

# Cultivating Roots of Quality Improvement

Session 2: Heart of the Matter: Tools to Determine the Problem  
May 2, 2023

## Introductions: Our Hospitals

9 hospitals represented by 29 CAH staff!

In the chat:

- Names, Facility, Improvement Topic

Big Sky Medical Center

Central Montana Medical Center

Community Hospital of Anaconda

Dahl Memorial Healthcare

Livingston HealthCare

McCone County Health Center

Mineral Community Hospital

Ruby Valley Medical Center

St Luke Community Hospital

# Program Expectations

## Purpose

Provide an avenue for Flex and HQIC member hospitals to work through a quality improvement project from the ground up using evidence-based tools and processes applied to topics of interest and priority.

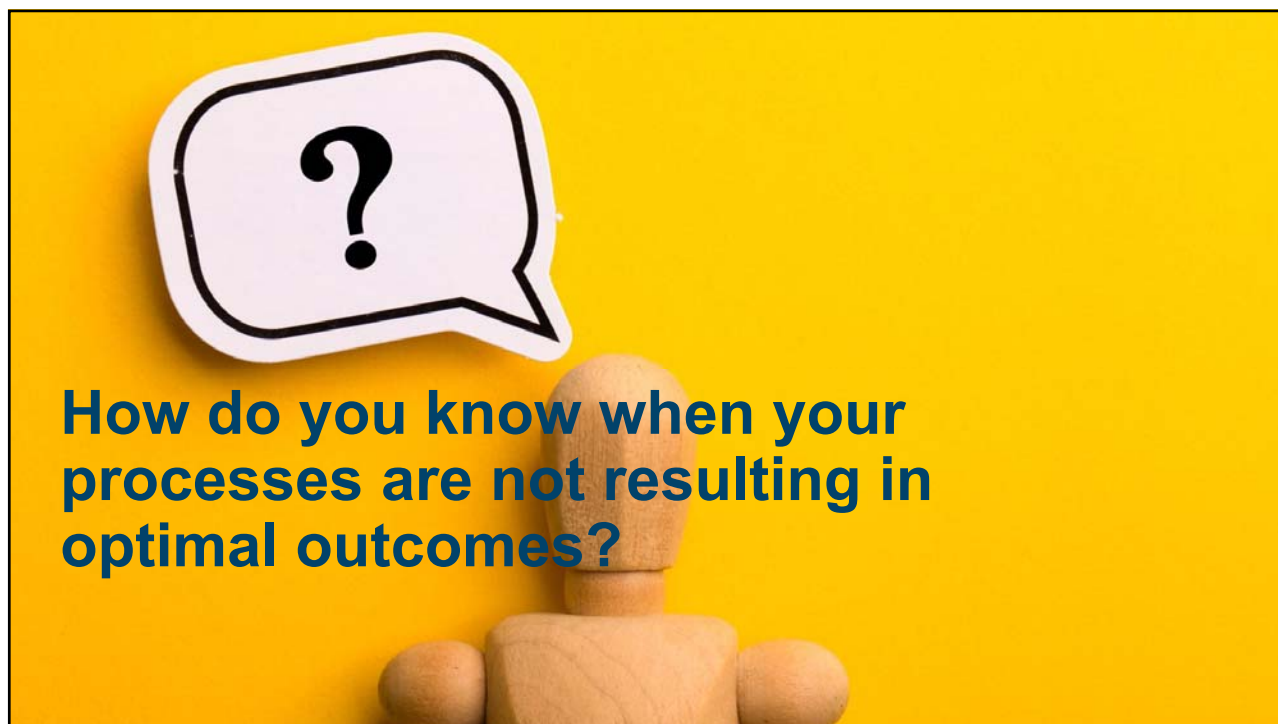
## Objectives

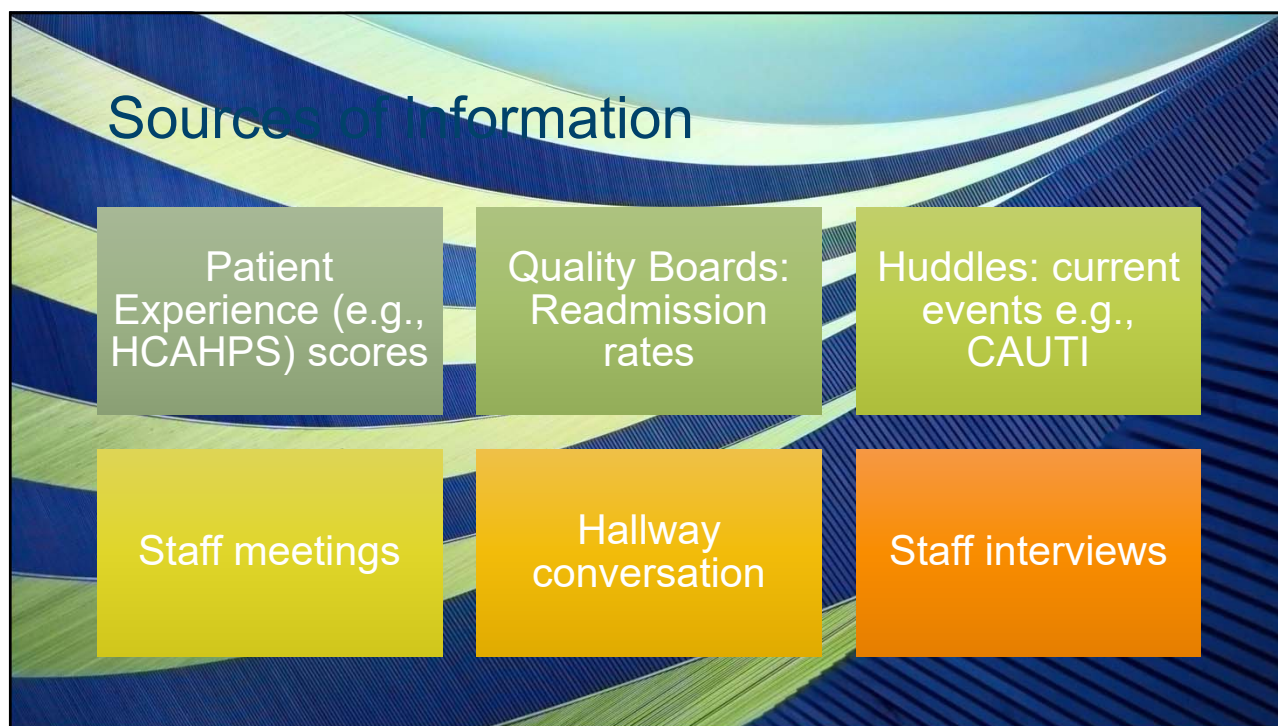
- Understand the Model for Improvement
- Identify tools to determine the root cause of a problem
- Identify types of data and apply to appropriate goals
- Implement tools for addressing adverse events
- Identify ways to engage patients and family in improvement efforts



Heart of the Matter:  
tools to determine the  
problem







## More sources

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Patient and staff interviews

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Observations of practices (e.g., hand hygiene)

