

# Human Factors Integration Strategy: Embedding Human Factors in Practice within Healthcare

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## SUMMARY

Despite identifying the need for enhancing the use of Human Factors and Ergonomics in healthcare about 20 years ago, progress to date has been slow. A cohesive strategy is required that aligns these methods and expertise with established improvement, transformation and organisational development programmes and which is synergistic with existing work that seeks to address local system and organisational priorities. This paper describes progress to date and proposed future steps for the integration of Human Factors and Ergonomics in one large NHS Hospital Trust.

## KEYWORDS

Human Factors Integration, Healthcare, Strategy

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## Introduction

The need for a greater application of Human Factors and Ergonomics (HFE) in healthcare has been identified as far back as approximately 20 years (Perry et al., 2021), whereby the need for a systems approach to enhance patient safety was highlighted in the seminal reports ‘An Organisation with a Memory’ (Department of Health, 2000) and ‘To Err is Human: Building a Safer Health System’ (Kohn et al., 2000). Although these reports have fuelled research interests, the integration of HFE in healthcare has been relatively slow and predominantly focused in certain areas (e.g. patient safety) whereby even in these areas it has been underutilised (Waterson & Catchpole, 2016). This is despite the theoretical models and practical solutions that HFE can offer and the calls by different HFE groups (e.g. CIEHF and Clinical Human Factors Group) for this integration (Waterson & Catchpole, 2016). This highlights that there also needs to be an internal drive within healthcare systems for the integration of HFE. One of the first step towards integration was the UK NHS Concordat on Human Factors and Healthcare (National Quality Board, 2013), signed by 16 healthcare agencies. More recently the establishment of Healthcare Safety Investigation Branch (HSIB, 2023) and embedding HFE principles within the new Patient Safety Incident Response Framework (NHS England, 2022), have introduced new drivers that promote HFE understanding and integration. The aim of this paper is to describe one approach to integrating HFE in a large NHS Hospital Trust.

## Context – How the need for an HF Integration Strategy Emerged

The Trent Simulation and Clinical Skills Centre (TSCSC) is a centre for simulation-based education and training within a large acute NHS Hospital Trust. Since opening in 2004, the centre has contributed to enhancing patient care and organisational learning through several programmes of work. The centre’s HFE work initially started through supporting several in-house improvement projects, providing training for teams based on the TeamSTEPPS implementation model (AHRQ,

2023) and improving HFE awareness through regular HFE forums for staff. Over time, the HFE team has expanded as has the range and level of involvement on different projects (e.g. service reviews and procurement projects). Due to the larger team, this now includes more in-depth involvement on certain projects, leading the HFE component on multidisciplinary and Trust-wide projects, as well as supervision and mentoring of clinical safety and education fellows. A strategy for HFE is needed to ensure that there is a clear focus for the development of HFE within the organisation and that it is well aligned to the organisation's clinical priorities. The strategy supports the establishment of a HFE team, operating with similar credentials to colleagues in quality improvement and patient safety and underpins the development of the business cases required to attract the necessary resources to build the HFE team.

### **Strategy – For the Implementation and Integration of HFE across the Trust**

The vision for HFE at this Trust is to build on the work achieved to date by a small expert HFE team, broaden the scope of HFE understanding within the Trust and promote the integration and application of HFE to optimise patient safety, staff wellbeing and overall system performance. The strategy has been developed by the HFE specialists within the Trust in partnership with patient safety leads and recognises the need for HFE across numerous workstreams, not just within patient safety work and investigations. This strategy provides a platform on which to introduce HFE integration into organisational functions such as procurement, information technology, estates and facilities, human resources, and similarly into service performance of clinical divisions and integrated care pathway design.

The strategy consists of four guiding principles, namely co-production and co-working, alignment with current organisational functions and workstreams, the expansion of a core team of experienced and qualified HFE specialists and building better HFE capability and capacity within divisions and corporate functions. It recognises the importance of offering internal users a coherent approach to designing services and aligns HFE with patient safety, quality improvement and organisational development, offering 'internal clients' a joined-up and cohesive approach to programmes of work.

In its current form, it describes a preliminary route for the development of HFE capacity and capability through the application of HFE expertise within prioritised projects, enhancing the awareness of HFE with organisational and service leads, and providing access to HFE training for the Trust. The strategy emphasizes the systems perspective, user centred approach and embedding and improving systems and processes by understanding human capabilities, adaptations and "work-as-done". HFE specialists would provide methods, objectivity and solution development for service transformation and safety improvement work as well as provide support and mentoring of staff embedded within clinical and organisational functions, thus growing a cadre of clinical and non-clinical staff with core HFE skills. Elements of this model are already being applied in certain areas, with further development taking place with clinical and corporate divisions considering both local and wider Trust goals and aims to mirror similar integration models in other industries.

### **Discussion, Next Steps and Conclusion**

This strategy for HFE integration proposes to build on how HFE experts have worked in this Trust in the past and expand the HFE offer to the organisation, improving equity of access to HFE advice. It aims to focus both at local clinical service goals while still maintaining sight of organisational priorities and larger work programmes that would benefit from HFE input, as suggested by Perry and colleagues (2021). To date, this strategy has been presented at a variety of different leadership and clinical service meetings within the organisation and feedback is being actively sought from clinical teams about how they would want HFE to be integrated. HFE has been included in the organisation's newly published strategy and next immediate steps include describing in detail how

the strategy can be implemented in practice along with identification of the resources needed by outlining business cases, for presentation to the Trust's senior management group. At a time of significant and prolonged stress on the healthcare service, HFE must provide compelling evidence and relevant examples, so the benefits of the HFE strategy are clear to stakeholders and outcomes are aligned and connect with Trust and system wide priorities.

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