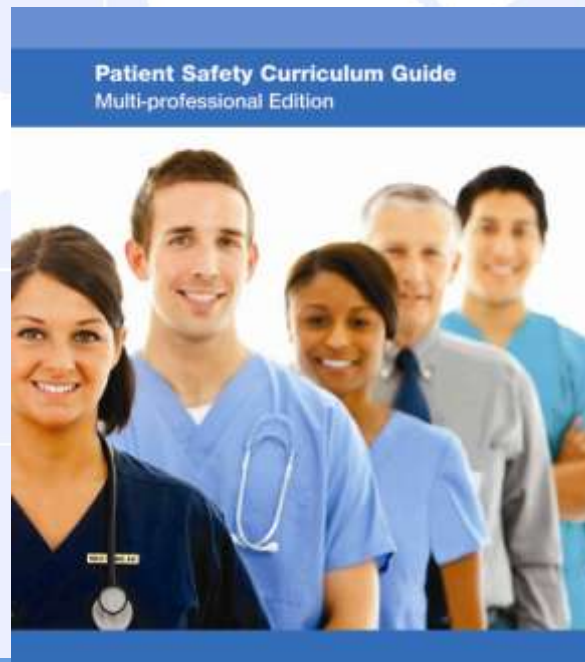


# Topic 5

## Learning from errors to prevent harm



# Learning objective

Understand the nature of error and how health-care providers can learn from errors to improve patient safety

# Knowledge requirement

Explain the terms:

- Error
- Violation
- Near miss
- Hindsight bias

# Performance requirements:

- Know the ways to learn from errors
- Participate in the analysis of an adverse event
- Practise strategies to reduce errors

# Error

- **A simple definition is:**

“Doing the wrong thing when meaning to do the right thing.”

*Bill Runciman*

- **A more formal definition is:**

“Planned sequences of mental or physical activities that fail to achieve their intended outcomes, when these failures cannot be attributed to the intervention of some chance agency.”

*James Reason*

# Note: violation

A deliberate deviation from an accepted protocol or standard of care

# Errors and outcomes

- Errors and outcomes are not inextricably linked:
  - Harm can befall a patient in the form of a complication of care without an error having occurred
  - Many errors occur that have no consequence for the patient as they are recognized before harm occurs

# Human factors principles remind us that:

- Error is the inevitable downside of having a brain!
- One definition of “human error” is “human nature”



# Human beings make mistakes

Regardless of their experience, intelligence, motivation or vigilance, people make mistakes

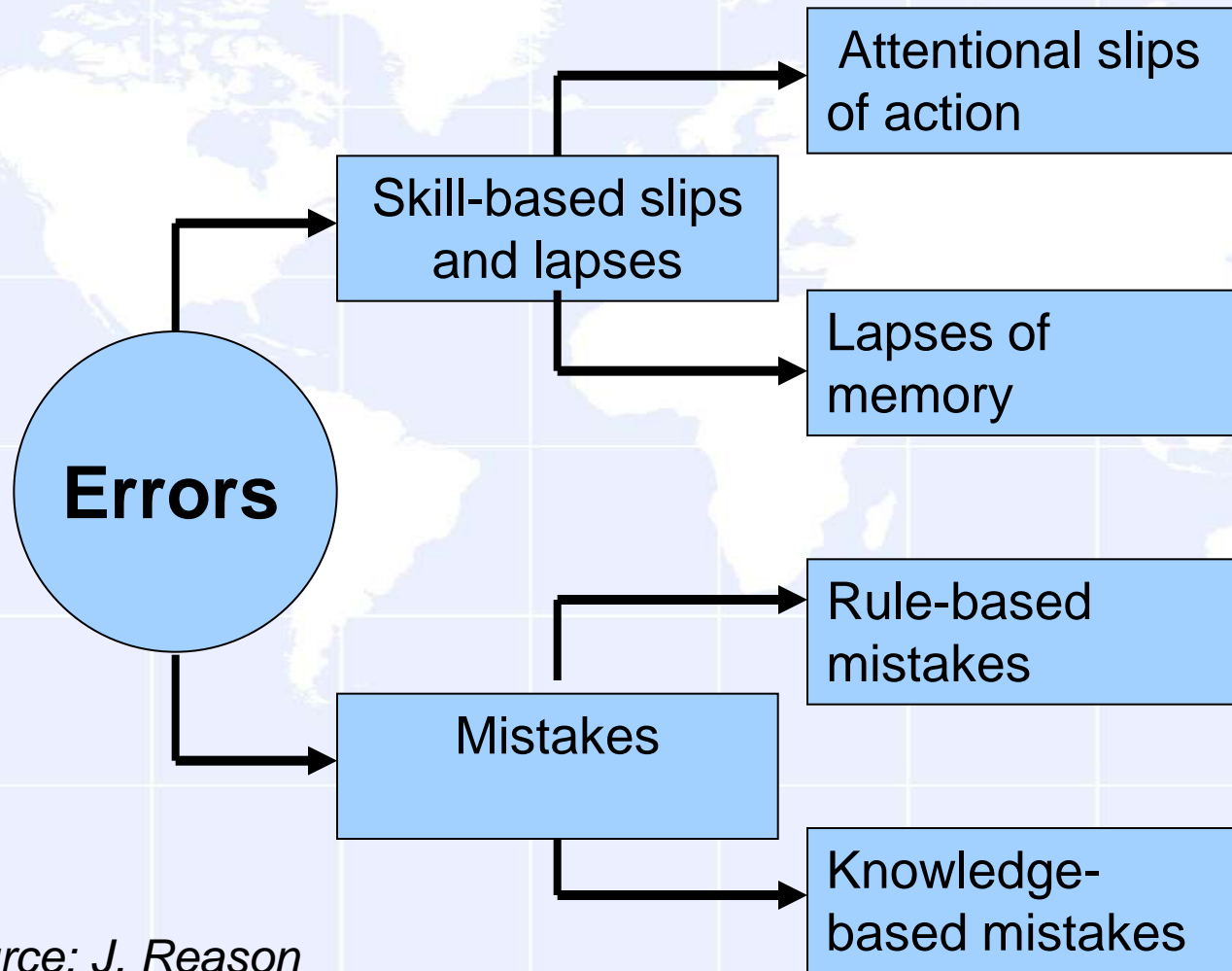
## Activity:

