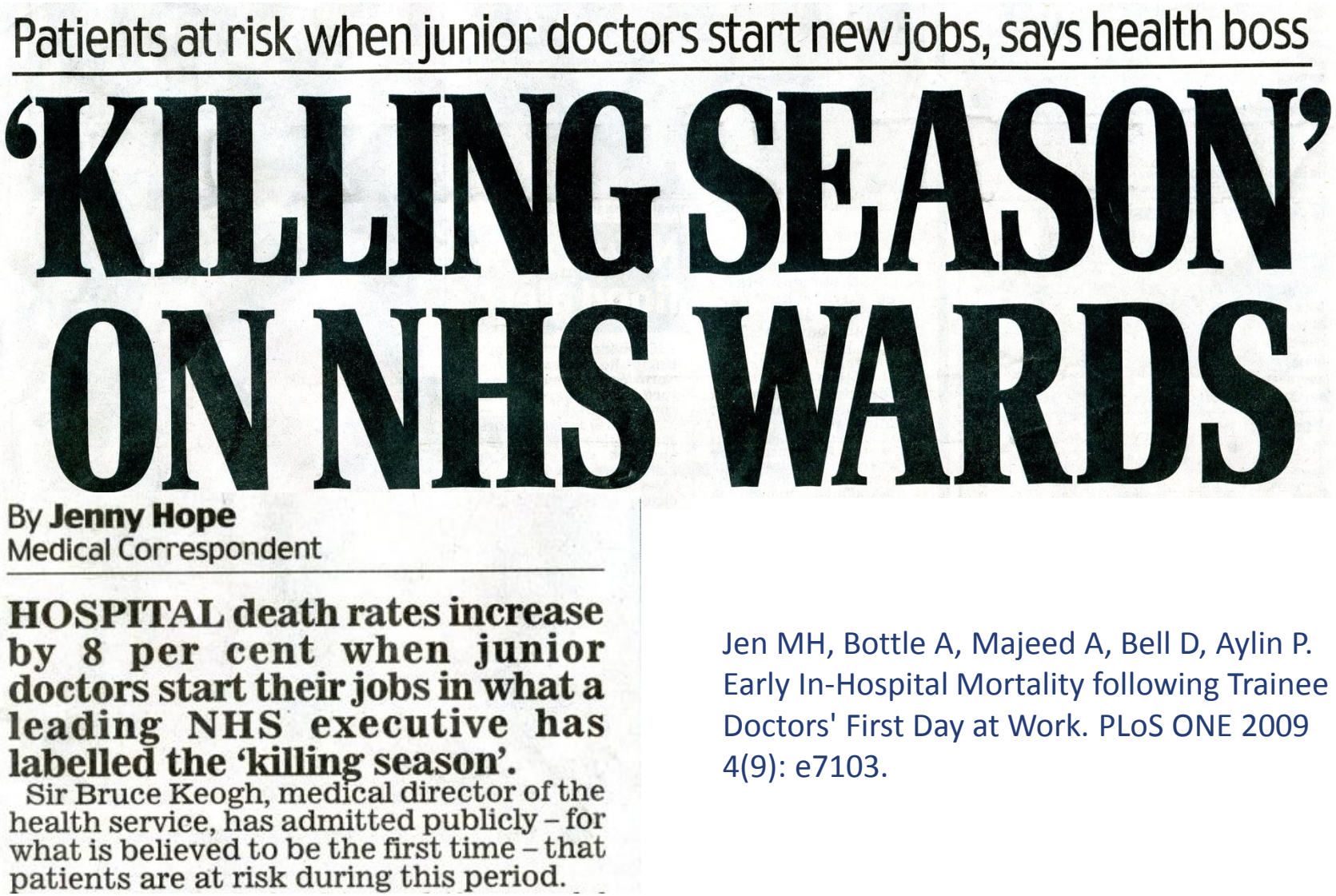
As easy as ?

Acute care and the transition into clinical practice

Vicky Tallentire

University of Edinburgh

The Daily Mail, 23rd June 2012



Patients at risk when junior doctors start new jobs, says health boss

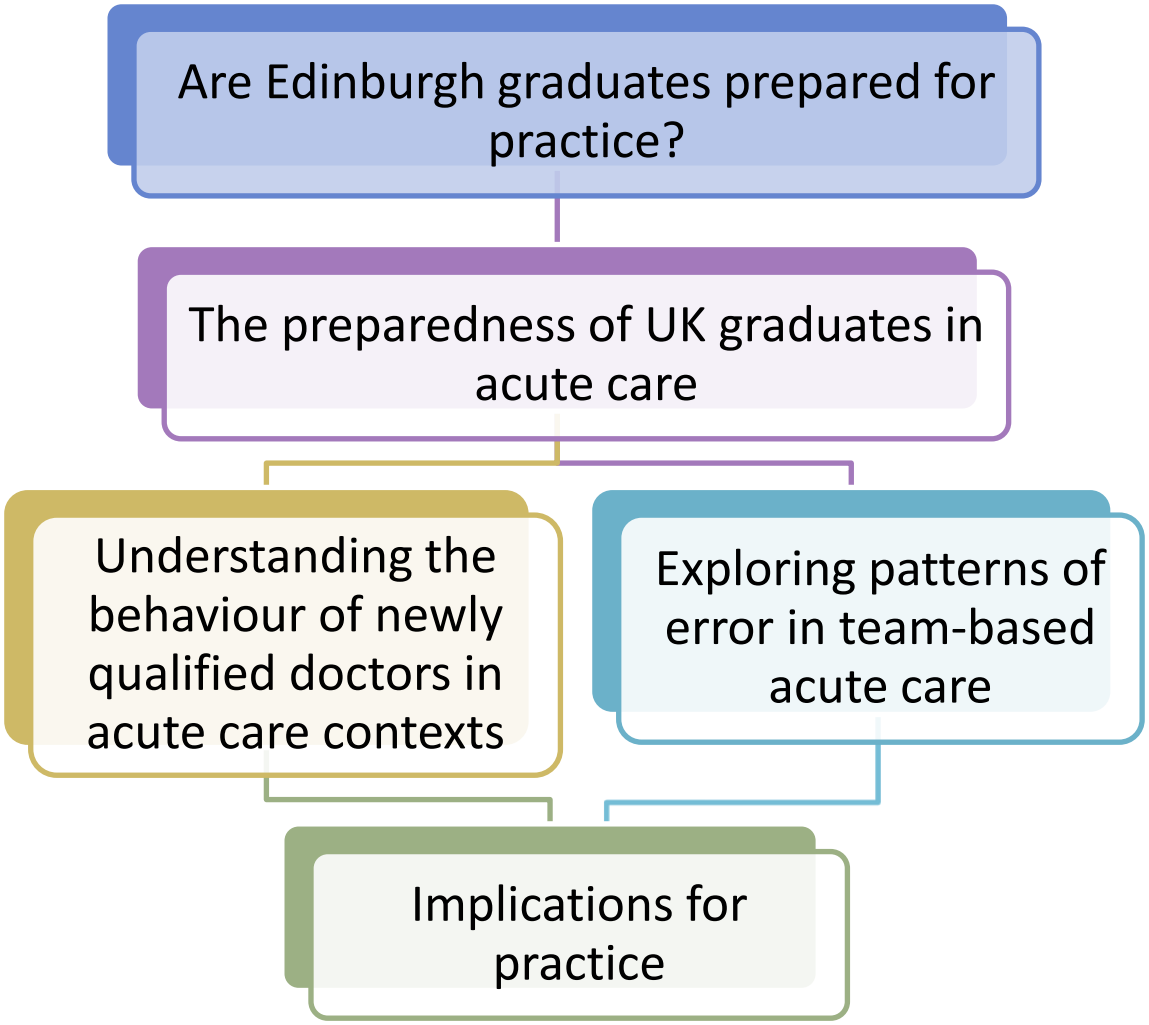
'KILLING SEASON' ON NHS WARDS

By **Jenny Hope**
Medical Correspondent

HOSPITAL death rates increase by 8 per cent when junior doctors start their jobs in what a leading NHS executive has labelled the 'killing season'.

Sir Bruce Keogh, medical director of the health service, has admitted publicly – for what is believed to be the first time – that patients are at risk during this period.