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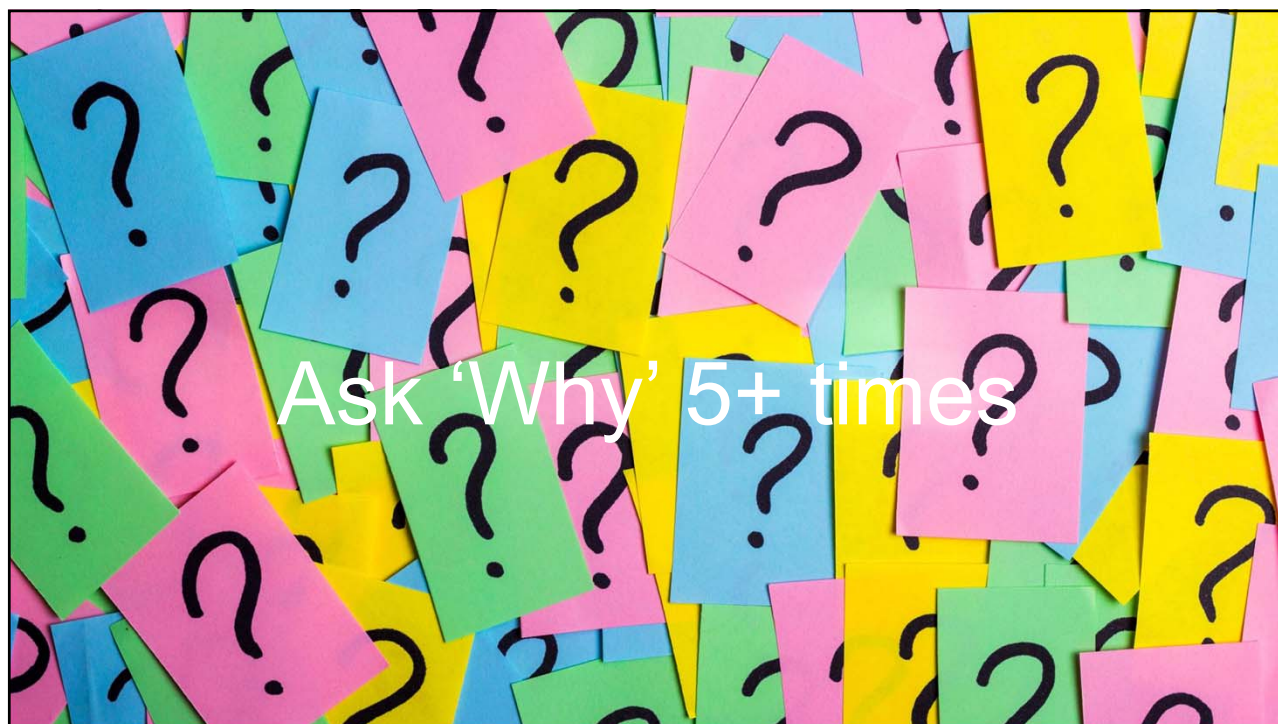
The local news

How to discover  
the reasons for  
failure?



Channel your  
curious child





## I ran a red light

Why? I was late for work

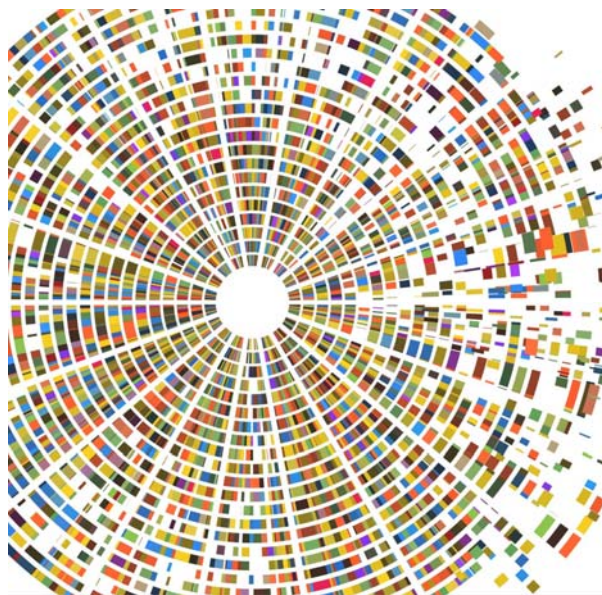
Why? I woke up late

Why? Alarm didn't go off

Why? Phone didn't charge

Why? I forgot to plug it in

Let's role  
play; focus  
on a patient  
readmission



## Readmission interview

- Why are you back with us so soon?
- Why did you not fill your prescriptions?
- What other 'Why' questions would you ask?



Patient was  
given wrong  
medication



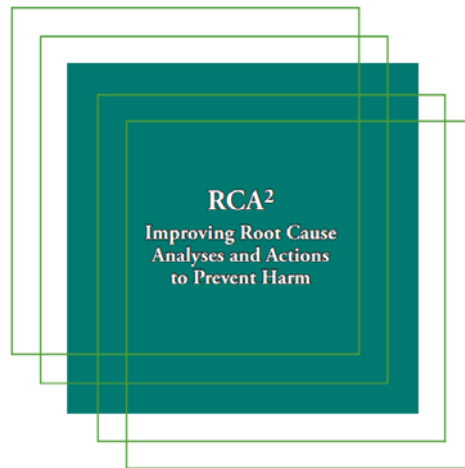
Patient was  
given a  
medication  
that resulted  
in death

Why?






