Chartered Institute of Ergonomics & Human Factors

MedLed

ENHANCING PERFORMANCE IN HEALTHCARE

CPD CERTIFIED

The CPD Certification Service

"Human Factors in Practice"

A New Strategy for Patient Safety

16th October 2019

Ben Tipney & Vikki Howarth

@bentipney @medledteam @vikkihowarth

UCLPartners

Academic Health Science Partnership

North Middlesex University Hospital NHS Trust

Tweet & Share

@MedledTeam

@Bentipney

@vikkihowarth

@NorthMidNHS

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

North Middlesex University Hospital NHS Trust

Highly Skilled – Highly Motivated

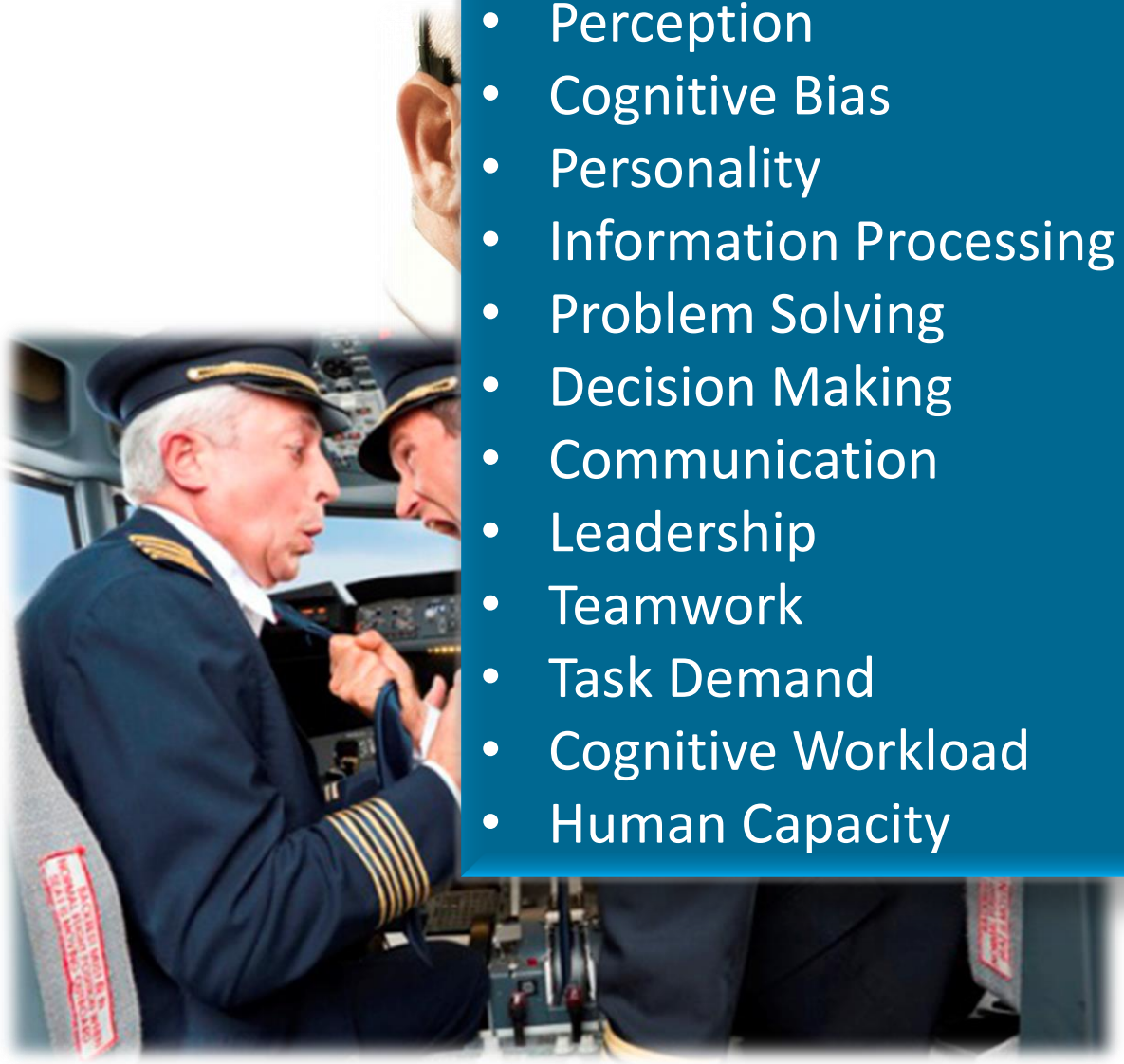
MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Human Error

“For a long time, people were saying that most accidents were due to human error and this is true in a sense but it’s not very helpful. It’s a bit like saying that falls are due to gravity.” – Dr Trevor Kletz

What does Human Factors mean to you?

