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Changing minds, saving lives: how training psychological safety transforms healthcare

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ABSTRACT

Psychological safety is a crucial component in highly functioning healthcare teams, enabling every member to speak up, take innovative risks and admit mistakes without fear of personal attack or repercussions. Leaders play a significant role in fostering this positive environment that boosts effective communication, enhances teamwork and decision-making and promotes incident reporting. Developing these non-technical skills, along with updated medical knowledge and procedural skills, is a key factor in providing better and safer patient care.

Creating and sustaining psychological safety in the workplace requires a cultural and mindset shift that impacts how team members interact with each other. The anaesthesia teams from seven VinMec Healthcare System (VMHS) hospitals across Vietnam faced several critical challenges, including cultural embeddedness, geographical dispersion and a hierarchical structure where deference prevailed.

Nonetheless, VMHS leadership established a goal to transform the Anaesthesia and Pain Management Department into one of the safest in Southeast Asia. A multifaceted team comprised of top management, training experts and simulation specialists was essential in driving the initiative forward.

The intervention highlights the importance of leadership engagement, structured curriculum design and feedback loops to ensure continuous improvement in staff competency and collaboration. Over 18 months, 112 anaesthesia doctors and nurses completed a series of online learning modules and on-site simulation training sessions. Preliminary outcomes indicate significant progress in non-technical skills such as communication, teamwork and cognitive aid utilisation among participants. There has also been a noticeable reduction in patient safety incident scores across hospitals.

This article presents a replicable model for addressing the cultural, practical and logistical challenges of integrating psychological safety into a large healthcare system by introducing an innovative, mixed-method training programme. It provides insights for healthcare leaders seeking to achieve sustainable improvements in patient safety and quality of care.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Psychological safety is essential for effective healthcare teamwork, as it enables open communication, speaking up and learning from errors. However, hierarchical structures, cultural norms and logistical constraints often hinder its implementation, especially in large and geographically dispersed healthcare systems. While previous studies highlight the importance of psychological safety, scalable and effective training models remain underexplored.

WHAT THIS STUDY ADDS

⇒ This study introduces a scalable, structured training model combining e-learning and full-scale simulation to enhance psychological safety in a large healthcare network. Over 18 months, the intervention led to increased speaking-up behaviours, improved teamwork, an increase in incident reports and an improvement in annual safety audits, demonstrating that psychological safety can be systematically cultivated at scale.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This study provides evidence that structured training can shift organisational culture towards one that prioritises psychological safety, ultimately improving patient care. The findings suggest that healthcare systems worldwide should integrate psychological safety training as a core component of their patient safety strategies, with strong leadership commitment as a critical enabler for success.

INTRODUCTION

Gains in patient safety necessitate inducing cultural and mindset changes which influence psychological safety on a large scale.[1–3] Building and sustaining psychological safety quickly to influence culture in medicine challenge even the most well-resourced organisations.[1] The impact of inadequate psychological safety on speaking, decision-making, communication and judgement dysfunction are sources of medical errors that deserve quality improvement.[1 3] Changing psychological safety involves a multipronged approach.[1] Psychological safety is built on behaviours commonly taught as 'soft skills' and is defined as relational skills involved in human interactions that complement the 'hard skills' of knowledge and technical or procedural skills.[4]

Soft skills can be taught with e-learning, a simple, highly flexible set of tools that facilitate access to knowledge.[4] Since knowing soft skills, by itself, is not applying, simulation training can be used to practice and improve these communication and relational skills.[5 6] However, implementing a large-scale simulation training programme is complex and costly from institutional, organisational and financial points of view.[7] We believe leadership's influence is essential and decisive for initiating and reinforcing changes in psychological safety through educational vehicles.

