HEALTHCARE SAFETY
INVESTIGATION BRANCH

Safety II: An approach to national healthcare safety investigations

Mel Ottewill and Deinniol Owens, National Investigators

3rd International Workshop on Safety-II in Practice

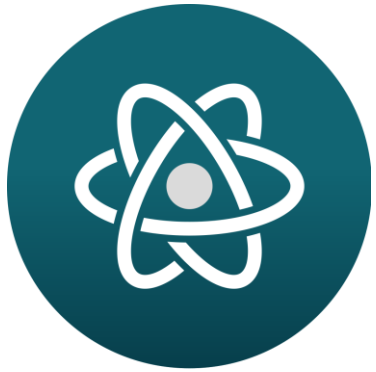
13 October 2020

About us

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

Independent safety investigations in NHS-funded care

Do not apportion blame or liability



Focus on system-level (policy and regulatory) change

Professionalise the patient safety investigator role

Background

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- In 2015, the House of Commons Public Administration Select Committee (PASC) recommended the establishment of a national independent patient safety investigation body.
- Drew on a wide range of evidence, including a key paper by Dr Carl Macrae and Professor Charles Vincent Learning from failure: the need for independent safety investigation in healthcare.
- That paper looked at the role of independent safety investigation bodies in other ‘safety critical’ industries (such as the AAIB, RAIB and MAIB) and suggested a similar approach for healthcare.

Challenges

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- Healthcare is a complex dynamic sociotechnical system.
- Many traditional artifacts and approaches from ‘accident investigation’ in other industries are not present. For example:
  - No ‘wreckage’.
  - No recording devices.
  - Incident may not be noted until well after the event.
  - Lack of capacity and expertise in safety science at the front line.
- These challenges have required HSIB to adapt its approach to independent healthcare safety investigation.
- Led to many HSIB investigations adopting aspects of Safety-II in incident investigation.

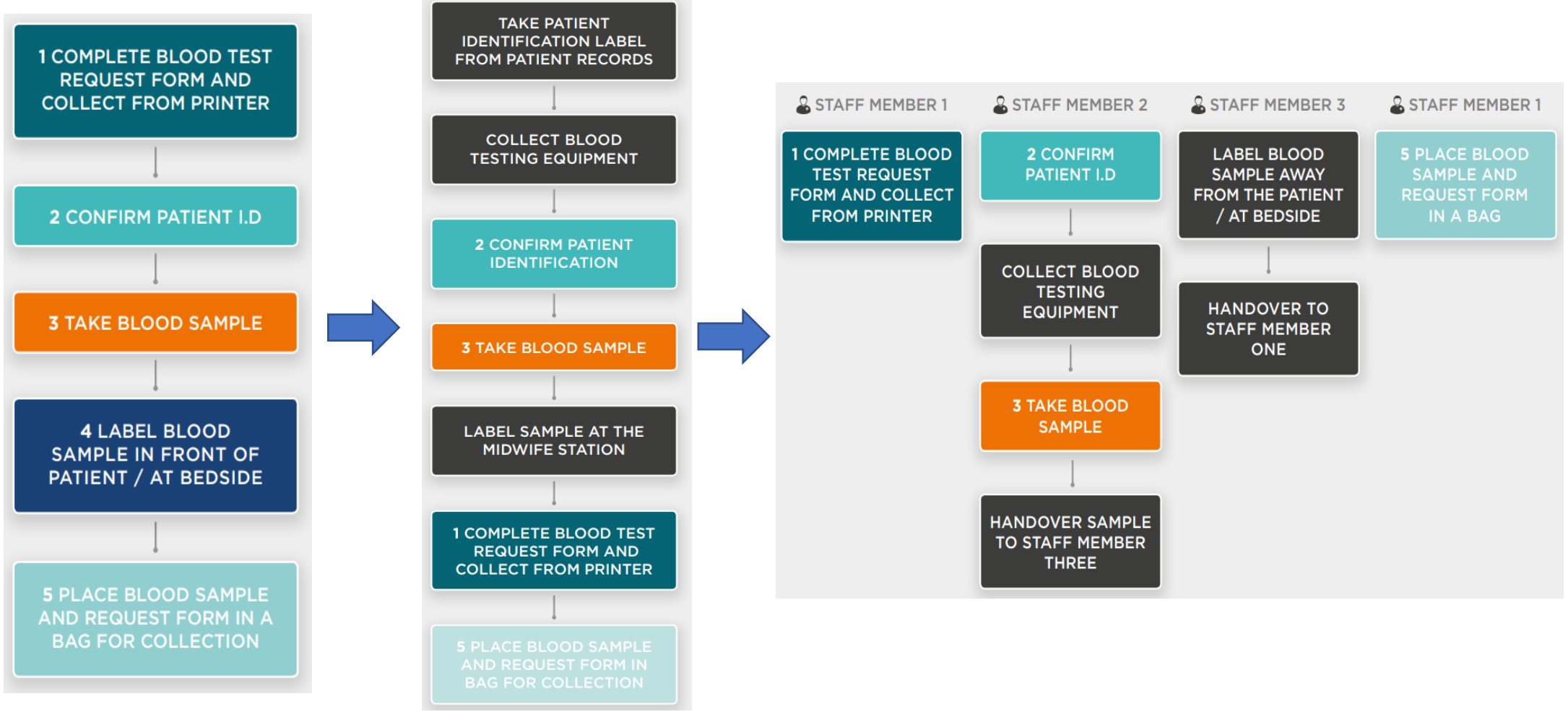
I2019/003
Wrong patient details on blood sample

