

# Use of significant event analysis as a reflective patient safety tool for undergraduates

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# Introduction

- Work in progress!
- Qualitative study
- Aims
- Explore the feasibility of significant event analysis (SEA) as a reflective tool for undergraduates
- Investigate the quality, content and reflectivity of reports

# Significant Event Analysis

- Flanagan World War II
- 1990's
  - Scale and impact of medical errors
  - Increased understanding of aetiology and processes
  - Advent of clinical governance
  - Implicit in risk management systems
- SEA as an educational tool-NES peer feedback on GP submitted SEAs
- Useful, feasible and added value

# Patient safety in the undergraduate domain

- Wu et al – 254 house officers - half made an error (diagnosis, prescribing and evaluation)
- Selective disclosure
- Feelings of ‘guilt and inadequacy’
- Lower quality of life and higher burnout scores
- DATIX-----
- WHO curriculum – 11 domains  
‘understanding and learning from errors’
- Tomorrow’s Doctors –  
‘appreciate the importance of protecting patients’

# Methods

- Final year students-apprenticeship model of clinical attachment
- Medical emergencies training day at the Scottish Clinical Simulation Centre in Larbert (with U of E nurses)
- Safe learning environment in which errors can be allowed to evolve
- Facilitated video debrief
- Students submit electronic SEA
- Structured individual feedback & global rating
- Ethical approval gained

# Methods

- Student self-reported errors coded using Wu classification and NTS for surgeons framework
- Content analysis of SEA forms - grounded theory approach (generation of theory from data)
- Will be open coded into concepts, categories and theories that explain the content
- Questionnaire at end of year to evaluate impact and usefulness of the process for students

## Significant Event Analysis - *Reflection*

1 Description of the event

2 Issues raised by the event

3 What went well

4 What didn't go well

5 How I might have done things differently

## Significant Event Analysis - *Action*

6 Areas of feasible improvement

7 Educational needs identified

8 Which needs I will address and in what order

9 How I intend to meet those needs

10 How I will be able to demonstrate improvement



**What happened?**

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding
1. The description of what actually happened:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

2. The issues raised by the event have been described:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

3. Positive aspects of performance have been described:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding	Not appropriate
4. Any negative aspects of performance have been described:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:								

**How might things have been done differently?**

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding
5. Changes to practice which may have improved outcome have been described:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

**Reflection and Learning**

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding
6. Reflection on the event has been demonstrated:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding
7. Appropriate educational needs have been identified from the event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:							

**Action**

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding	Not appropriate
8. An appropriate learning plan has been demonstrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:								