VinMec Healthcare System (VMHS) anaesthesiology teams faced several critical challenges, including the predominance of a hierarchical senior-junior relationship culture in decision-making where deference predominated, cultural embeddedness and geographical dispersion across seven hospitals. Despite these challenges, hospital leadership set forth a goal to transform the VMHS into one of the safest in Southeast Asia for anaesthesiology and pain management practice. This strategy involved implementing innovative training initiatives, fostering a safety culture and providing expertise in soft skills. Enacting this initiative involved a comprehensive approach, combining e-learning and immersive simulation to target soft skills and improve safety and quality of care. This included having anaesthesiology leadership convince management of the value of investing in large-scale training, analysing training needs, developing tailored courses and scenarios and conducting hands-on training sessions with interactive debriefings.

Significant challenges were anticipated, including securing funding, addressing scepticism from senior stakeholders, overcoming language barriers, navigating cultural norms and managing logistical complexities. Surmounting these challenges required careful navigation and creative problem-solving, which included extensive preparatory discussions and adaptations to training methodologies. A multifaceted team consisting of top management, training experts and simulation specialists was essential in propelling the initiative forward. Their collaborative efforts ensured alignment with organisational goals and effective execution of training programmes.

We aim to transform safety and care quality in the VMHS thoroughly. By integrating innovative training techniques, cultivating a culture of safety and teamwork and enhancing soft skills, we sought to establish our healthcare system as a leader in patient safety in Southeast Asia.

METHODS

The report is presented in accordance with the Revised Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0).[8]

Context

The challenge

The challenge at hand encompasses several critical observations made by our team. First, we identified the pervasive influence of seniority and hierarchy in decision-making processes within our healthcare organisation in anaesthesiology. This hierarchical structure posed a barrier to agility and innovation, hindering our ability to address emerging challenges swiftly and effectively.[9] Concurrently, we recognised the operational significance of numerous non-functional or suboptimal incident resolution processes, underscoring the need to improve the quality and safety of care delivery.

Moreover, we faced the challenge of developing a safety culture within an organisational and national context where hierarchical dynamics carry considerable weight.[10] This cultural inertia further compounded the complexities of implementing change initiatives to enhance safety and quality of care. Additionally, the geographical dispersion of our healthcare system across seven hospitals presented practical constraints, limiting direct communication and understanding of frontline staff needs. This dispersion posed a significant challenge in accurately assessing and addressing safety concerns at the grassroots level. This dispersion calls for a culture of quality and safety of care that is common to our organisation, strong and distributed.

Furthermore, our team recognised the need to adapt to shifting safety dynamics within the healthcare landscape while striving for excellence in safety standards (like the aeronautics industry). The ambitious nature of our safety organisation, coupled with the imperative to effect significant cultural change within a relatively short timeframe and on a large scale, underscored the magnitude of the challenge at hand. However, this also presents a unique opportunity for us to make a substantial and lasting impact on the safety and quality of care delivery.

The challenge encompassed navigating hierarchical structures, addressing operational inefficiencies, fostering a safety culture amidst cultural inertia, adapting to practical constraints, and effecting significant cultural change within a geographically dispersed healthcare system. Acknowledging and addressing these challenges formed the foundation of our approach to implementing innovative strategies to enhance safety and quality of care delivery.

The goal

Our innovation in pedagogy and strategy for implementing changes in medicine had the overarching goal of transforming the VMHS into one of the safest in Southeast Asia. This ambitious objective encompassed several key aims.

First, we aimed to demonstrate the effectiveness of a coordinated training initiative combining e-learning and simulation to improve patient safety and quality of care and increase incident reporting. By leveraging innovative training methods, we sought to equip healthcare

professionals with the necessary skills and knowledge to enhance patient safety and care quality.

Moreover, our goal extended beyond procedural changes to encompass a cultural shift from a traditionally hierarchical culture to a speaking-up culture that fosters psychological safety and encourages proactive engagement in safety initiatives.[11] This cultural transformation aimed to create an environment where team members feel empowered to offer and seek help, fostering a safety and collaboration culture.

Additionally, our objective included providing expertise in soft skills to anaesthesia teams on a massive scale within a short timeframe. This initiative aimed to disrupt the traditional approach to quality and safety of care by equipping frontline healthcare professionals with essential skills necessary for optimal patient outcomes.