What's the problem and how do we solve it?



Version 2, January 2016

 NPSF National Patient Safety Foundation  
268 Summer Street | Boston, MA 02210 | 617-391-9900 | www.npsf.org

## Rules of Causation (1 and 2)

**Rule 1. Clearly show the “cause and effect” relationship.**

**INCORRECT:** A resident was fatigued.

**CORRECT:** Residents are scheduled 80 hours per week, which led to increased levels of fatigue, increasing the likelihood that dosing instructions would be misread.

**Rule 2. Use specific and accurate descriptors for what occurred, rather than negative and vague words.** Avoid negative descriptors such as: Poor; Inadequate; Wrong; Bad; Failed; Careless.

**INCORRECT:** The manual is poorly written.

**CORRECT:** The pumps user manual had 8 point font and no illustrations; as a result nursing staff rarely used it, increasing the likelihood that the pump would be programmed incorrectly.

## Rules of Causation (3 and 4)

**Rule 3. Human errors must have a preceding cause.**

**INCORRECT:** The resident selected the wrong dose, which led to the patient being overdosed.

**CORRECT:** Drugs in the Computerized Physician Order Entry (CPOE) system are presented to the user without sufficient space between the different doses on the screen, increasing the likelihood that the wrong dose could be selected, which led to the patient being overdosed.

**Rule 4. Violations of procedure are not root causes, but must have a preceding cause.**

**INCORRECT:** The techs did not follow the procedure for CT scans, which led to the patient receiving an air bolus from an empty syringe, resulting in a fatal air embolism.

**CORRECT:** Noise and confusion in the prep area, coupled with production pressures, increased the likelihood that steps in the CT scan protocol would be missed, resulting in the injection of an air embolism from using an empty syringe.

## Rules of Causation (5)

**Rule 5.** Failure to act is only causal when there is a pre-existing duty to act.

**INCORRECT:** The nurse did not check for STAT orders every half hour, which led to a delay in the start of anticoagulation therapy, increasing the likelihood of a blood clot.

**CORRECT:** The absence of an assignment for designated RNs to check orders at specified times increased the likelihood that STAT orders would be missed or delayed, which led to a delay in therapy.

## Deep Dive Example

Deep Dive into <i>C. difficile</i> :	
A tool to assess root causes of healthcare-onset <i>C. difficile</i> and the impact of culturing practices	
Antibiotic and Laboratory Stewardship are primary drivers of healthcare-onset <i>C. difficile</i> . This tool is intended to guide analysis of culturing practices, antibiotic prescribing practices, risk factors and potential gaps.	
Patient Name:	DOB:
Medical Record:	Date and time of admission: / /
From: <input type="checkbox"/> home <input type="checkbox"/> another hospital	SNF/LTAC/NH
Was patient discharged from our facility in the last 30 days? <input type="checkbox"/> Yes (date: ) <input type="checkbox"/> No	
Any previous history of a positive <i>C. difficile</i> stool result? <input type="checkbox"/> Yes (date: ) <input type="checkbox"/> No	
Our clinical lab uses the following test(s) to screen stool for <i>C. difficile</i> :	
<input type="checkbox"/> NAAT (stand-alone)	<input type="checkbox"/> GDH plus toxin
<input type="checkbox"/> NAAT plus toxin	<input type="checkbox"/> GDH plus toxin, arbitrated by NAAT
<input type="checkbox"/> other	
Date and time CDI stool test was ordered:	
Where was patient at the time the CDI stool test was ordered?	<input type="checkbox"/> Emergency Department <input type="checkbox"/> In-patient unit:
Date and time CDI stool specimen was obtained:	
Where was patient at the time the specimen was obtained?	<input type="checkbox"/> Emergency Department <input type="checkbox"/> In-patient unit:
Did patient have 3 or more unexpected or unexplained liquid or unformed stools in the 24 hours prior to having the stool specimen collection?	<input type="checkbox"/> Yes <input type="checkbox"/> No*
*If 'No', criteria for testing not met. Investigate further to determine why specimen was ordered/submitted:	
Did the patient have any of these symptoms at the time the specimen was collected? (check all that apply)	<input type="checkbox"/> abdominal cramping <input type="checkbox"/> elevated WBC's <input type="checkbox"/> fever >100.4F/38F
Did the patient have any of these risk factors? (check all that apply)	
<input type="checkbox"/> Antibiotics in the last 2 months	
Name/Dose/Duration/Indication:	
Was indication for antibiotic necessity re-evaluated after 48 hours? <input type="checkbox"/> yes <input type="checkbox"/> no	
<input type="checkbox"/> Proton pump inhibitor (e.g. Protonix) daily for at least 3 days in the week prior to diagnosis? <input type="checkbox"/> yes <input type="checkbox"/> no	
HRET HIN CDI Root Cause Analysis Tool version 1 March 2018	
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# CAUTI Discovery Tool – Specimen Collection Tracer