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- The investigation looked at the mislabelling of a blood sample in a maternity unit.
- Investigation set out to understand ‘work as done’ vs ‘work as imagined’.
- Focused on:
  - observations of staff within the working environment
  - informal interviews with staff who collected blood samples
  - cognitive walk through/simulation type interactions with staff.
- Built on academic work “Blood sampling in acute hospital care settings: A Human Factors Review” (Pickup et al, 2016)

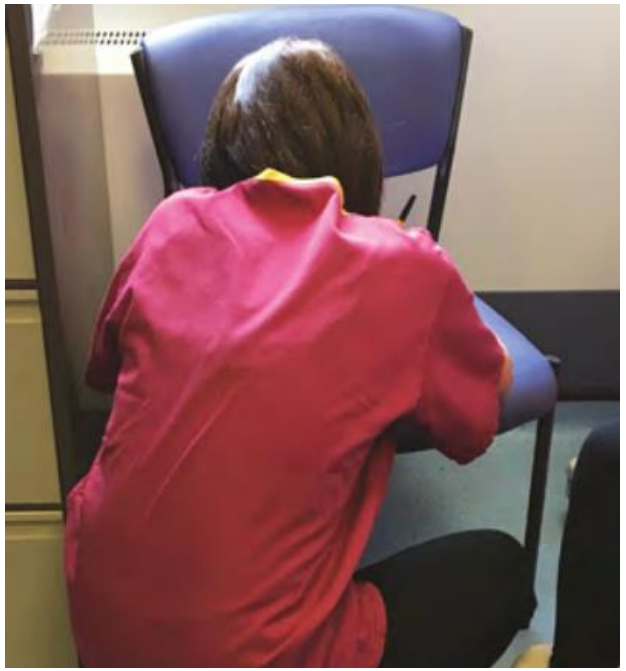
Work as Prescribed vs Work as Done

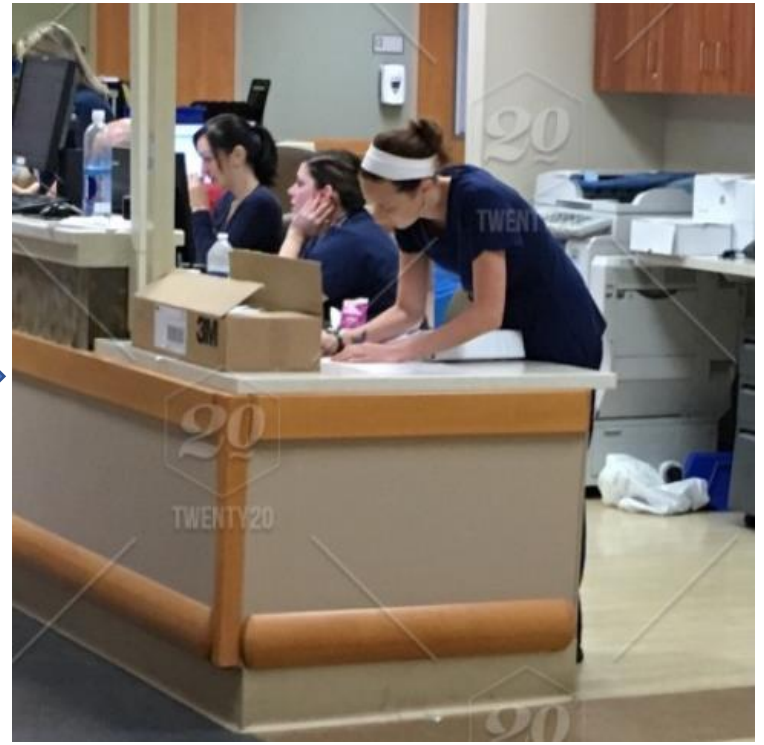
HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH



Adaptations to blood sample labelling

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH





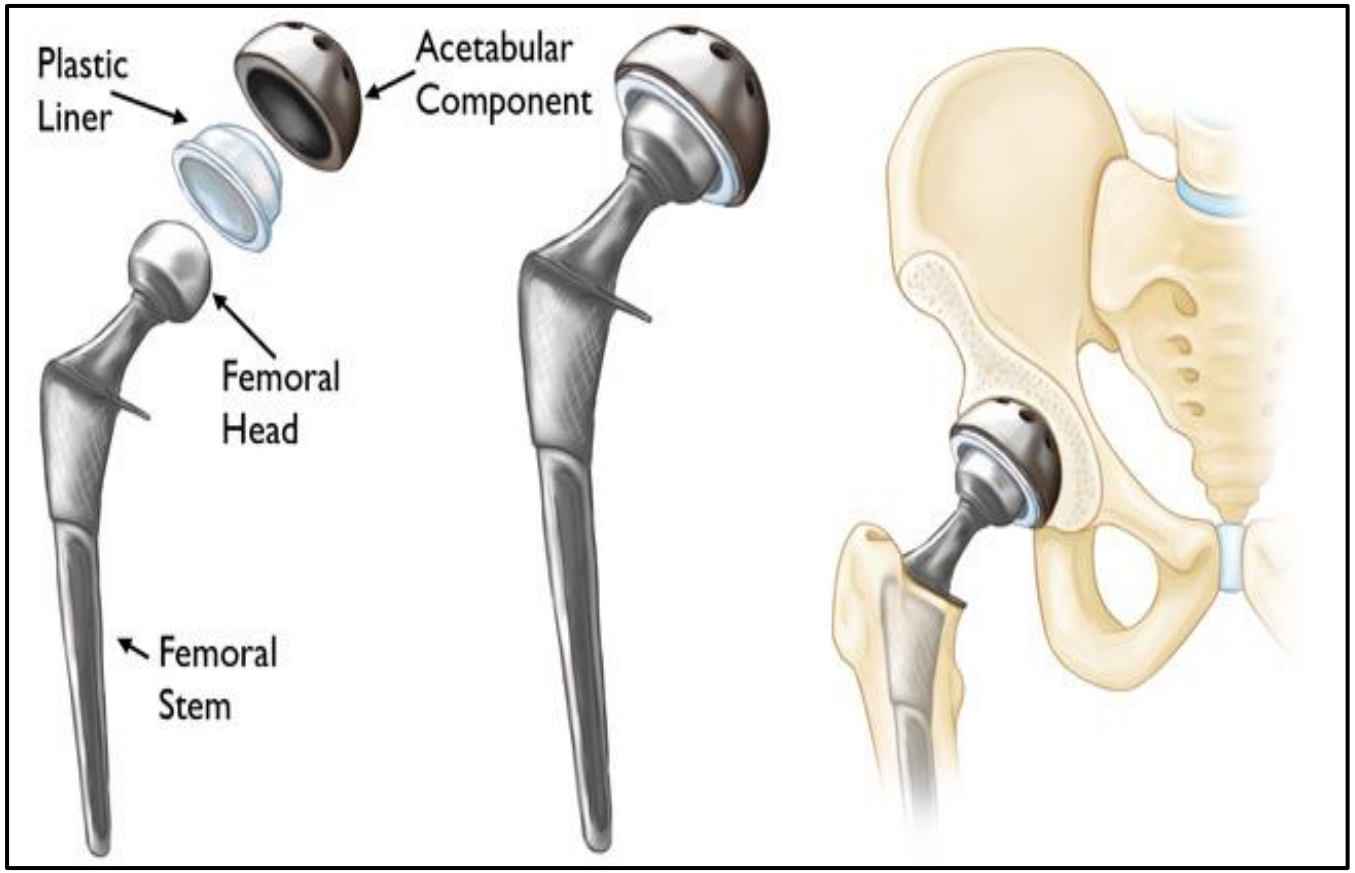
I2017/010: Implantation of wrong prostheses during joint replacement surgery