Jen MH, Bottle A, Majeed A, Bell D, Aylin P. Early In-Hospital Mortality following Trainee Doctors' First Day at Work. PLoS ONE 2009 4(9): e7103.

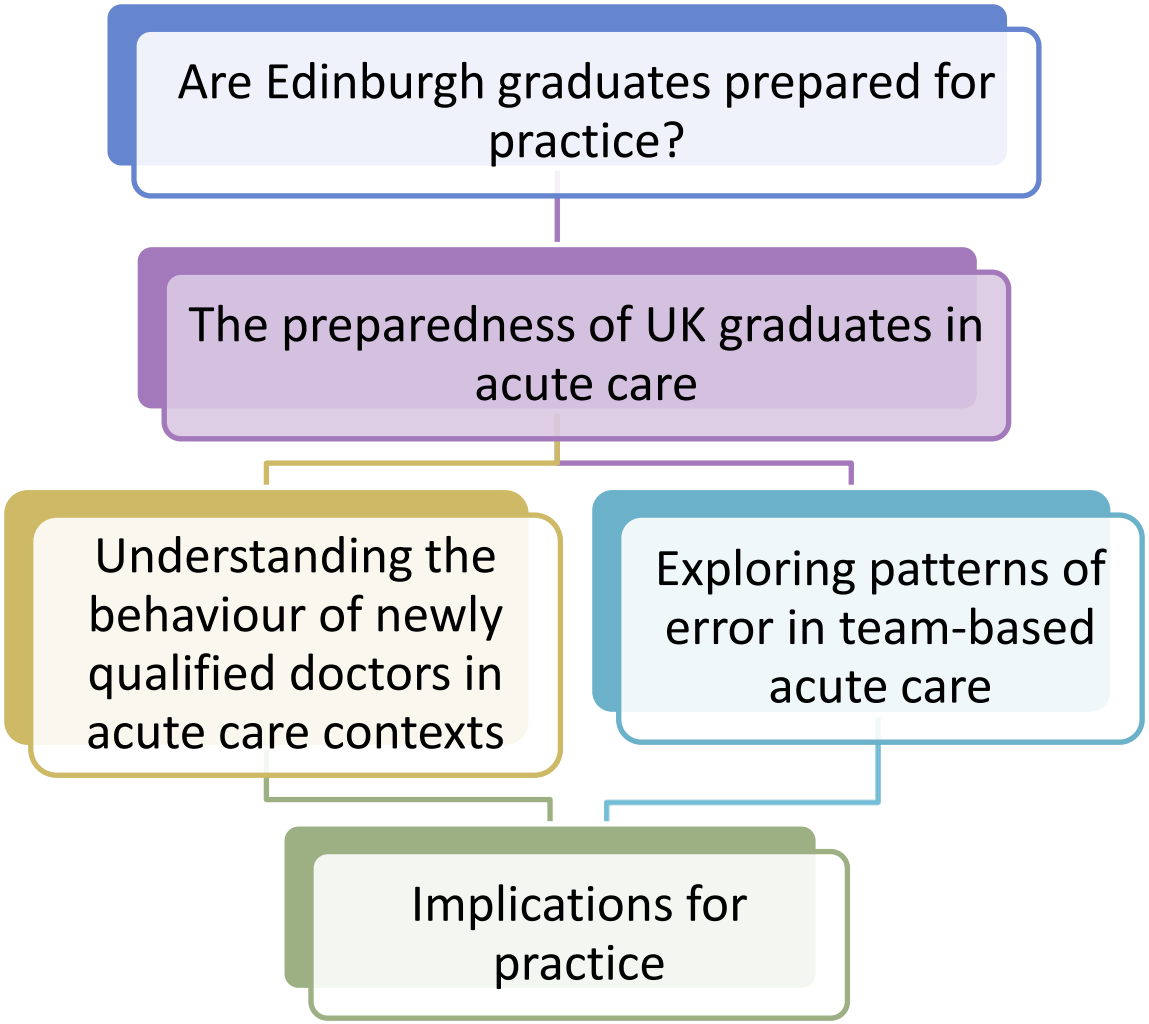

Are Edinburgh graduates prepared for practice?
The preparedness of UK graduates in acute care
Understanding the behaviour of newly qualified doctors in acute care contexts
Exploring patterns of error in team-based acute care
Implications for practice

Edinburgh graduates

- How well do Edinburgh medical graduates and their educational supervisors feel that their primary medical training prepared them for starting work as a doctor?
- Questionnaire study over 3 years.
- Preparedness in acute care and prescribing were rated lowest.

Tallentire VR, Smith SE, Wylde K, Cameron HS. Are medical graduates ready to face the challenges of Foundation training? *Postgraduate Medical Journal* 2011; 87: 590-595.

centre for medical education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UK graduates

- How does perceived preparedness in acute care compare with perceived preparedness in other *Tomorrow's Doctors* (2009) outcomes?
- Systematic literature review.
- 256 abstracts reviewed → 10 included studies.

Tallentire VR, Smith SE, Skinner J, Cameron HS. The preparedness of UK graduates in acute care: a systematic literature review. *Postgraduate Medical Journal* 2012; 88: 365-371.

UK graduates

- UK graduates perceive themselves to be least well prepared in acute care and prescribing.
- Senior colleagues and AHPs perceive them to be least prepared in acute care.
- Perceived preparedness in acute care appears to have declined since 1993.

Tallentire VR, Smith SE, Skinner J, Cameron HS. The preparedness of UK graduates in acute care: a systematic literature review. *Postgraduate Medical Journal* 2012; 88: 365-371.

New doctors 'lack expertis to care for the seriously ill'

10 *** Sc

By Rebecca Smith, Medical Editor

NEWLY qualified doctors are less able to look after seriously ill patients than in the past because their training emphasises communication and teamwork above acute clinical care, research has found.

Junior doctors working in hospitals reported that they did not feel fully prepared to deal with acutely sick patients.

Researchers said that changes to the medical school curricula, which have put greater emphasis on communication and teamwork, may have been to the detriment of basics such as treatment, prescribing and managing emergencies.

They suggested that the problem had got worse since the introduction of new standards for medical training introduced by the General Medical Council in 2003.

The team from the University of Edinburgh analysed 10 studies on the perceptions of junior doctors published between 1993 and 2011.

They found that in most areas junior doctors felt better prepared for the job. However, in prescribing and acute care, their confidence appeared to have deteriorated.

"The assimilation of evidence in this review suggests that recent changes in UK undergraduate training, while improving preparedness in some areas, may have neglected acute care," the research paper, published in the *Postgraduate Medical Journal*, stated.

Dr Sam Smith, a co-author of the study, added: "Junior doctors feel prepared in communication but don't feel prepared in acute care. One of the reasons … is the emphasis on commun working. It is very dif same level of emphas when new things are Figures released that patients requiri were almost 10 per c if they were admi weekends, when ju likely to be left There have been European Working has restricted juni week, is denying on" experience.

Prof Norman W the Royal Colle "These findings new doctors in patients do not "Restrictions thin rotas that l and make it ha ence. In recent ing divergence schools, mea have very di where they Niall Dick the General ards for me 2009 increa skills. He added: patients by making sure doctors have right knowledge, skills and experience to provide safe high-quality care. Moving from medical student to doctor is a big step – that is why new doctors are closely supervised by experienced colleagues in their first years of practise."

New doctors 'lack training to care for acutely ill patients'

CLAIRE SMITH

NEWLY qualified doctors feel they lack training to care for acutely ill patients on hospital wards, according to a new Scottish study.

Senior doctors are also concerned about the amount of training new doctors have to prepare them.

Researchers from the University of Edinburgh believe acute care may be a neglected area in medical training and this may be putting patients in danger.

Dr Vicky Tallentine, a fellow in medical education and one of the authors of the study, said: "The main findings are that new doctors feel poorly prepared in this domain – and their more experienced colleagues also feel they are not well prepared. Maybe we need to focus a little bit more in terms of training them to deal with these situations."

The research, published in the *Postgraduate Medical Journal*, analysed ten studies on the views of newly qualified doctors, consultants and education supervisors about junior doctor preparedness.

The research found that jun ior doctors felt poorly pre for dealing with acutely patients compared with aspects of care. More s doctors also agreed with assessment.