Attitudes & Behaviours? Non-Technical Skills?



- Situational Awareness
- Perception
- Cognitive Bias
- Personality
- Information Processing
- Problem Solving
- Decision Making
- Communication
- Leadership
- Teamwork
- Task Demand
- Cognitive Workload
- Human Capacity

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

System Design?

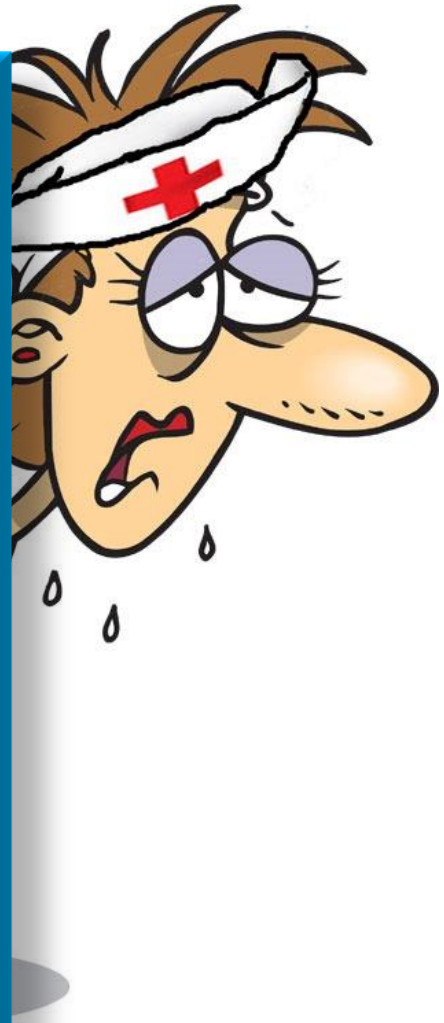
- Equipment
- Systems
- Technology interfaces
- Engineering
- Ergonomics
- Design
- Automation
- Biomechanics
- Maintenance
- Procedures
- Checklists
- Drills
- SOPs
- Workflow

or and in
the adoption of
oach has
f air traffic
t-decks and

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Health & Well-Being?

Stress
Workload
Performance-Under-Pressure
Resilience
Confidence
Breaks
Physical Health
Mental Health
Wellbeing
Physiology, Nutrition, Hydration
Fatigue
Motivation
Morale



MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

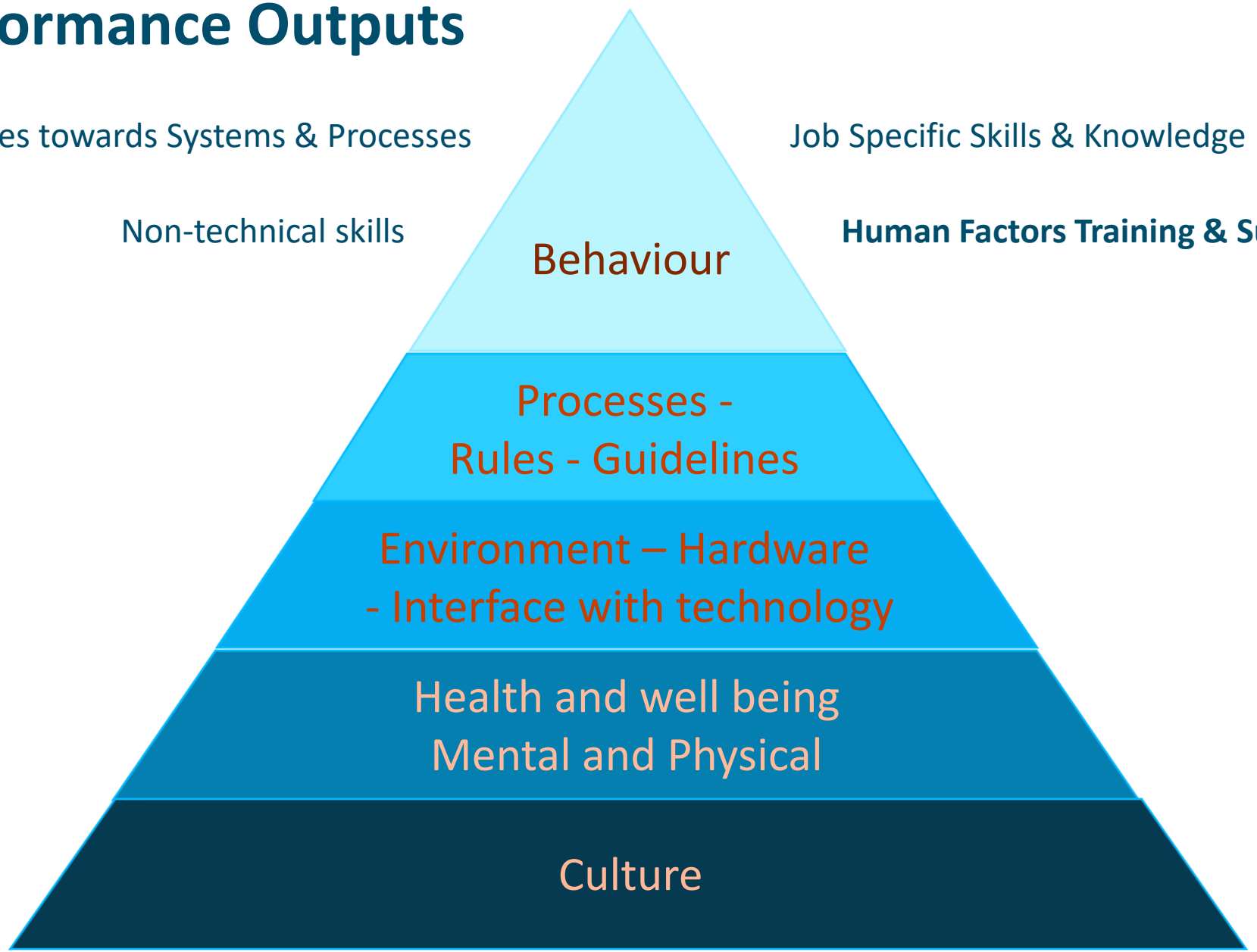
Performance Outputs

Attitudes towards Systems & Processes

Job Specific Skills & Knowledge

Non-technical skills

Human Factors Training & Support



MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Human Factors

Scientific knowledge about the human body, mind and behaviour

Understand human capabilities and limitations

Best possible fit between people and their working environment
(Hardware, Software & Liveware)

Programme Approach

- 16 healthcare workers from 4 trusts recruited from the UCLPartners geography through a competitive process
- Participants attended a week-long immersive Human Factors training programme
- 10 months of ongoing support, including workshops, site visits, 1-1 coaching and a facilitated peer network
- Aim was to provide participants with the skills to improve safety back in their own organisations and build in-house teaching capability

North Middlesex HF team

North Middlesex University Hospital NHS Trust

- Multidisciplinary
- Influencers with QI knowledge
- Targeted areas from SI themes and risk
- Executive support

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

The First Week

North Middlesex University Hospital NHS Trust

5 full days with of training learning about HF principles and linking this back to the clinical environment.

Fascinating multi professional involvement!

4 other Trusts involved so good opportunity to learn lessons from broad experience

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

What did we implement?
- Impact on Staff & Patients

North Middlesex University Hospital NHS Trust

Implementation of Greatix, Learning from Excellence

- Over 2000 'greatix' nominations received across the organisation
- 2nd most improved trust in NHS Staff Survey