Think about and then discuss with your colleagues any “silly mistakes” you have made recently when you were *not* in your place of work or study - and why you think they happened

# The health-care context is problematic

- When errors occur in the workplace the consequences can be a problem for the patient...
  - .... a situation that is relatively unique to health care
- In all other respects there is nothing unique about “health-care” errors...
  - ... they are no different from the human factors problems that exist in settings outside health care

# Summary of the principal error types



Source: J. Reason

# Situations associated with an increased risk of error

- Inexperience\*
- Time pressures
- Inadequate checking
- Poor procedures
- Inadequate information

\* Especially if combined with lack of supervision

# Individual factors that predispose to error

- Limited memory capacity
- Further reduced by:
  - fatigue
  - stress
  - hunger
  - illness
  - language or cultural factors
  - hazardous attitudes

# Don't forget ....

If you're

- **H**ungry
- **A**ngry
- **L**ate or
- **T**ired .....

**H  
A  
L  
T**

# A performance-shaping factors “checklist”

- **I** Illness
- **M** Medication: prescription, over-the-counter and others
- **S** Stress
- **A** Alcohol
- **F** Fatigue
- **E** Emotion

**Am I safe to work today?**

# Incident reporting/monitoring

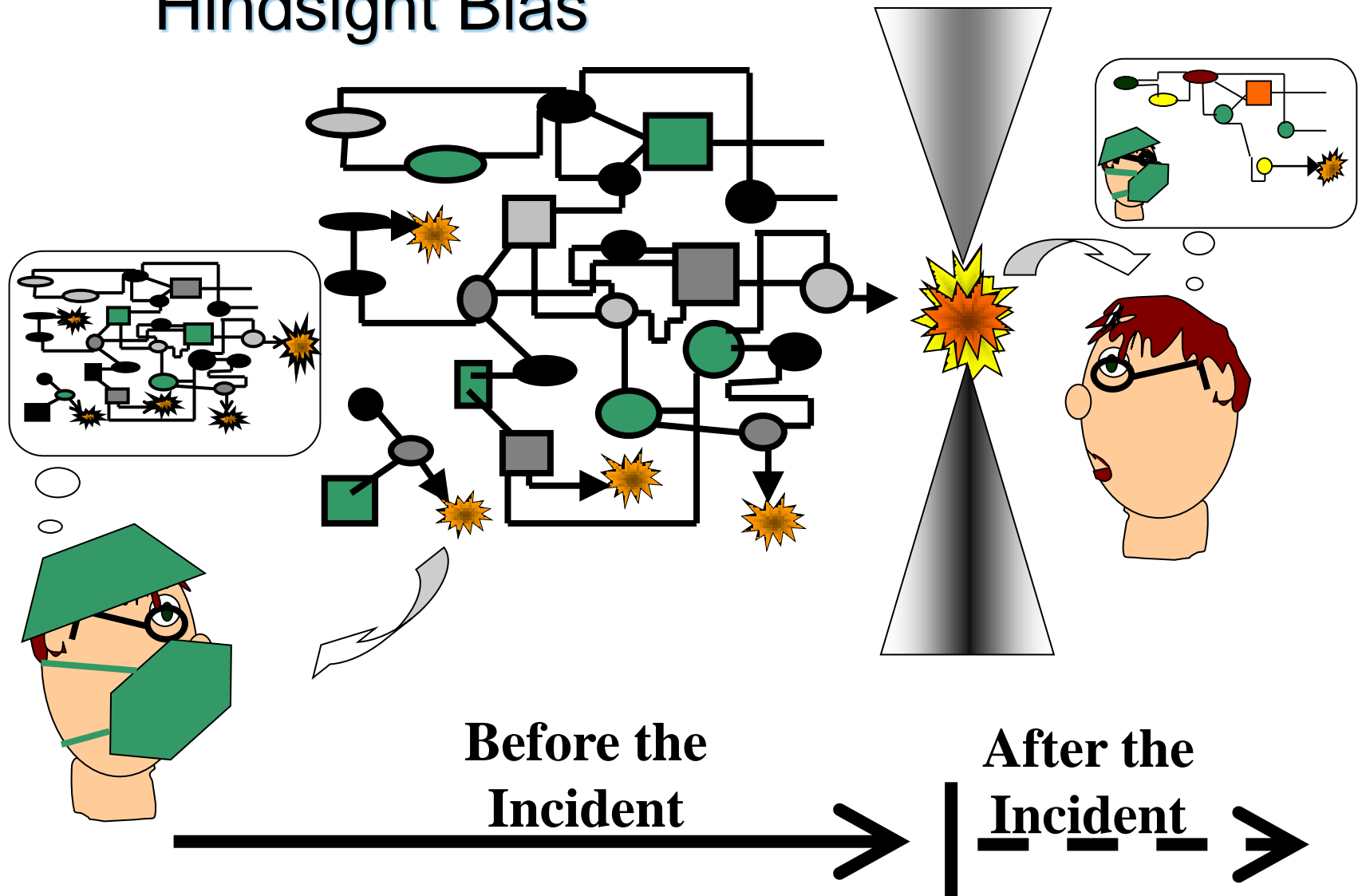
- Involves collecting and analyzing information about any event that could have harmed or did harm anyone in the organization
- A fundamental component of an organization's ability to learn from error



# Removing error traps

- A primary function of an incident reporting system is to identify recurring problem areas - *known as “error traps” (J.Reason)*
- Identifying and removing these traps is one of the main functions of error management

# Hindsight Bias



*Modified from R. Cook, 2005, A Brief Look at the New Look in Complex System Failure, Error, Safety and Resilience*

# Culture: a workable definition

'Shared values (what is important) and beliefs (how things work) that interact with an organization's structure and control systems to produce behavioural norms (the way we do things around here)'

