

STeLI

Simulation Technology-enhanced Learning Initiative

London Deanery

NHS
London



Innovation in education - an engine for change

1st March 2010

www.simulation.londondeanery.ac.uk

Simulation &
Technology-
enhanced
Learning
Initiative



*Dr Ian Curran
Head of Innovation
Associate Dean, London Deanery*

'Innovation is meaningless...

...without operational excellence'

The challenges?



Training the iGeneration!



Digital natives



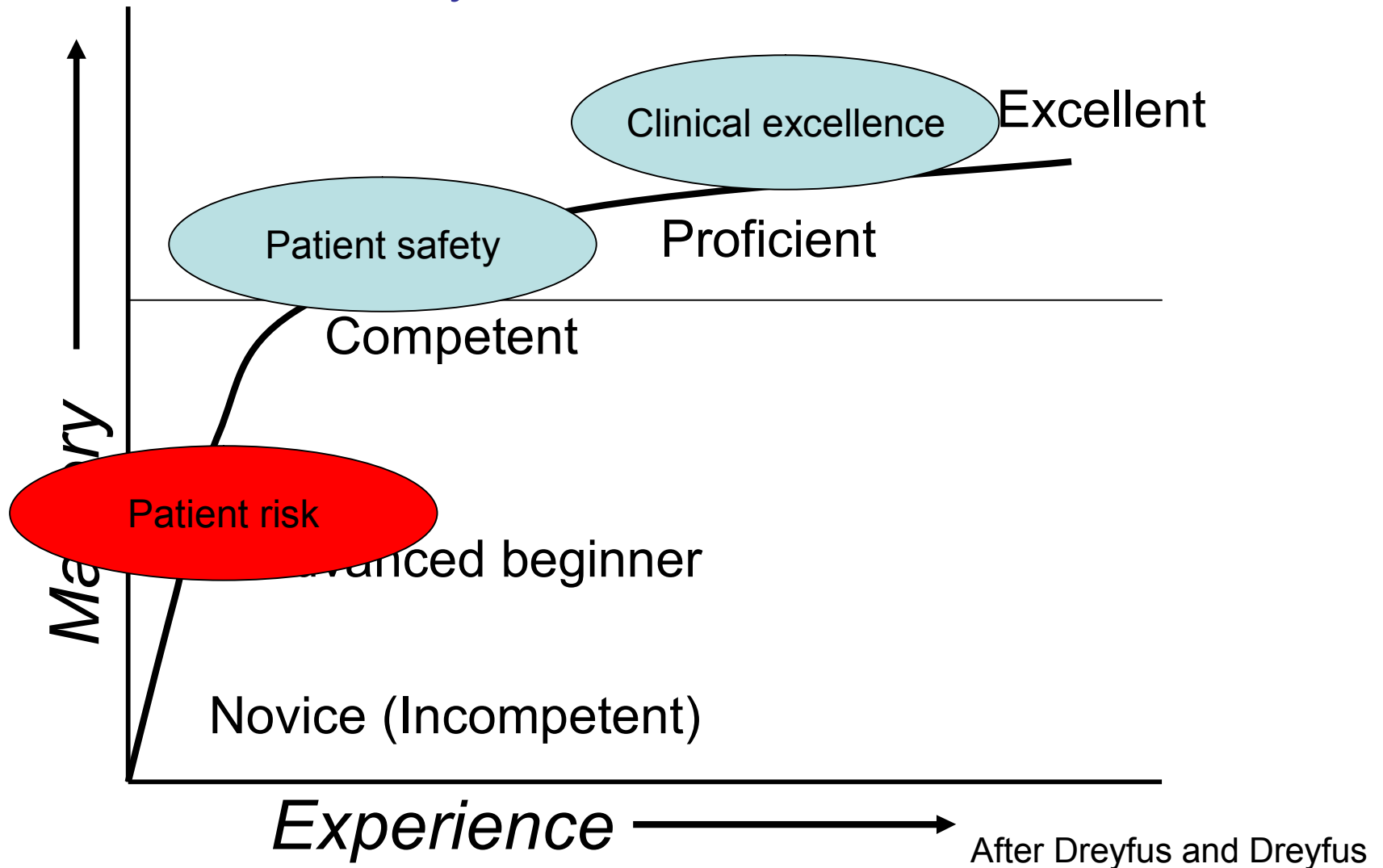
EWTD

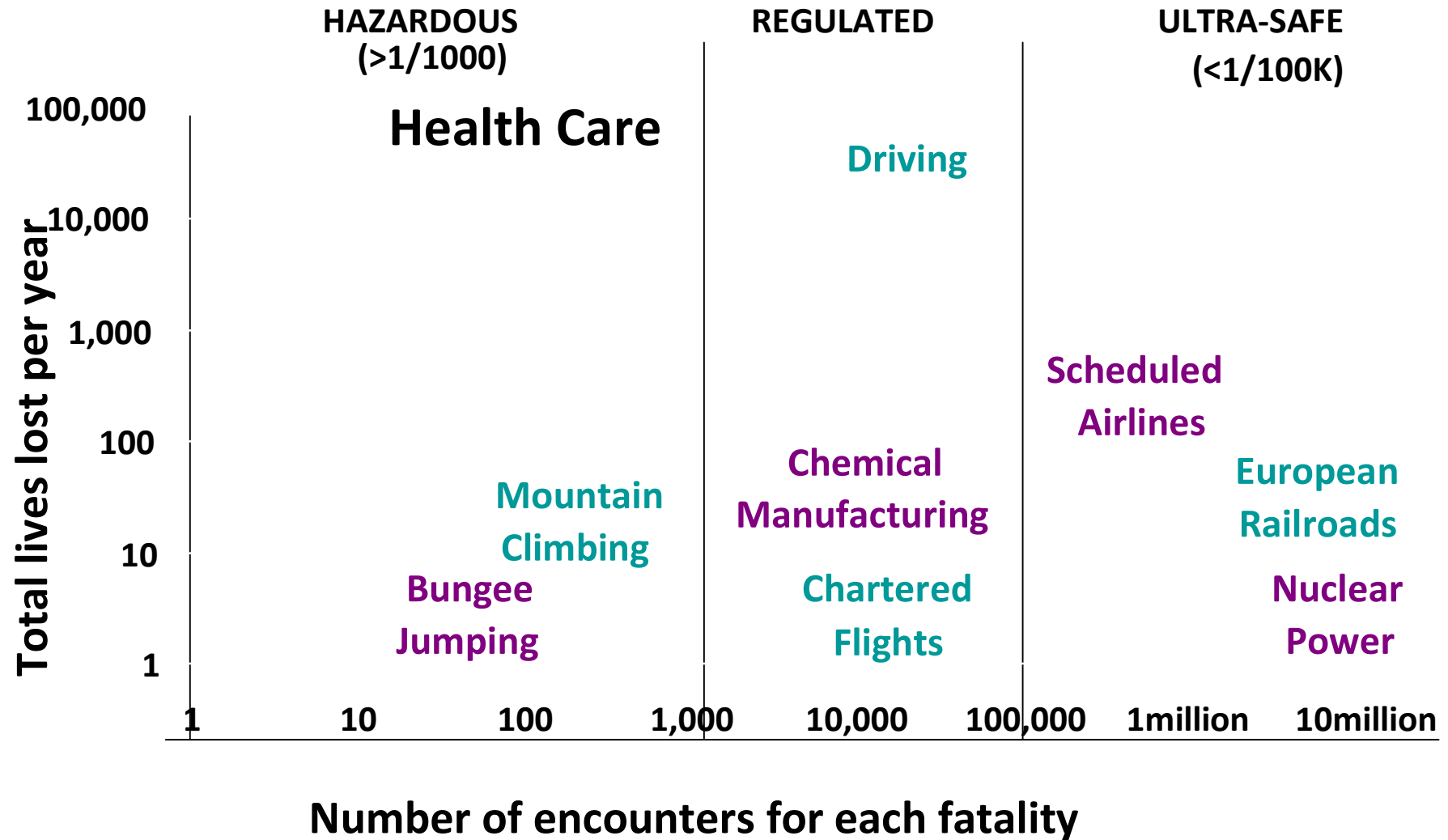
In the 'Good Ole Days'!

