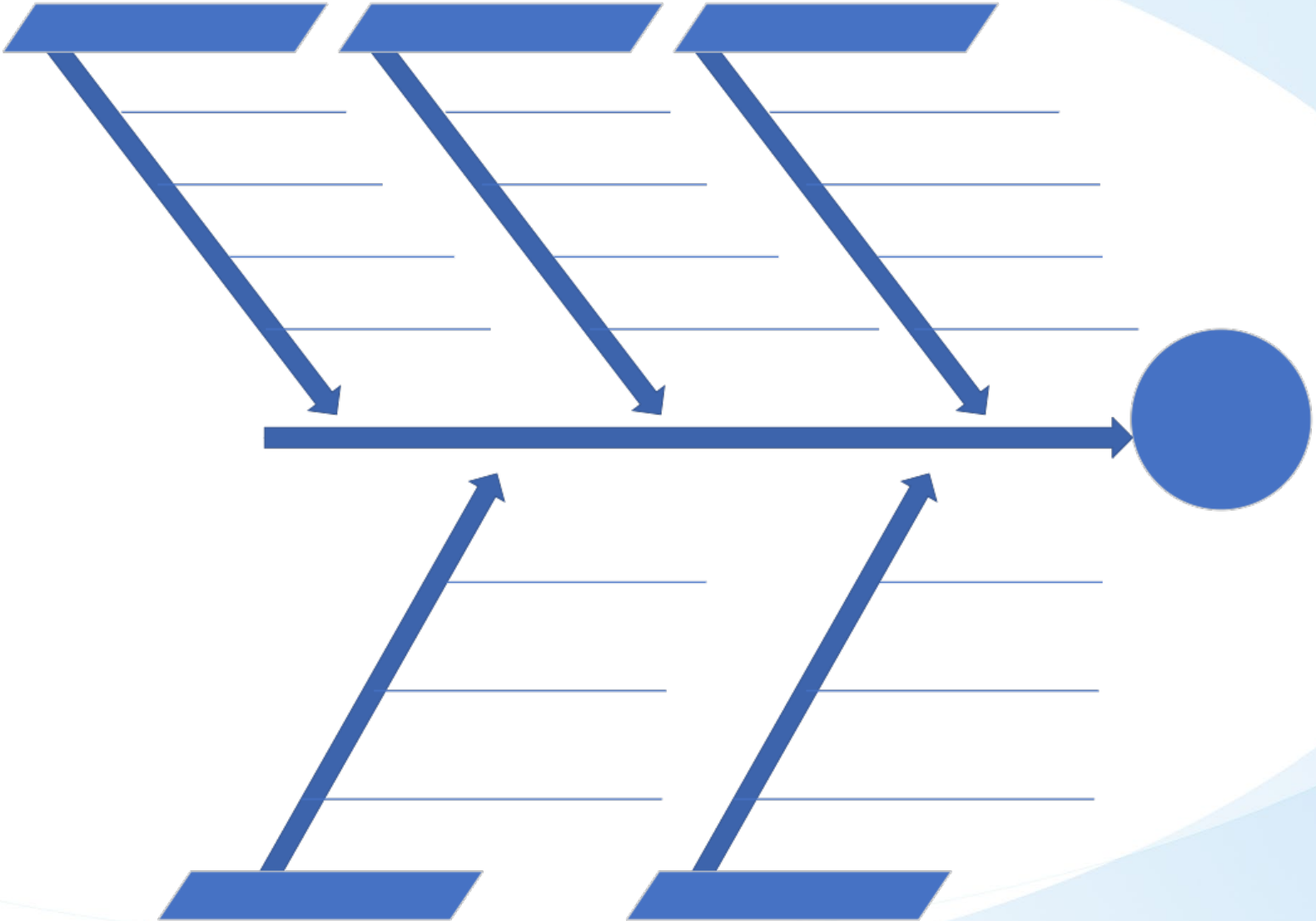- Deep dive and pull apart what happened.

