Identifying hazards in healthcare

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&

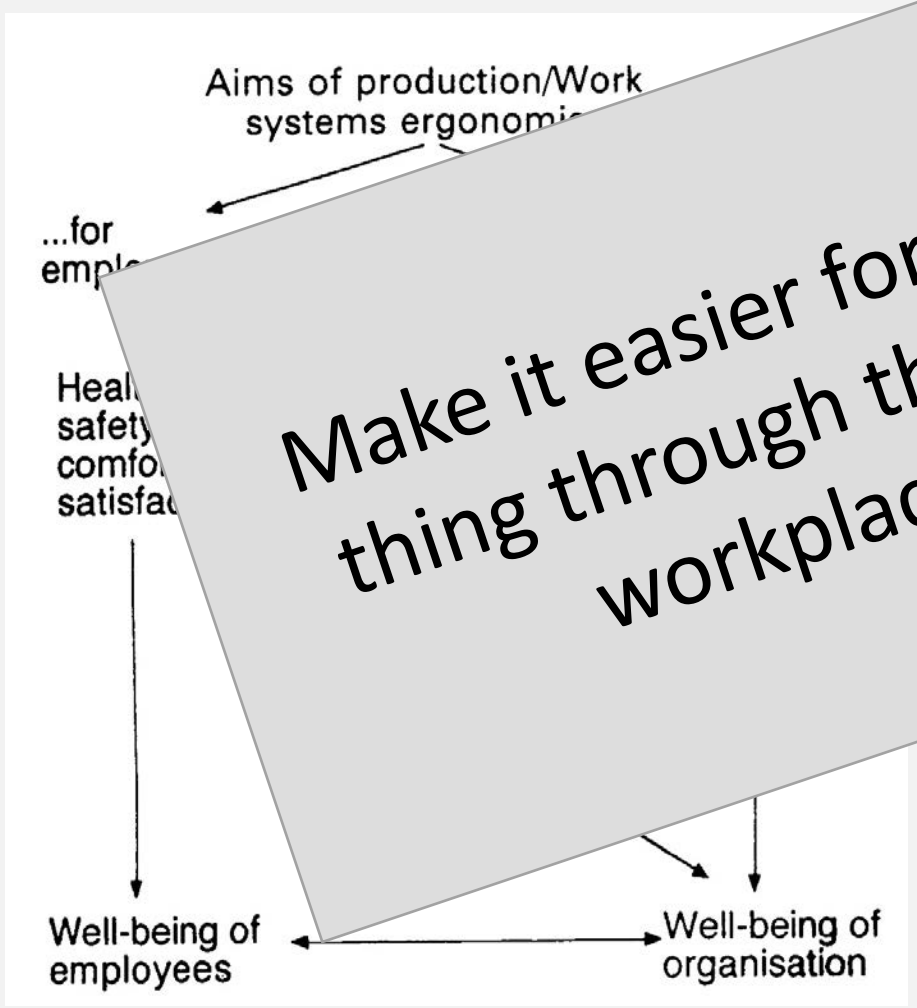
Dr Cath Ward

Chartered Institute of Ergonomics and Human Factors

- 1949 – First professional Ergonomics body formed
- 2015 – Chartered status awarded – 412 Chartered professionals
- Professional UK regulator for HFE
- Education and training accreditation
- Healthcare and Pharmacy special interest groups

http://www.ergonomics.org.uk/
http://www.ergonomics.org.uk/wp-content/uploads/2015/05/CIEHF-case-studies-FINAL-1.pdf

What does HFE do?



Make it easier for people to do the right thing through the design of their work, workplace and, equipment

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CIEHF

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World news

Eight deaths linked to oxy Italian hospital

- Supply tube switched with fatal anaesthetic
- Heart unit in use for 17 days before error spotted

Tom Kington

Monday 7 May 200

A face mask w
oxygen has b
Italian corona
unit since it c
Doctors at Ca
oxygen and a
death on Frid
arrhythmia.