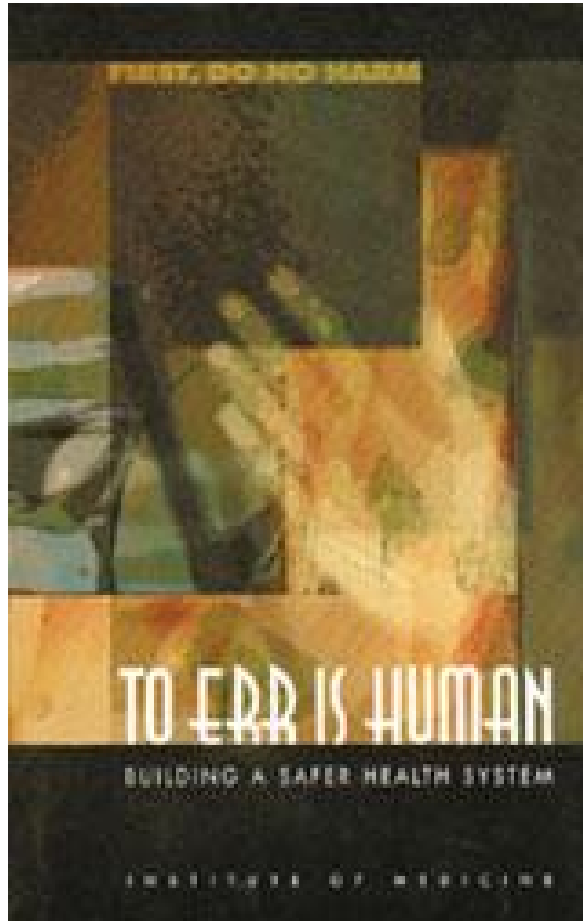
- See one!
- Do one!
- Teach one!



Not such Good Ole Days?







To Err Is Human

Building a Safer Health System

Linda Kohn, Janet Corrigan, and Molla Donaldson, *Editors*

Committee on Quality of Health Care in America

INSTITUTE OF MEDICINE
NATIONAL ACADEMY of SCIENCE PRESS
Washington, D.C. ©2000

1999: IOM report lit the simulation education fuse

Kohn LT, Corrigan JM, Donaldson MS. *To err is human: building a safer health system*. Washington, DC, National Academy Press; 1999



Unacceptable cost of performance failure



Unacceptable cost of training failure

A role for STeLI?



STeLI - The vision

- To harness technology and innovative training methods
- To champion patient safety and clinical excellence
- To promote safe, effective individual and team-working
- To raise awareness of human factors and generic skills
- To train capable professionals who are safe today and ready for tomorrow



STeLI in Context

- Flagship strategic workforce development project
- £20 million investment promoting excellence in education
- Employs innovative training techniques to enhance professional training
- Provides patient safe training solutions
- Is grounded in clinical environments and practice
- Addresses many of the challenges of reforms such as MMC and EWTD
- Builds capability beyond competence

An operational overview

- STeLI is fully integrated within training programmes
- Service aligned
- Faculty development
- R+D
- Procurement
- Academic thread



The opportunities?

That's the 4 million dollar question!



"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."

Increased educational effectiveness?

Practice makes perfect!

Increased clinical effectiveness

Right thing first time!

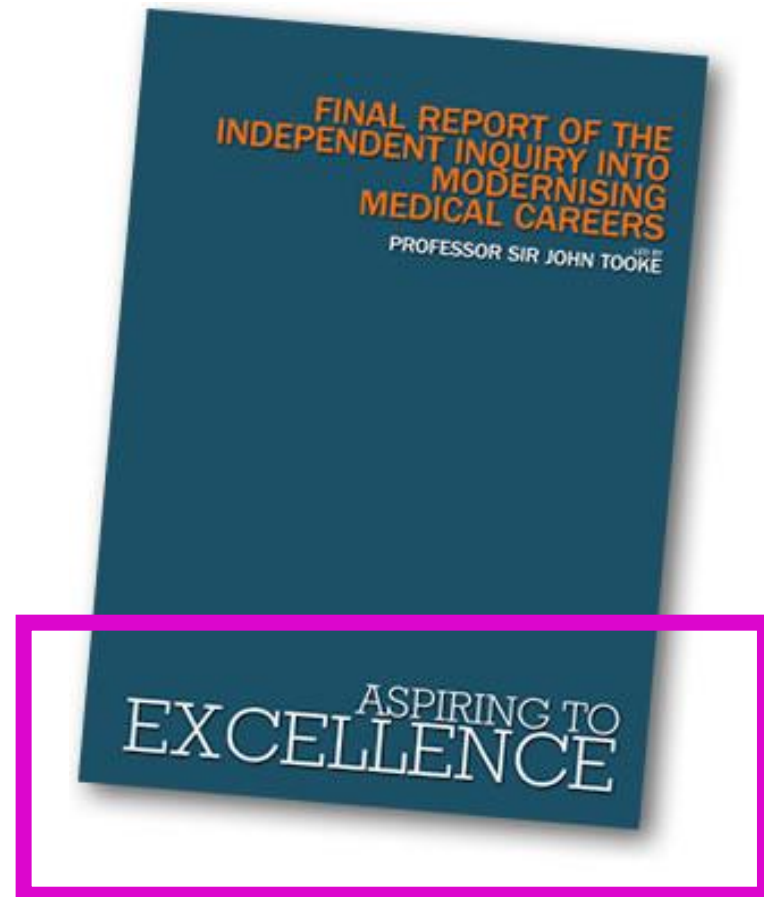
Just in time learning...

Boot camps!

Is simulation coming of age?

How do we promote and develop this clinical excellence?

We practice and practice and practice some more!



A Professional?