Furthermore, those stu which enabled people to exp on their responses found t

"Maybe we need to focus a little bit more in terms of training"

Dr Vicky Tallentine

acute care consistently showed up as an area of concern.

The papers also suggest the problem has got worse since the introduction of new standards for medical training introduced by the General Medical Council (GMC) in 2003.

The authors say the findings will "come as little surprise" to those involved in medical education, saying: "The care of acutely unwell patients is complex, involving a myriad of technical and non-technical skills in time-pressured situations and increasingly litigious environments."

New doctors feel queasy over very ill

24 METRO Tuesday, December 13, 2011

By JEN LAVERY

NEWLY qualified doctors feel poorly prepared to look after very sick patients, a study has found.

Evidence suggests they don't feel ready to look after acutely ill patients, compared with other elements of clinical practice.

The findings have prompted researchers to suggest recent changes in undergraduate training may be to blame.

They trawled five databases to find published studies between 1993 and 2011, covering the preparedness of UK graduates in acute care and other required competencies set out by the regulator in Tomorrow's Doctors, designed to guide medical school curricula.

The analysis showed UK graduates feel least well prepared to look after acutely ill patients and prescribe drugs.

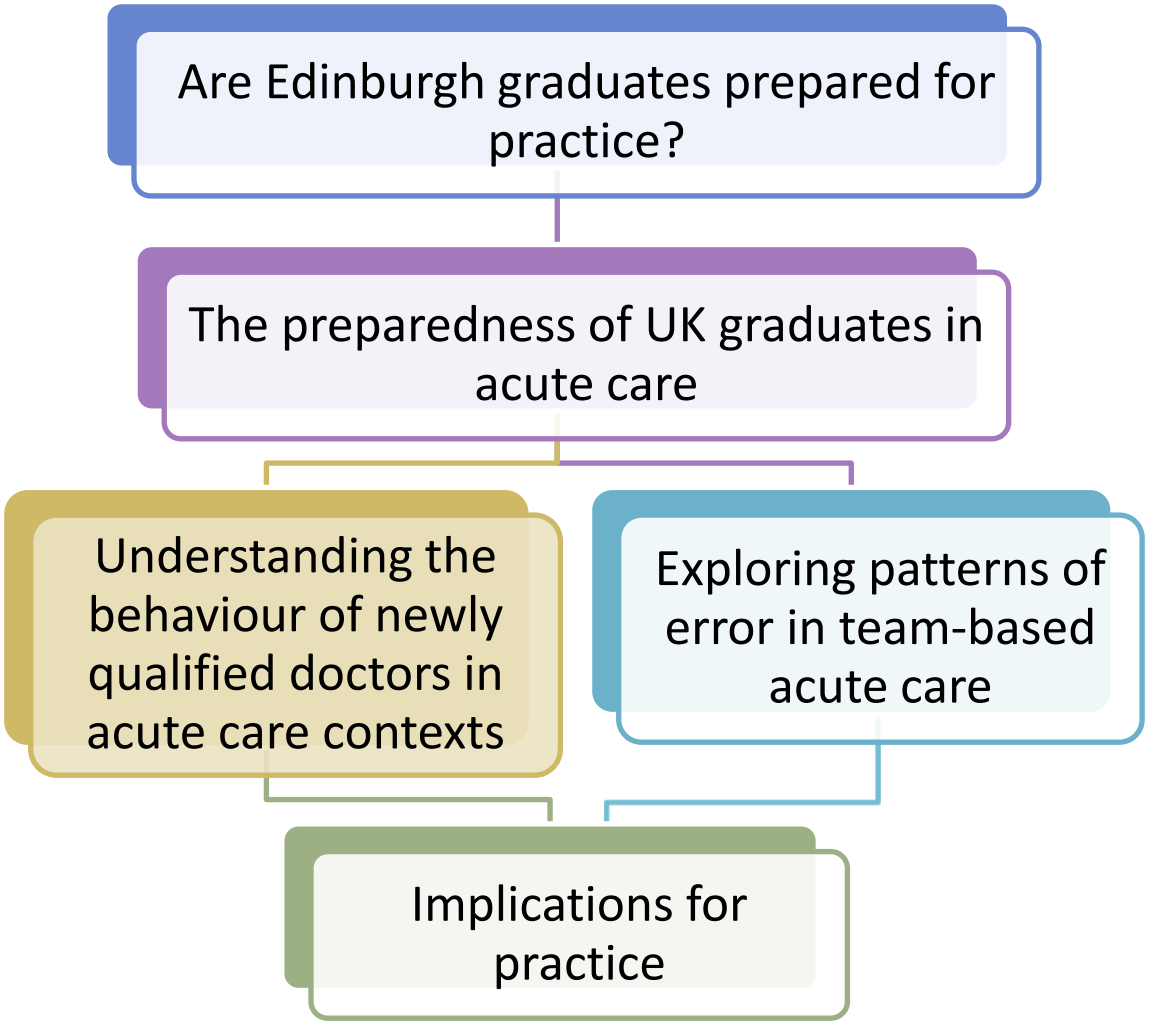
And their professional colleagues tend to agree with that assessment.

They also perceive newly qualified doctors to be the least well prepared in acute care.

Dr Sam Smith, of the University of Edinburgh, said: 'The results of this study suggest recent changes to UK undergraduate training, while improving preparedness in some areas, may have neglected acute care skills.'

The findings were published in the Postgraduate Medical Journal.

