Northern Ireland Assembly

Knowledge Exchange Seminar Series (KESS)

Designing Safe and Effective Staffing: Evidence from Real-World Healthcare Practice

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KESS Policy Briefing

...is a forum that encourages debate on a wide range of research findings, with the overall aim of promoting evidence-informed policy and law-making within Northern Ireland

Key points:

1. **Safe staffing is built, not counted**

   Safe care comes from empowering frontline teams to adapt under pressure (a Safety-II approach) rather than from compliance alone (Safety-I) and headcounts. That empowerment depends on psychological safety — so that the unsustainable "extra-role" effort that masks shortages (the "superhero" effect) becomes visible before it turns into burnout and turnover.

2. **Look beyond the numbers to the reality "Work-as-Done"**

   Standard metrics miss the hidden trade-offs staff make every day — trading their own wellbeing and a manageable workload to keep the system running. These trade-offs are invisible in formal staffing data yet shape safety, care quality, staff wellbeing and retention.

3. **Not all teams are the same**

   Five distinct team types have been identified in hospital settings based on their characteristics: *Structural, Hybrid, Satellite, Responsive and Coordinating*. Each team type carries different strengths and vulnerabilities. Hybrid teams, comprised of both stable and temporary or transient team members who don't normally work together (e.g. bank or agency staff), are most vulnerable and should be prioritised in resource allocation.

4. **Safety, but not at the expense of care quality**

   When staffing allows only for clinical tasks and administration, relational and preventive care is squeezed out. In mental health wards specifically, where relational care is a proactive safety mechanism, this pattern leads to reliance on restrictive practice resulting in patient harm, staff sickness and turnover, which further degrades staffing, in a self-reinforcing loop. The legitimate drive to minimise risk must be balanced against care quality, not traded for it.

5. **Build the local evidence base in Northern Ireland**

   Much of this evidence was gathered in England. Ethnographic observations are challenging to conduct in some Northern Ireland clinical contexts. The Bill should support transparent, "*work-as-done*" workforce data and the development of NI-specific evidence.

1. Executive Summary: Aligning Policy with Work-as-Done

Workforce policy in Northern Ireland stands at a critical juncture. The Safe and Effective Staffing Bill provides an opportunity to align legislation with robust, interdisciplinary evidence on how care is actually delivered. To realise that opportunity, the Bill should embed a shift in perspective, from a Safety-I view (reactive, error-focused, compliance-driven) to a Safety-II view (proactive, success-focused, resilience-driven). Traditional metrics describe *Work-as-Imagined:* the formal protocols and static headcounts envisaged by planners. Clinical safety, however, is sustained through *Work-as-Done*: the real-time, flexible adaptations staff make to keep complex systems functioning (Sanford et al., 2022a; Lavelle et al., 2020).

Drawing on more than 500 hours of ethnographic observation across physical and mental health settings, this briefing makes three connected arguments. **First, headcount metrics such as Whole Time Equivalents miss the hidden trade-offs through which teams hold services together,** most often by sacrificing their own wellbeing and manageable workloads, so a service can *"look safe"* on paper while its true costs accumulate out of view (Sanford et al., 2022b).
Second, there is no universal staffing ratio: teams differ in membership, location and function, and each of the five team types identified here carries distinct vulnerabilities that require tailored support. (Sanford et al., 2024b; Sanford et al., 2025).
Third, safety and care quality cannot be separated. In mental health settings especially, when staffing allows only for tasks and administration, the relational care that prevents conflict is squeezed out and restrictive practice rises, harming patients and staff alike, and feeding a self-reinforcing cycle that erodes staffing further. (Lavelle et al., 2025).

These dynamics are harder to see in Northern Ireland, where ethnographic access to clinical settings is constrained and an understandable emphasis on risk minimisation, sharpened by recent events such as the Muckamore Abbey Hospital investigation. This can crowd out the open observation that safer care depends on. This is not a reason to wait, but a reason to legislate in a way that actively makes Work-as-Done visible.

The overarching goal of this briefing is to ensure the legislative framework moves beyond rigid ratios to support the system's actual adaptive capacity. Specifically, it aims to:

1. Shift the focus of the Bill from simple headcount metrics toward team adaptive capacity as a primary indicator of system health;

2. Make Work-as-Done visible to policymakers, including the hidden trade-offs staff make and the team-by-team differences in how safety is achieved, so that legislation supports rather than stifles frontline ingenuity;

3. Recognise that safety pursued at the expense of care quality is ultimately self-defeating, particularly in mental health settings;

4. Establish that safe staffing is an emergent property of well-supported teams — requiring a move from monitoring compliance to sustaining resilience.

