Root Cause Analysis Process

Vet Sherpa Consulting

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Objective

Be able to identify and demonstrate the basic concepts behind an effective root cause analysis.

Root Cause… Definition

- An identified reason for the presence of a defect or problem.

- The most basic reason, which if eliminated, would prevent recurrence.

What is a Causal Factor?

- Any problem associated with the incident that if corrected could have prevented the incident from occurring or would have significantly mitigated its consequences.
- It’s an opportunity to improve.

What is a Root Cause Analysis (RCA)?

- It is a process for identifying the contributing causal factors that underlie variations in performance associated with **adverse events** or **close calls.**
- It focuses on systems and processes rather than individual performance and outcomes.

What is a Root Cause Analysis (RCA)?

- It identifies changes that can be made in the system through either **re-design or development of new processes** or systems that would **reduce the risk** of recurrence of the event or close call.

What is a Root Cause Analysis (RCA)?

- Inter-disciplinary process, involving experts from the frontline services, most closely involved in the processes/systems and who are the most familiar with the situation.
- Those involved in the event/close call cannot serve on the RCA Team.
- Focuses on prevention, *not* blame or punishment.

The RCA process should answer the following questions...

- What happened? (or *almost* happened)
- Why did it happen?

  What happened <u>that day</u>?

  What <u>usually</u> happens? (norms)

  What <u>should</u> have happened? (policies)

- What are we going to do to prevent it from happening again? (actions/outcomes)

When should an RCA be done?

- Joint Commission designated “sentinel events.”
- Any event or close call a facility decides merits that level of attention.
- Selected **Close Calls**
  - Serious & fundamental system implications
  - Potential for patient harm
- Aggregated minor incidents or close calls

When is RCA *NOT* appropriate?

- Intentionally unsafe acts.
- Criminal acts.
- Situations involving alcohol/substance abuse by employees.

RCA Team Responsibilities

- Team leader: Subject matter expert
  - Schedules meetings
  - Makes team assignments
  - Assist facilitator with reports
  - Ensures team participation
  - Presents RCA to Command
- Facilitator:
  - Guides the process/assist the team
  - Ensures reports are completed and submitted
- Team members: Process owners/subject matter experts
  - Determines the root causes
  - Develops the action plan

RCA Team Rules

- Everyone has a voice
- No “rank” in the RCA meetings
- Do not maintain paper or electronic copies of documents
- Do not discuss the specifics of the RCA with anyone other than the RCA team members and appropriate leadership

Part One

What happened?

Basic steps of the RCA process…

Part I: What happened?

- ✓ Description of the event/close call
- ✓ What happened that day?
- ✓ What usually happens?
- ✓ What should have happened?
- ✓ Who
- ✓ How
- ✓ What
- ✓ When
- ✓ Where
- ✓ Area/service impacted

Determining what happened...

- Map out the flow of the team's initial understanding of what happened and when it happened.
- Use flow chart to help the team determine what additional information is needed.
- Gather more information to fill in the blanks.

Part Two

Why did it happen?

Basic steps of the RCA process...

Part II: Why did it happen?

- ✓ Brainstorming and Flow Charting
  - Possible causes
  - Potential problems
  - Information gaps
- ✓ Safe simulation of the event/close call
- ✓ Document review
- ✓ Interviews
- ✓ Literature review

Determining why it happened...

- Simulate the events if necessary.
- Interview those staff that the team has determined may have information about the event or circumstances at the time.
- Use triggering and triage questions to help you drill down to the true root causes.
- Keep asking why until there are no more questions and no more possible answers!

Determining why it happened...

Suggested key areas to focus on during the drill down process:

- Human Factors - Communication
- Human Factors - Training
- Human Factors – Fatigue/Scheduling
- Environment / Equipment
- Rule/Policies/Procedures
- Barriers

Determining why it happened...

Finalizing and documenting your root causes and contributing factors...

- Team's findings about what must be fixed.
- If we control or eliminate "X," will we prevent or minimize future events?
- Remember that your Root Causes will guide everything else that follows (task assignment, actions, outcome measures).

Determining why it happened...

Finalizing and documenting your root causes and contributing factors...