Our goal was to effect a comprehensive transformation in the safety and quality of care delivery within the VMH system. By combining innovative training methods, fostering a culture of safety and collaboration and providing expertise in soft skills, we aimed to position our healthcare system as a leader in patient safety within the Southeast Asian region.

Interventions

The execution

Executing our innovative pedagogical and strategic initiative involved a comprehensive and iterative process. We used a combination of e-learning and immersive simulation to target soft skills and improve our organisation's safety and quality of care. Table 1 summarises the step-by-step training preparation, design and implementation.

First, our execution strategy involved ensuring our training programme's feasibility, effectiveness and sustainability by convincing management of the value of investing in large-scale training initiatives.

Once the training programme was approved, we analysed expressed and observed training needs to feed the development of targeted e-learning courses and simulation scenarios to address these needs. The pedagogical strategy focused on leveraging e-learning to (1) teach, (2) demonstrate the ideal soft skills for crisis management, and (3) raise awareness of performance gaps among healthcare professionals. This initial phase aimed to establish a foundation for skill development and highlight improvement areas. Simultaneously, we developed in-person 2-day courses mixing innovative theoretical focused lectures on soft skills, immediately illustrated with immersive simulation scenarios. Those courses aimed to provide hands-on experience and demonstrate the gap between ideal and actual performance.

Participation in the educational project was mandatory as a continuing education process for all the VMHS anaesthesia staff (anaesthesiologists and nurses anaesthetic). By challenging professionals in simulated crises, we aimed to foster a deeper understanding of their capabilities and enhance skill acquisition in a realistic environment. The training programme was designed to facilitate a progressive increase in skills, focusing on routine practice reliability and managing life-threatening emergencies. Interactive debriefing sessions following simulations allowed thorough exploration of participants' understanding and skill mastery while providing opportunities for reflection and feedback.

Our execution strategy encompassed a structured approach to needs analysis, curriculum development, skill acquisition and impact assessment. By integrating e-learning and immersive simulation, we aimed to provide healthcare professionals with the necessary tools and training to enhance patient safety and care quality, ultimately driving a culture of continuous improvement within our organisation.

The team

In our endeavour to implement innovative pedagogy and strategy in medicine, a multifaceted team played a crucial role in driving the initiative forward and overcoming challenges.

The team comprised individuals from three key components:

1. VMHS: this component encompassed top management, including the hospital system director, department leadership and operational coordination. The healthcare system director provided leadership in decision-making and project validation, while the anaesthesia head division led the identification of needs, setting objectives and monitoring progress. The anaesthesia coordinator oversees operational coordination, ensuring smooth execution and alignment with organisational goals. Their commitment to driving cultural change from the top down facilitated the adoption of new practices and ensured the programme's long-term success.
2. Safe Team Academy: this component focused on designing training courses, weekly follow-up reporting and integrating e-learning with classroom sessions. Their expertise in pedagogy and training design was instrumental in shaping the educational content and ensuring its effectiveness in achieving desired outcomes.
3. Simulation For All: this component identified training needs, articulated e-learning with classroom training and implemented immersive simulation sessions. The team balanced theoretical input lectures with practical simulation exercises, leveraging their simulation and healthcare education expertise to create impactful learning experiences.

Overall, the collaborative efforts of these diverse team members, each bringing unique expertise and perspectives to the table, were instrumental in overcoming challenges and achieving the initiative's goals. Their collective dedication and collaboration exemplify the importance of a well-coordinated and diverse team in driving innovation and change in healthcare education and practice.