2. An Evidence Base from Direct Observation

This briefing is grounded in a sustained programme of ethnographic research spanning physical and mental health inpatient settings. It encompasses more than 500 hours of direct observation of routine work, detailed analysis of social and clinical interactions in situ and from video recorded interactions, and semi-structured interviews with frontline staff (Sanford et al., 2022a; Cibelli et al., 2025; Lavelle et al., 2025).

This research is theoretically underpinned by the Concepts for Applying Resilience Engineering (CARE) Model 2.0 and an associated framework for the temporal observational analysis of teamwork (Sanford et al., 2022a; Lavelle et al., 2020). The CARE Model 2.0 maps demand–capacity misalignments, (i.e. situations where the demands of the work exceed the resources available) and the specific adaptations individual staff members and/or teams deploy to bridge those gaps (Sanford et al., 2022a). Six types of misalignments were identified, including: staffing, equipment, communication, space, process and workflow. Staff adaptations observed in response to these misalignments fell into three broad categories: adaptation of the process (changing how, when, who, where and what); redistribution of resources (staff or equipment); and extra-role performance, where individuals absorb work beyond their formal role to hold the system together.

Organisational Resilience: *the ability of a system to sustain required operations under both expected and unexpected conditions by adjusting its functioning before, during or after events. (Hollnagel et al., 2011)*

Team Adaptive Capacity*: The variable capability of a team, ranging along a spectrum from brittle to elastic, to activate team adaptation processes based on situational, individual, team, and organisational factors.(Sanford et al., 2024a)*

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3. Team Typology: Why teams are not all the same

A central finding of this programme is that a universal staffing ratio is a dangerous oversimplification. Not all healthcare teams within inpatient settings are the same.

Each team is defined by its characteristics: membership (stable, mixed or transient), location (fixed to one place or mobile across the hospital) and function (routine clinical, urgent response or non-clinical coordination). These features either protect teams from specific misalignments (e.g. stable membership and fixed location reduces the likelihood of communication misalignments) or leave teams vulnerable to misalignments (e.g. mobile teams that are relying on using equipment in the area of the hospital they visit are more vulnerable to equipment misalignments). The availability of adaptive strategies also differs fundamentally by type. We identify five discrete team types presented in table 1 below. (Sanford et al., 2024b; Sanford et al., 2025).

For resource allocation, Hybrid teams warrant particular attention. By integrating stable team members (e.g. nurses) with rotating, temporary or transient team members (e.g. doctors on rotation, temporary staff), hybrid teams are especially prone to fragmented interaction and lost situational awareness. Within these teams, the stable members of staff, particularly the more senior staff members, were observed to engage in persistent and chronic extra-role performance, where individuals absorb work beyond their formal role to hold the system together. This led to staff consistently working beyond their allocated shift, likely to contribute to staff burnout and poor retention (Sanford et al., 2022b).
Importantly, the more stable structural team will take on hybrid-like vulnerabilities the moment its membership becomes transient, for example taking on additional bank and agency staff to fill staffing gaps (Sanford et al., 2025).

Table 1: Team types in hospital settings

Team type	Membership	Location	Function	Character & resilience emphasis
Structural	*Stable*	*Fixed*	*Routine clinical*	*Consistent membership in a single location (e.g. a traditional ward). Most resilient team*
Hybrid	*Mixed (stable core & transient)*	*Fixed*	*Routine clinical (time-limited)*	*Fixed core members with rotating staff. Requires strong monitoring so the core can support and integrate rotating members. Least resilient team*
Satellite	*Stable*	*Mobile*	*Routine clinical*	*Specialists moving between wards. Challenge integrating into different ward cultures and equipment misalignment*
Responsive	*Unstable*	*Mobile*	*Urgent response*	*Formed rapidly for emergencies (e.g. cardiac-arrest teams). Prioritise responding and coordinating under acute time pressure.*
Coordinating	*Mixed*	*Fixed*	*Non-clinical*	*Manage hospital-wide flow (e.g. site managers). Centred on anticipating and monitoring system-wide disturbances.*

4. Beyond Staffing Metrics: The Invisibility of Trade-offs

Formal metrics, in particular Whole Time Equivalents (WTE), are increasingly insufficient to capture clinical safety. Healthcare systems are complex: leaders cannot fully predict how a staffing decision will turn out, because what happens in practice depends on how people work together and the choices they make in the moment. Relying on headcounts alone means the trade-offs teams make to maintain stability and provide care remain invisible (Sanford et al., 2022b; Sanford et al., 2025).

