Hands-On Workshop: Using Incidents to Improve Patient Care

Moderator: Jean Moran, Brett Miller

- **Using Root Cause Analysis When Analyzing Incidents**
  - Grace Kim
- **Classification of Incidents**
  - Jennifer Johnson
- **Developing a Corrective Action Plan**
  - Leah Schubert
- **Hands-On Exercise**

Using Root Cause Analysis When Analyzing Incidents

Grace Gwe-Ya Kim, Ph.D.

Learning Objectives - RCA

- To understand the basics of Root Cause Analysis (RCA)
- To learn about the techniques to implement RCA
- To be able to analyze the causes and contributing factors for an incident

Definitions

- **Incident** – An unwanted or unexpected change from a normal system behavior which cause or has the potential to cause an adverse effect to persons or equipment.
- **Adverse event** – An incident that occurs during the process of providing health care that results in suboptimal clinical outcome including unintended injury or complication leading to disability, death, or prolonged hospital stay for the patient
- **Cause** – A situation, condition, action, or omission that leads to an incident

E Ford et al., Med. Phys. 37(12), 2012

Definitions

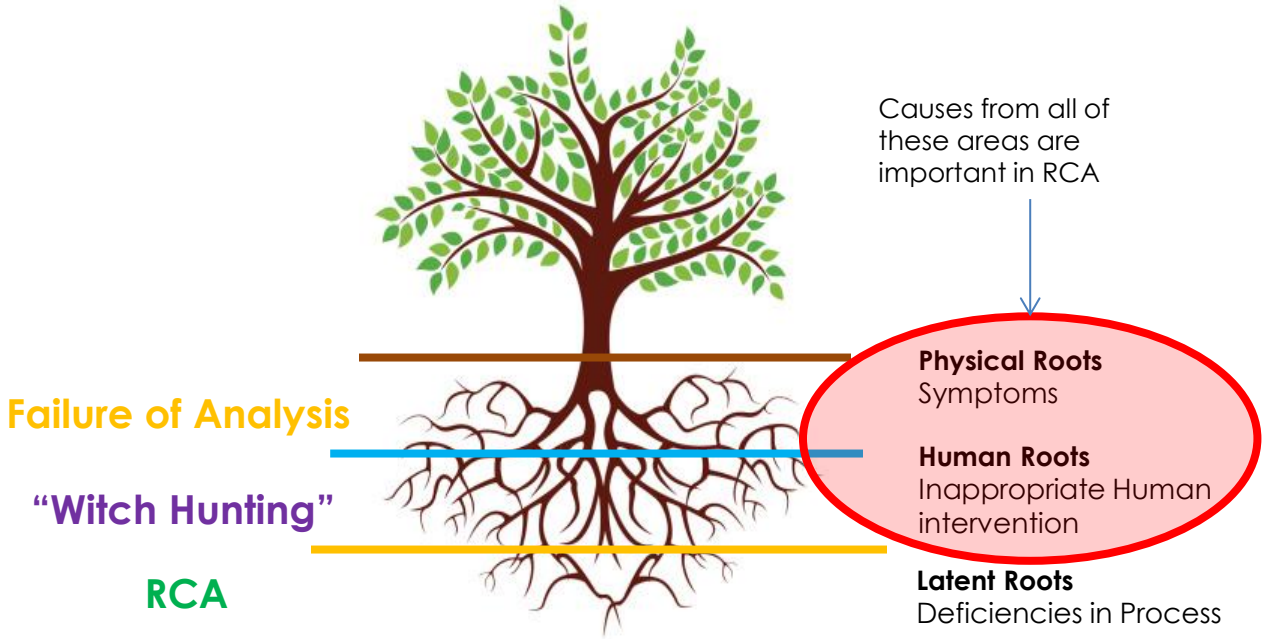
- **Error** – Failure to complete a planned action as intended or the use of an incorrect plan of action to achieve a given aim.
- **Mistake** - Implementation of a plan unlikely to achieve its intended outcome even if executed correctly. Blunder, wrong judgment, wrong action or statement from faulty judgment; inadequate knowledge or inattention
- **Near miss** – An event or situation that could have resulted in an accident, injury or illness but did not either by chance or through timely intervention. Also known as a close call, good catch or near hit.