**He or she who manages
uncertainty, complexity
or chaos!**

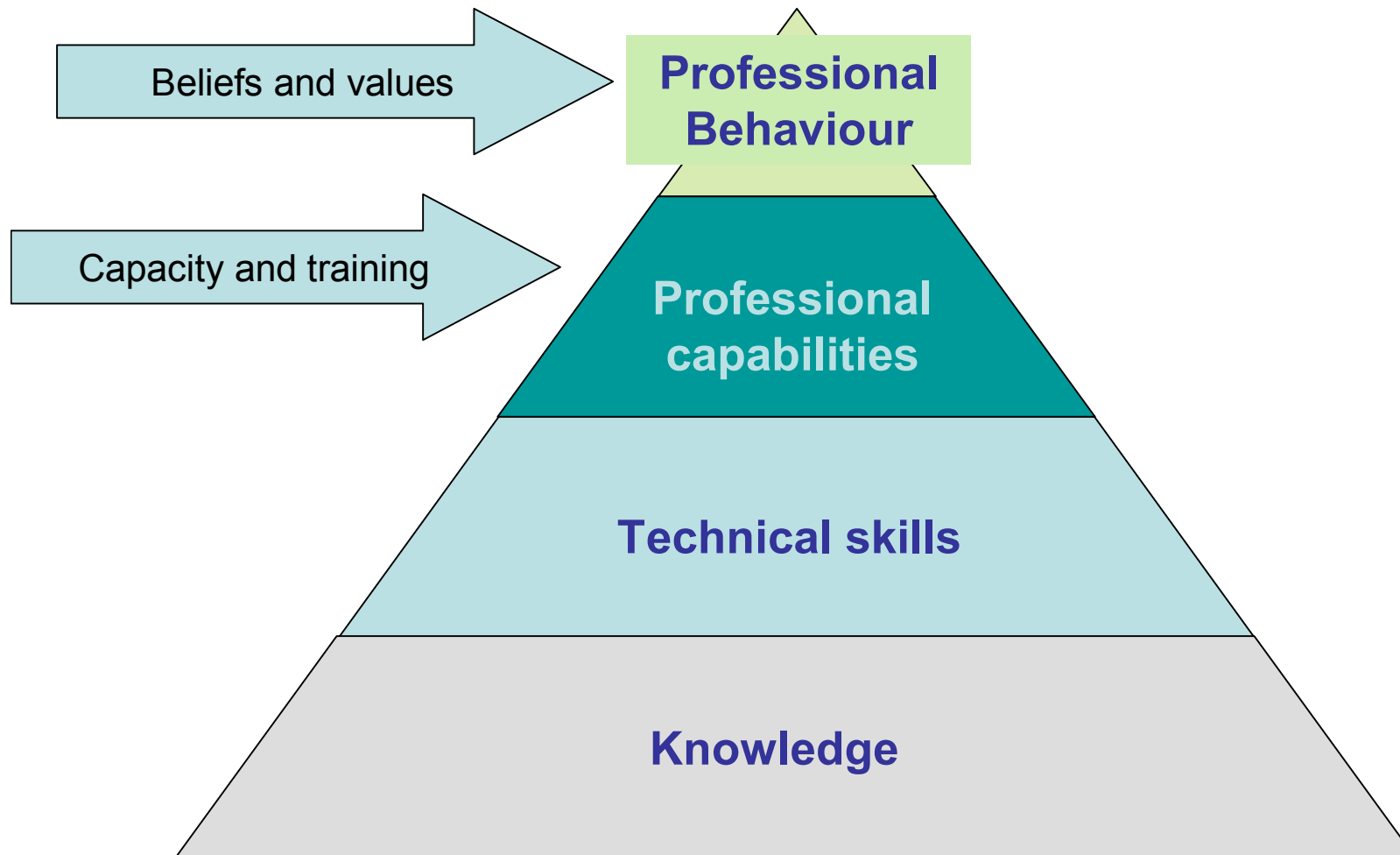
**Excellence requires professionals
develop capabilities beyond
competencies**



Perceived value of doctors?



Domains of Professional Practice



The VISA logo is displayed in a large, bold, blue font. The letter 'V' is stylized with a yellow and orange gradient on its left side.



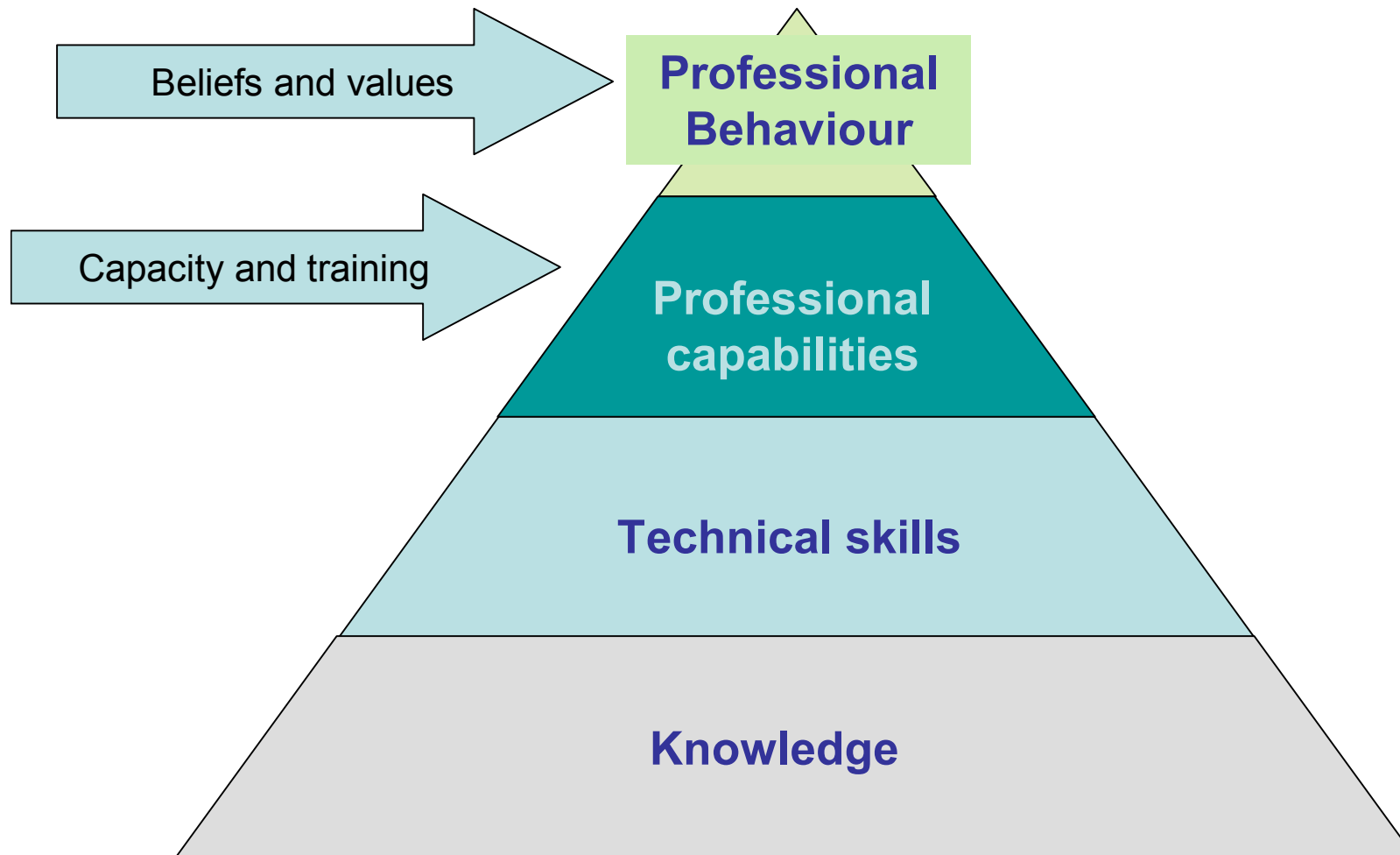
Dee Hock on professional qualities

- Promote first on the basis of integrity;
- second, motivation;
- third, capacity;
- fourth, understanding;
- fifth, knowledge; and
- last and least, experience.