Staff members and teams continually balance competing domains. In a dynamic, complex healthcare system, the balance is frequently held through personal sacrifice that never reaches formal governance and as such is never addressed (Sanford et al., 2022b). When capacity is low, staff almost invariably trade their own wellbeing to protect efficiency and safety (e.g. skipping breaks). Because the service keeps running, leadership perceives the staffing level as “safe.” This invisibility of the true cost of care is precisely what drives long-term attrition and the “care left undone” that the Bill has the opportunity to address (Sanford et al., 2022b; Lavelle et al., 2025). Our evidence quantifies the pattern: staff reported trading off their personal wellbeing in (73.7%) and a manageable workload (77%), overwhelmingly to preserve organisational and system-level goals (Sanford et al., 2022b).

Compromised staff wellbeing and resulting attrition has a direct impact on patient care. Large-scale NHS evidence demonstrates the direct link between registered-nurse staffing and patient survival: for an average team, adding a single 12-hour registered-nurse shift reduces the odds of a patient death by 9.6%. Crucially, this benefit comes only from senior, trust-employed nurses, adding agency staff or healthcare support workers shows no statistically significant effect, so experienced nurses lost to burnout and turnover cannot simply be "backfilled" by headcount, and the cost of losing them is ultimately measured in patient lives. The relationship is also non-linear: harm escalates the more short-staffed a team becomes.

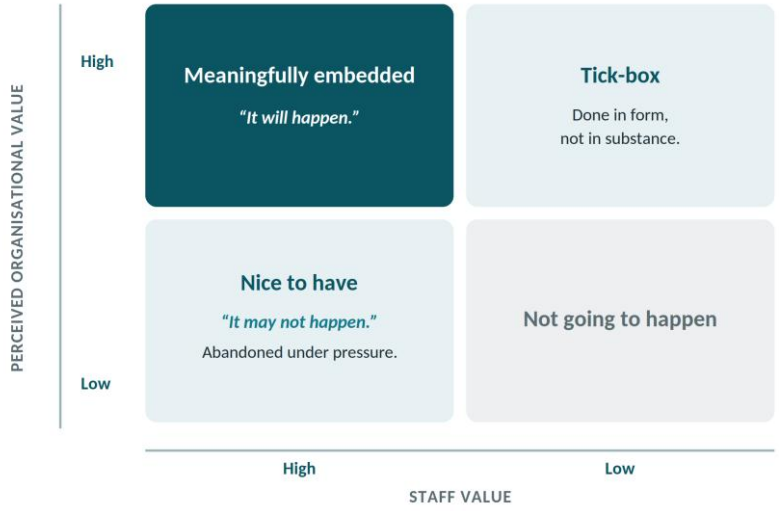
The Frontline Decision Compass

A practical tool emerging from our ethnographic work — the Frontline Decision Compass — helps explain a common puzzle: why two staffing or safety initiatives that look identical on paper can play out completely differently on the ward. The difference comes down to two simple questions:

1. Do frontline staff perceive it to be valued by the organisation, is it monitored and prioritised?
2. Do frontline staff value it, do they see it as worthwhile and doable in their daily work?

Combining the answers gives four possible outcomes predicting how, and if, the practice is implemented.

Figure 1: The Frontline Decision Compass



Only practices that have perceived organisational value will reliably happen. A practice that is meaningfully embedded, valued by both the organisation and the staff who deliver it, is the one that actually happens when the ward is under pressure. The other three are fragile in characteristic ways. A tick-box practice is mandated and audited but not believed in by staff, so it is completed in form rather than substance and its protective intent is lost. A nice-to-have is valued by staff but unsupported by the organisation, so it survives only while slack exists and is the first thing dropped when capacity tightens. And where neither party values it, it is simply not going to happen. Crucially, when staffing falls, practices migrate down and to the right: the very pressures the Bill seeks to address are what convert embedded safety work into tick-box or abandoned work.

The implication for legislation is direct: a safety practice is only reliably delivered when it is valued by both the organisation and the staff who must enact it. A mandate alone moves a practice into the top row, but without frontline buy-in and the capacity to act on it, that is the tick-box quadrant, the precise gap between Work-as-Imagined and Work-as-Done. The Compass is therefore a practical test for any staffing requirement: legislation should ask not only whether a practice is required, but whether teams are valued and resourced enough to actually carry it out.

5. Mental Health Settings: Communication and Restraint Reduction

Acute mental health wards bring the argument of this briefing into sharp focus. These wards are under significant strain, with high bed occupancy, high staff vacancies and patients in acute distress. These wards demonstrate how staffing, staff wellbeing and care quality are bound together. The proactive safety mechanism here is relational care, the attentive, unhurried human contact through which staff notice rising distress and de-escalate it before it becomes conflict. Where that capacity exists, restrictive practice (physical restraint, seclusion and forced tranquilisation) can often be avoided; where it is squeezed out, restrictive practice rises (Lavelle et al., 2025).

