Topic 5
Understanding and and learning from error

Learning objective

Understand the nature of error and how health care can learn from error 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."

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."

Reason

Note: violation

A deliberate deviation from an accepted protocol or standard of care

Error and outcome

- error and outcome 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

Error is the *inevitable* downside of having a brain!

One definition of “human error” is “human nature”.

Human beings make “silly” mistakes

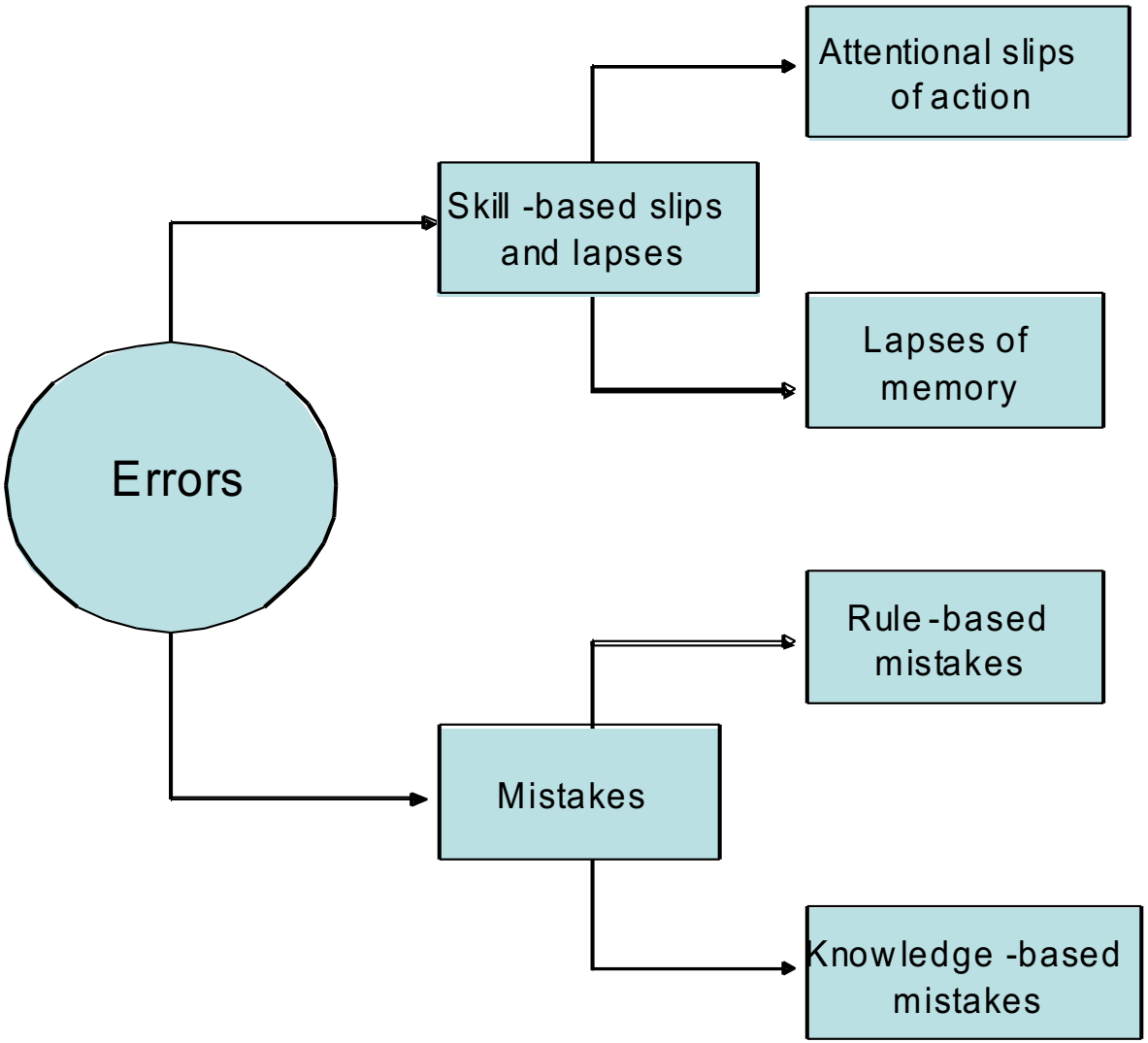
Regardless of their experience, intelligence, motivation or vigilance, people make mistakes

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

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 "medical" errors
  - they are no different from the human factors problems that exist in settings outside health care


Errors
Skill -based slips and lapses
Attentional slips of action
Lapses of memory
Mistakes
Rule -based mistakes
Knowledge -based mistakes

Reason

Situations associated with an increased risk of error

- unfamiliarity with the task*
- inexperience*
- shortage of time
- inadequate checking
- poor procedures
- poor human equipment interface

Vincent

*** 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, alcohol and others
- S Stress
- A Alcohol
- F Fatigue
- E Emotion

Am I safe to work today?