Fishbone Diagram

- Fishbone diagram "Ishikawa"
  - ✓ For visual context
  - ✓ Interpretation
  - ✓ Flow of the incident
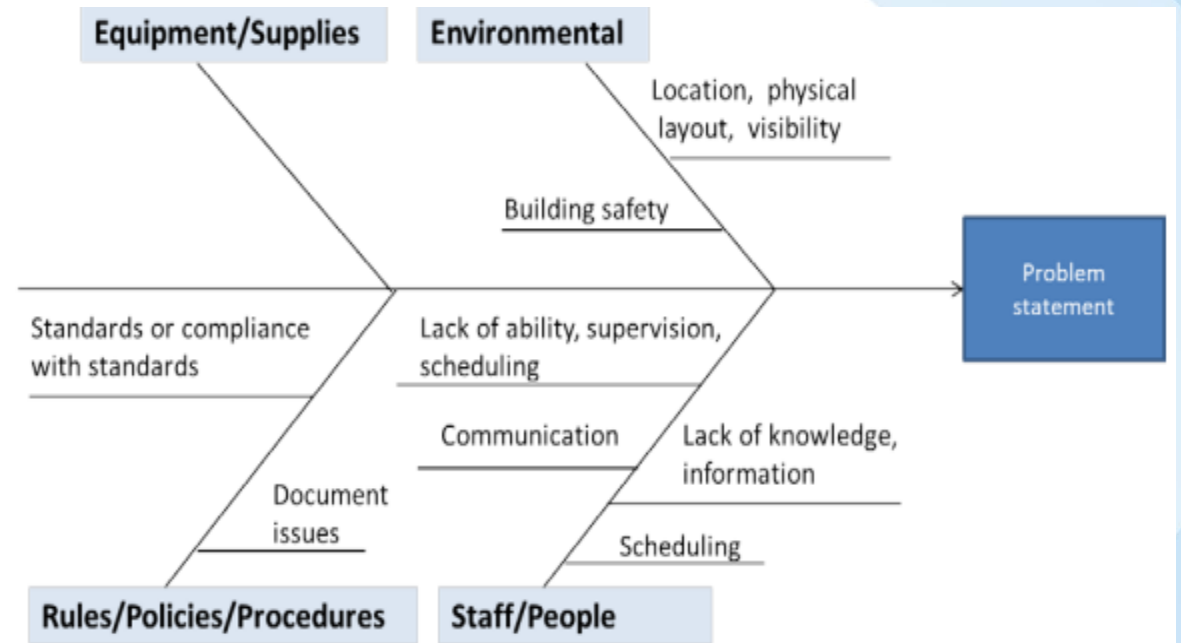
Visual Reference: Centers for Medicare and Medicaid Services. (2015, September). *How to use the fishbone tool for root cause analysis - CMS*. How to Use the Fishbone Tool for Root Cause Analysis. https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/FishboneRevised.pdf

How to Start a Fishbone for this Safety Event:

Contributing Factors

- **Human Factors:** human/individual characteristics which influence behavior at work in a way which can affect health and safety. This can include how they interact with each other (human interaction), but also how the environment, task, and equipment affect how people work. [2]

⭐ In the chat the contributing **Human Factors** you hear?
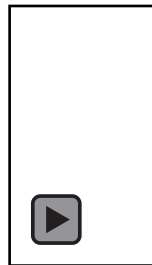
Contributing Factors: Human

Danni:

- Did not verify the right person when called from waiting room to be triaged. (Deviance from standard policy of 2 identifiers)

- Did not use an interpreter device for triage (Not available). (Both human and process)

- She did not ask "Do you have any allergies to medication?" to clarify. (Deviance form standard policy)

- When giving medication, she did not use the interpreter because she scanned his bracelet and "Knows numbers in Spanish" for DOB. (Deviance from standard policy and noncompliance with federal law 1557)

Contributing Factors: Human

What other questions could we have asked in the interview to clarify his actions or gather more information?

Contributing Factors: Process

- **Process/System**: Systemic factors are the underlying conditions and processes that shape the way an organization functions. They include things like organizational culture, processes, and leadership styles. [1]

Please put in the chat the **process factors** you identify as you listen to the registration interview.

Contributing Factors: Process

- Easy to create a new chart (No hard stop required EMR only one demographic entered in making a new chart)

- Knowledge deficit on creating reason for ED visit off a visual observation (No system training for registration, unit-based training only)

- Knowledge deficit on DOB order outside USA (No system training for registration, unit-based training only)

- Limitation of number of desired device for interpretation (location of interpreter is a 3-4 min interruption to get either physical device or call and talk to service via phone)