Table 1 Description of the step-by-step training preparation, design, implementation and assessment. Each DOMA module included an impact survey before and a satisfaction survey at the end of the module. All training interventions (e-learning and DOMA) included pre-tests and post-tests

When	What	Objective	How
Nov–Dec 2021	Annual Safety Audit	**Baseline assessment** of organisation, quality and safety	**VMHS' annual safety audits** based on 124 indicators collected during inspection visits, interviews, and analyses of operating room files.
Nov 2021-–March 2022	Origin of the project and needs analysis	**Analysis of the needs** and objectives of the training (perceived and observed)	**Interviews** with the anaesthesia teams, the heads of the anaesthesia department and the management of VinMec, coupled with the **analysis of the annual quality and safety audits**.
March–Aug 2022	E-learning and DOMA design	**Customised creation** of e-learning courses and coordinated simulation training, adapted to the analysis carried out.	A **team of experts in simulation, e-learning, and anaesthesia** developed a programme including **current and innovative concepts in the field of soft skills** that have been shown to have a positive impact on the quality and safety of care (leadership, teamwork, etc.). The concepts are articulated through interactive e-learning, theoretical reminders and full-scale simulations.
Sept–Nov 2022	E-learning Module #1	Contextualised theoretical input accessible online at self-pace with an **interactive platform**.	Progressive and gradual approach to **theoretical concepts** through **interactive videos** with multiple choice questions and practical analysis.
Nov 2022	DOMA Module #1	**Simulation session** covering all aspects of soft skills that have been identified as educational targets: overview session.	Two-day interactive session combining **targeted brief, theoretical reminders**, illustrated and put into practice immediately afterwards in a **full-scale simulation** (seven scenarios).
Nov-Dec 2022	Annual Safety Audit	**First-year impact assessment** on organisation, quality, and safety	**VMHS' annual safety audits** based on 124 indicators collected during inspection visits, interviews, and analyses of operating room files.
Jan-March 2023	E-learning Module #2	Contextualised theoretical input accessible online at self-pace with an **interactive platform**.	Progressive and gradual approach to **theoretical concepts** through **interactive videos** with multiple choice questions and practical analysis.
April 2023	DOMA Module #2	**Simulation session** with a specific focus on **cognitive aids**.	Two-day interactive session focused on **cognitive aids** combining **brief, in-depth theoretical reminders**, illustrated and put into practice immediately afterwards in a **full-scale simulation** (seven scenarios).
Sept-Nov 2023	E-learning Module #3	Contextualised theoretical input accessible online at self-pace with an **interactive platform**.	Progressive and gradual approach to **theoretical concepts** through **interactive videos** with multiple choice questions and practical analysis.
Nov 2023	DOMA Module #3	**Simulation session** with a specific focus on **speaking-up**.	Two-day interactive session focused on **speaking-up** combining **brief, in-depth theoretical reminders**, illustrated and put into practice immediately afterward in a **full-scale simulation** (seven scenarios).

Continued

Table 1 Continued

When	What	Objective	How
Nov-Dec 2023	Annual Safety Audit	**Second-year impact assessment** on organisation, quality, and safety	**VMHS' annual safety audits** based on 124 indicators collected during inspection visits, interviews, and analyses of operating room files.
Jan-March 2024	E-learning Module #4	Contextualised theoretical input accessible online at self-pace with an **interactive platform**.	Progressive and gradual approach to **theoretical concepts** through **interactive videos** with multiple choice questions and practical analysis.
April 2024	DOMA Module #4	**Simulation session** with a specific focus **on crisis management**.	Two-day interactive session focused on **crisis management** combining **brief, in-depth theoretical reminders**, illustrated and put into practice immediately afterwards in a **full-scale simulation** (seven scenarios).

DOMA, Development of Mastery in Anesthesiology.

Study of intervention

The impact of the intervention was evaluated according to Kirkpatrick's model.[12] The four dimensions were documented: satisfaction, knowledge improvement, behavioural changes (reported and observed) and impacts on organisation, quality and safety.

Satisfaction (Kirkpatrick level 1) was evaluated through anonymous digital satisfaction surveys conducted at the end of each 2-day in-person simulation training session.

Improvement in knowledge (Kirkpatrick level 2) was evaluated using anonymous pre-test and post-test results from the e-learning platform (percentage of success). For each participant, we collected data on the number of teaching modules started, the number of teaching modules completed, the pre-test and post-test results, and the total time spent on the platform.

