The Psychology of Incidents and Investigations

Claire Philp
Agenda

• Human error
• Understanding behaviours
• Human limitations during investigations
• Conclusions
Human Error
• ‘Human error’ – what do we mean?
Definition

• “people operating within our systems in a way which we do not desire”
Police: 'Human error' caused teen to fall 25 feet from New York park ride

New York transport officials say the subway derailment in Harlem that left 39 injured was caused by 'human error' and not a track defect

Amtrak derailment caused by human error: speed

Human Error, Not Tech, Is Often to Blame for Cyberattacks
The ‘Human Error’ problem

- ‘Human error’ provides the public with a simple headline to draw a line underneath major disasters
- But beneath this banner the lessons and the subtleties are lost
- Despite the well-documented problems with the use of the term, ‘human error’ doesn’t seem to be going anywhere fast
How do we talk to clients about ‘Human Error?’

- We need to maximise organisational learning
- Organisations need to respond appropriately
- We need to move the focus away from blame
- We need to drive behaviour change
Let’s play a game

You are in an area where wearing a high visibility jacket is mandatory

You see someone in the area not wearing a jacket

Why?
I knew the rule
I didn’t intend to break the rule
Something went wrong
Knowledge-based errors

I didn’t know the rule
Or I thought I knew the rule but I was wrong
Or I applied the wrong rule in this circumstance
I didn’t intend to break the rule
Violations

I knew the rule
I intentionally broke the rule
Error categorisation

• Adapted from Rasmussen and Reason’s categories
• Small number of categories
• Simple language
What other factors are at play?

Violations aren’t inherently bad

Sometimes we are working around an imperfect system, or driven by the system to make the wrong decisions

The COM-B model can shed some light on where our systems might set us up to fail
Understanding behaviours
Understanding behaviours

- There are lots of models to explain behaviour
- We use a simple model that you can use when you talk to colleagues
- It provides a framework to explore why people do the things they do
- It supports the development of a Just Culture
COM-B Model

Adapted from the COM-B model, by Michie et al, 2011
Capability: I know how to; I can concentrate for long enough; I’m clever enough; I’ve been appropriately trained; I am physically, psychologically, sociologically able
Opportunity: I can because I have enough time and resources; because it’s possible to do it where I am; because I have reminders in my surroundings; because the equipment I have allows me to; because ‘it's the done thing’; we all do it; my boss/others want me to; I am rewarded for it...
Motivation: I’ve thought about it and I want to; I think it’s a good thing; I’m *not* thinking about it but my response is driven by things like being shy; being angry; being hungry; habits; simple reflexes...
Applying COM-B reactively

- We can use the model (COM-B) after an incident to talk to our colleagues about what went wrong, using the model as a framework.
- This provides us with a starting point to create a targeted action plan to redirect behaviour.
Human limitations in investigations
Biases

- Understanding errors and behaviours is important in accident investigation
- We expect managers to make sound judgements
- We are all susceptible to conscious and unconscious biases
- A lack of understanding compounds this
Examples of Biases

Hindsight bias - once you know the outcome, the failures are obvious and seem avoidable

Confirmation bias – if you investigate with a pre-formed idea of what you think happened, you will only notice the evidence that supports that idea

Attribution bias – overemphasising personality factors in others’ mistakes and underemphasising situational factors (vice versa when looking at their own mistakes)

Availability bias - certain vivid memories, experiences, facts come to mind more easily to drive our decision making
Conclusions
Why is this important?

- Simple tools so that anyone can look beyond errors and rule-breaking and tackle the deeper issues
- Appropriate responses and controls vary by error 'type'
- Tools enhance the way managers approach non-compliance
- More effective responses drive behavioural change in employees
- Investigators should be aware of their own biases
Thank you

Any questions?