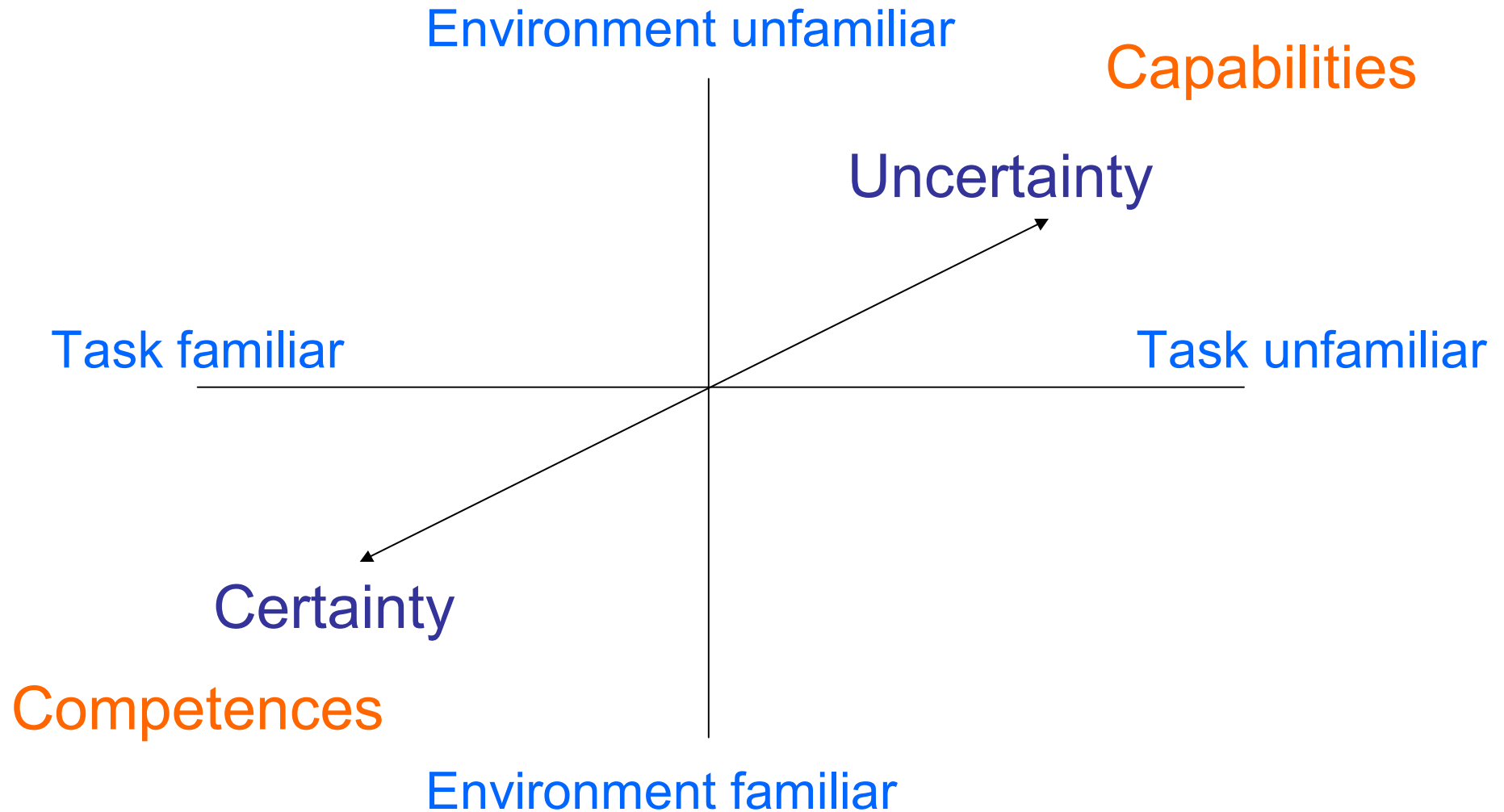
Because...

- Without integrity, motivation is dangerous;
- without motivation, capacity is impotent;
- without capacity, understanding is limited;
- without understanding,
knowledge is meaningless;
- without knowledge, experience is blind.

Domains of Professional Practice



Developing capabilities beyond competence



HENSIP MAX

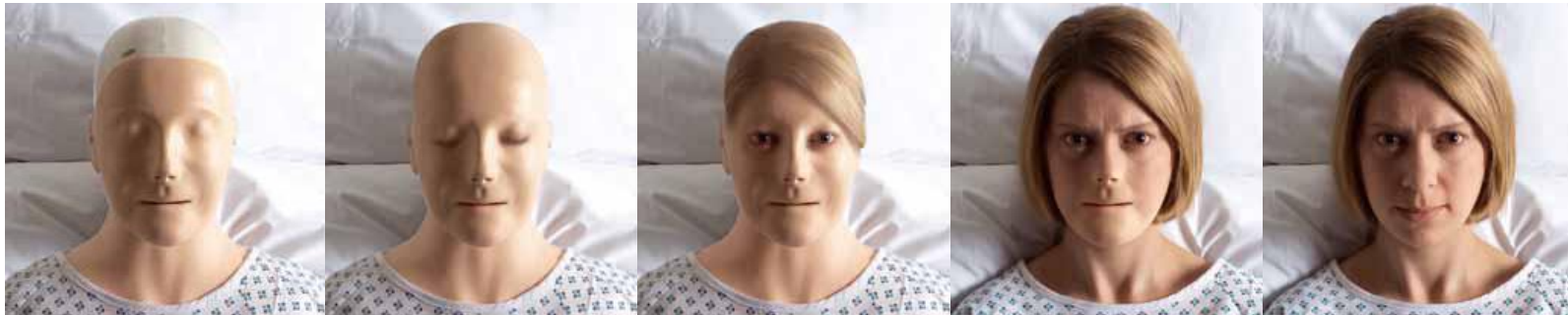


BIRD FLU
Lemon & Corn



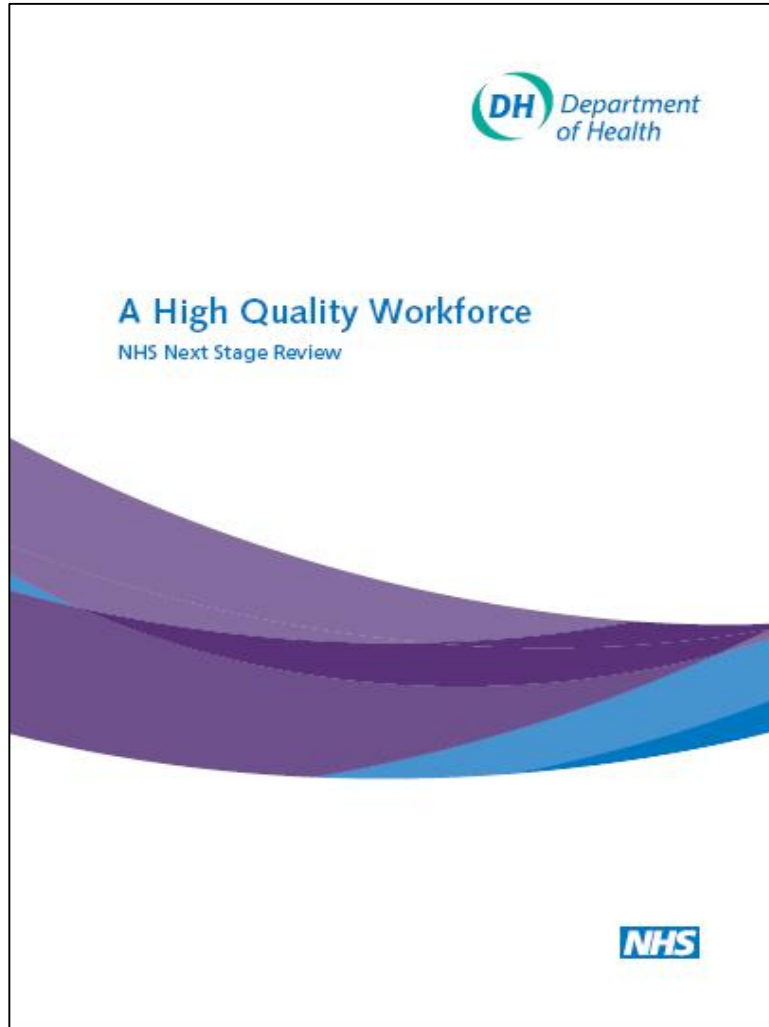
10

- Sore Gizzard ✓
 - Achey Giblets ✓
 - Blocked/Runny Beak ✓
- MAX STRENGTH FORMULATION**



CMO's Report Safer Medical Practice

March 2009



Practitioner

Partner

Leader

Follower?