The Metro 13th December 2011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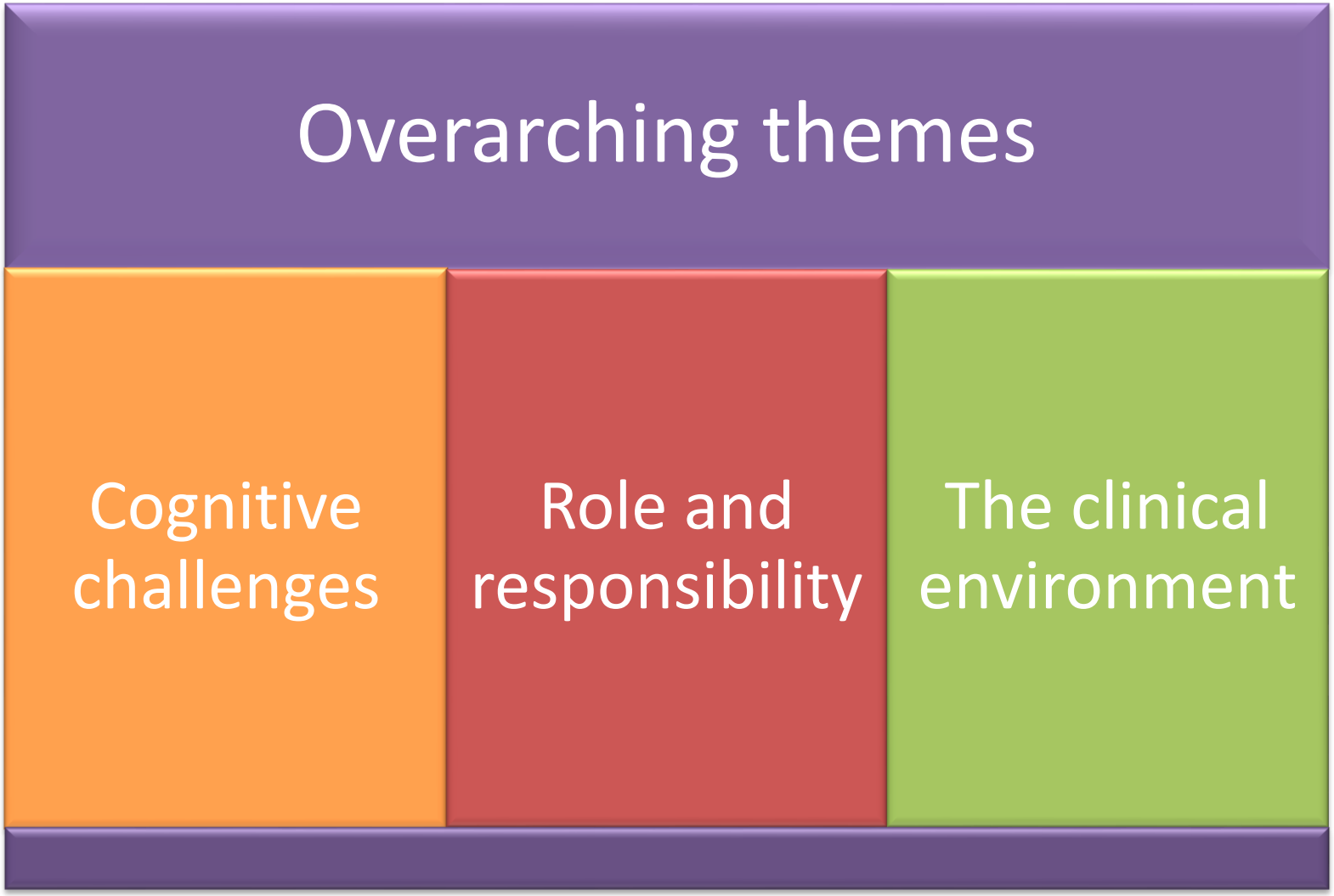
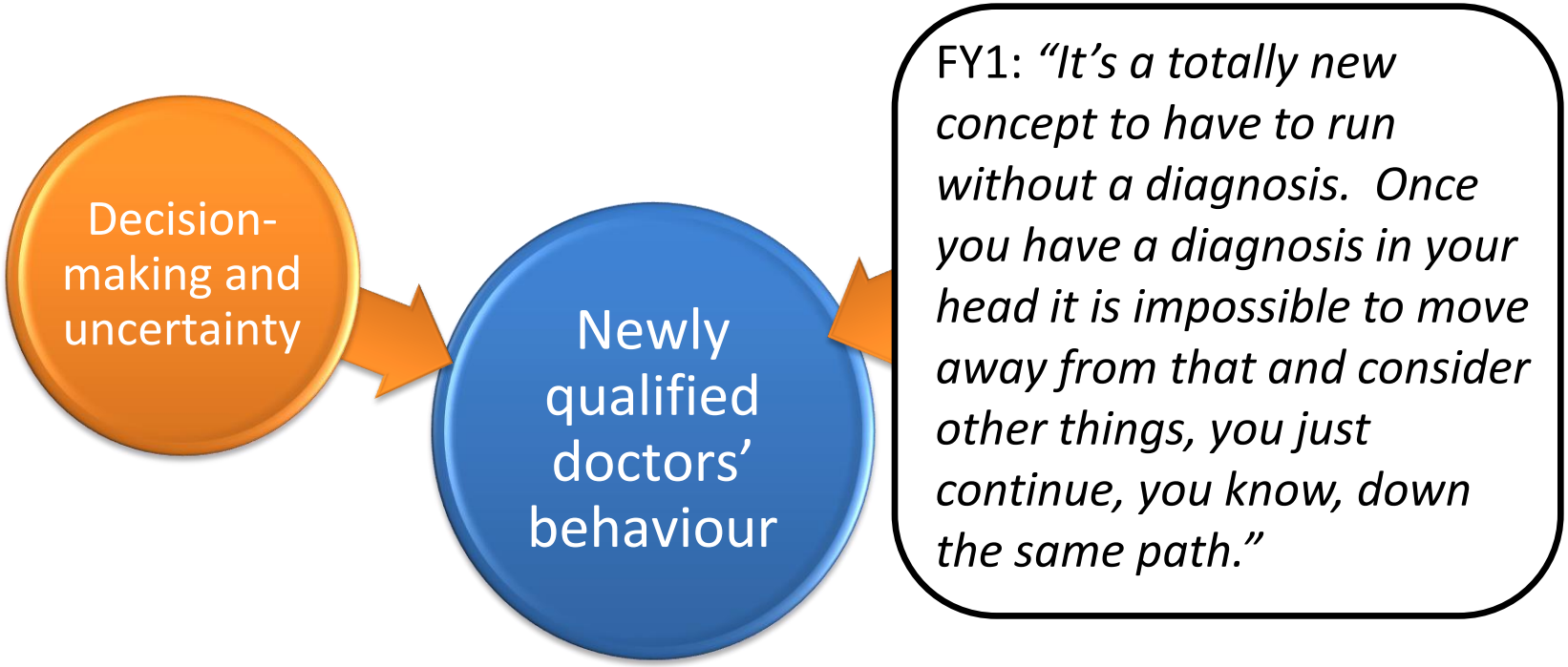
Coding is not a crime.


Overarching themes
Cognitive challenges
Role and responsibility
The clinical environment