E Ford et al., Med. Phys. 37(12), 2012

Root Cause Analysis (RCA)

- Retrospective analysis
- Serious, adverse events (and **near misses**) with rare occurrences
- Identify underlying problems that increase likelihood errors
- RCA is a "systems analysis"
  - Examine relationships between different layers & other aspects of systems design
- Impartial analysis (**Culture of Safety)**

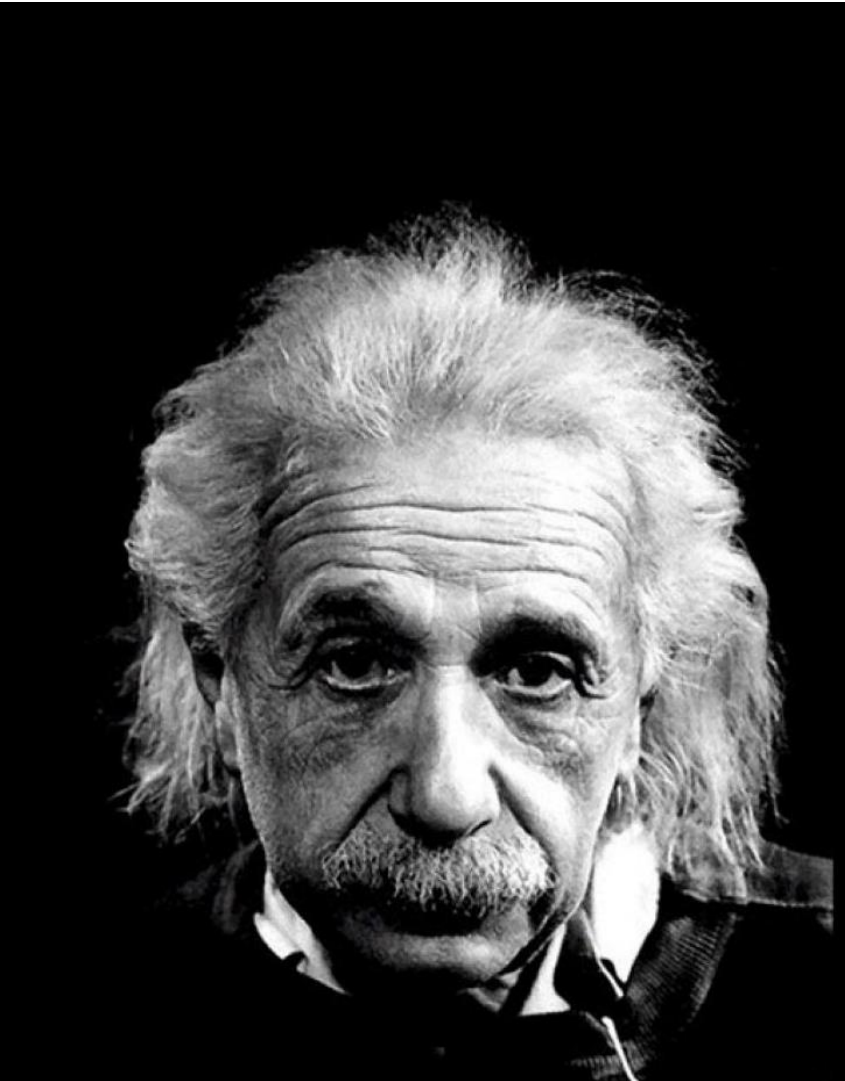
Three Levels of Root Cause



Muhamed Faizal Mohd Karin, 5 Whys Analysis, Leanapplied.com, Oct. 2012

RCA Overview

1. Collect information (What happed?)
2. Identify causes (Why it happened?)
3. Recommendations for remediation
4. Implement and Monitor