**Please add any general comments**

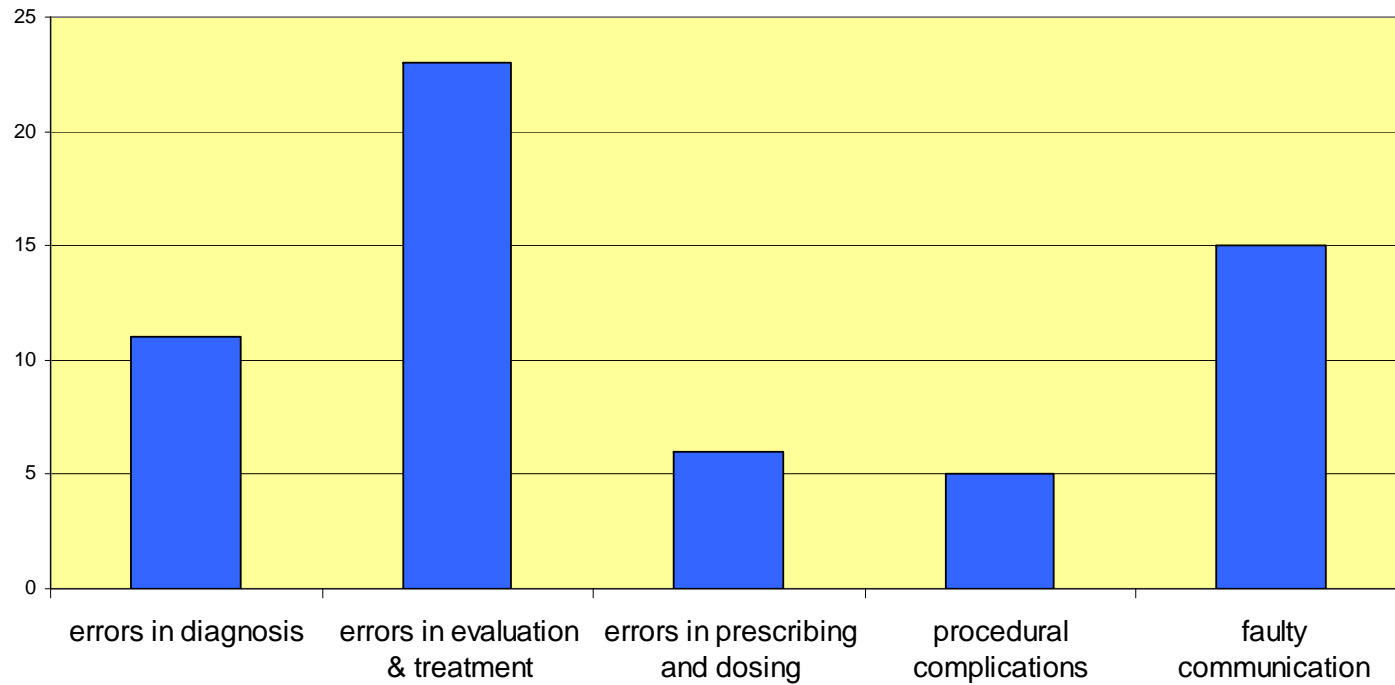
**Global Rating Scale**

	1. Very Poor	2. Poor	3. Fair	4. Good	5. Very Good	6. Excellent	7. Outstanding
10. Please rate the overall analysis of the significant event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

McKay, J., D. J. Murphy, et al. (2007). "Development and testing of an assessment instrument for the formative peer review of significant event analyses." *Quality & Safety in Health Care* 16(2): 150-3.



## Events self-reported by students as per Wu's classification



Wu AW, et al. Do House Officers Learn From Their Mistakes? JAMA, 1991; 265 (16):2089-95

# Emerging issues

- Knowledge basis- learn more about more things
- Transferral into practice
- Positive actions e.g. calling for help
- Limited understanding of non-technical skills
- Reflective 'divide'
- Engagement with safety and SEA
- Conceptualisation of errors