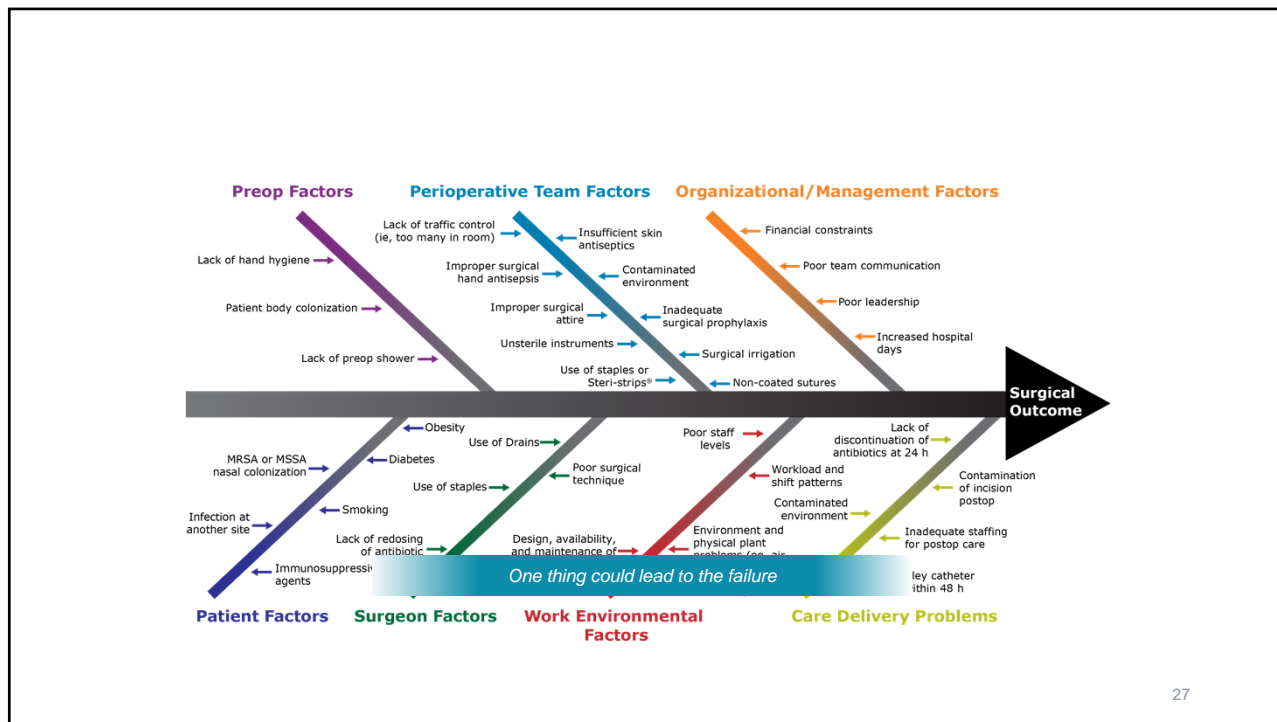
PROCESS	Chart #	Chart #	Chart #
<b>(LAB ORDERS) There is:</b>			
An order for a urinalysis and urine culture			
<b>(SIGNS/SYMPOMS) The patient has:</b>			
At least one of the following: new onset or worsening of fever, rigors, altered mental status, malaise or lethargy with no other identified cause; flank pain, costovertebral angle tenderness; acute hematuria; pelvic discomfort			
A urinalysis that demonstrated at least one abnormality (e.g. + Nitrite, + Leukocyte esterase (LE), ≥ 5 WBC/hpf)			
<b>(SPECIMEN COLLECTION and TRANSPORTATION) The following was observed:</b>			
The urine specimen was collected from the sampling port			
The sampling port was scrubbed with a disinfectant (e.g. alcohol wipe)			
A dedicated transfer device designed to luer-fit directly onto the sampling port was used			
The current urinary catheter was removed, need for replacement was confirmed, and a new catheter was inserted before the urine specimen was collected			
The specimen is labeled correctly as clean catch or catheterized			
The urine specimen was either analyzed by the clinical lab within two hours of collection or was refrigerated (2-8°C) or in a tube containing a preservative.			
<b>(LAB INTERPERETATION)</b>			
Does the lab perform a culture only if UA is abnormal? (e.g. + Nitrite, + Leukocyte esterase (LE), ≥ 5 WBC/hpf)			
<b>(TREATMENT)</b>			
The urine sample was obtained from the urinary catheter BEFORE initiation of antibiotics			