Patients die in S

Tuesday, May 8, 2007 - 12:55

Like 0 Tweet 0

Italy was hit by a fresh p
southern hospital who w

Two patients died last week
being fed nitrous oxide, the

Prosecutors suspect the sam
coronary intensive care ward

A five-year-old boy and an infant died after they wer
instead of oxygen at government-run MY Hospital i
the following 2 deaths, M.Y.Hospital, May 2016 d his la

serious errors involved the misc
lines; these occurred in four cases
by defects in the sockets. Still m
four cases of ignition of alu
regulators after the oxygen high
of the regulator, was opened rapid
users. Two non-fatal cases of cor
lines with nitrous oxide were not

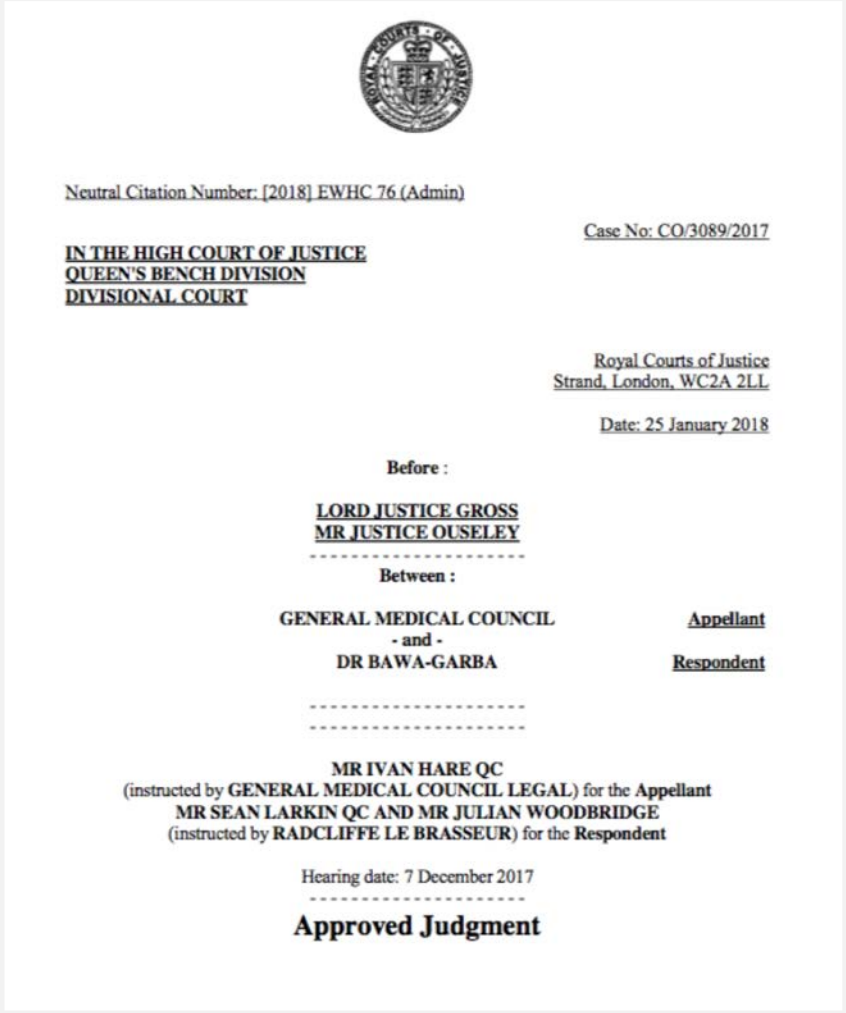
'Our hearts were broken, just shattered': re IMG_3607 g deadly mix-up at former Sudbury hospital

Inquest ruled that at least 9 of the 23 deaths investigated were caused by blending of gas lines

