

## ***Enhanced Significant Event Analysis – A Human Factors Approach***

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Significant event analysis (SEA) is a well-established safety improvement tool in general practice.<sup>1-2</sup> However, there is good evidence to suggest that many SEAs (the majority of which involve patient safety incidents<sup>3-4</sup>) are poorly conducted by practice teams, leading to missed opportunities to make health care safer.<sup>2-6</sup> A range of issues contribute to this problem. Firstly, being involved in a significant event can be similar to receiving a form of negative feedback. The emotional reaction to this feedback can interfere with the personal ability to assimilate and process the information beyond the 'self' level,<sup>7-8</sup> potentially impeding an objective and constructive approach to SEA. Consequently, the emotional well-being of GPs involved may suffer (the so-called 'second victim' syndrome) leading to increased stress and anxiety levels and feelings of guilt, helplessness and frustration amongst others.<sup>9-11</sup>

A prevailing 'blame culture' is also widely perceived within the NHS – not helped by recent health secretary pronouncements<sup>12</sup> which, paradoxically, are at odds with the evolving, official policy of building a supportive 'just culture'<sup>13-14</sup>. This can impact on the preparedness of clinicians to highlight patient safety issues because of concerns about punitive action and professional embarrassment.<sup>5,9-10</sup> Therefore, many are selective in the types of safety incidents they raise for team-based analysis, potentially ignoring those of a complex, serious or sensitive nature and opting instead for less controversial examples, or even for non-engagement.<sup>5</sup>

A further issue is the lack of a structured analytical framework to guide care teams when reviewing significant events<sup>2</sup> - this impacts on the high standard of critical reflection and analysis that is often required to identify the range of human-system interactions contributing to these incidents<sup>3</sup>, so that effective learning and improvement can take place. This is particularly important because many clinicians tend to view the 'causes' of incidents as being mainly attributable to their own actions or inactions which is largely contrary to

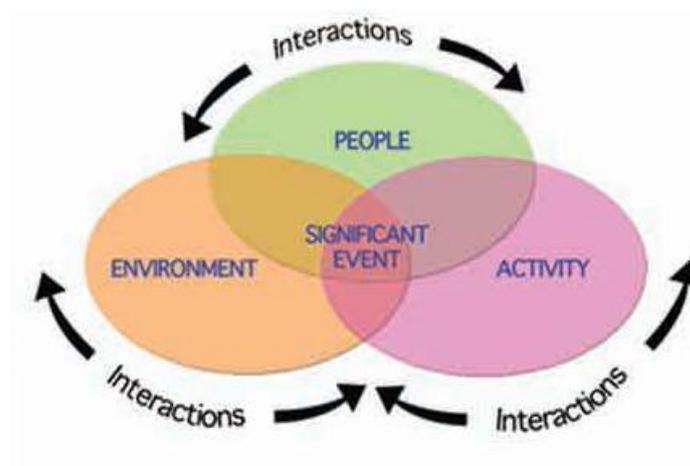
human error theory, while SEA research shows that there are often wider system-based ‘contributory factors’ at play.<sup>3-15</sup>

A recent Health Foundation ([www.health.org.uk/](http://www.health.org.uk/)) funded pilot project, led by NHS Education for Scotland, attempted to address the aforementioned problems by designing an *enhanced* SEA method that is underpinned by basic ‘human factors’ principles. A simple way to view the discipline of human factors is to think about the interactions (Figure 1) between three work-related factors and how they combine to impact on people’s health, performance and safety-related behaviours, ultimately contributing to errors in the workplace (for example, a child being wrongly administered MMR):

- *People factors* (e.g. a newly trained health visitor practising in an immunisation clinic under clinical supervision, while being frequently distracted by parents and colleagues)
- *Activity factors* (e.g. performing repetitive but different vaccination tasks in a very busy and recently combined immunisation clinic, with similarly labelled vaccinations within immediate reach),
- *Environment factors* (e.g. a poorly designed workspace layout and immunisation system, and a well-intentioned practice decision to combine clinics to improve efficiency)

Applying the science of human factors to the SEA process offers the practice team a more objective and constructive means of gaining a deeper, systems-based understanding of why errors happen. Using a basic human factors framework as a prompt to guide an event analysis can help depersonalise the incident and focus attention on the ‘true’ contributory factors – that is, how the complexity of work tasks, systems and wider organisational and cultural issues can interact with the human element in the practice (e.g. our well-known memory and attention limitations amongst many others) to increase the risk of healthcare error. Understanding these core principles is vital in adopting a mature and constructive response to uncovering how and why mistakes happen – this is fundamental knowledge that is as equally important for frontline GP teams to grasp, as it is for current and future NHS managers, executives and health secretaries.

Figure 1. Human-systems interactions that contribute to significant events



At its core, *enhanced* SEA is based on sound educational principles. It is one key element among others in a ‘learning organisation’ that promotes an effective safety culture within the practice team and facilitates change for improvement. Importantly, *enhanced* SEA encourages a culture of honesty in the team as well as both individual and team-based reflection. To make the investigation of significant events a much more meaningful experience for practice teams, therefore, a deeper consideration of the emotional demands involved in coping with and highlighting the event (at the individual level), and the most professionally appropriate and effective way to analyse it (at the team level), are critical in successfully improving patient safety – *enhanced* SEA offers one such approach.

To learn more about the Health Foundation funded *enhanced* SEA project, including the developed tools, report format, evaluation report and further information on human factors, please visit: [www.nes.scot.nhs.uk/shine/](http://www.nes.scot.nhs.uk/shine/)

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