Perceived value of simulation?

*Time for a National Simulation
Strategy?*



‘STeLI moves the steepest part of the learning curve away from patients, that’s got to be a good thing!’

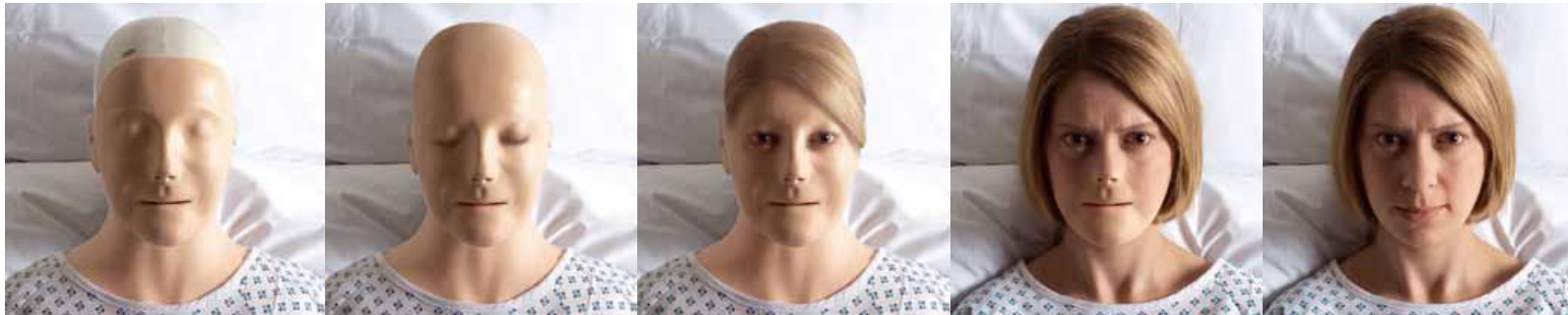
*Prof Elisabeth Paice
Director of Medical & Dental Education London*

A patient's view of simulation:

'Patients would be gobsmacked! Not that the technology exists... We know that. But that it isn't being used!'

Patricia Wilkie

Patient representative Academy of Medical Royal Colleges



CMO's Report Safer Medical Practice

March 2009

CMO's report Safer Medical Practice - recommendations March 2009

- Simulation-based training should be fully integrated and funded within training programmes for clinicians at all stages.
- Simulation-based training needs to be valued and adequately resourced by NHS organisations.
- A skilled faculty of expert clinical facilitators should be developed to deliver high-quality simulation training.
- The importance of human factors training to safe care should be widely communicated.
- The STeLI Plan
- STeLI Plans for Postgraduate Schools
- More effective educational commissioning
- STeLI faculty development
- Schools and Trusts introducing Patient Safety and Human Factors training



CMO's report Safer Medical Practice - recommendations March 2009



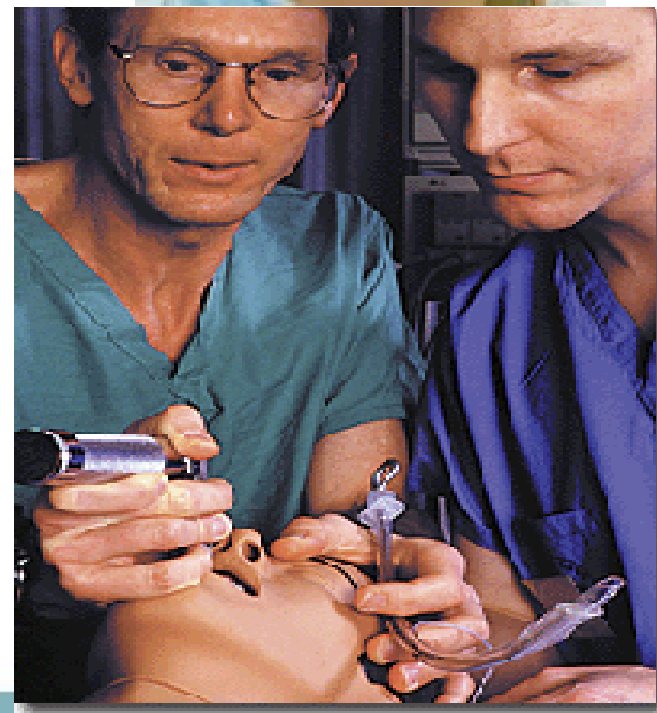
- A national centre for simulation techniques should be established to maintain and disseminate leading-edge methods and new developments.
- Each medical Royal College should identify a lead for simulation training.
- National Patient Safety Agency serious incident reports should be made available to simulation centres to embrace learning to prevent such incidents in the future.