# Quotes

*'I intend to go back to basics and look at physiology and anatomy again'*

*'memorise the acute medicine handbook'*

*'Deciding who to call at that time'*

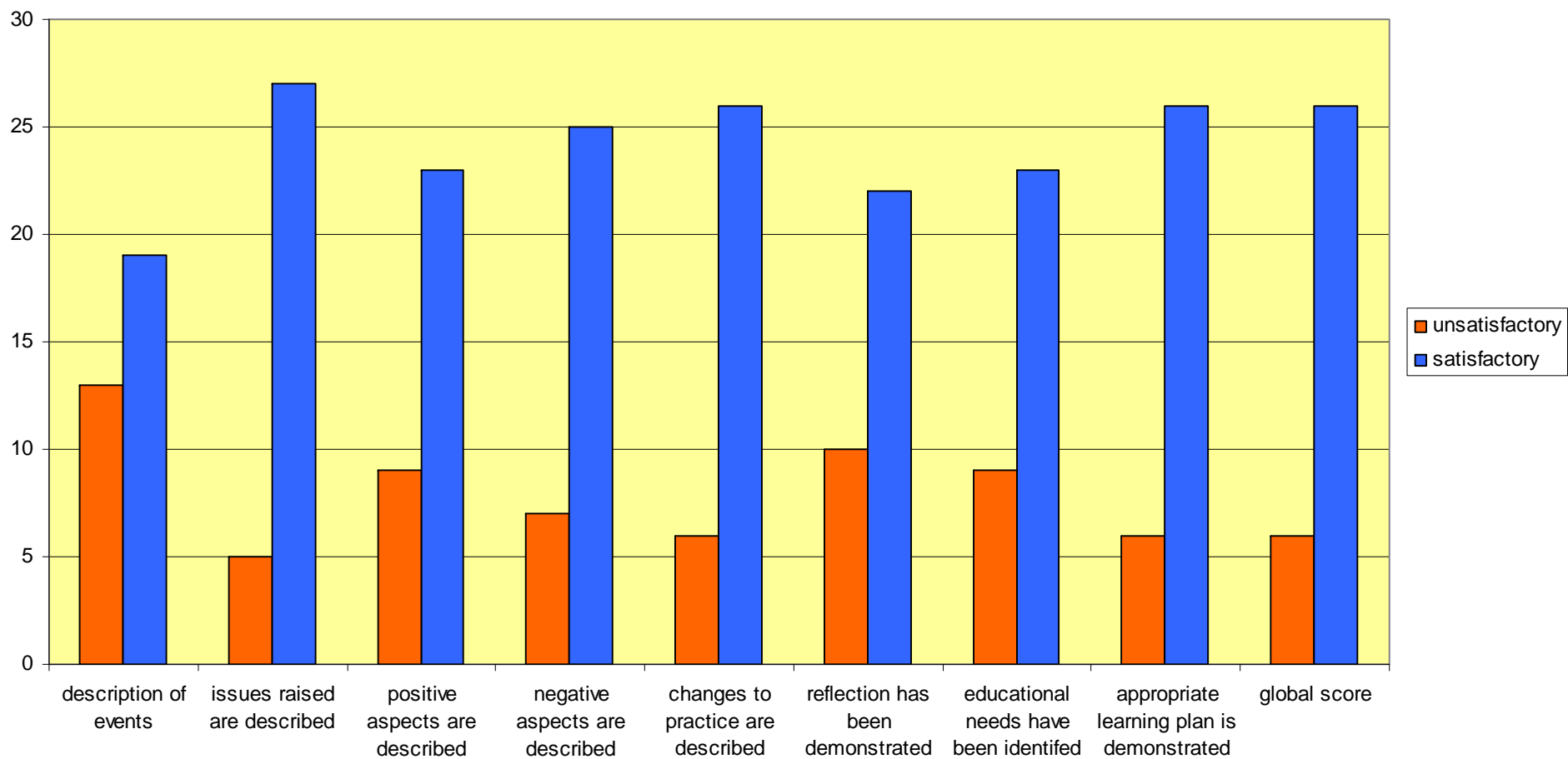
*'team stagnated .....just got stuck in an ABCDE loop'*

*'None of us were talking through the patients information, procedures we have done or relaying new information in clear and loud voice'*