Jensen, 1987

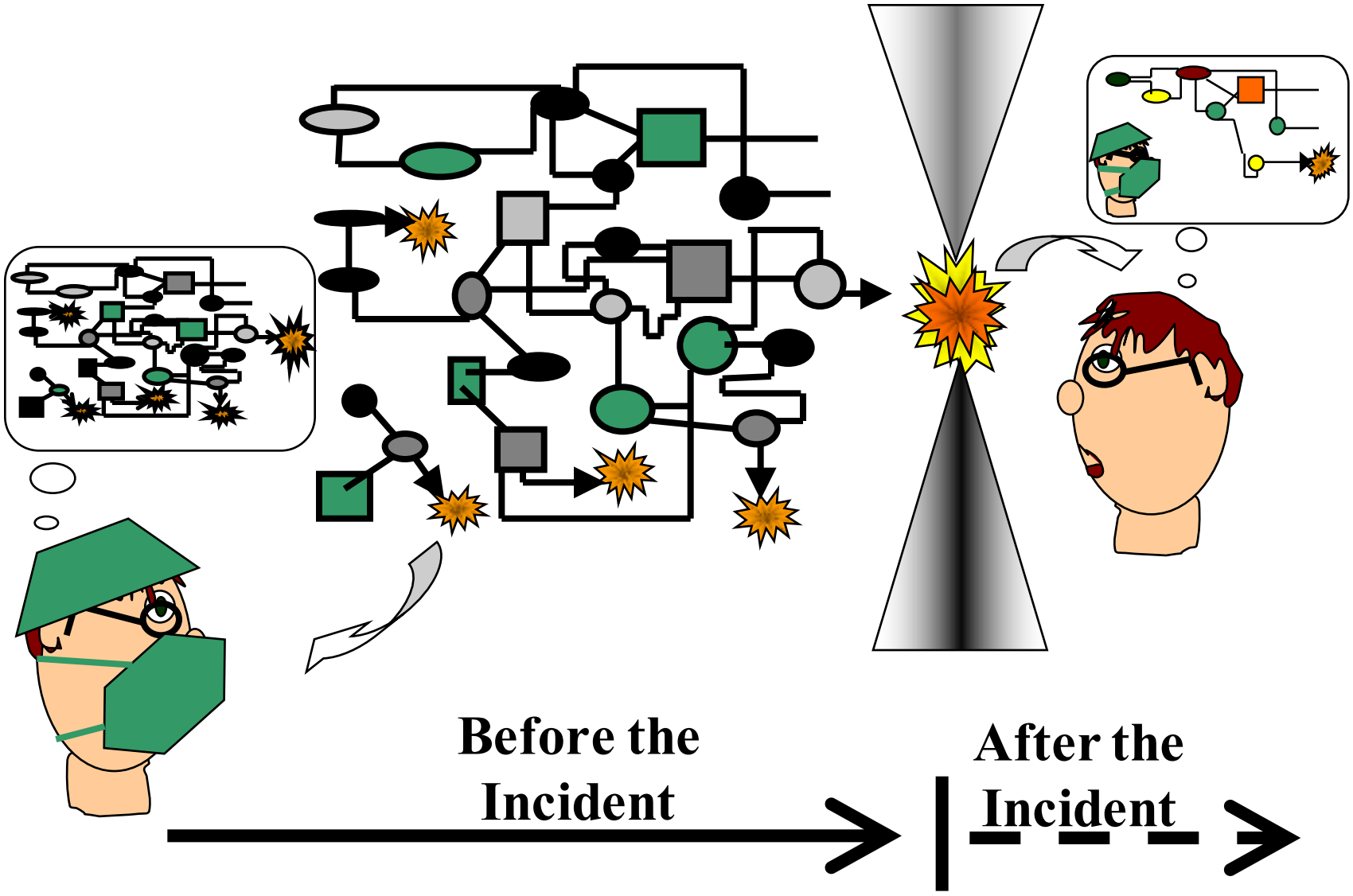
Incident monitoring

- involves collecting and analysing information about any events 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"* (Reason)

- identifying and removing these traps is one of the main functions of error management



Modified from Cook, 1997

Culture: a workable definition (Reason)

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)

Culture in the workplace

- it is hard to “change the world” as a junior doctor
- *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

- others 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

Larson

Root cause analysis

Established by the US Department of Veterans Affairs
National Center for Patient Safety

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

RCA model

- a rigorous, confidential approach to answering:
  - What happened?
  - Why did it happen?
  - What are we going to do to prevent it from happening again?
  - How will we know that our actions improved patient safety?

RCA model

- focuses on prevention, not blame or punishment
- focuses on system level vulnerabilities rather than individual performance

- 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
- 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

Reason

Summary

- medical 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