ST



NHS
London



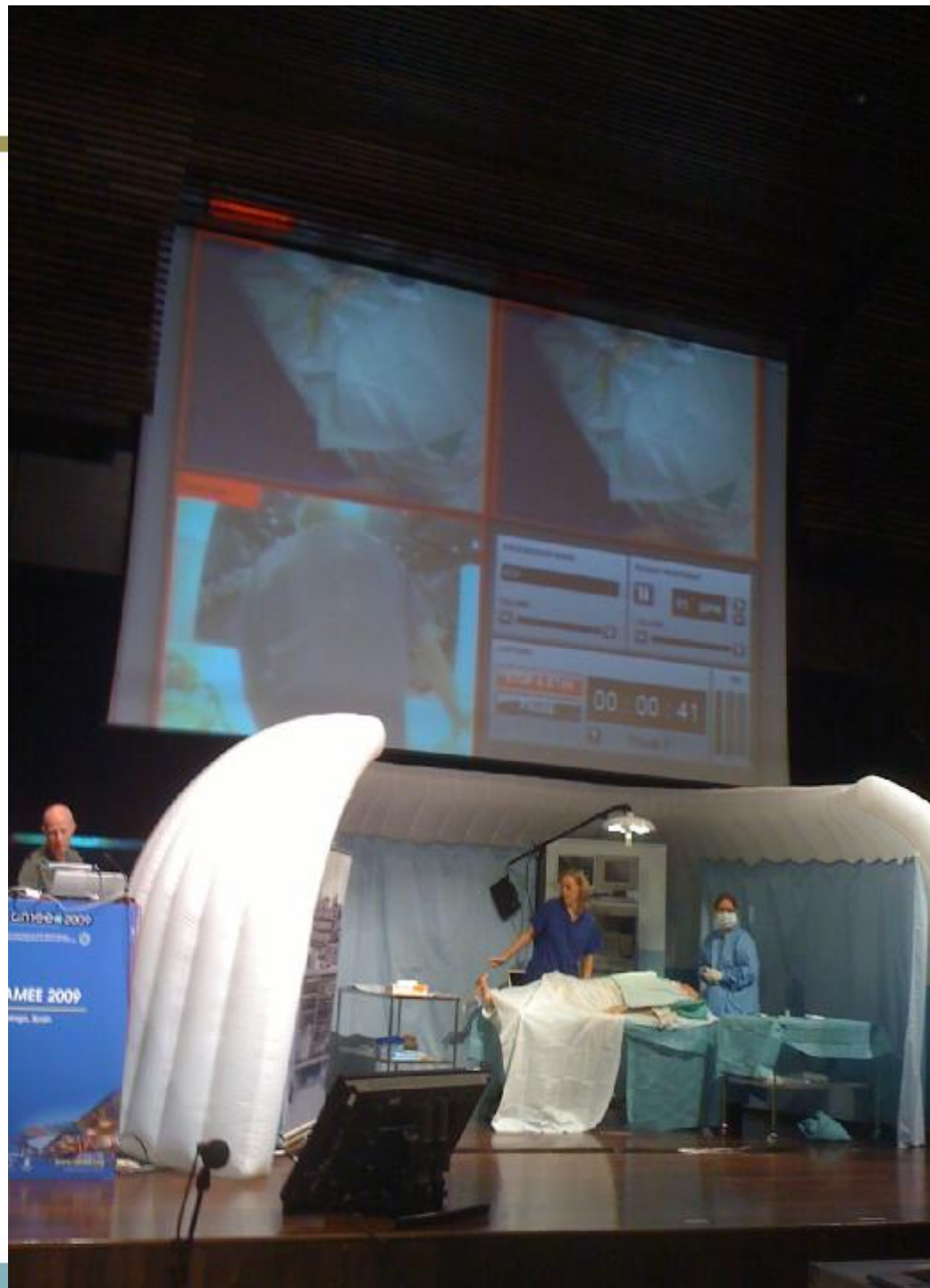
Management training





Mobile or in-situ simulation







Be more innovative

Promote more effective learning

Promote clinical excellence

Where does simulation add value to...?

- Patients
- Trainees
- Trainers
- Hospitals
- Healthcare systems

Value of simulation to the workforce...

- Rare or targeted events
- Serious events, SUIs
- Case or 'mission rehearsal'
- Team-based review
- Behavioural debriefing
- Engages and provides interactive learning





The importance of values and generic capabilities within the professions





Clinical team training

- Promoting CRM principles
- Human Factors
- Patient Safety Initiatives
- WHO surgical safety
- Major trauma team
- Polysystems
- Primary
- Dental
- Management
- Leadership
- Risk management
- Medical error

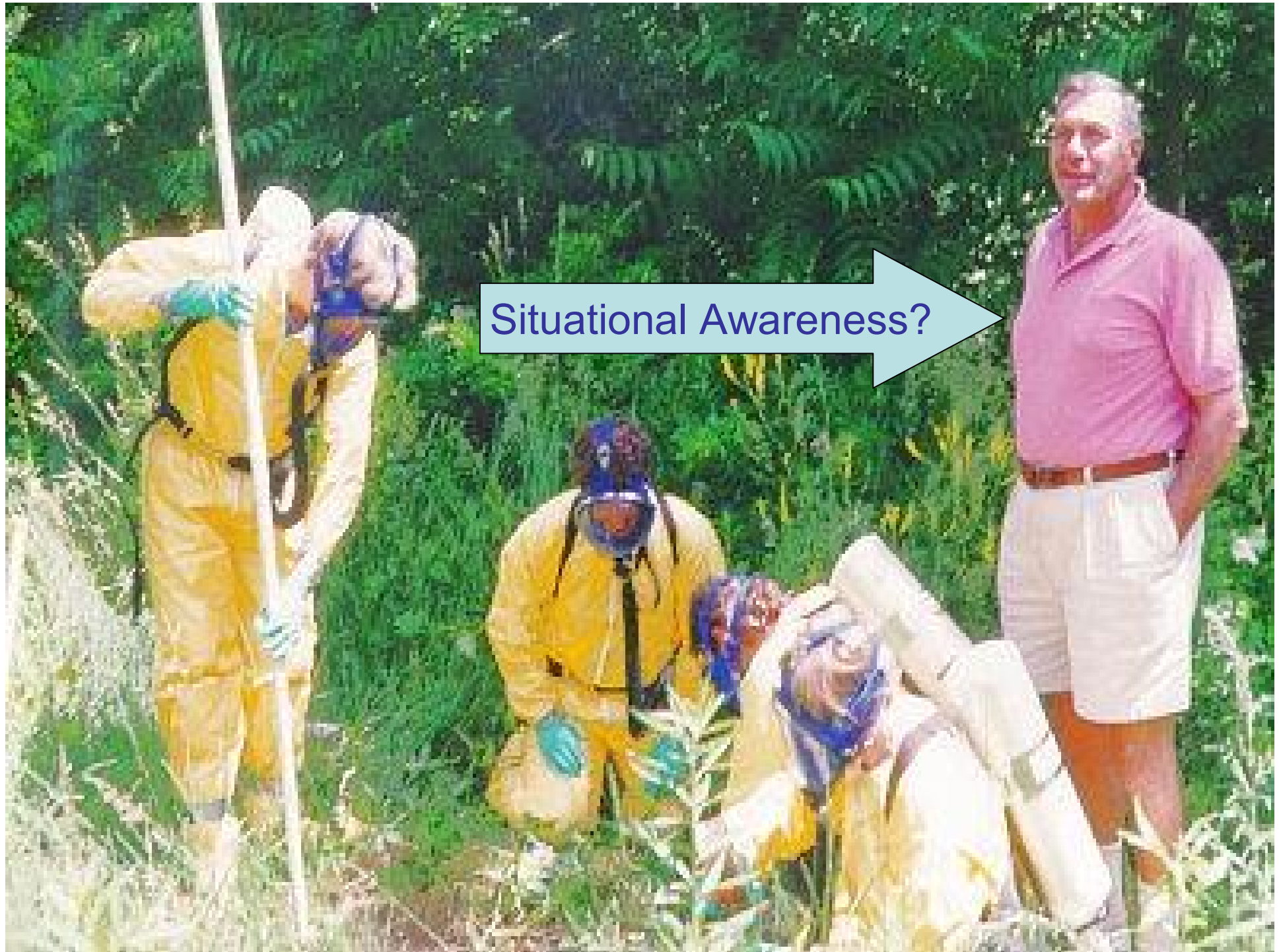


Crisis Resource Management Key Points

- 1) Know the environment
- 2) Anticipate and plan
- 3) Call for help early
- 4) Exercise leadership and followership
- 5) Distribute the workload
- 6) Mobilise all available resources
- 7) Communicate effectively
- 8) Use all available information
- 9) Prevent and manage fixation errors
- 10) Cross (double) check
- 11) Use cognitive aids
- 12) Re-evaluate repeatedly
- 13) Use good teamwork
- 14) Allocate attention wisely
- 15) Set priorities dynamically

www.stell.londondeanery.sc.uk

From: Rall, M, Goss, DM: Human Resources and Patient Safety, 1st ed, 2006



Situational Awareness?