*James Reason*

# Culture in the workplace

- It is hard to “change the world” as a junior health-care professional
- *But ...*
  - ...you can be on the look out for ways to improve the “system”
  - ... you can contribute to the culture in your work environment

# Incident reporting and monitoring strategies

- Successful strategies include:
  - anonymous reporting
  - timely feedback
  - open acknowledgement of successes resulting from incident reporting
  - reporting of near misses
    - “free” lessons can be learned
    - system improvements can be instituted as a result of the investigation but at no “cost” to a patient

*Source: E.B. Larson*

# Root cause analysis (RCA)

- A structured approach to incident analysis
- Established by the National Center for Patient Safety of the US Department of Veterans Affairs

<http://www.va.gov/NCPS/curriculum/RCA/index.html>

# RCA model (1)

A rigorous, confidential approach to answering:

- What happened?
- Who was involved?
- When did it happen?
- Where did it happen?
- How severe was the actual or potential harm?
- What is the likelihood of recurrence?
- What were the consequences?

# RCA model (2)

- Focuses on prevention, not blame or punishment
- Focuses on system level vulnerabilities rather than individual performance
- It examines multiple factors such as:
  - communication
  - environment/equipment
  - training
  - rules/policies/procedures
  - fatigue/scheduling
  - barriers



# Personal error reduction strategies

- Know yourself: eat well, sleep well, look after yourself
- Know your environment
- Know your task(s)
- Preparation and planning; “What if ...?”
- Build “checks” into your routine
- ***Ask if you don’t know!***

# Mental preparedness

- Assume that errors can and will occur
- Identify those circumstances most likely to breed error
- Have contingencies in place to cope with problems, interruptions and distractions
- Mentally rehearse complex procedures

*James Reason*

# Summary

- Health-care error is a complex issue, but error itself is an *inevitable* part of the human condition
- Learning from error is more productive if it is considered at an organizational level
- Root cause analysis is a highly structured system approach to incident analysis