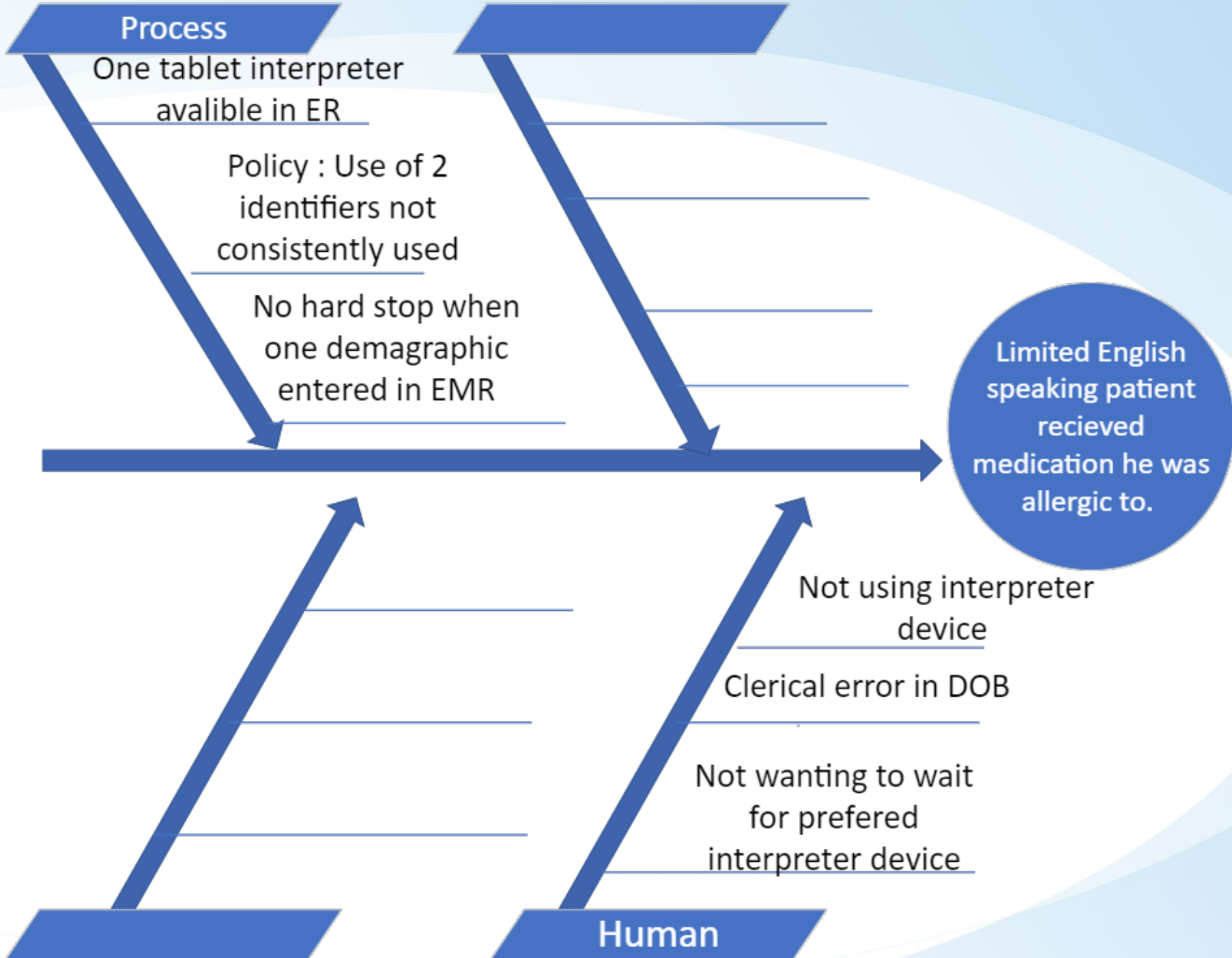- No training on OCR Final Rule 1557 (Inadequate training)

Contributing Factors: Process

Put in chat the questions you would like to ask to clarify what happened and ensure the factors you hear are truly related to **process**.

Process

One tablet interpreter avalible in ER

Policy : Use of 2 identifiers not consistently used

No hard stop when one demagraphic entered in EMR

Limited English speaking patient recieved medication he was allergic to.

Not using interpreter device

Clerical error in DOB

Not wanting to wait for prefered interpreter device

Human

5 Whys

Why?	Why?	Why?	Why?	Why?
I did not use an interpreter	Because it is not available	We only have one tablet on the unit for interpreter	One has been broken/ missing for over 2 months.	No IT ticket put in. No equipment owner.