Reported and observed behavioural changes (Kirkpatrick level 3) were evaluated through anonymous digital impact surveys conducted with anaesthesia teams before each 2-day in-person simulation training session.

Impacts on organisation, quality and safety (Kirkpatrick level 4) were estimated through the results of VMHS' annual quality and safety audits, and the evolution of events reported for VMHS' anaesthesia department.

Measures

Throughout the execution process, data collection was integral to assessing the impact of our training interventions. This involved tracking knowledge acquisition through e-learning modules, conducting surveys to gauge the perceived impact of training programmes, incorporating feedback from participants and observers, and the organisation's annual safety audit results.

The pre-tests and post-tests consisted of single-choice and multiple-choice questions, whether for the e-learning modules or in-person simulation training. The questions in the pre-tests and post-tests were similar but presented in different orders. The objectives were to capture knowledge acquisition and engage the participants' attention to specific elements deemed central to the training. The e-learning pre-tests and post-tests were included in the functionalities of the e-learning platform. The pre-tests and post-tests of the 2-day simulation sessions used an online survey system (Google Forms). Training impact surveys were conducted before each new training course and concentrated on the changes observed or not observed concerning the topics covered in all prior training courses. The inquiries focused on behaviour, communication, leadership, teamwork, the use of cognitive aids, the practice of briefing and debriefing, and speaking up. Participants were asked whether any changes had been observed, and if so, they were requested to describe them and mention the three most significant changes. Participants were also asked whether they considered the change sustainable over time. Finally, if no change had been observed, they were asked to suggest reasons for this. All questionnaires were anonymous.

The VMHS' annual safety audits are based on 124 indicators (scored from 1 to 10) collected during inspection visits, interviews and analyses of operating room files and data relating to technical devices (availability, use), safety practices (protocols, knowledge, application), organisations, and the management of postoperative pain and pain in the delivery room.

To assess the cultural change in the safety and quality of care and the ability to dare to speak out/report an adverse event, we collected the number of adverse events reported in the various VMHS hospitals before and after the start of the intervention. We compared these data with those from the North American database available for the same period.

Analysis

The data from the e-learning platform and the satisfaction and impact surveys are expressed in numbers and

percentages. Qualitative analyses of the descriptive data were carried out with a frequency expression of the importance of the number of citations. The data from the annual safety audits were analysed in terms of average and SD at VMHS level. A percentage of variation over time of the results obtained was calculated. As the data were purely descriptive, no statistical tests were indicated.

Ethical considerations

Ethics committee approval was not required for this study. This study describes the strategy for implementing a training programme, with data collected from routine safety reports of the healthcare system and anonymous electronic surveys of participants who consented to the use of their data after receiving written information. Data were stored and managed in compliance with the European General Data Protection Regulation.

RESULTS

Metrics

All VMHS anaesthesia staff participated in the study. Five staff members missed a 2-day simulation training session (maternity leave (2), conflict of agenda (2) and sick leave (1)). Two people left VMHS during the study (data during their participation time are included).

Data from satisfaction surveys (Kirkpatrick level 1)

Results for the satisfaction surveys are summarised in online supplemental file 1. Overall, the results are very positive. Participants recommend the training (100%) and think it will change their practice (100%).

Data from e-learning (Kirkpatrick level 2)

Over 18 months, 112 participants (71 nurses anaesthetists and 41 anaesthesiologists) completed 4870 hours of e-learning (average 43h29/participant), which showed strong adherence. 91% of the 3213 modules started by participants were 100% completed, with a significant improvement in results between pre-tests and post-tests (41% vs 89% success rate, p<0.001).

Data from impact surveys (Kirkpatrick level 3)

The three surveys conducted before each of the four simulation 2-day courses assessed the perceived impact of the training on behaviours applied and observed in everyday clinical situations. Figure 1 illustrates the incidence of changes observed or reported by the participants. These changes are significant and stable over time (18 months). It is worth noting that over 93% of the participants perceived the changes as sustainable. Among the most effective changes reported by participants in the three surveys at 6, 12 and 18 months, the three most cited were communication (including speaking up; 46% to 63% of respondents), teamwork (including task allocation and coordination; 35% to 57% of respondents) and the use of cognitive aids (20% to 57% of respondents).