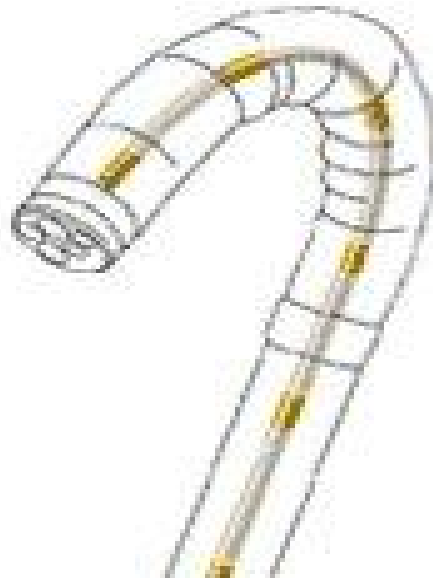
Generic Professional Capabilities?

- Patient-centredness
- Assertive effective communication
- Risk management
- Team working
- Critical decision making
- Task awareness
- Situational awareness
- Non-technical skills
- Emotional and social awareness

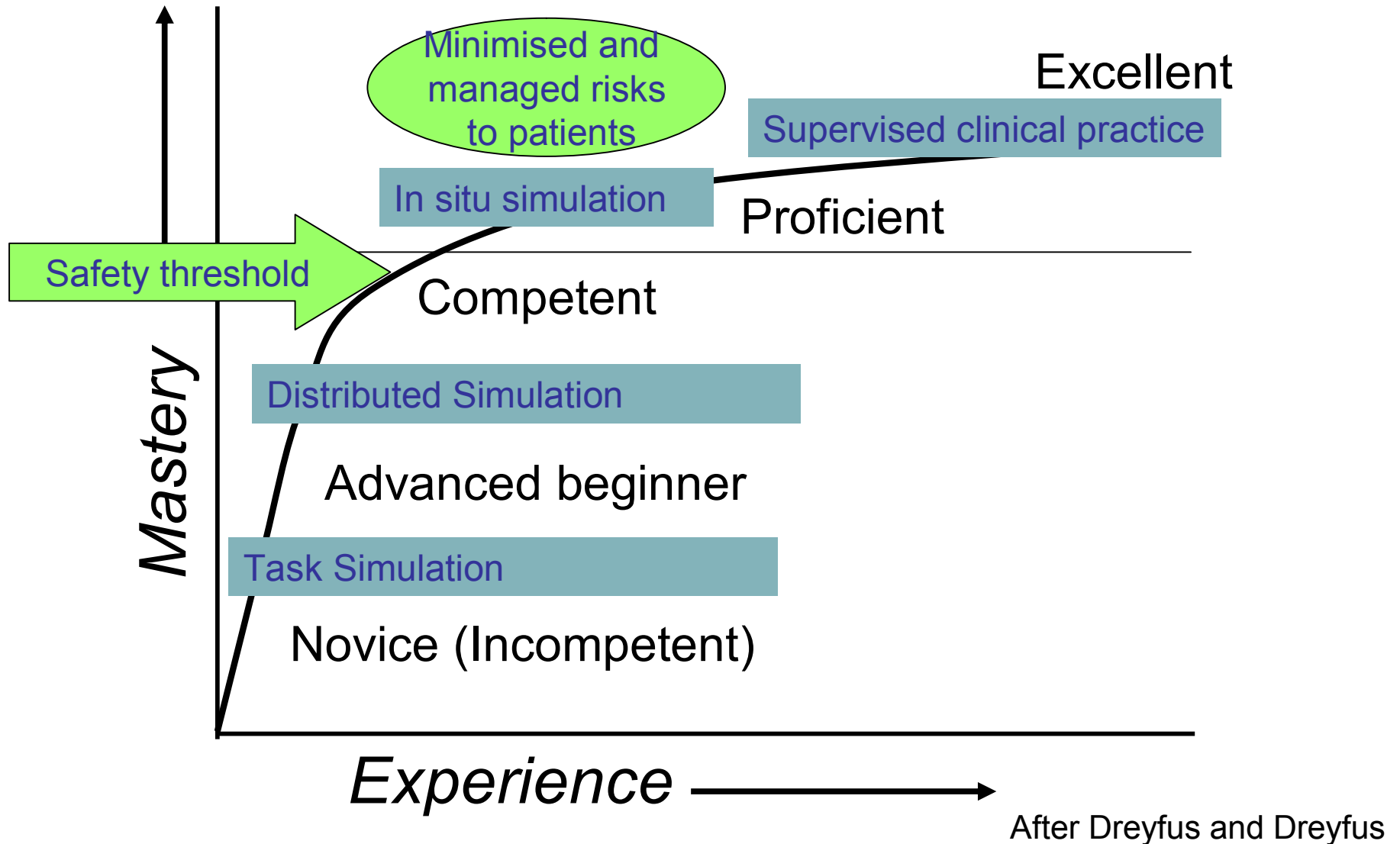
Generic Professional Capabilities...

...future proof the workforce!

Technology enhanced clinical learning



A STeLI enhanced learning trajectory



On reflection STeLI has...?

*Built educational capacity and
capability across London*

Trainees perspective

- STeLI has made simulation accessible
- Raised awareness of human factors and patient safety issues
- Catalyst to improving trainers ability to debrief and give behavioural feedback about individual and team performance
- Addresses our concerns re reduced training hours

Trainee perspective

- Finessing clinical skills through rehearsal
- Practice makes perfect
- Making mistakes in a safe environment
- Realism and real-time activities
- Learning to cope with risk and controlling panic!

Trust Perspective

- Reduces risk to patients
- Induction and assessment of staff
- An opportunity to learn new skills safely
- Promotes team working
- Supports the development of professional behaviour
- Has a role in retraining and continuing professional behaviour
- Run through critical incidents and SUIs
- NICE and NPSA guidelines

'If you think education is expensive try ignorance'