THE FOLO Erik White · CBC News
October 13, 2016

Jacqueline Dupuis holds a portrait of her sister Suzanne, who died at 16 in 1973, one of nine confirmed to have been killed by a gas line mix-up at the Sudbury General Hospital. (Erik White/CBC)

Dr Bawa Garba



Neutral Citation Number: [2018] EWHC 76 (Admin)

Case No: CO/3089/2017

IN THE HIGH COURT OF JUSTICE
QUEEN'S BENCH DIVISION
DIVISIONAL COURT

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 25 January 2018

Before :

LORD JUSTICE GROSS
MR JUSTICE OUSELEY

Between :

GENERAL MEDICAL COUNCIL — **Appellant**
- and -
DR BAWA-GARBA — **Respondent**

MR IVAN HARE QC
(instructed by **GENERAL MEDICAL COUNCIL LEGAL**) for the **Appellant**
MR SEAN LARKIN QC AND MR JULIAN WOODBRIDGE
(instructed by **RADCLIFFE LE BRASSEUR**) for the **Respondent**

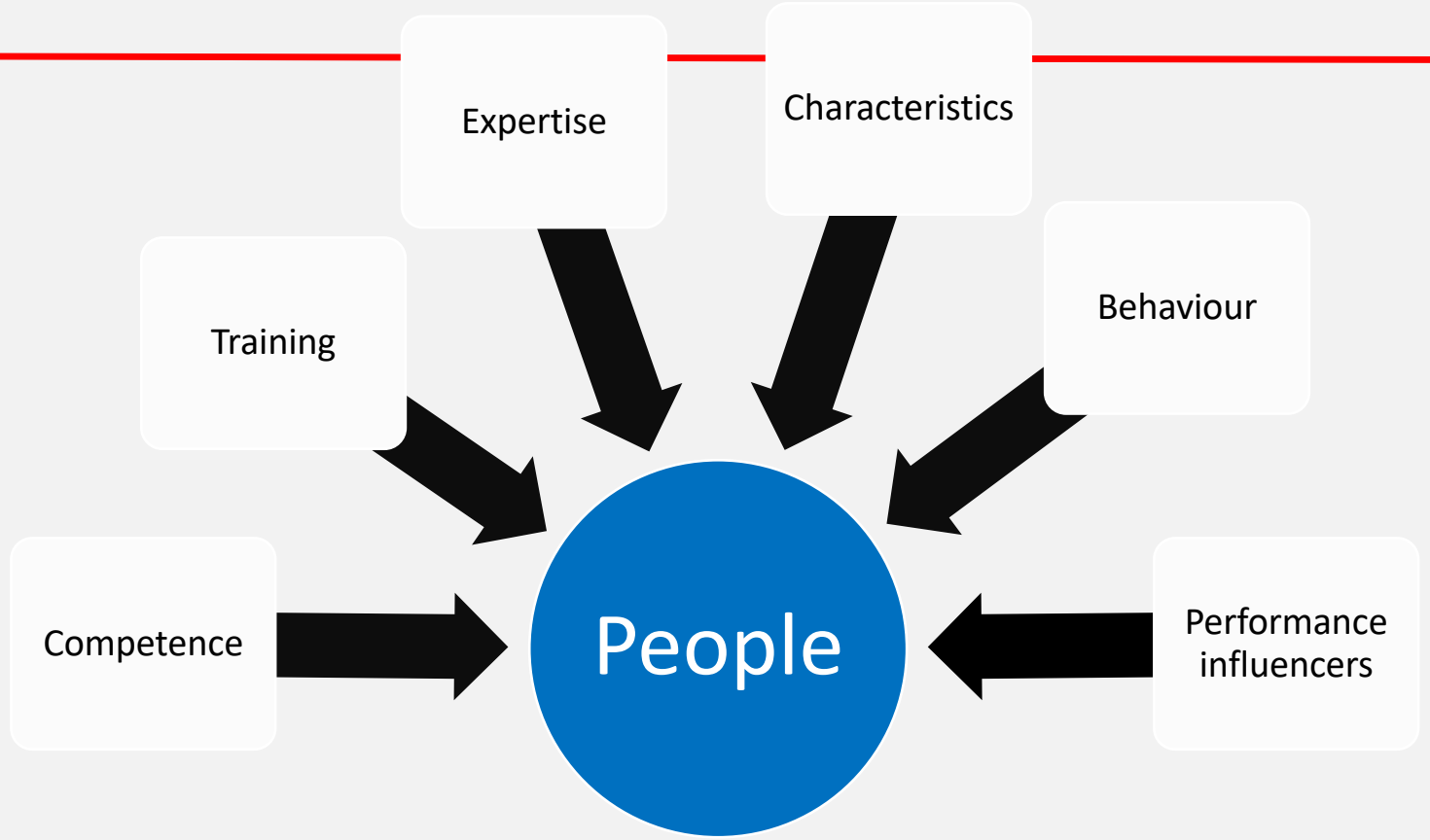
Hearing date: 7 December 2017

Approved Judgment

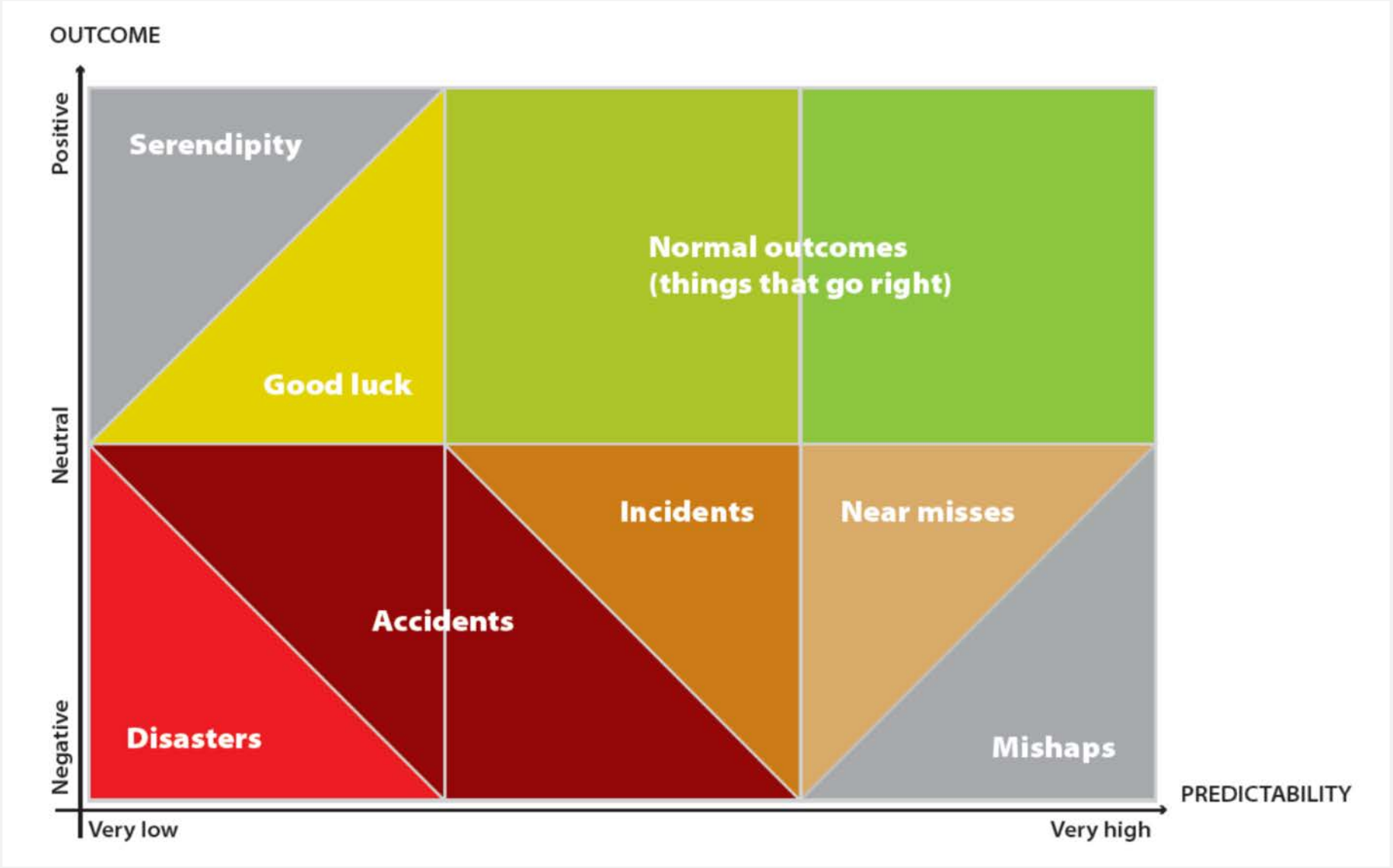
Mr Larkin submitted that systemic failings also had this significance : failings which the systemic safety nets should have detected and removed on the da y before any serious harm was done, were not working ; so serious failings here had consequences which equally serious failings at another time simply would not have, and would not, perhaps, have led to any proceedings at all, let alone erasure. (Point 46)