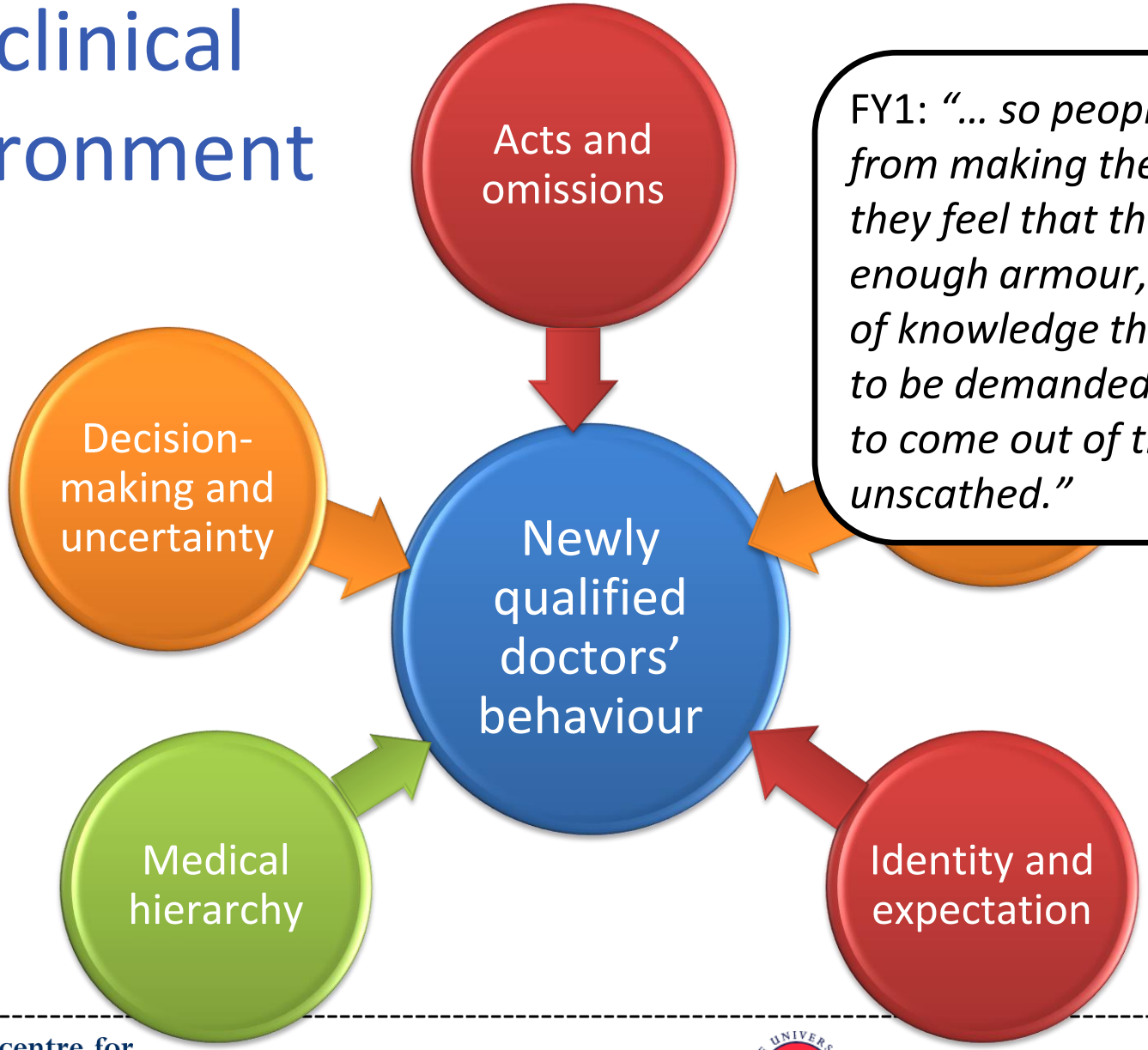
Cognitive challenges



Role and responsibility

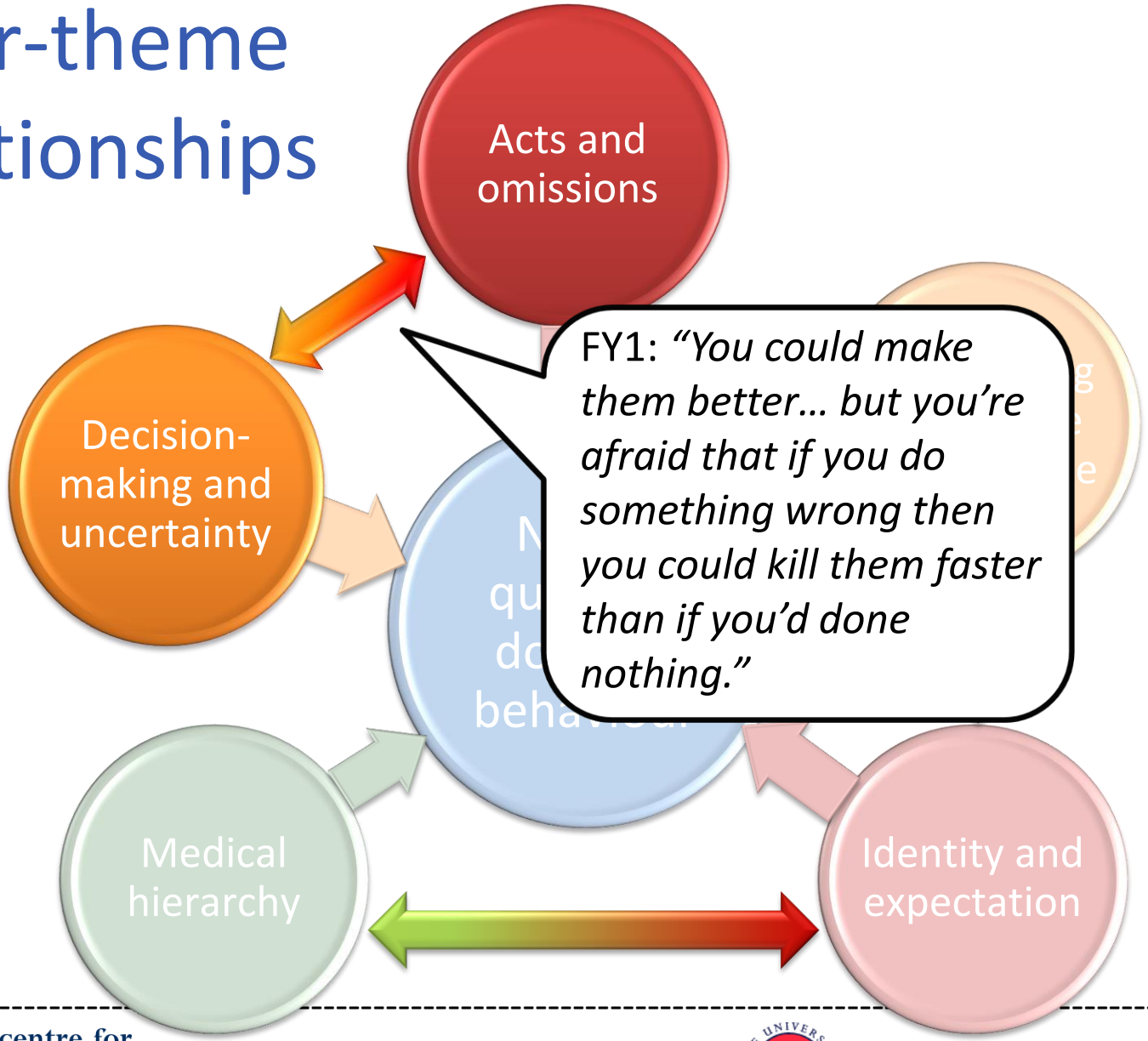
FY1: *"You don't want to phone for help and them say 'what have you done?' and you have to say 'nothing'. Because that would make you feel useless. And you feel like, 'I'm a doctor now, I should be able to at least start to manage a situation'."*

The clinical environment

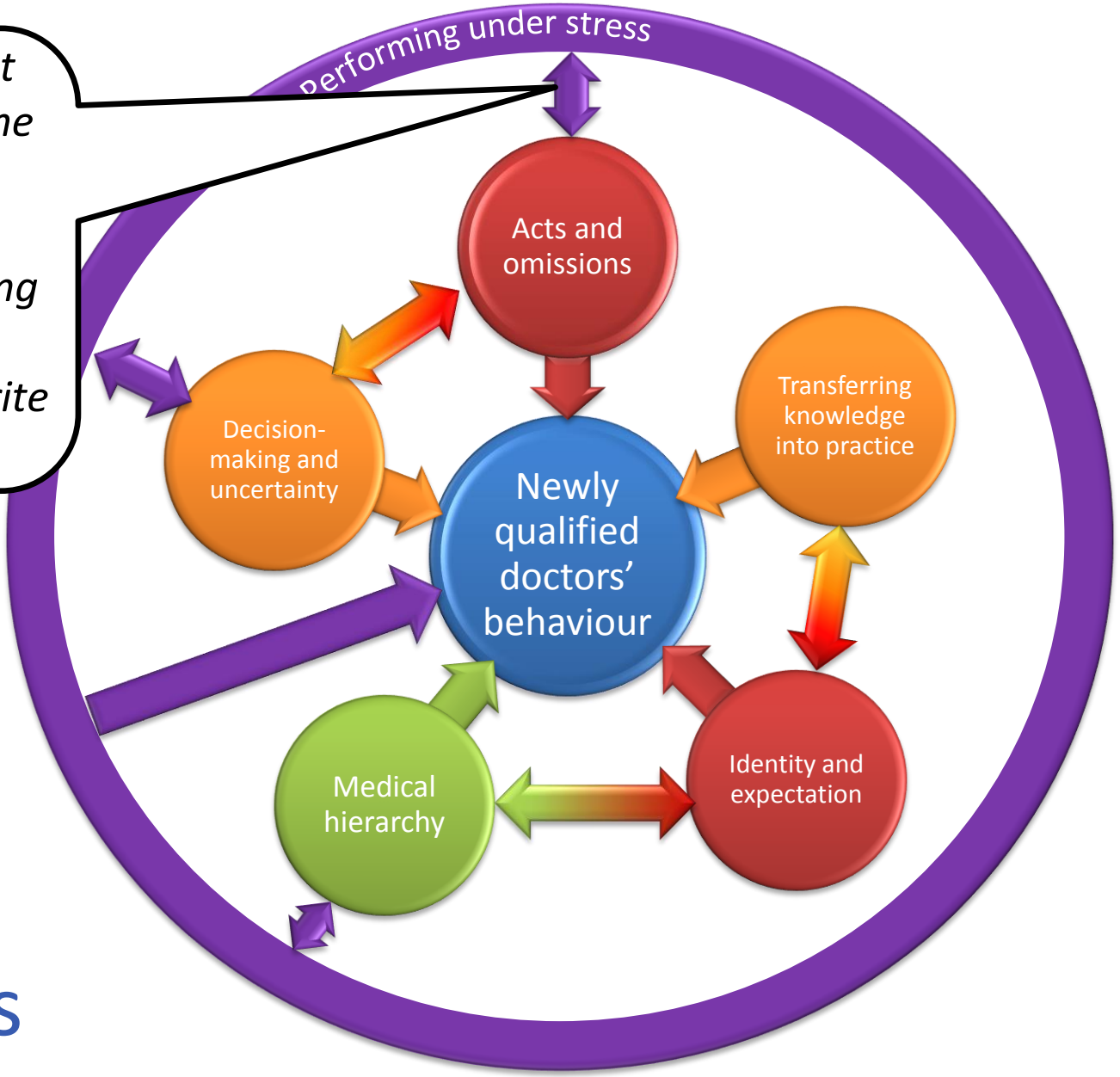


FY1: *"… so people shy away from making the call until they feel that they have enough armour, in the form of knowledge that is going to be demanded from them, to come out of the call unscathed."*