Crucially, restrictive practice is not only a consequence of thin staffing but a cause of it. Restrictive practice carries serious human and financial costs; poorer patient prognosis, longer admissions (Bowers et al., 2010; Priebe and McCabe 2008), and staff sickness, burnout and turnover (Royal College of Nursing, 2018; Bonner et al., 2002). Although current figures are difficult to obtain, restrictive practice was estimated to cost approximately £106M annually in England alone (Flood, Bowers and Parkin, 2008).

The Communication and Restraint Reduction (CaRR) study examines which staff and team approaches can break this cycle, preventing and responding to incidents without reliance on restrictive practice. Across seven wards in England, it combines analysis of staff communication during 76 recorded incidents with roughly 350 hours of ethnographic observation of routine practice and staff interviews (Cibelli et al., 2025; Lavelle et al., 2025). Its central finding echoes the rest of this briefing: high workloads and administrative demand pull staff away from compassionate, relational care, which is the system's most effective proactive tool for preventing conflict. Staff experience a tension between perceived organisational priorities and pro-active relational care. Here the ward forfeits its most powerful safety mechanism, and pays for it in restrictive practice, harm and attrition (Lavelle et al., 2025). It is the clearest illustration of the principle behind the Bill: safety and risk minimisation at the expense of care quality, is ultimately self-defeating.

6. The Northern Ireland Context

Much of the observational evidence summarised here was collected in England. Northern Ireland presents specific challenges and barriers to gathering ethnographic data in clinical settings. The tendency toward risk minimisation at the expense of care advancement can make it difficult to develop the robust local evidence that good legislation depends on.

This caution can be understood within the context of the recent Muckamore Abbey Hospital investigation, which has placed inpatient mental health and learning disability care in Northern Ireland under necessary scrutiny. Understandably, its legacy includes a heightened sensitivity towards external observation of these settings. Yet, Muckamore also shows precisely why visibility matters: the situation persisted at least in part because concerns were not raised and everyday practice was not open to outside view. Making "Work-as-Done" visible is therefore not a threat to safe care but a precondition for it.

With funding from the Health and Social Care Research and Development Division (Public Health Agency, Northern Ireland), the CaRR study is now working to build that local picture through interviews and focus groups with frontline staff on acute adult mental health inpatient wards across all five Health and Social Care Trusts. This will provide valuable insight into the regional landscape, in the absence of ethnographic observations being permitted (Cibelli et al., 2025; Lavelle et al., 2025).

The challenge of conducting this research within Northern Ireland is not a reason to wait. It is a reason to design the Bill so that it actively generates the evidence it needs, making "Work-as-Done" visible through transparent planning and reporting, while being careful that the legitimate drive to minimise risk does not diminish the advances in care quality.

7. Implications for the Safe and Effective Staffing Bill

To translate this evidence into policy, we recommend that the Bill:
1. Empower teams and protect psychological safety. Support a Safety-II culture that empowers frontline teams to adapt, and in which staff can report workarounds and misalignments without fear of blame. A purely Safety-I Bill that penalises error will drive the reality of Work-as-Done underground and mask the unsustainable extra-role effort that precedes burnout and turnover.

2. Measure adaptive capacity and surface hidden work. Establish team adaptive capacity, the ability to coordinate and adapt under constraint, as a primary indicator of system health alongside WTE figures, and ensure staffing models account for the hidden work and trade-offs that formal metrics miss, so the true cost of maintaining safety is visible rather than absorbed silently by staff wellbeing.

3. Tailor support to team type. Recognise the five team types and direct support to their specific vulnerabilities — prioritising Hybrid teams and any team made transient through bank or agency reliance.

4. Break the staffing–restraint cycle in mental health. Treat relational care as core, safety-critical work rather than a discretionary extra. Resource staffing so there is protected relational-care time that cannot be traded away for tasks and administration — interrupting the self-reinforcing loop upstream, rather than paying its downstream costs in restrictive practice, harm and turnover.

5. Build transparency and a local evidence base in Northern Ireland. Use the legislation to make workforce planning transparent and grounded in "Work-as-Done", reflecting that care is delivered through interprofessional teamwork, which the Bill's cross-disciplinary scope recognises, and actively support the development of NI-specific evidence, given the challenges of conducting observation in some local clinical contexts.

8. Conclusion

Safe staffing is not a numerical target; it is the system's ability to support its teams' capacity to adapt to a complex environment. Northern Ireland has a genuine opportunity to lead the UK in evidence-based workforce legislation. By acknowledging the reality of '*Work-as-Done'* and the central importance of team adaptive capacity, the Safe and Effective Staffing Bill can move beyond Work-as-Imagined to help build a genuinely resilient and sustainable health and social care system.

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