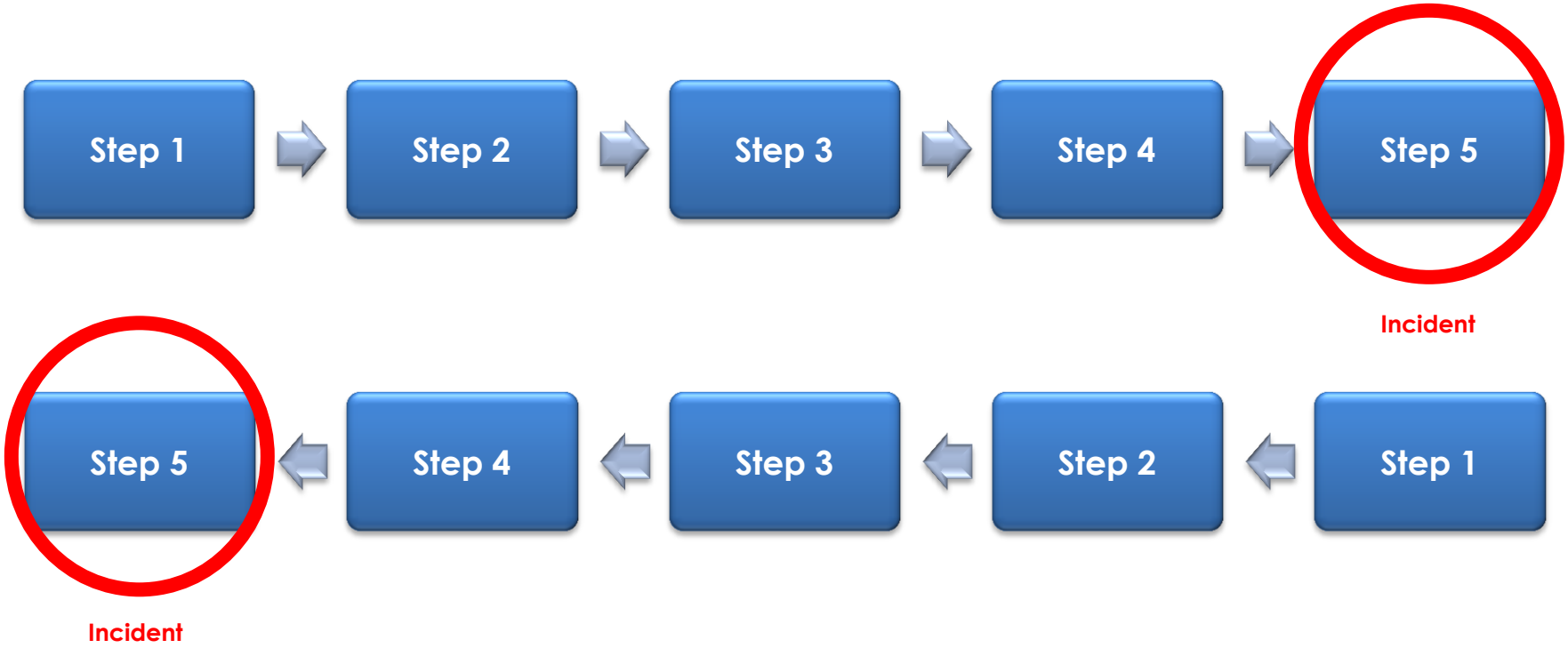
We can’t solve problems by using the same kind of thinking we used when we created them.

RCA Step 1: What happened?

- Focus on “what” rather than “why”
  - A narrative can be helpful

- Helpful tools
  - Process Mapping
  - Ask questions and listen
    - Let the interviewee ‘connect the dots’

Process Map


Step 1
Step 2
Step 3
Step 4
Step 5
Incident
Step 5
Step 4
Step 3
Step 2
Step 1
Incident

RCA Step 2: Why it happened?