Inter-theme relationships

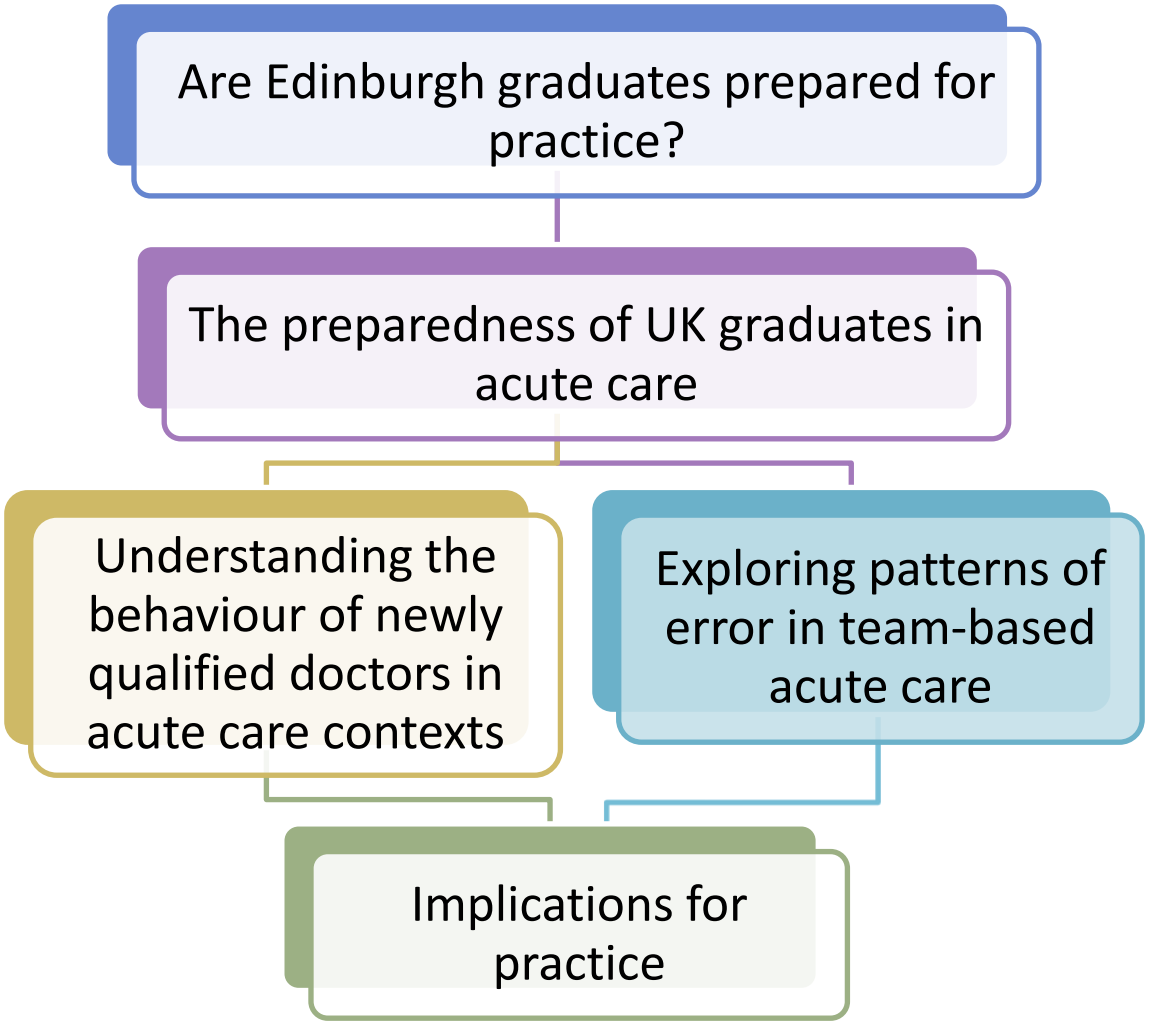


FY1: *"I think that is what underlies a lot of the time wasting in an acute situation. People are afraid of doing something that will have a bad outcome so they just write the notes…"*



Performing under stress

Tallentire VR, Smith SE, Skinner J, Cameron HS. Understanding the behaviour of newly qualified doctors in acute care contexts. *Medical Education* 2011; 45(10): 995-1005.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38 FY1s from 7 UK medical schools

High fidelity simulation

18 simulated scenarios:

- post-operative haemorrhage
- severe sepsis
- post-operative respiratory distress
- hypoglycaemic coma

Tallentire VR, Smith SE, Skinner J, Cameron HS. Exploring error in team-based acute care scenarios: an observational study. *Academic Medicine* 2012; 87(6):792-798.

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Conceptual framework

Professor James Reason

Generic Error Modelling System (GEMS)

Unintentional error

- Skill-based slips and lapses
- Rule-based mistakes
- Knowledge-based mistakes

Intentional error

- Violations

Results

- 243 errors identified
- 8 to 20 per scenario
- All errors attributed to the ‘team’
- 164 classified using the original version of GEMS

Skill-based slips and lapses

FY1: *"The pulse is 97"*

Rule-based mistakes

Tutor: "*Did 2222* [emergency call] *cross your mind?*"

FY1: "*Yes, it did at one point*"

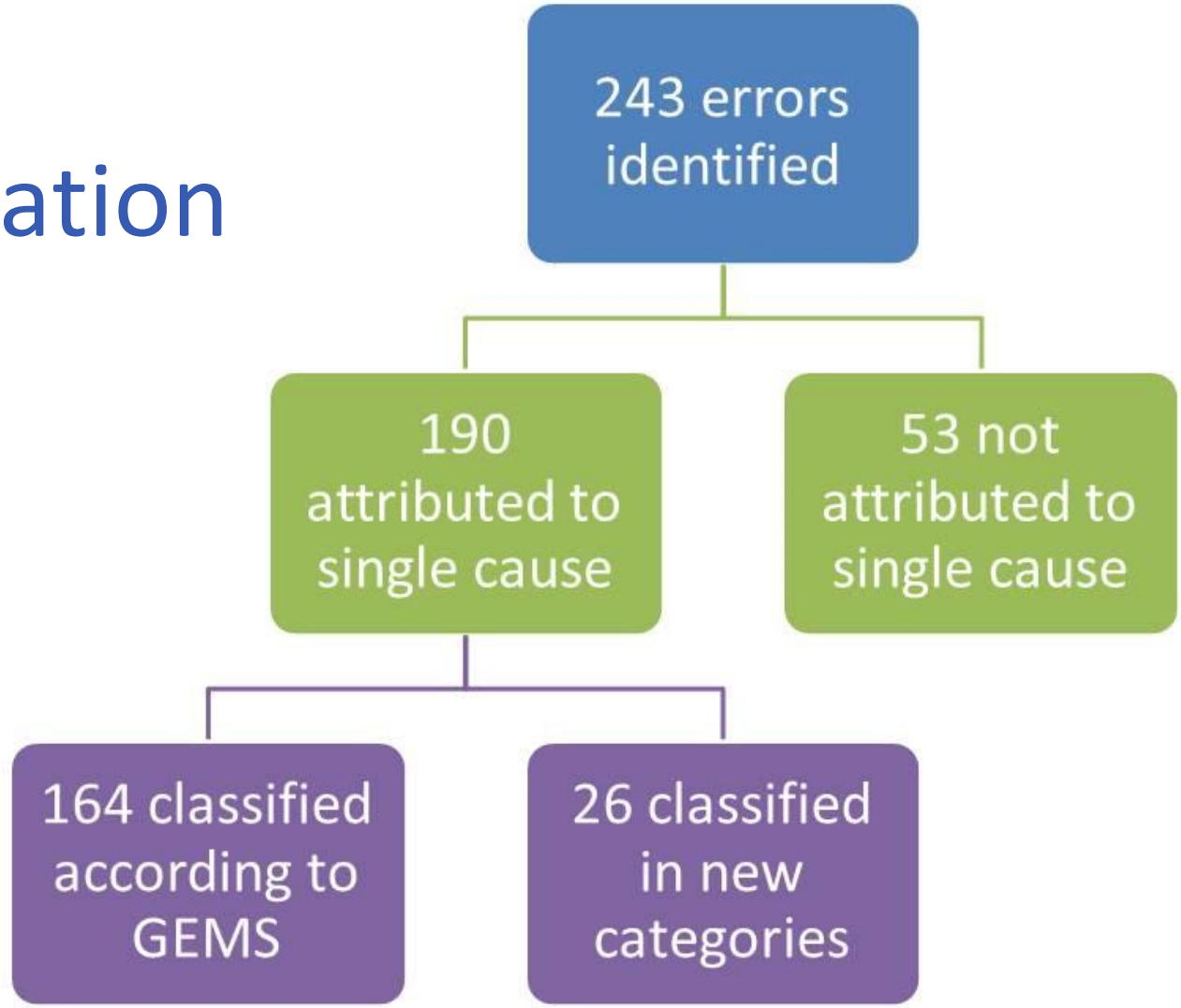
Tutor: "*Why didn't you call it?*"