- Strong root causes set up success.
- Weak root causes undo everything …
  - No root cause
  - Everything that should have been done, was done

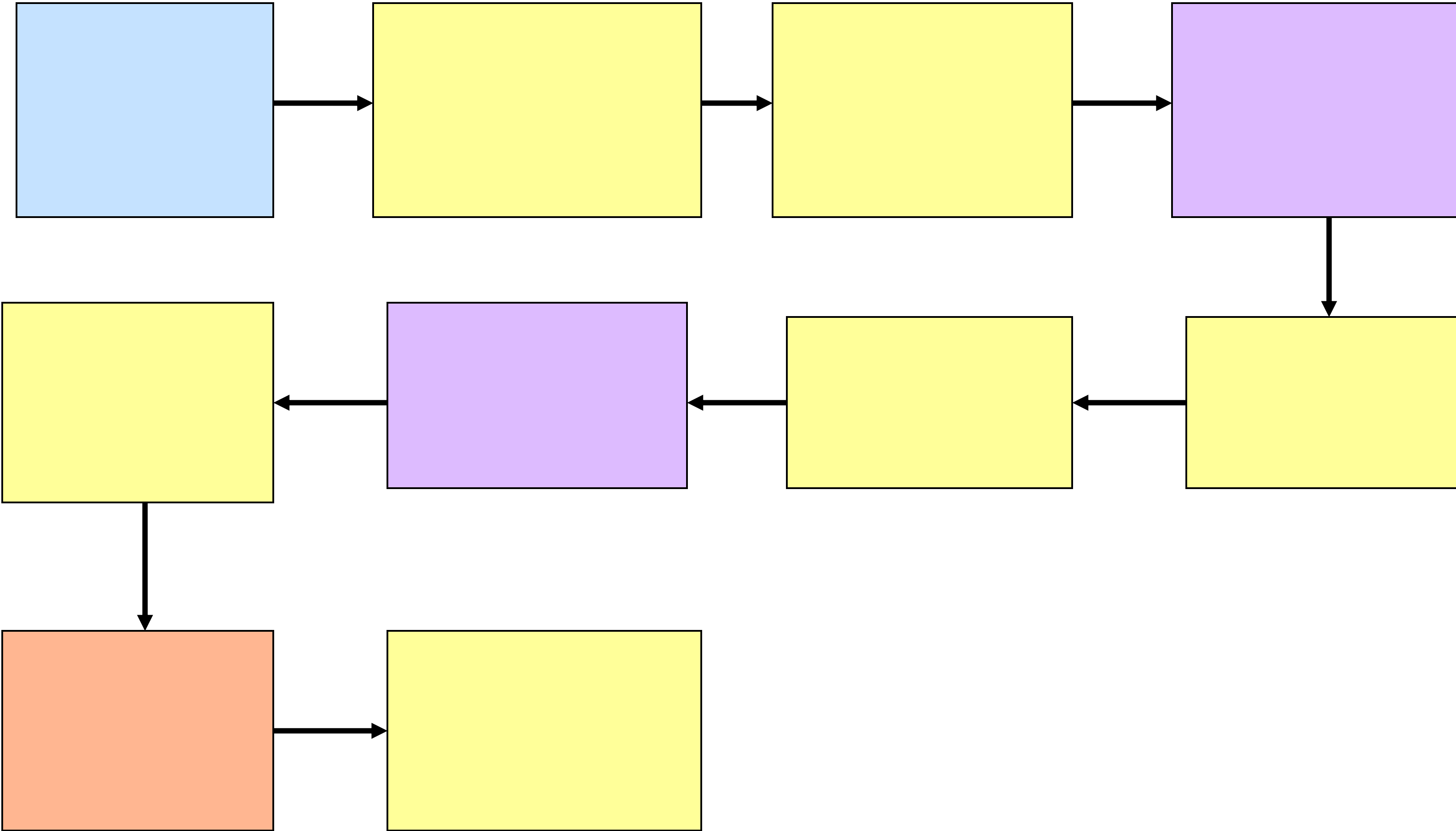
Determining why it happened...