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

Terms of reference included:

- Understanding the contextual, environmental and other factors which influence identification of the correct prosthesis (**why is it correct the majority of the time**)

- Identify potential opportunities to reduce the risk of implantation of the wrong prosthesis (**learning from why it goes right…)**



Selection of wrong prosthesis (reference event)

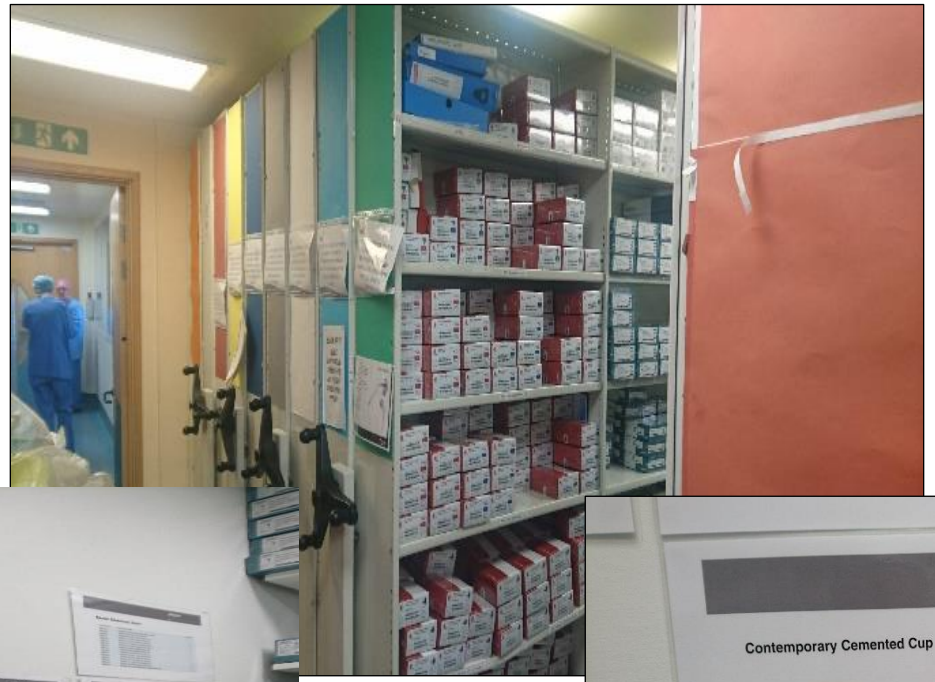
HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