FY1: "*I felt like the patient's consciousness wasn't impaired*"

Knowledge-based mistakes

FY1: *"I was thinking about maybe calling the anaesthetist. I was thinking: 'I need an anaesthetist, where do I get one of those?'"*

Errors classification



Compound errors

Error occurring solely because of a preceding error, from own or others' misperception or misinterpretation of information

FY1: "*97% sats* [oxygen saturation; actually 77%] *so I didn't think we needed to jump in with all guns blazing*"

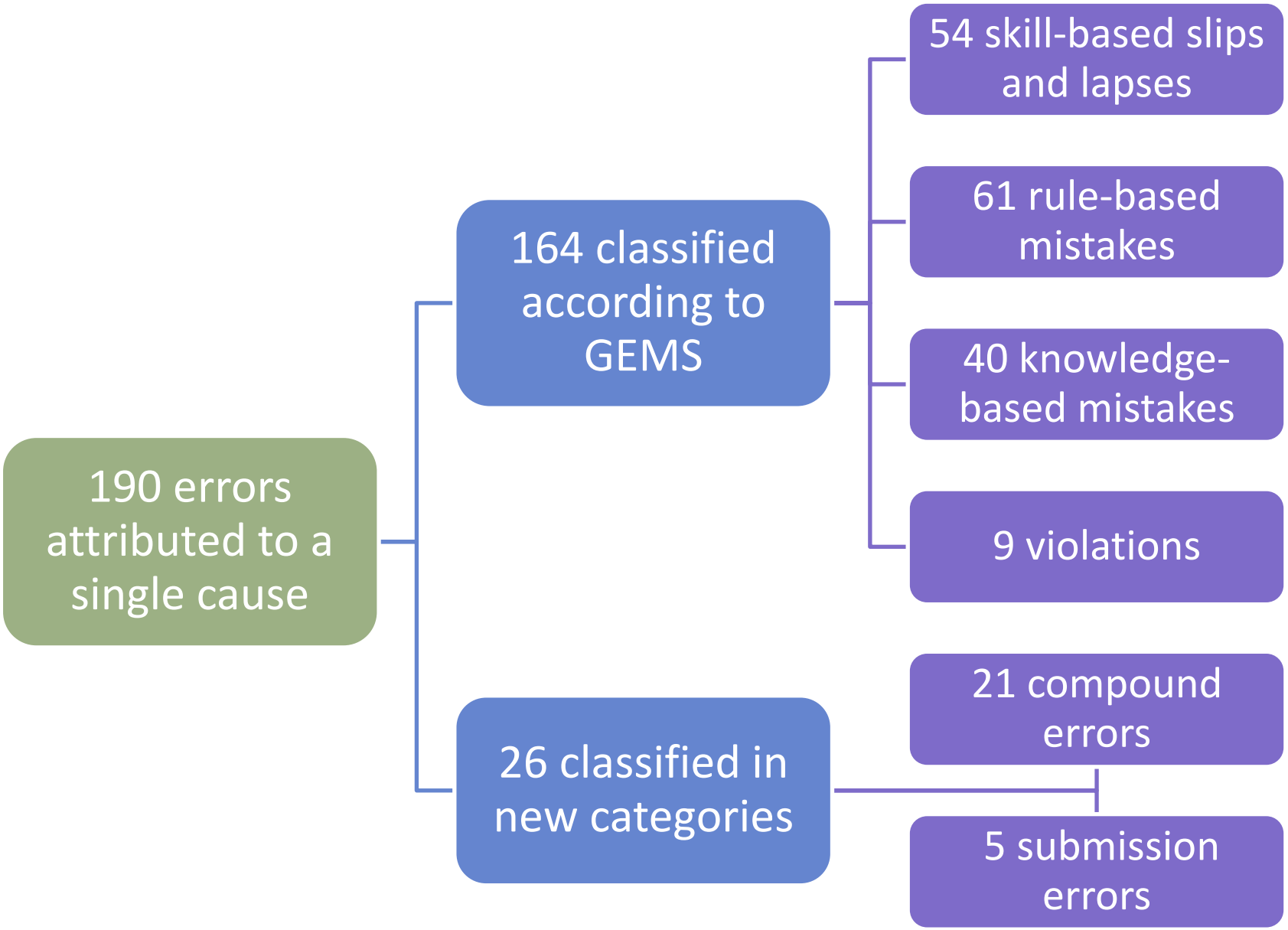
Submission errors

Error occurring when an FY1 was dissuaded from taking the most appropriate course of action by a colleague advocating less appropriate measures

FY1: "*I think we should just give more fluid*"

Other FY1: "*But if she's bleeding blood then we should give her blood*"

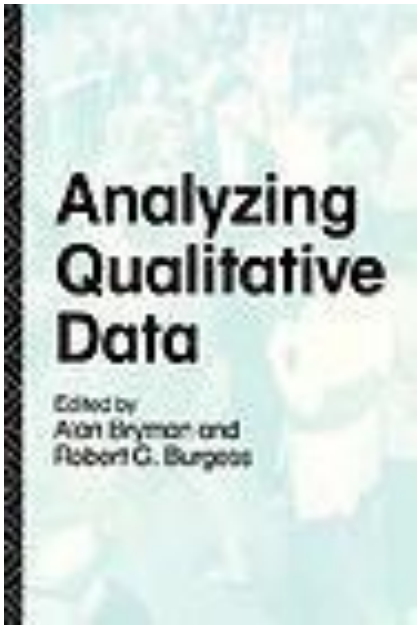
FY1: "*…can we not just keep giving her saline, or jelly* [colloid] *or something?*"