Where we are
steps in an RCAA

1 → Define the Problem

Discovery ← 2

3 → Describe what Happened

Identify the Contributing Factors ← 4

5 → Identify Root Causes

Design and Implement Solutions ← 6

7 → Measure the Success of Changes
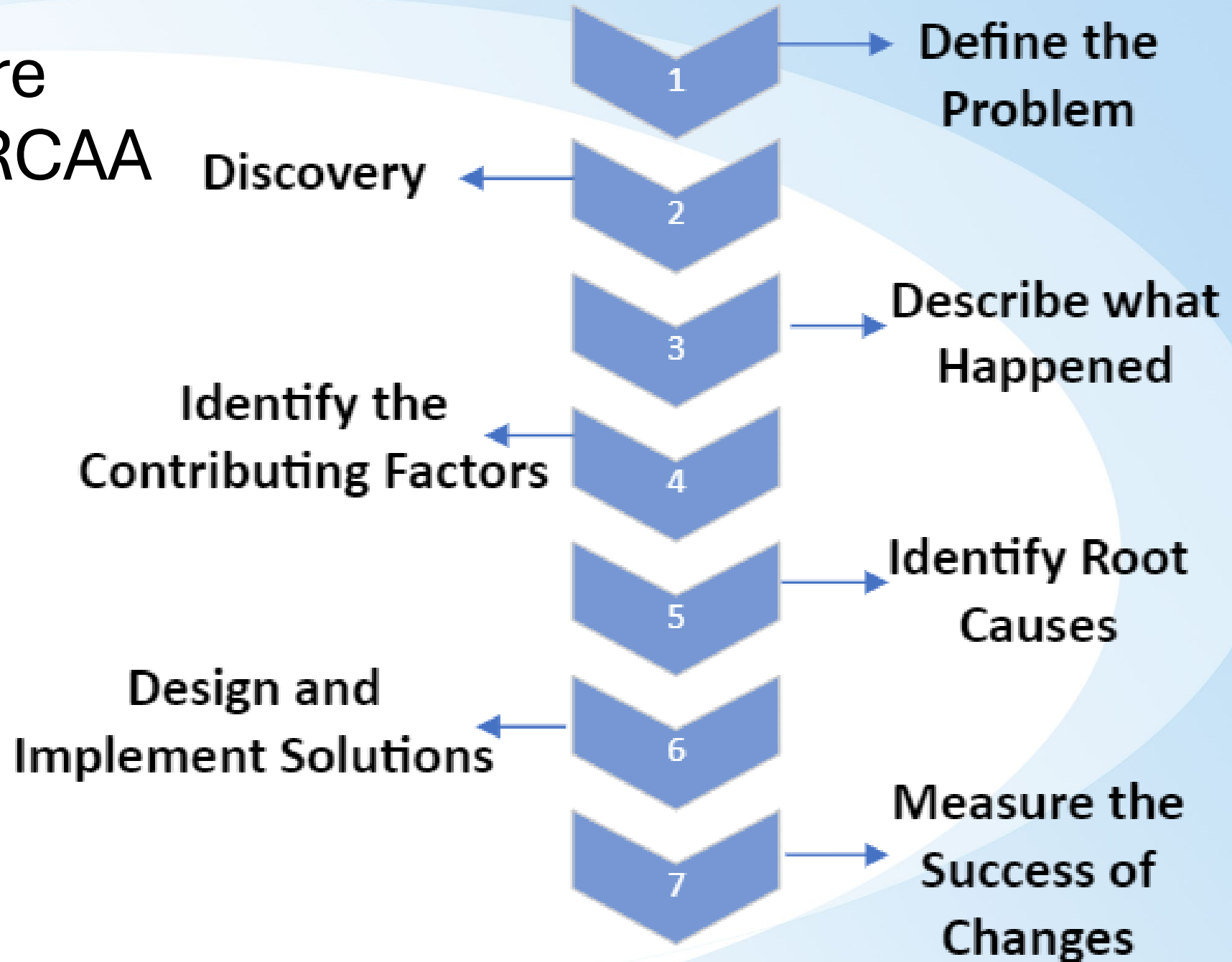
Identify Root Causes:

- What is a Root Cause?
- With team at the table, we want to discuss our why what happened...happened.
- Use all your information gathered and your Gemba discoveries.

Factors	Root causes
Interpreter tablet was in use by another staff member	We have not trained on how to contact interpreter service in over 2 years if a tablet is tied up.
2nd interpreter tablet is broken and has been for a while	No owner of equipment problems.
Tablets stored in stock room to charge not close to where patients check in.	The storage location of translator tablets is not good for incoming patients.
Staff "get by with what they know" or can understand from the patient	Policy does not have OCR's final 1557
Chart duplicates are common occurring, after registration staff don't enquire if no history in chart.	No hard stop in EMR to prevent patient chart from being created
Staff only using wrist band as common identifier	No use of redundancy or best practice of bedside labeling (x-ray, labs).
Very few ESR reports get entered	Just culture needs to be established.