### Mini RCA CDI Process Improvement Discovery Tool (Minimum 10 charts/Maximum 20 charts)

**Note: Do NOT spend more than 20-30 minutes per chart!**

Instructions: (1) Mark an X in the box where a process failure occurred. You may check more than one box per chart. (2) The processes with the most common failures could be a priority focus.

Process	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #	Chart #
Did the patient have less than 3 unexplained and unexplained stools in the 24 hrs. prior to																			
Was the stool specimen submitted																			
formed stool? Did the patient receive a laxative or enema within 24 hours prior to stool																			
Did the patient receive lactulose, tube feedings or IV contrast within 24 hours prior to stool																			
Did the patient who occupied the room just before this patient have CDI?																			



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# Schedule

Date	Topic	Practical Application (assigned)
April 18	Getting Started: The Model for Improvement & How to Choose a Change	Tool: 3 Questions
May 2	Heart of the Matter: Tools to Determine the Problem	Tool: Project Summary
May 16	What Tells the Story? How to Identify and Use Data	Tool: PDSA Cycle 1 and Summary
June 8	Just Do It...and Do It Again! Small Tests of Change and the Do-Study-Act of the PDSA Cycle	Tool: PDSA Cycle 2 +
June 20	The Leader Mindset	
July 11	No Blame No Shame: Addressing Patient Safety and Adverse Events	Poster development
July 25	Changing the Perspective Changes the Experience: Involving Patients and Family Advisors in Quality Improvement	
August 22	Celebration & Sharing	

# Practical Applications – By 5/18

- ❑ Complete “3 Questions” tab in the Workbook.
- ❑ Schedule Scope Coaching with Barb.
- ❑ Complete Project Summary tab in the Workbook

THE 3 QUESTIONS	
These questions guide improvement work.	
QUESTION 1	
AIM/GOAL	What are we trying to accomplish?
<b>S</b> Specific	
<b>M</b> Measurable	
<b>A</b> Achievable	
<b>R</b> Relevant	
<b>T</b> Time-bound	

PDSA		
PROJECT SUMMARY		
PROJECT START DATE:		PROJECT COMPLETION DATE
PROJECT TITLE	Test	
PROJECT LEAD		
TEAM MEMBERS		
PLAN		
This indicator or project supports ("X" all that apply):		
Quality Assurance	Quality Control	Performance Improvement
High Risk	Improved Health Outcome	Transitions of care, including readmissions
High volume	Hospital Quality Objective	Prevention/reduction of adverse events
Problem Prone		Prevention/reduction of hosp. acquired condit
Other		Prevention/reduction of medical errors
BACKGROUND: Why is this important? What are the issues? What questions do you want to answer?		



## Contact

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Project Website	<a href="https://mtpin.org/qiroots/">https://mtpin.org/qiroots/</a>





# *Evaluation*

*Please complete the short evaluation that will appear  
when you leave the webinar.*