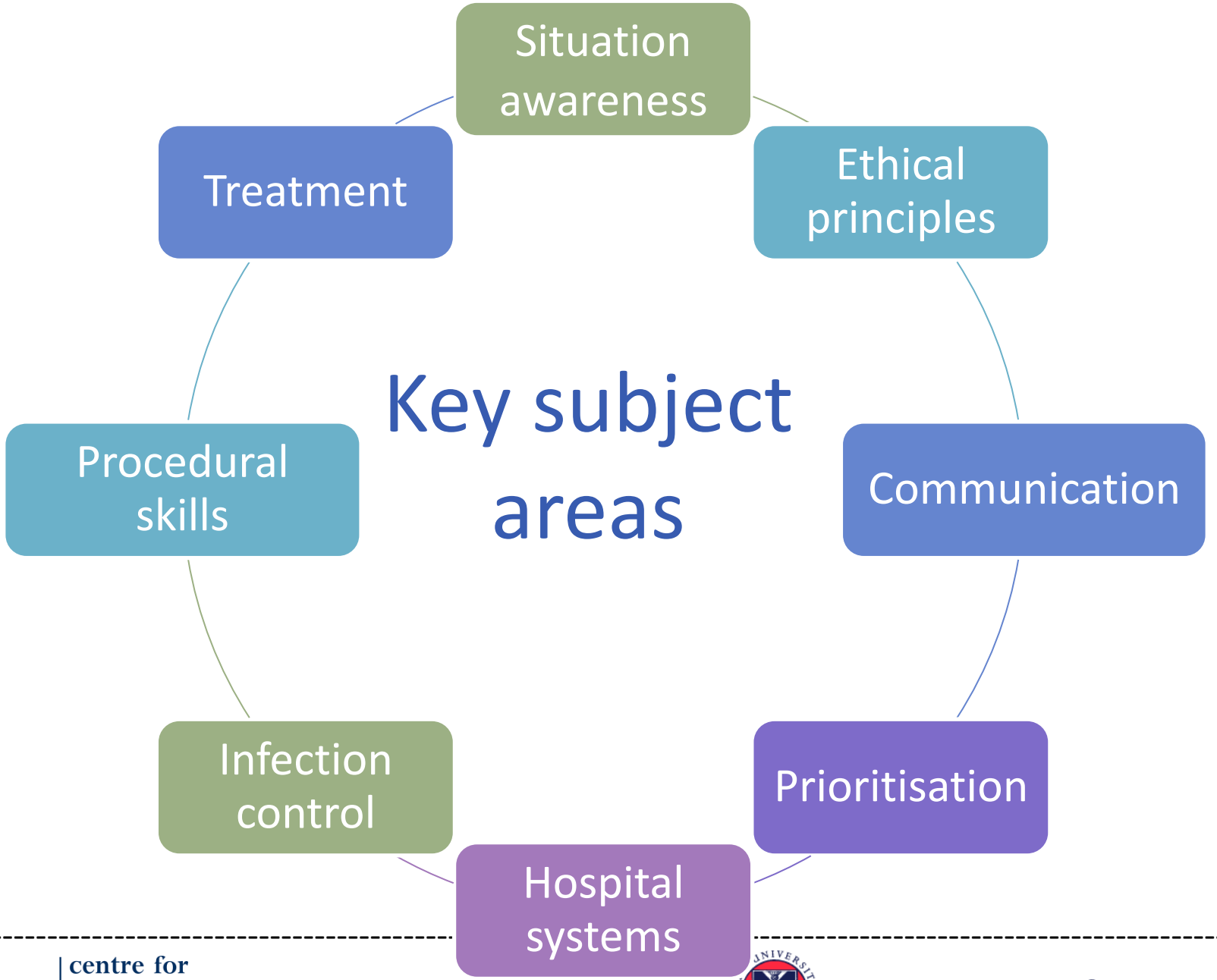

190 errors attributed to a single cause
164 classified according to GEMS
54 skill-based slips and lapses
61 rule-based mistakes
40 knowledge-based mistakes
9 violations
26 classified in new categories
21 compound errors
5 submission errors

Stages of framework analysis

(Ritchie and Spencer, 1994)

1. Familiarisation
2. Identifying a thematic framework
3. Indexing
4. Charting
5. Mapping and interpretation




Situation awareness
Ethical principles
Communication
Prioritisation
Hospital systems
Infection control
Procedural skills
Treatment
Key subject areas

Indexing

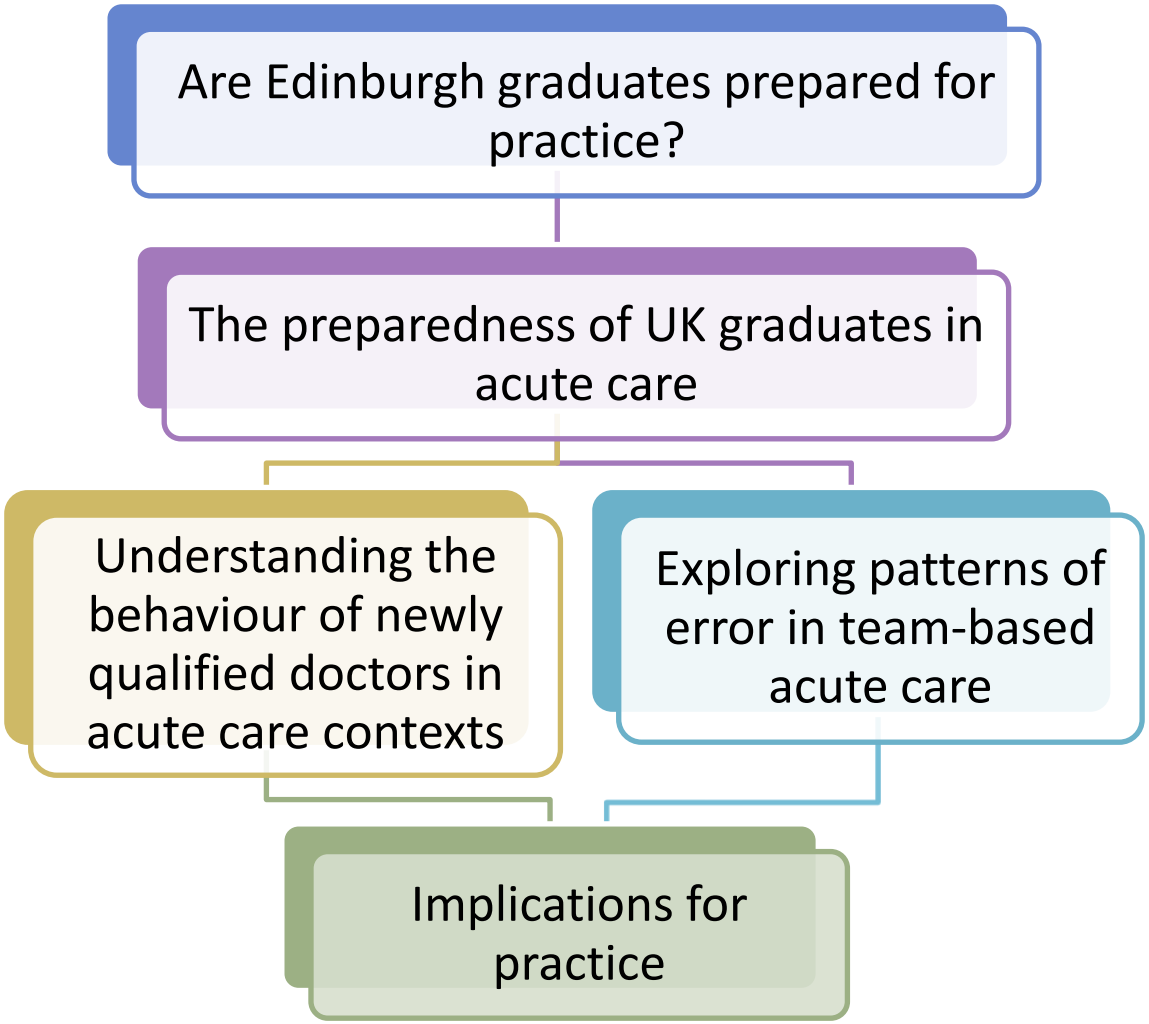
Description of error	Evidence from scenario (S) or debrief (D)	Key subject area classification
Surgeon paged (but had not answered) and junior doctors assumed that the surgeon was therefore on his way to the ward	Junior (S): *"He's been called so he's on his way."*	Hospital systems
Recognition of severe sepsis but no attempts made to give antibiotics	Tutor (D):"*Did the patient get antibiotics?*" Junior: "*No, because I didn't know how to administer them*"	Procedural skills

Multidimensional analysis

Key subject area	GEMS			
	Skill-based slips / lapses	Rule-based mistakes	Knowledge-based mistakes	Violations
Hospital systems	1	24	13	3
Prioritisation	1	10	0	3
Procedural skills	18	0	12	0
Treatment	2	12	6	0
Communication	11	0	1	1
Ethical principles in practice	0	6	0	1

Multidimensional analysis

Key subject area	GEMS			
	Skill-based slips / lapses	Rule-based mistakes	Knowledge-based mistakes	Violations
Hospital systems	1	24	13	3
Prioritisation	1	10	0	3
Procedural skills	18	0	12	0
Treatment	2	12	6	0
Communication	11	0	1	1
Ethical principles in practice	0	6	0	1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Educational strategies

Hospital systems:

- Application of systems-related knowledge needs to be robustly assessed
- Induction processes need to include systems and equipment training

Prioritisation:

- Repeated exposure to simulation training facilitates use of assessment protocols

Educational strategies

Procedural skills:

- Emotional skills training should form an integral part of primary medical training
- Distraction and time-pressure can be incorporated into rehearsal

Communication:

- Strategies for dealing with challenging situations should be taught and rehearsed

Conclusions

- Acute care is a challenging and complex area
- New doctors will never feel fully prepared and errors will never be eliminated

- Patterns of error can guide educational innovations
- Strategies for improvement are multi-faceted

Acknowledgements

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Helen Cameron

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CLINICAL SKILLS Managed Educational Network

Excellent skills for excellent care

ASME

All research participants

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