Derek Bok



World Class Workforce for World Class Healthcare



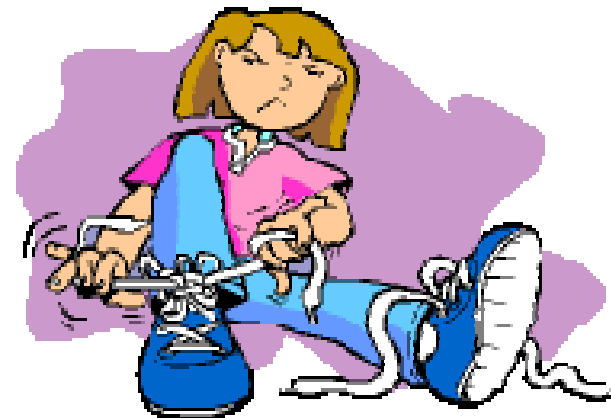
STeLI

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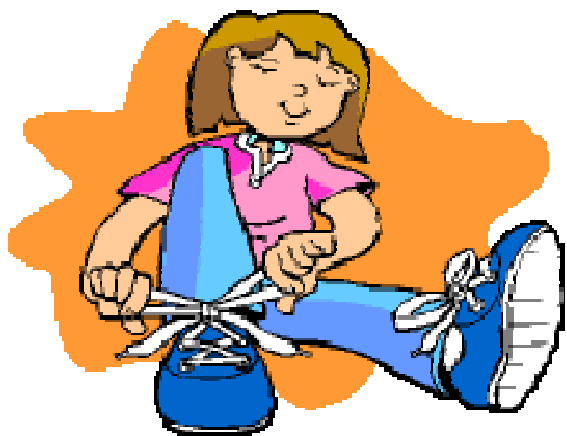
- **Basic principles**
- Trainee engagement
- Situated learning
- Experiential learning
- Active interactive
- Feedback – personal physical sensory behavioural
- Adaptive
- Versatile
- Variable
- **Catalyst**
- Organisational change agent
- Ripple out effect
- Stealth
- Hub for faculty development
- Honey pot for educators or novice educators
- Skill assessment
- Trainee assessment
- Retraining
- Safe environment to push the envelope
- Conspicuous Service alignment of training In situ
- Hybrid
- Contextualised
- Distributed
- In situ
- Real
- **Technology enhanced learning**
- **Evidence**
- Issenberg
- Integration
- Repetition
- Validity
- **Reflective**
- Reflective space debriefing developing new learning from old experience
- **Behavioural**
- Behavioural debriefing
- Team debriefing
- Individual debriefing
- Insight opportunity
- **Scenarios**
- Table top
- Major event
- **Virtual worlds**
- Triage
- Hpa
- Trauma
- CBRN
- Scaleable
- Virtual patient generations
- Custom animation
- Curriculum visualisation
- fidelity
- reality
- realism
- Faculty development trainees in difficulty
- Simulated trainees
- Simulated patients
- Simulated difficult cases
- Management
- Coroner's inquests
- Mission rehearsal
- Operational feedback re processes eg how good resus
- Human factors
- Crm
- Non-technical skills
- Audio visual techniques
- Rare serious events
- Rerun SUIs
- Operational process development
- Equipment validation
- High visibility focus for medical education



Unconscious incompetence



Conscious incompetence



Conscious competence



Unconscious competence

Developing capabilities beyond competence

Environment unfamiliar

Capabilities

Uncertainty

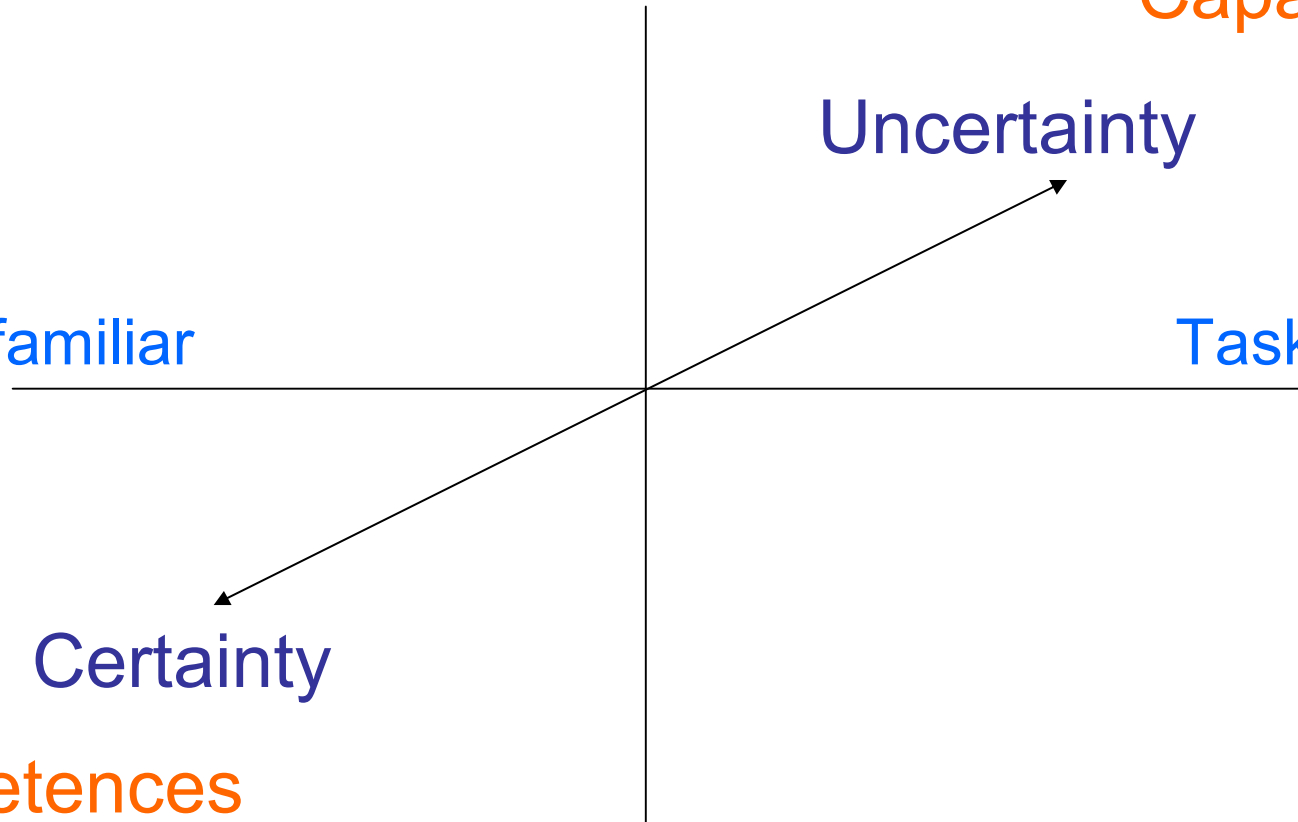
Task familiar

Task unfamiliar

Certainty

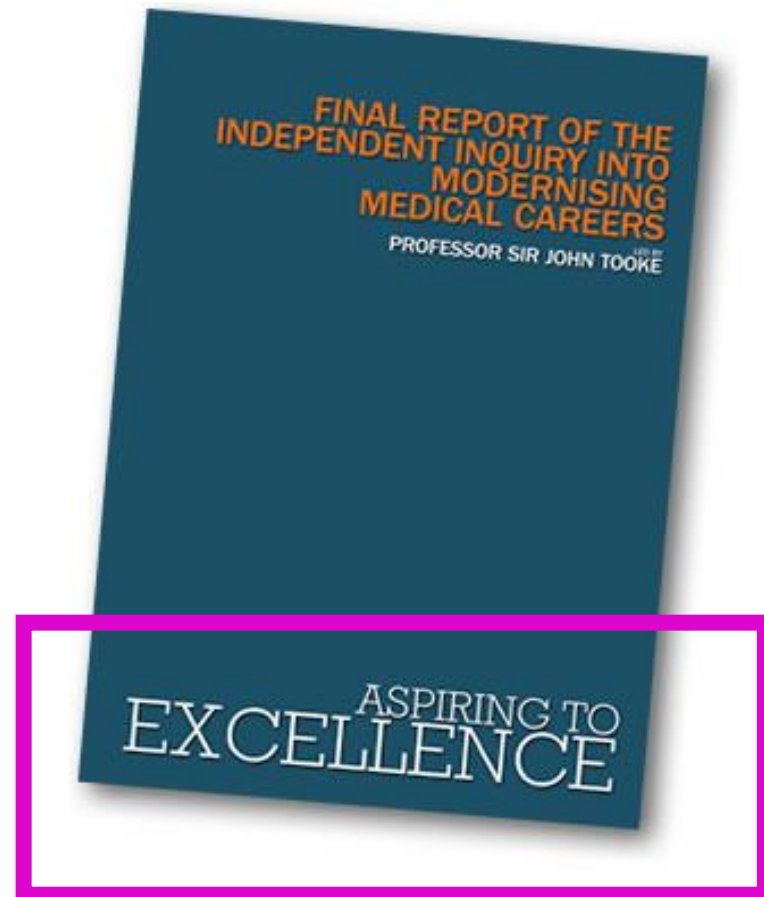
Competences

Environment familiar



How do we promote and develop this clinical excellence?

We practice and practice and practice some more!



Develop communication skills and team working

- Excellence in...
- Induction
- Handover training
- Workplace supervision