- Identify causes
  - Focus on the "whys"

- Helpful tools
  - Brainstorming
  - 5-Whys: force and in-depth analysis
  - Cause & Effect (Fishbone) Diagram

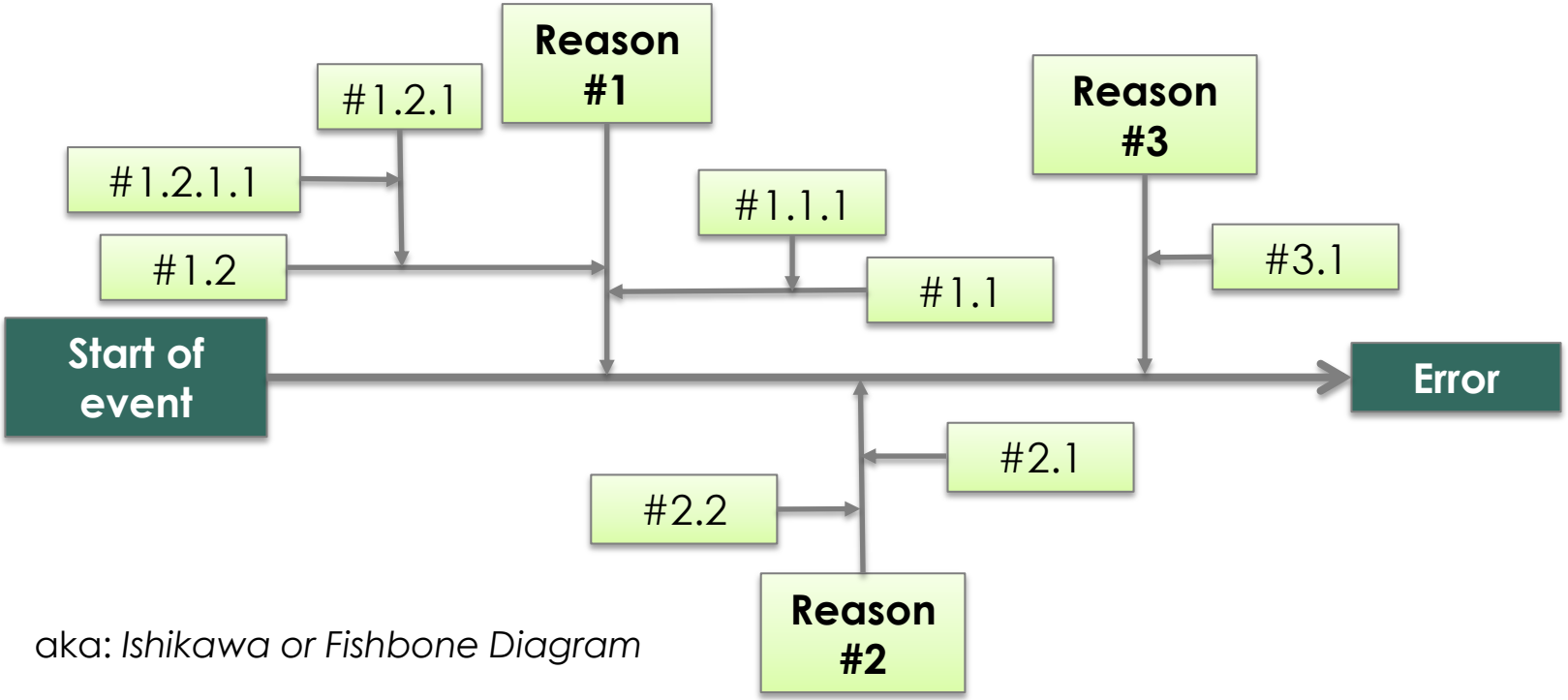
Brainstorming

- A method for a group of people to generate a large number of ideas in a short period of time
- Designate a note taker & moderator (separate people)
- Start with a statement of the problem
- No bad ideas, all ideas recorded
  - Criticizing or discussing the ideas is not allowed

The 5 Whys

- Simple procedure of asking 'why' 4 or 5 times as to the cause of an error or near-miss to force an in-depth analysis
- At each successive 'why' question, the group probes deeper
- Results are recorded for use in the RCA