- Clearly show the "cause and effect" relationship.
  - You should clearly show the link between the root cause and the adverse outcome

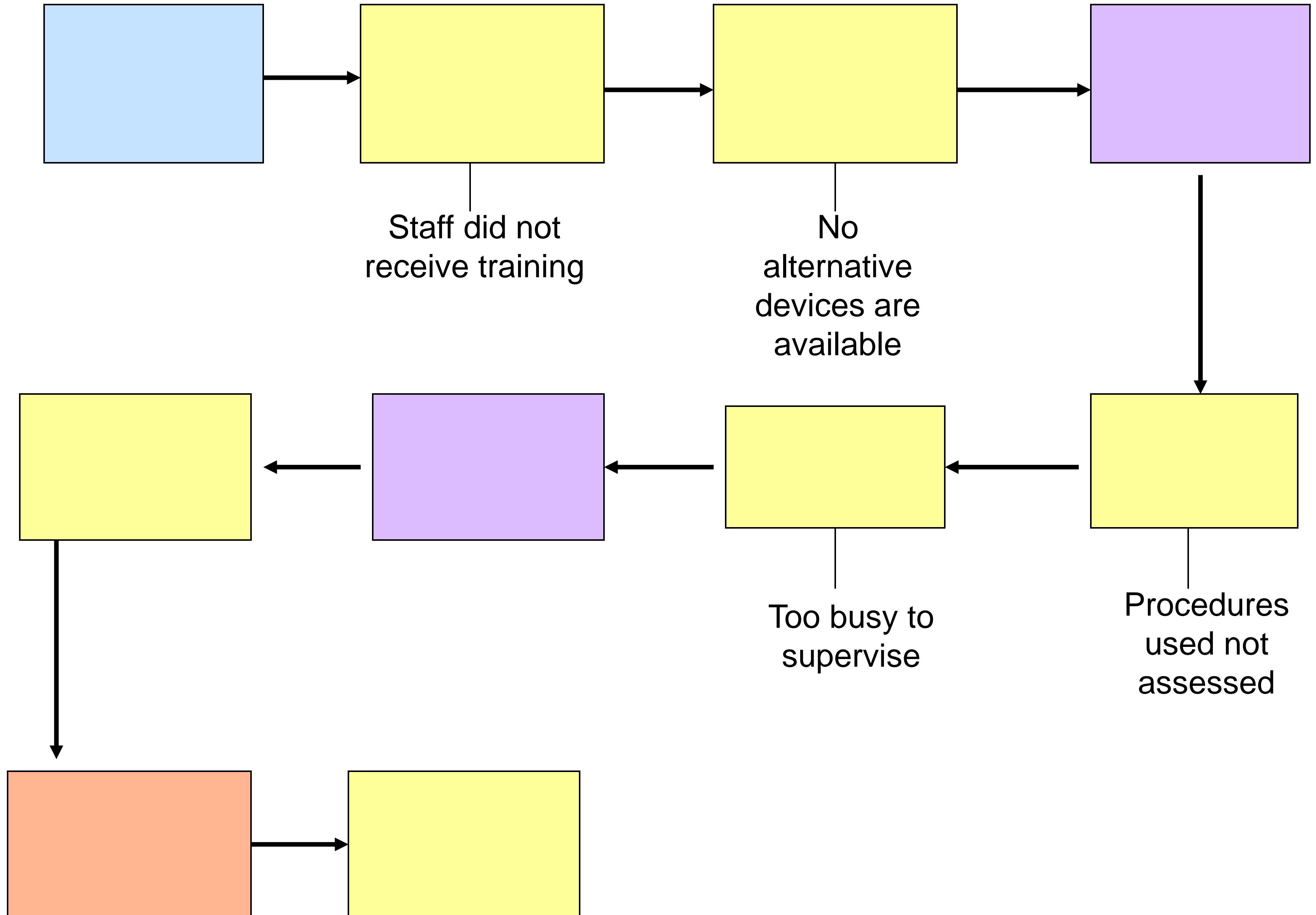
Flow Of Events

Flow Diagram

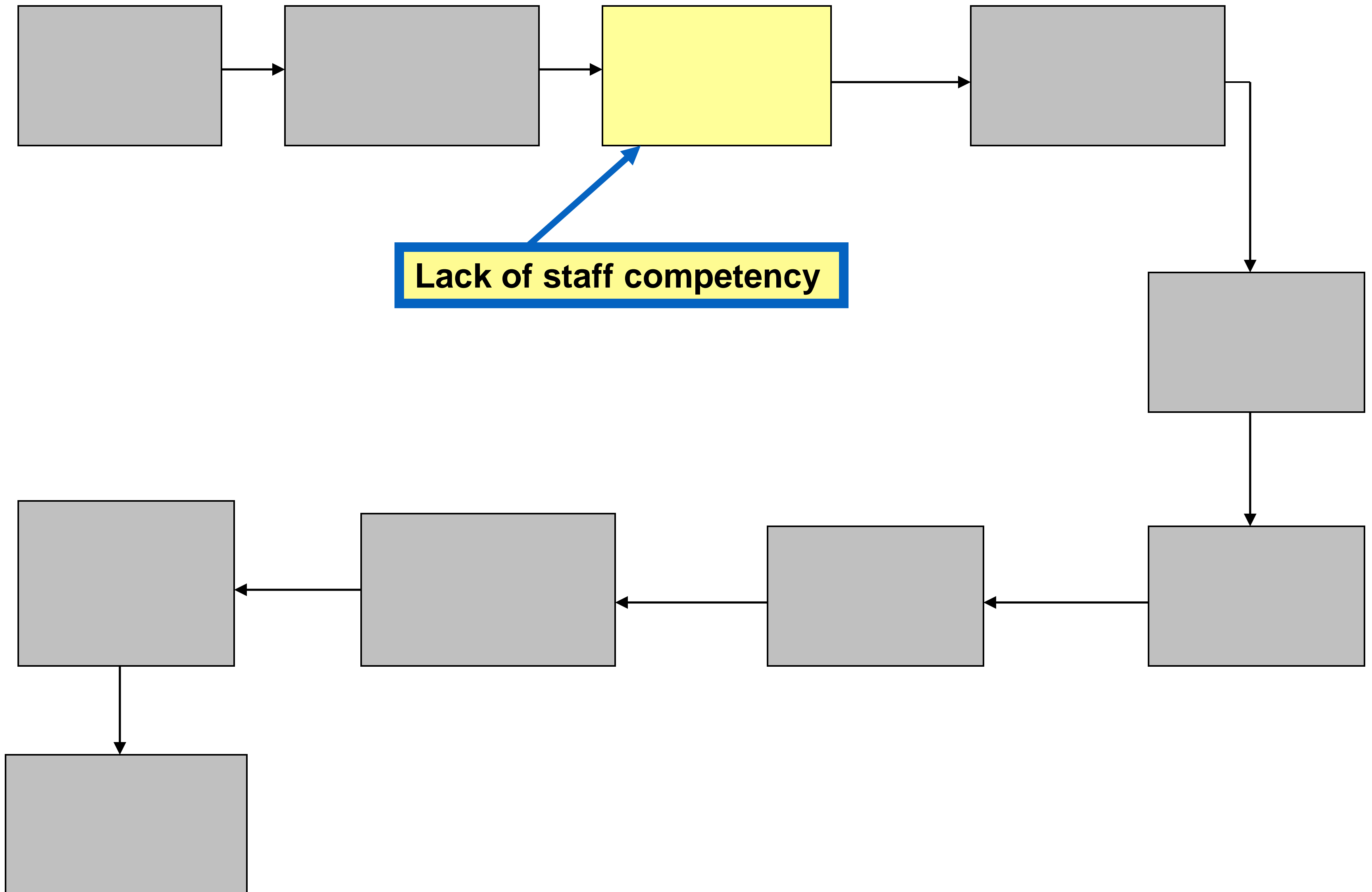
Flow Diagram-Leading up to Event



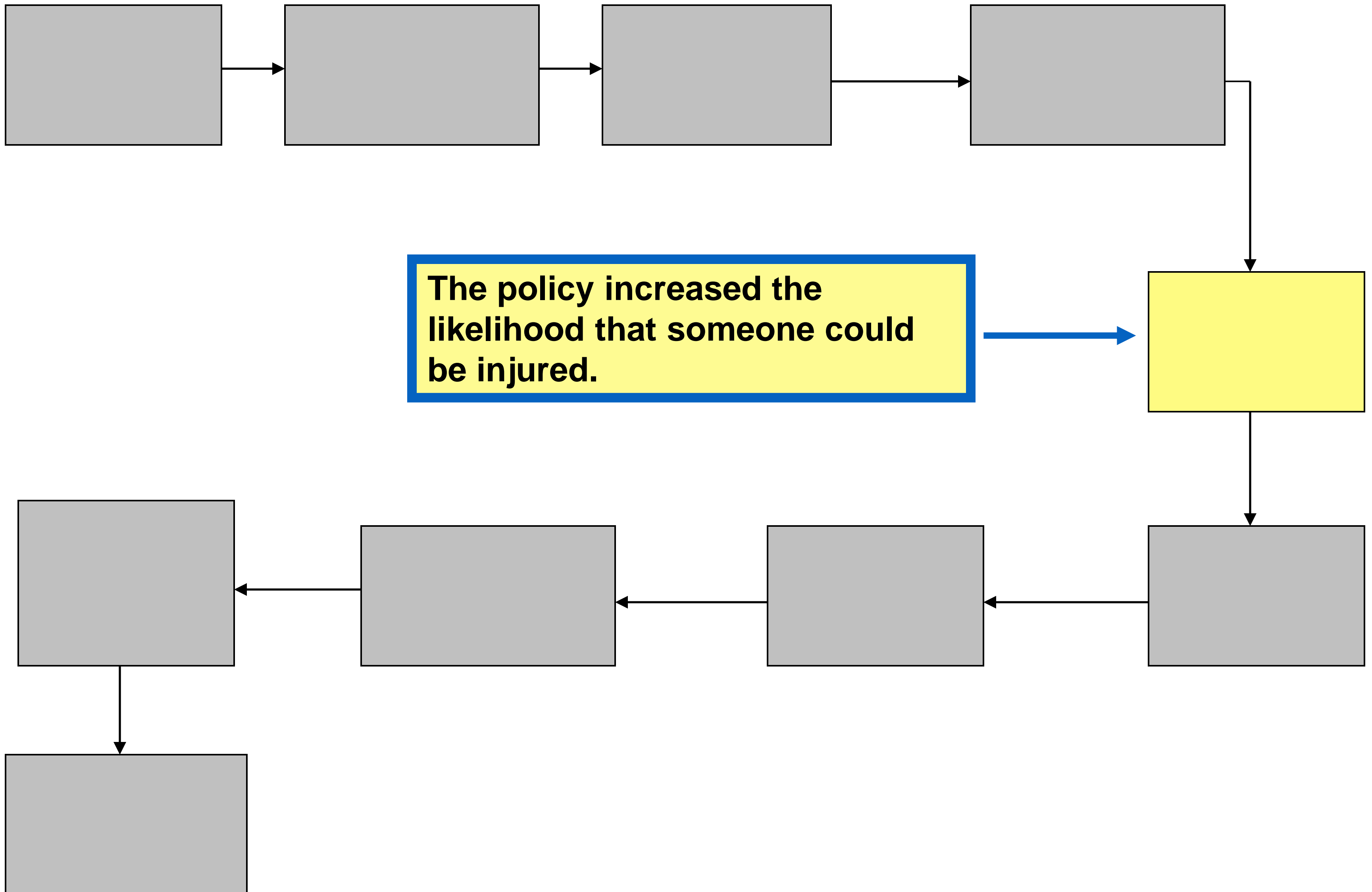
Flow Diagram-Contributing Factors



Final Flow Diagram/Root Causes



Final Flow Diagram / Root Causes



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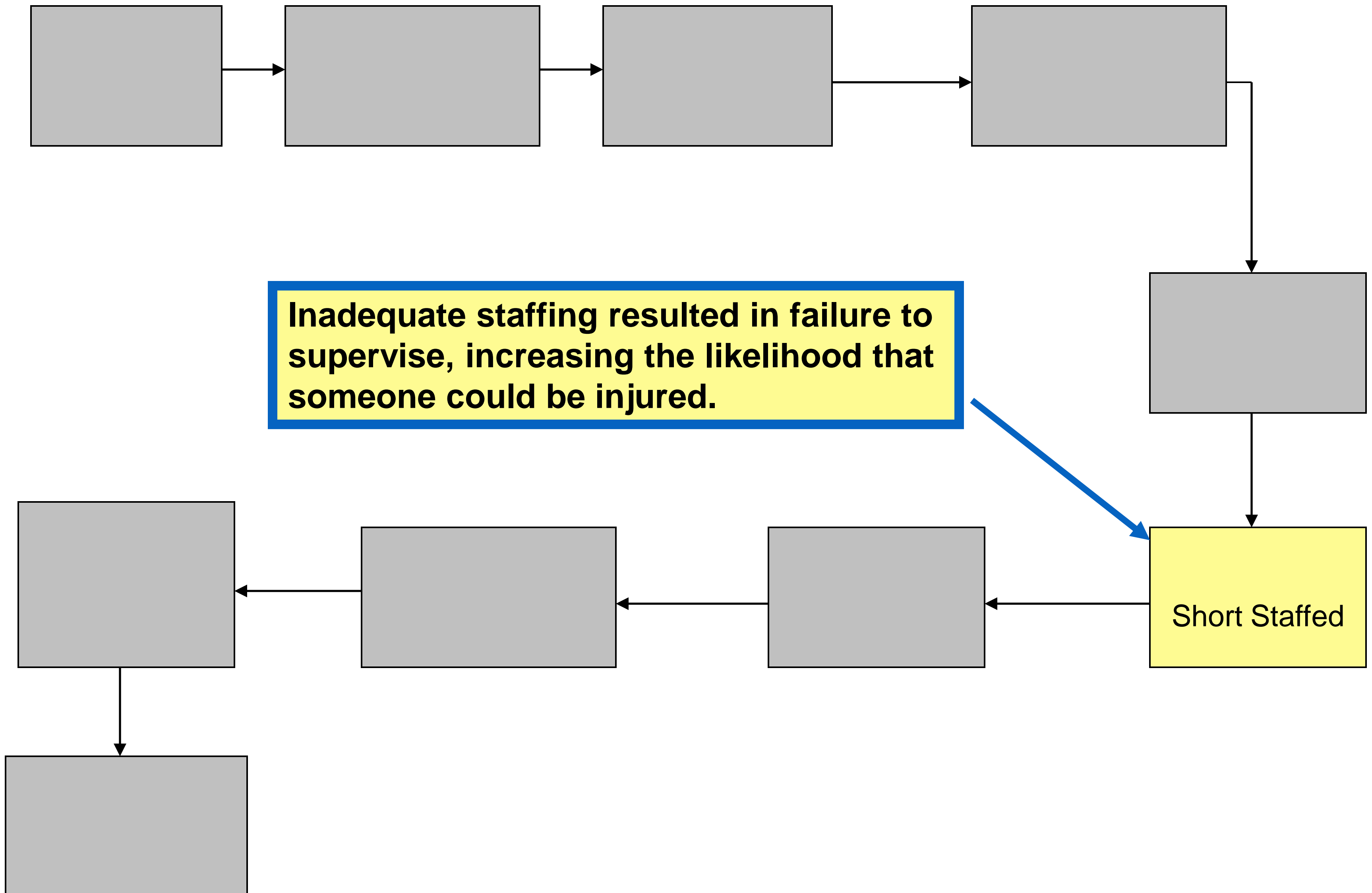

Part Three

Action Plans

Basic steps of the RCA process…

Part III: What are we going to do to prevent it from happening again?

- Development of actions and outcome measures

