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AI is rapidly entering healthcare and education - including simulation.

This edition of TfS Dispatch explores what that means *not* from a technical perspective, but from a design and values-based one. As AI becomes more capable, questions of intention, purpose and meaning become more important, not less. This piece reflects on what AI reveals about simulation - and what simulation must make explicit in return.

AI, Design, and the Next Era of Simulation

Design intentions and choices become acutely visible when we consider the role of AI in simulation for change.

With countless ways to design any given simulation for change, decisions about why we are doing it, which lens we apply, and whose voices we include are not technical choices - they are value decisions. These are precisely the kinds of decisions AI cannot make for us.

AI needs instruction. It cannot infer purpose, values, or meaning unless we make them explicit. In healthcare - with its complexity, shifting contexts, multiple purposes for simulation, and deeply relational systems - this matters profoundly.

Without clear values, declared intentions, and a coherent design process, AI risks amplifying confusion rather than insight.

For Transformative Simulation (TfS), this is especially important. TfS is not primarily about producing pre-defined outcomes. It is about creating the conditions for emergence through specified intentions - ***collective***

understanding, insight, and learning that cannot be fully specified in advance or does not need to be.

This is where the seven Simulation-Based Intentions (SBIs) become critical. They help us choose the right design lens while still leaving space for emergence. They provide structure without collapsing complexity.

The Shift We Are Living Through

We are standing at the threshold of a profound shift - not just in simulation, but in how we understand learning, systems, and intelligence itself.

For decades, healthcare has operated within a largely rational–scientific paradigm. That era brought enormous progress, but it also reached its limits:

- healthcare systems became increasingly complex
- evidence expanded beyond human capacity
- systems became more relational and interdependent
- clinicians are becoming cognitively overloaded
- simulation expanded rapidly, but often without shared coherence

Analytical reasoning alone could no longer keep pace.

AI will not replace human thinking but it will support the limits we've reached within this evolved complexity.

This shift is not a rejection of science or evidence, but an expansion of how we can obtain and apply it.

The Paradox of AI

AI can handle cognitive load. It can detect patterns, summarise, and analyse at scale. But it cannot decide what matters. Only humans can choose purpose, values, meaning, ethics, and direction.

AI creates space for what has been squeezed out for too long: meaning, connection, culture, emotion, moral judgement, and collective intelligence.

Simulation as the Bridge

Simulation sits exactly at the intersection of this shift.

It is where human behaviour, systems, culture, emotion, and design meet. This makes simulation uniquely well placed to act as a bridge between human intelligence and emerging forms of artificial intelligence. However, for AI to reason with simulation, simulation itself must be designed with sufficient clarity and coherence to make its purpose legible.

Much simulation for change has developed creatively, organically and pragmatically, often shaped by local facilities, available equipment, variable resourcing, or immediate needs. As a result, simulation can sometimes be:

- theoretically under-specified in its design
- oriented toward multiple or overlapping purposes (for example, learning or other pre-determined outcomes being conflated with broader, change-based intentions)
- framed primarily within an educational paradigm, even when broader system or cultural change aims are present

These conditions do not diminish the value of current simulation. However, they do limit what AI can meaningfully support or augment going forward.

For AI to meaningfully engage with simulation, rather than simply operate around it, simulation itself benefits from reasoning more explicitly about intention, design logic, and purpose.

Transformative Simulation provides a reasoning structure when simulation is used for change purposes.

It makes explicit:

- ethical considerations
- declared intentions
- theory alignment
- design logic
- contextual boundaries
- modality selection
- data capture
- pre/debriefing approaches

This provides an architecture AI can understand and work within.

The Human Era of Simulation

The implications are significant:

- simulation becomes continuous, not episodic
- simulation becomes adaptive, not static
- simulation reflects real culture, not idealised versions
- learning becomes relational
- leadership becomes shared
- systems learn collectively

AI becomes an amplifier of human intention - not the driver of it.

If we want coherent AI in simulation, we must first build coherent simulation thinking, grounded in intention, theory, and values.

> What matters most is who chooses the lens - and why

🌍 TfS in Practice: Real-World Spotlights

This recurring section highlights real-world examples of Transformative Simulation in action - across geographies and sectors.