The day brought its unexpected workload , and strains and stresses caused by IT failings, consultant absences and her return from maternity leave. (Point 51)

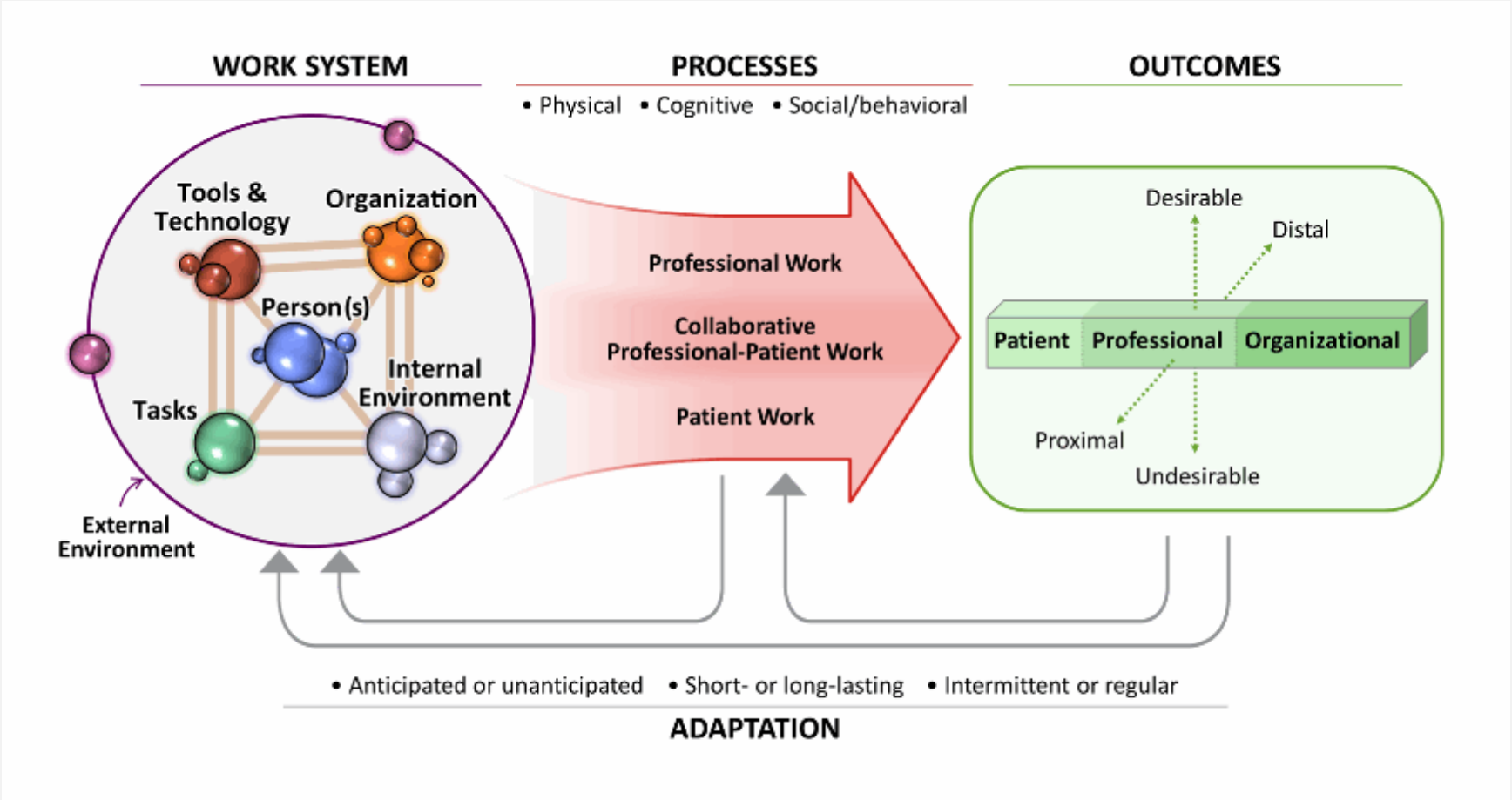
Person centred approach to safety



The key principle here is that we should design to minimise the effect of individual variation, known errors and behaviours, and optimise performance


OUTCOME
Positive
Neutral
Negative
Serendipity
Good luck
Normal outcomes
(things that go right)
Incidents
Near misses
Accidents
Disasters
Mishaps
PREDICTABILITY
Very low
Very high

