

The Pressures Diagram: Illustrating Pressures and Trade-offs in Healthcare

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SUMMARY

Healthcare is challenged by pressures on every level of the system. This short paper introduces the Pressures Diagram as a tool to communicate pressures and the prioritisation of pressures, affording greater insight into the complexity of healthcare work.

KEYWORDS

Resilient Healthcare, Human Factors, Healthcare Safety

Introduction and Background

Healthcare organisations are challenged with multiple pressures, for example, pressures caused by staffing, limited resources, quality standards, and increasing patient complexity (Farid et al., 2020; Hall et al., 2016; Kapur et al., 2016). These elements cannot always be addressed simultaneously, which necessitates prioritising, making trade-offs, and adapting work flexibly over time (Braithwaite et al., 2015; Reader et al., 2018). Although Resilient Healthcare (RHC) theory emphasises flexible adaptation, theoretical work to understand how pressures are managed in practice have centred on one or two challenges in isolation (Farid et al., 2020; Hollnagel et al., 2014). One exception is the Dynamic Model of Risk and Safety, which proposes three factors that organisations must balance, but there has been little empirical exploration of these ideas (Rasmussen, 1997). Building upon insights from RHC and existing human factors theories, this short paper introduces the empirically based Pressures Diagram (Sanford et al., 2022).

Pressures Diagram

The Pressures Diagram (Sanford et al., 2022) communicates pressures and trade-offs individuals, teams, and organisations balance (Figure 1). The diagram consists of five empirically identified pressures (Table 1) which overlap in a Venn Diagram, and the notional operating point (OP), indicated by a star. The OP shows which pressures are prioritised and which pressures are traded-off, based on empirical data gained from observations and interviews. If the OP falls within a pressure or multiple pressures, that pressure(s) has been prioritised. If the OP does not fall within a pressure, that pressure has been traded-off. At the centre of the diagram, all pressures overlap; when the OP falls in this zone, all occurring pressures have been addressed.

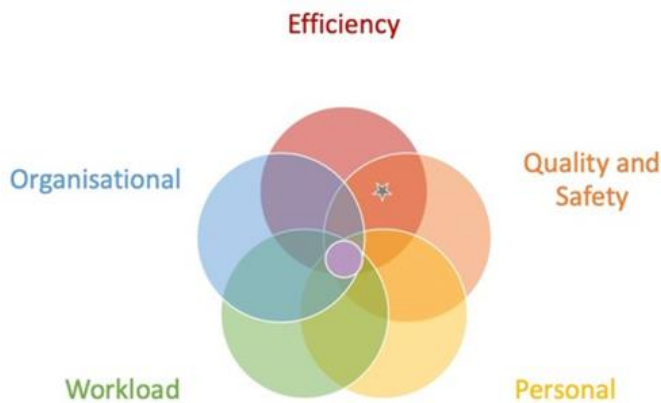


Figure 1: The Pressures Diagram

Table 1: Pressure Categories and Descriptions

Pressure	Description
Efficiency	Maintaining time and cost efficiency
Organisational	Upholding organisational ethos and preserving access to resources
Quality and Safety	Mitigating risk and harm, providing quality
Workload	Ensuring workload is feasible and within the range of what one is willing to contribute without causing harm
Personal	Meeting personal needs (taking breaks, leaving work on time, etc)

Discussion

The Pressures Diagram revisits and extends existing human factors and resilient healthcare theories. A challenge of Rasmussen's (1997) model is determining how near or far from the boundaries to place the OP. This work has identified new pressures, extending Rasmussen's model. The OP is placed on the pressures diagram in one of several discrete locations, based on evidence of which pressure is prioritised. This eliminates the need to measure the location of the OP relative to each boundary. This is a strength of the model. Further, the Pressures Diagram has multiple, flexible uses. For instance, it can be used to represent the evolution of pressures and trade-offs to determine patterns over time or the diagram could be used by different stakeholders to highlight alternative views on a scenario. Finally, the diagram can be used to represent pressures and trade-offs for individuals, teams, and organizations on all system levels across multiple disciplines.

Conclusion

This paper presents the Pressures Diagram as a means of conceptualising interrelated pressures and corresponding trade-offs. The diagram can be used for research, educational, and conversational purposes to raise awareness of and make explicit trade off decisions and their consequences.

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