Simulation-Based inclusion and Influence

Including physicians and nurses to instigate a cultural shift in End of Life care (Israel)

This national project in Israel in 2017 is a great example of simulation-based inclusion and influence where 1324 staff were involved in 100 Simulation workshops to explore, unlearn and rethink end of life care.

> Authors stated: "At the start, we believed we were going to train for communication skills using previously described tools, and cope with the challenge of assessing the efficacy of an educational intervention for improved professional competence. As we progressed over the years with the project, we became more and more aware than we were the ones who were learning. What is professional competence when facing EOL? What are the skills when mere human presence is an answer? The concept of skills misrepresents communication, which is inherently creative: skills and sincerity are inimical concepts; can authenticity be inculcated? The simulation-based workshops turned into a dynamic laboratory to explore barriers and challenges when healthcare teams face human finitude. The discussions brought up ideas related to the attachment theory, unlearning, paradoxical

> thinking and tolerance of uncertainty. The entire process raised more questions than answers... "

🔗 **Read the article**

Simulation based Innovation and identification

Pre-implementation testing of a Clinical service (Hong Kong)

In Hong Kong, a regional hospital used in-situ simulation to test a new endovascular aortic repair (EVAR) service *before* the first real patient was treated. Rather than relying on planning documents or traditional checks, the team simulated the entire care pathway - from patient transfer and anaesthesia to surgical workflow and emergency contingency planning.

The simulation uncovered **17 critical latent safety threats**, including equipment layout issues, gaps in blood product logistics, unclear team roles during crisis, and environmental constraints that were not visible through standard preparation. Many issues were corrected immediately; others informed system redesign before the service went live. When the first real cases occurred, previously identified risks had been mitigated and care ran as intended.

🔗 **Read the article**

TfS in Practice Webinar: NHS Forth Valley

On **17 December**, **Dr Julie Mardon** (NHS Forth Valley, Scotland) shared how her team embedded **Transformative Simulation** across an entire health board during a period of significant system-level challenge and change.

The webinar offered an inspiring insight into how the TfS framework provides a **governance-ready approach**—bringing structure and legitimacy at leadership level, aligning and meaningfully connecting disciplines and roles across the healthcare system, and enabling simulations that are creative, purposeful, intentional and impactful.

If you missed it, **watch the recording here**
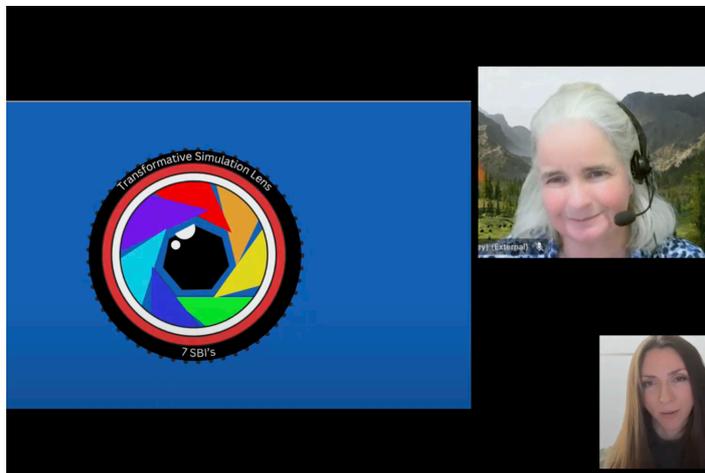
Next TfS in Practice Webinar – 24 February 2026

Guest Speaker: Rose Edwards, University Hospitals Dorset NHS Foundation Trust, England

Join us for our second TfS in Practice webinar, where Rose will talk about preparing staff, buildings, equipment and processes for service relocation using transformative simulation.

📅 **Tuesday 24 February 2026**

🕐 **13:00–14:00 UK time**

Open to all – 🔗 **Register here**

📣 **Get Involved**

- Want to **present at a webinar**? Let us know.
- Interested in joining the **Strategic Group**? Expressions of interest opening soon.
- Our **TfS WhatsApp group** has launched!
- Further resources available here: **https://aspih.org.uk/tfs-infographics/**

Thanks for being here. This movement is growing - and it needs your insight, curiosity, and creativity.

#TransformativeSimulation #TfS #SimulationForChange #ASPiH

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