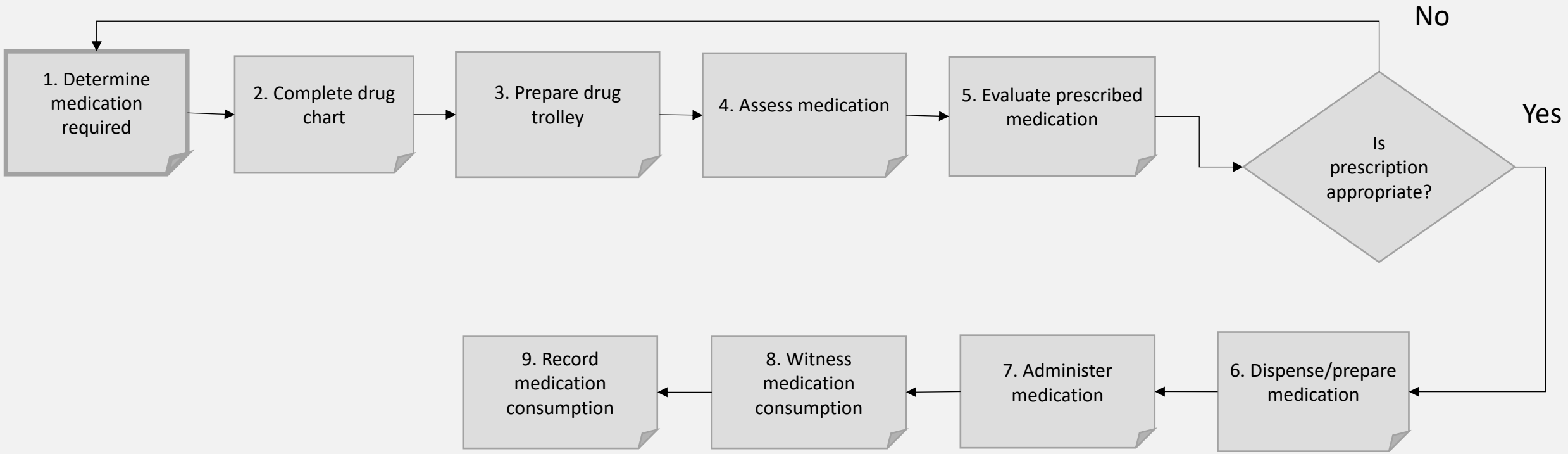
System centred approach to safety

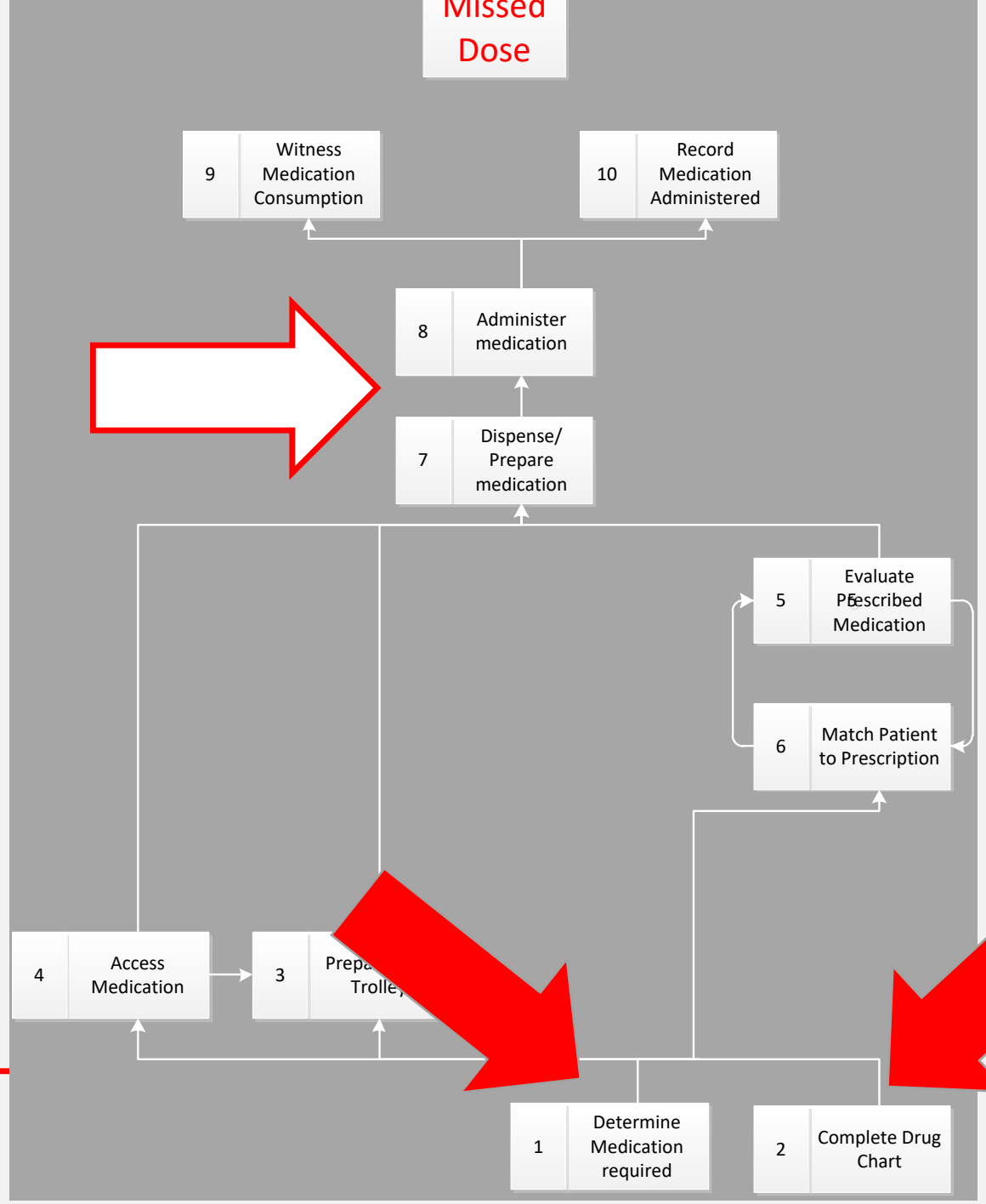


Carayon, P., Schoofs Hundt, A., Karsh, B.-T., et al., 2006. Work System design for patient safety: the SEIPS model. Qual. Saf. Healthc. 15, 50e58.
Holden,R.J., Carayon,P., Gurses,A.P., Hoonakker.P., Schoofs Hundt., A., Ozok Ant., Joy Rivera-Rodriguez. SEIPS 2.0: A human factors framework for studying and improving the work of healthcare professionals and patients. Ergonomics. 56,11.

Describing Tasks – Task Analysis

- Dispensing medication on a drug round

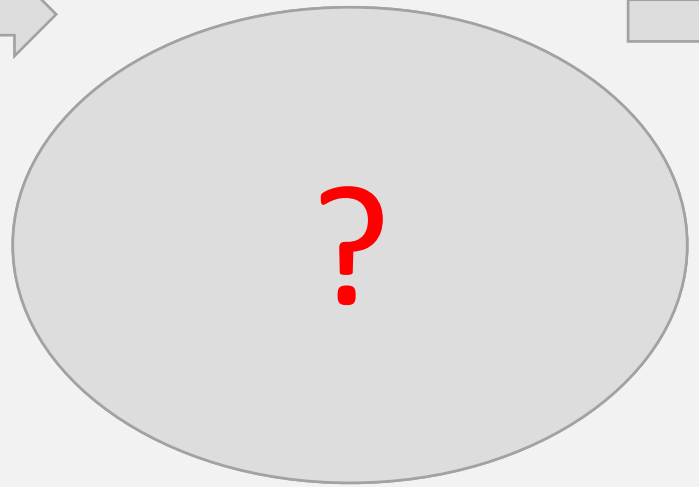



Missed Dose
9 Witness Medication Consumption
10 Record Medication Administered
8 Administer medication
7 Dispense/ Prepare medication
5 Evaluate Prescribed Medication