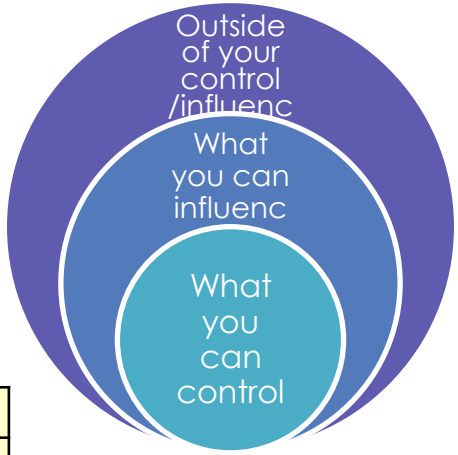
Cause & Effect Diagram

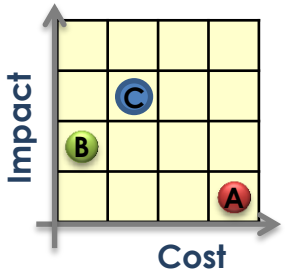


aka: *Ishikawa or Fishbone Diagram*

RCA Step 3: Recommendations

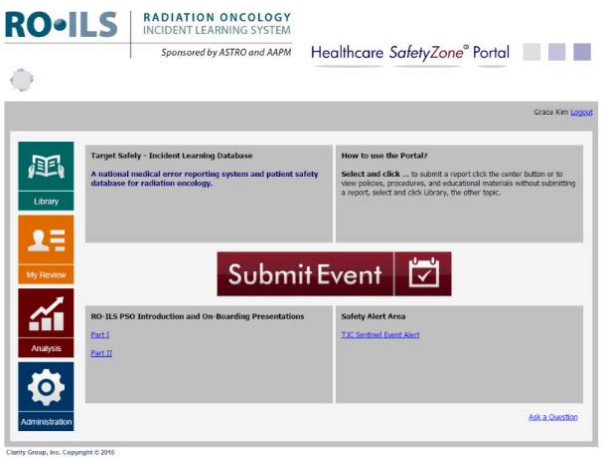
- Requires domain experts
- Low cost, high impact
  - Focus on sphere of influence
  - Cost-benefit analysis
- Examples
  - Checklists
  - No interruption zone
  - Time out
  - Intuition





RCA Step 4: Implement & Monitoring

- Monitoring System
  - National reporting system: RO-ILS
  - Department reporting system
- For a RCA to be useful
  it has to encompass:
  - Corrective Actions
  - Learning
  - Follow-up



Example - Event Reported

- Eve

RO•ILS | RADIATION ONCOLOGY INCIDENT LEARNING SYSTEM
Sponsored by ASTRO and AAPM

Healthcare SafetyZone® Portal

Current Form: Incident

Save | Reset | Cancel

Home Event Number: 2083

NOTE: Required questions marked with *

*Location:
Awesome Studio
*Sub Location:
Studio A
*Additional Location:
Please select Additional Location:

*Event Type:
Incident
*What is being reported?

*Narrative: (Briefly describe the event that occurred or the unsafe condition, 4000 character limit)
Chipmunks were out of control and injured

Local Identifier:

Reporter's Name:

Reporter's Role:
Agent
*Identify the date and time the event occurred:
Hour: 1 Min: 0 AM

Save | Reset | Cancel

This data is being collected in a patient safety evaluation system to improve patient safety, healthcare quality and/or healthcare outcomes and for reporting to a Patient Safety Organization. This data is privileged and confidential under the protections afforded by the Patient Safety and Quality Improvement Act of 2005; Final Rule 42 CFR Part 3.

ne agent for the chipmunks

What Happened

https://www.youtube.com/watch?v=CvfINlM87il

RCA Step 1: What happened?

- Narrative
  - In the recording studio, the chipmunks were tired so they couldn't sing
  - Manager decided to give them coffee
  - Manager brought the large coffee with caramel and whip cream.
  - Chipmunks finished the coffee
  - Chipmunks were out of control and injured after drinking coffee

RCA Step 1: What happened?

- Process Map

RCA Step 2: Why it happened?