Daily Cardiac Arrest Team Huddle

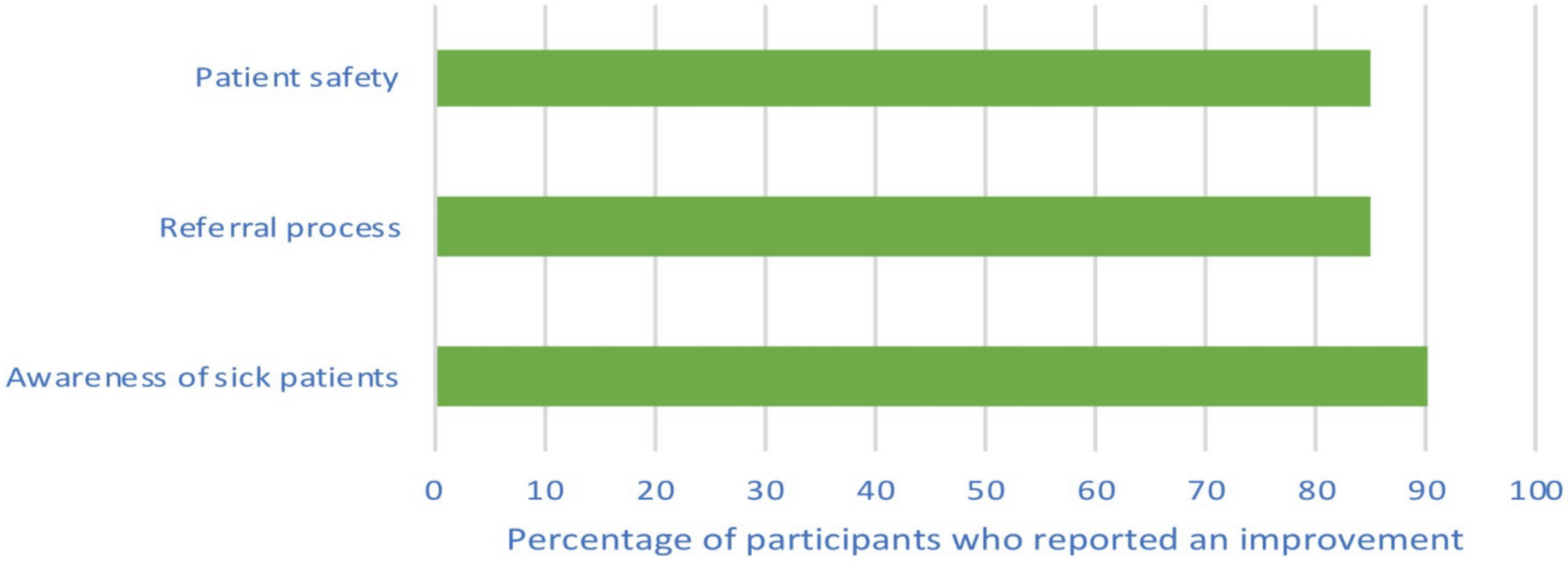
- improvement in the confidence of **88%** of team members in managing a cardiac arrest

Hospital at Night Huddle

- Increased recognition of sick patients and improved patient safety

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Hospital at Night - post implementation results



MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

What did we implement?
- Impact on Staff & Patients

North Middlesex University Hospital NHS Trust

Training sessions for all disciplines

- 350 staff received in-house training in aspects of Human Factors principles

Applying Just Culture methodology to our investigations

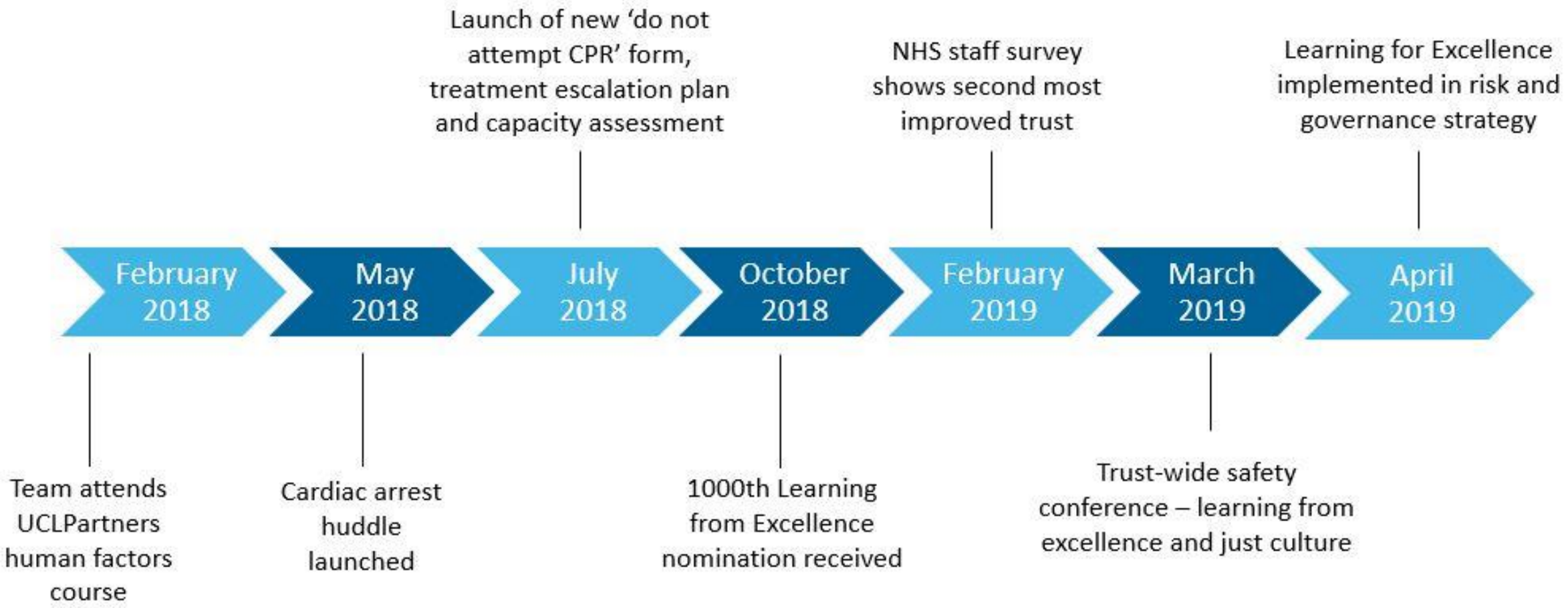
- HF subtopics included in all SI investigations