Preventing it from happening again

Developing action plans

- First, decide to either eliminate, control or accept the root cause.

- Determine what actions will be taken
  - Be specific, concrete and clear
  - Specifically address the root cause/contributing factor
  - Give them to a cold reader and confirm that they understand the actions and would know how to go about implementing them

- Designate who is responsible.

Preventing it from happening again

Developing action plans

- Actions are developed to prevent or minimize future adverse events or close calls.
  - How can we decrease the chance of the event or close call form occurring?
  - How can we decrease the injury if the event does occur?
  - How can involved devices, software, work process or work space be redesigned using a human factors approach?

Preventing it from happening again

Developing action plans

- Stronger actions
  - Architectural/physical plant changes
  - Simplify the process and remove unnecessary steps
  - Standardize equipment or process
  - New device with usability testing before
  - Tangible involvement & action by leadership in support of patient safety

Prevent it from happening again

Developing action plans

- Intermediate actions
  - Checklists/cognitive aids
  - Increase in staffing/decrease in workload
  - Readback
  - Enhanced documentation/communication
  - Software enhancements/modifications
  - Eliminate look and sound-a-likes
  - Eliminate/reduce distractions (sterile medical environment)

Prevent it from happening again

Developing action plans

- Weaker actions
  - Redundancy/double checks
  - Warnings and labels
  - New procedure/memorandum/policy
  - Training
  - Additional study/analysis

Measuring Success...

Establishing outcome measures

- Specific and quantifiable with defined numerators, denominators and thresholds
- Define the sampling strategy and the timeframe for the measurement
- Measure the effectiveness of your actions
- Set realistic thresholds for acceptable performance levels

Questions?

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