- The 5 Whys

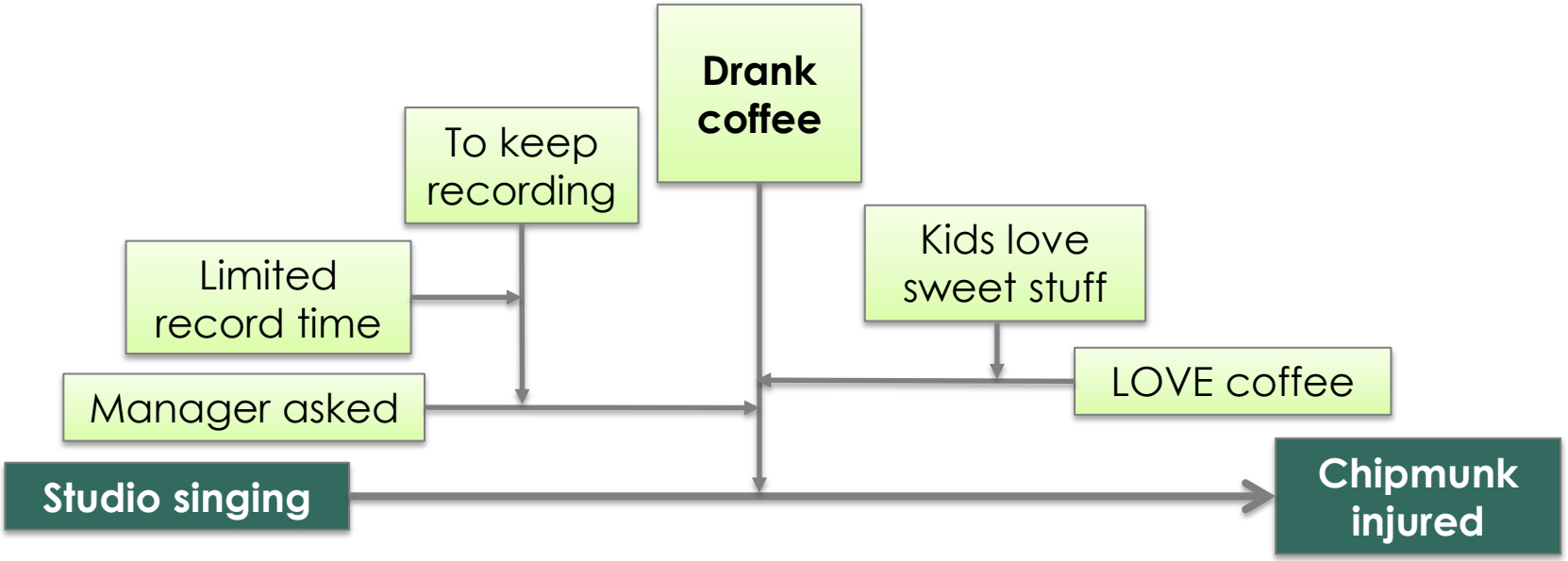
Q1. **Why** were the Chipmunks out of control and injured?
A1. They drank coffee

Q2. **Why** did they drink coffee?
A2. The manager asked them to

Q3. **Why** did the manager ask the to drink coffee?
A3. So they could keep recording

Q4. **Why** did they need to keep recording?
A4. They only had the studio for one more hour

Cause & Effect Diagram



aka: *Ishikawa or Fishbone Diagram*

RCA Step 2: Why it happened?

- The 5 Whys

Q1. **Why** were the Chipmunks out of control and injured?
A1. They didn't have the proper focus

Q2. **Why** didn't they focus?
A2. They like to play

Q3. **Why** do they like to play?
A3. They are chipmunks and that's what they do

Cause & Effect Diagram

aka: *Ishikawa or Fishbone Diagram*

RCA Step 3: Recommendations

- Don't record chipmunks any longer
- Don't give chipmunks coffee
  - What if chipmunks LOVE coffee?
- Recommend a new manager that better understands chipmunks – not ideal (no direct control, only a recommendation (weak))
- Work in padded recording studio
- Make sure there is enough recording time for breaks
- Order small coffee / decaf only?
- Make sure chipmunks play before recording

RCA Step 4: Implement & Monitoring

- Choose and always use the proper size cup for Chipmunks

- Give play time before recording
- Keep tracking record time and break time