Redesign of the DNACPR form to incorporate TEP and MCA

- Improvement in completion of capacity assessments for DNACPR decisions from 3% to >90%

Safety Needles for LP

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE



MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

On going work & new initiatives

North Middlesex University Hospital NHS Trust

- Using anonymous SI templates as the basis for sim training.
- Removal of piped medical air from wards were it is not necessary
- Strengthening the HF faculty within the Trust to include AHP's
- Escalate the Greatix initiative Trust wide

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Human Factors

Scientific knowledge about the human body, mind and behaviour

Understand human capabilities and limitations

Best possible fit between people and their working environment (Software, Hardware & Liveware)

Safety Model must be appropriate to context

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Three contrasting approaches to safety

Ultra adaptive
Embracing risk

Context: Taking risks is the essence of the profession:
Deep sea fishing, military in war time, drilling industry, rare cancer, treatment of trauma.

Safety model: Power to experts to rely on personal resilience, expertise and technology to survive and prosper in adverse conditions.

Training: through peer-to-peer learning shadowing, acquiring professional experience. knowing one's own limitations.

High reliability
Managing risk

Context: Risk is not sought out but is inherent in the profession:
Marine, shipping, oil Industry, fire-fighters, elective surgery.

Safety model: Power to the group to organise itself, provide mutual protection, apply procedures, adapt, and make sense of the environment.

Training in teams to prepare and rehearse flexible routines for the management of hazards.

Ultra safe
Avoiding risk

Context: Risk is excluded as far as possible:
Civil aviation, nuclear Industry, public transport, food industry, medical laboratory, blood transfusion.

Safety model: Power to regulators and supervision of the system to avoid exposing front-line actors to unnecessary risks.

Training in teams to apply procedures for both routine operations and emergencies.

Priority to adaptation and recovery strategies

Priority to procedure and adaption strategies

Priority to prevention strategies

Innovative medicine
Trauma centres

Scheduled surgery
Chronic care

Anaesthesiology ASA1

Radiotherapy
Blood transfusion

Hymalaya mountaineering

Finance

Forces, war time

Professional fishing

Fire fighting

Drilling industry

Chemical industry (total)

Chartered flight

Processing industry

Civil aviation

Railways

Nuclear industry

10-2
Very unsafe

10-3
Unsafe

10-4

10-5
Safe

10-6
Ultra safe

Charles Vincent & Rene Amalberti *'Safer Healthcare – Strategies for the Real World'*

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Collaborative Design

- Specialists in Human Performance/Performance under Pressure
  - Sports Psychology/Performance Psychology
- Qualified Ergonomists – Experts in System Design
- Specialists in Leadership & Team Dynamics
- Learning from other risk professions (broad scope)
- Specialists in educational methodology/behaviour change
  - Professional Coaches/Teachers

Working in collaboration with healthcare professionals (operational and strategic) - experts in their work

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

High Performance Healthcare

- Understanding Systems
- Human Performance
- Leadership at all levels
- High Performing Teams (Teaming)
- Safety Culture

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Putting it into practice

- Human Factors Awareness Training
  - provider led and/or Train the Trainer
  - broad brush and/or context specific

- Integrating Human Factors into Quality Improvement work
- Integrating Human Factors into other education delivery

- Strategic plan for embedding Human Factors
  - High Performance Roadmap

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

Be wary of the 'magic bullet'

"Health care, which in statistical terms is higher risk than any of the industries we consulted, in contrast took the view that safety was the norm and things only went wrong exceptionally. Staff are not expected to make errors. This leads to a search for quick fixes and technical solutions, when Never Events occur. Our analysis showed that only 4% of Never Events are amenable to this approach, the overwhelming majority require human factors based solutions"

Professor Ted Baker, Chief Inspector of Hospitals

('Opening the Door to Change – Care Quality Commission 2018')

MedLed
ENHANCING PERFORMANCE IN HEALTHCARE

MedLed

ENHANCING PERFORMANCE IN HEALTHCARE

Thank you for your time

Get involved with our ongoing discussions!

www.med-led.co.uk

@MedledTeam @Bentipney

MedLed

ENHANCING PERFORMANCE IN HEALTHCARE