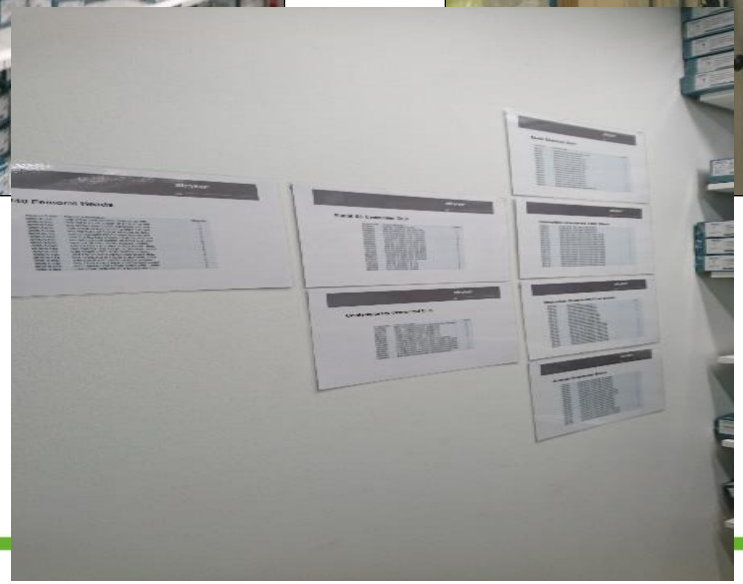
Theatre environment – work as done

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

Complexity of equipment

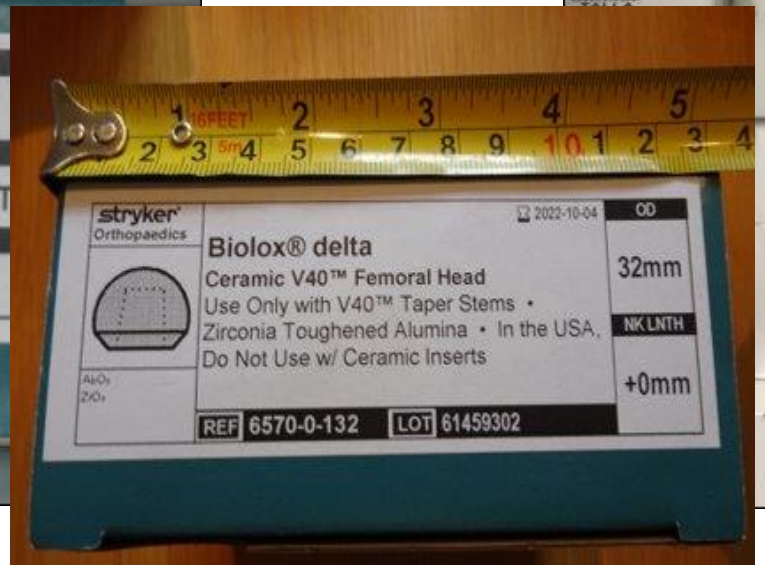
HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH





Labelling and packaging

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH



Adaptions to increase safety

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- Variability in checking process
- Local adaptions such as a board (hand)

"when you leave theatre you often get interrupted and then your thought is disturbed…was it 32mm or 34mm he wanted"

- Adaptation common across hospitals to counter confirmation bias

"what you have in your head may not be what's on the box"

Denmark

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

What have we learnt?

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- Adopting a Safety-II approach identifies local adaptations in response to challenges faced by staff in their local environment.
- The adaptations represented the normal or routine work completed by staff that largely helped ensure efficiency and safety.
- Investigations have highlighted a range of factors to consider when seeking to mitigate undesirable adaptations:
  - Physical environment and task layout
  - Equipment and technological support systems
  - Staff workload and fatigue
  - Teamwork and communication
- Our reports have shared knowledge about safety science methods and showed how a Safety-II approach can improve understanding and learning from incidents.

Where do we go from here?

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

- What is realistic to ask of investigators in hospitals and other healthcare environments in adopting a Safety-II approach?
- Complexity of healthcare involves multiple and dynamic ways in which interventions and contexts interact across time and space. How do you observe this?
- How do you balance a Safety-I approach with a Safety-II approach to investigation?
- Safety-II can help with understanding why things go right, but can it help create the conditions needed to make positive change more likely?
- How do hospital trusts square the fact that work as done is often different from work as prescribed, which is often dictated by national guidance?
- How does HSIB square the need to make national level recommendations to improve safety with the need to recognise the importance of local adaptations?

Links to HSIB reports

HSIB
HEALTHCARE SAFETY INVESTIGATION BRANCH

I2019/003: Wrong patient details on blood sample
https://www.hsib.org.uk/investigations-cases/wrong-patient-details-blood-sample/final-report/

I2017/010: Implantation of wrong prostheses during joint replacement surgery

https://www.hsib.org.uk/investigations-cases/implantation-wrong-prostheses-during-joint-replacement-surgery/final-report/