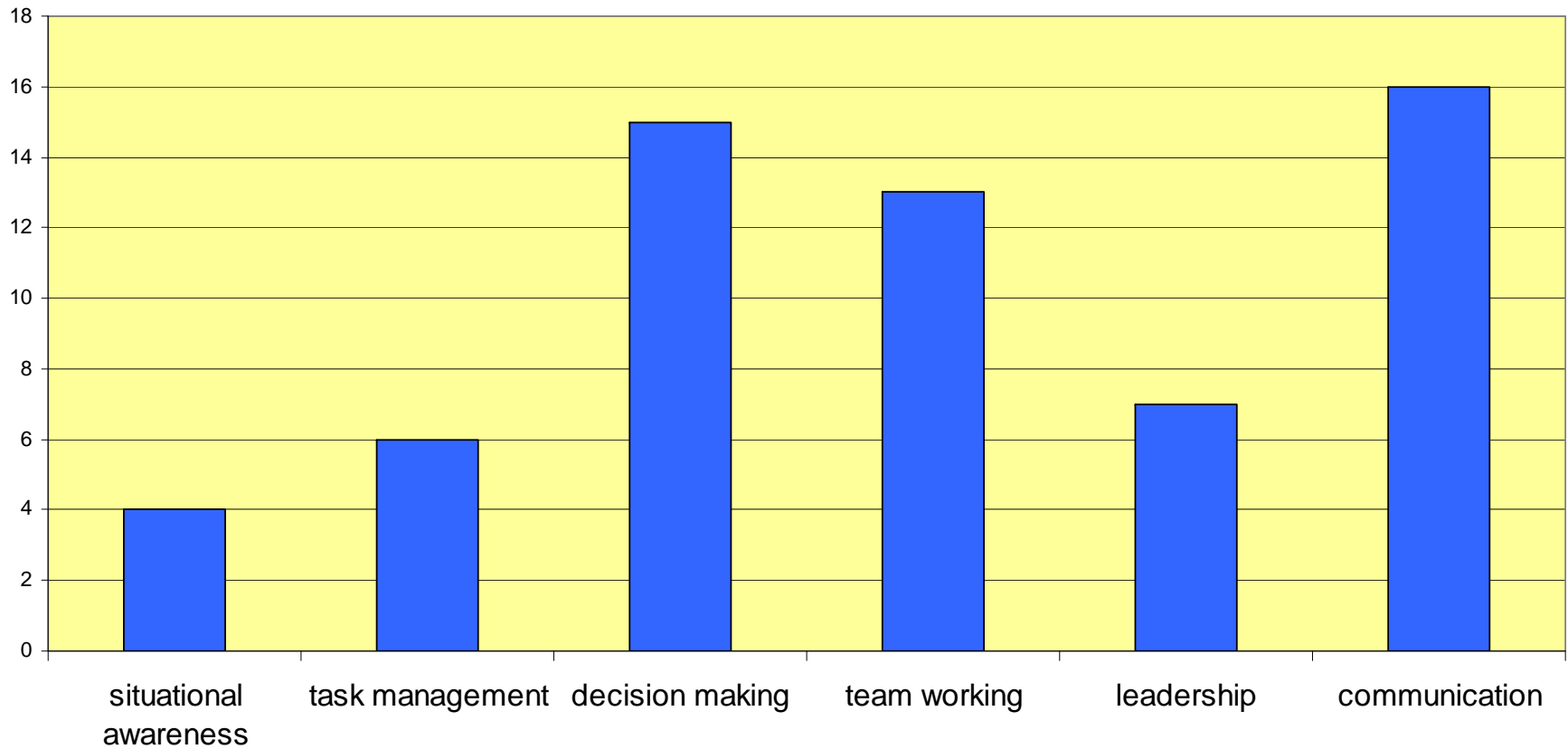
*'Do not assume that silence is agreement. .... Need a kind of , "yes chef" system.'*

*'When to take action, actually doing something'*

## SEA feedback domains and ratings



## Non-technical skills



*Yule S, et al. Development of a rating system for surgeons' non-technical skills. Medical Education, 2006;40 (11):1098-1104*

# Transferring knowledge into practice

- SEAs-students focused on knowledge and the need to improve this
- Know the theory but struggle to put it into practice
- Cannot generate 'effective action'
- Schon 1987 – reflection-on-action and reflection-in-action
- 'On'-looking back after the event, e.g. debrief or SEA
- 'In'-how practitioners are able to think on their feet, problem solve, test solutions, draw on their repertoire
- SEAs-students limited reflection-in-action
- Struggle when 'control' is lost and are unable to take positive steps like calling for help

# Conceptualisation of errors

- **Cognitive**
- Perry (1968)-epistemological growth in the College years
- Various stages of epistemological growth
- ‘Dualism’ –black and white
- ‘Relativism’ – reason, recognise uncertainty, make judgements
  
- **Behavioural**
- Mizrahi et al. –Denial, discounting, distancing
- Jealously guarded autonomy
- Role modelling and the hidden curriculum

# Engagement with SEA

- GPs uncomfortable submitting events that reflected badly on them
- Strong 'emotional factors'
- Uncertainty over whether an error had happened
- SEA as part of a portfolio-students saw limited benefits
- Henderson et al- student perceptions
- Themes of 'conflict' and 'coping'
- Students felt vulnerable, uncomfortable and judged

# Reflection

- Portfolios – collections of anecdotes & recipes
- Little critical reflection *“analysing, questioning & reframing an experience in order to make an assessment of it for the purposes of learning”*
- But how well are these skills taught & assessed??
- SEA-introduction, structure, purpose need to be explicit
- Role of assessment? – ‘box ticking’

# Summary

- Student SEAs – rich data set
- On-going work
  - Thematic analysis of SEA forms
  - Assessment of degree of reflectivity of the forms using structured criteria
  - Feedback from students
  - Disseminate via CSMEN / NES

# Acknowledgements

- CSMEN for kindly funding this work
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ANY QUESTIONS?