Design and Implementing Change

- Assemble all your materials needed to assist the team:
  - ✓ Electronic Safety Report
  - ✓ Patient chart(s)
  - ✓ Interview notes
  - ✓ Fishbone
  - ✓ Ideal and Actual Flow Processes
  - ✓ The 5 Whys

Design and Implementing Change:

During this phase you can:

- ✓ Re-interview the staff involved again if needed.
- ✓ Ask peers what process/steps they would have taken in a similar situation.
- "If I could I would"… The Magic Wand or Wish List.

Design and Implementing Change:

- Addressed contributing factors?

- What safeguards could we implement?

- Follow best practices and policy:

  -OCR FR 1557 in existing policy & educate

  -Non-English-Speaking patients

  -Universal patient identifiers

  -Hard stop in EMR when creating new charts

Tools & Methods: Design and Implement

Remember: Change solutions can range from strong to weak:

Examples:

STRONG	INTERMEDIATE	WEAK
Change the physical environment.	Increasing staffing.	Education or re-education.
Engineering controls into system (creating those 'hard stops' into the EMR).	"Read Back" to assure clear communication is taking place.	Posters or flyers within the unit concerning LES patients.
Purchasing new equipment needed.	Eliminate or reduce distractions or unnecessary steps in a process.	Warning or labels.

Design and Implement Solutions

- Process Improvement Plan
- Standardizing your change solution.
  - Update systems
  - Physical environment
  - Address materials need
- All on same page
- Educate

Design and Implement Solutions

Before it goes live- Test it! Try it out!

The Solutions:

Contributing factors	Root Cause	Solutions
Interpreter tablet was in use by another staff member.	We have not trained on over 2 years if tablet is tied up.	Establish a routine training schedule with 1st execution within 30 days.
2nd interpreter tablet is broken and has been for a while.	No owner of equipment problems.	Redefine/ Redesign role to establish ownership of equipment issues.
Staff "get by with what they know" or they understood from the patient.	Policy does not have OCR's final 1557.	Incorporate OCR final rule 1557 in policy.

Measure the Success of Change

● Measures of success were monitored over time showing improvement/compliance.

● The goals was achieved (changes were made and sustained, no recurrent events were seen).

● You feel confident that the change is permanent and sustainable.

CMS and TJC Websites

- IMPROVING CARE FOR PEOPLE WITH LIMITED ENGLISH PROFICIENCY (cms.gov)
- Institute For Safe Medication Practices. (2022b, April 18). *Education is "predictably disappointing" and should never be relied upon alone to improve safety*. Institute For Safe Medication Practices. https://www.ismp.org/resources/education-predictably-disappointing-and-should-never-be-relied-upon-alone-improve-safety
- https://www.jointcommission.org/-/media/tjc/newsletters/quick-safety-issue-13-lep-update-10-5-21.pdf
- Summary Final Rule Implementing Sec 1557 of the ACA | HHS.gov
- Patient Safety Organizations Program | Agency for Healthcare Research and Quality (ahrq.gov)
- https://pso.ahrq.gov/faq/what-is-patient-safety-work-product
- Centers for Medicare & Medicaid Services. (2020, July 14). *R2136OTN (PDF) - CMS*. Guidance for Performing Root Cause Analysis (RCA) with Performance Improvement Projects (PIPs). https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/2018downloads/R2136OTN.pdf

References:

1. Healthcare Excellence. (2023, April 12). *System Factors*. System factors. https://www.healthcareexcellence.ca/en/resources/patient-safety-and-incident-management-toolkit/systemfactors/#-factors/#:~:text=They%20originate%20from%20different%20system,%2C%20people%2C%20processes%20and%20resources.

2. Health and Safety Executive . (2021, September 29). *Introduction to human factors*. Human factors/ergonomics – Introduction to human factors. https://www.hse.gov.uk/humanfactors/introduction.htm#:~:text=%22Human%20factors%20refer%20to%20environmental,can%20affect%20health%20and%20safety%22

3. IHI Website. (2023). RCA2: Improving root cause analyses and actions to prevent harm. Institute for Healthcare Improvement. https://www.ihi.org/resources/tools/rca2-improving-root-cause-analyses-and-actions-prevent-harm

4. Institute For Safe Medication Practices. (2020, June 4). *Education is "predictably disappointing" and should never be relied upon alone to improve safety*. Institute For Safe Medication Practices. https://www.ismp.org/resources/education-predictably-disappointing-and-should-never-be-relied-upon-alone-improve-safety

Questions?