6 Match Patient to Prescription
4 Access Medication
3
1 Determine Medication required
2 Complete Drug Chart

Contributing Factors : Hazards

Variability

System Factors Contributing	
External	Technological design
Organisation	Pharmaceutical support
Tools & Technology	Access to drug history
Task	Communication of drug history
People	Patient knowledge/compliance
Internal Environment	Distractions



Hazard

1. Information too late
2. Incomplete information
3. Prescription unclear
4. Prescription inaccurate

System Factors Contributing	
External	Regulatory expectations, economic climate, NHS organisation, influence from external organisations.
Organisation	Organisational structure, policies and procedures, safety culture and priorities, financial priorities and constraints, procurement processes, staff allocation, recruitment, prioritisation of staff wellbeing, Leadership.
Tools & Technology	Availability, usability, design, reliability, accessibility, maintenance, repairs, replacements, compatibility, information flow.
Task	Design, clarity of task, supportive & realistic protocols, physical /cognitive requirements e.g. attention and decision making, communication – information content, timing, format or flow, workload, time pressure.
People	Knowledge, skills, motivation, competence, confidence, expertise, physical and psychological characteristics and health, fatigue, stress.
Internal Environment	Physical design/layout of immediate and wider workspaces e.g. clinical area, bed area, storage areas, temperature, humidity, lighting, noise levels e.g. distracting, annoyance.