Data from VMHS' annual safety audits (Kirkpatrick level 4)

Operating room data from annual safety audits conducted across the VMHS showed an improvement in the overall safety score and a reduction in score dispersion between 2021, the baseline year before the programme implementation (2021), and the following years, 2022 and

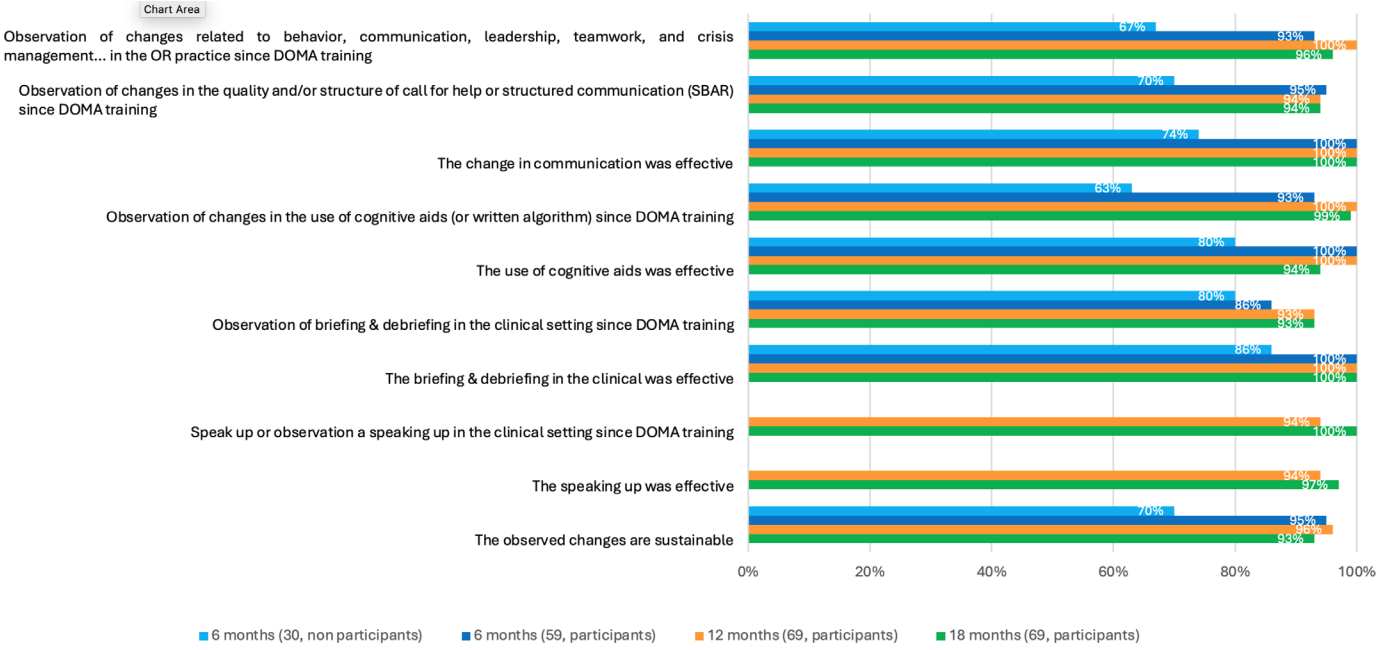

Figure 1 Surveyed impacts of the training on behaviour applied and observed in everyday clinical situations at 6, 12 and 18 months of the beginning of the training program (the 6-month non-participant group consists of staff who attended the training 6 months after the other and were asked about the changes they observed in their trained colleague's behaviour). DOMA, Development of Mastery in Anesthesiology = on site simulation 2 days courses training; SBAR, Situation Background Assessment Response.

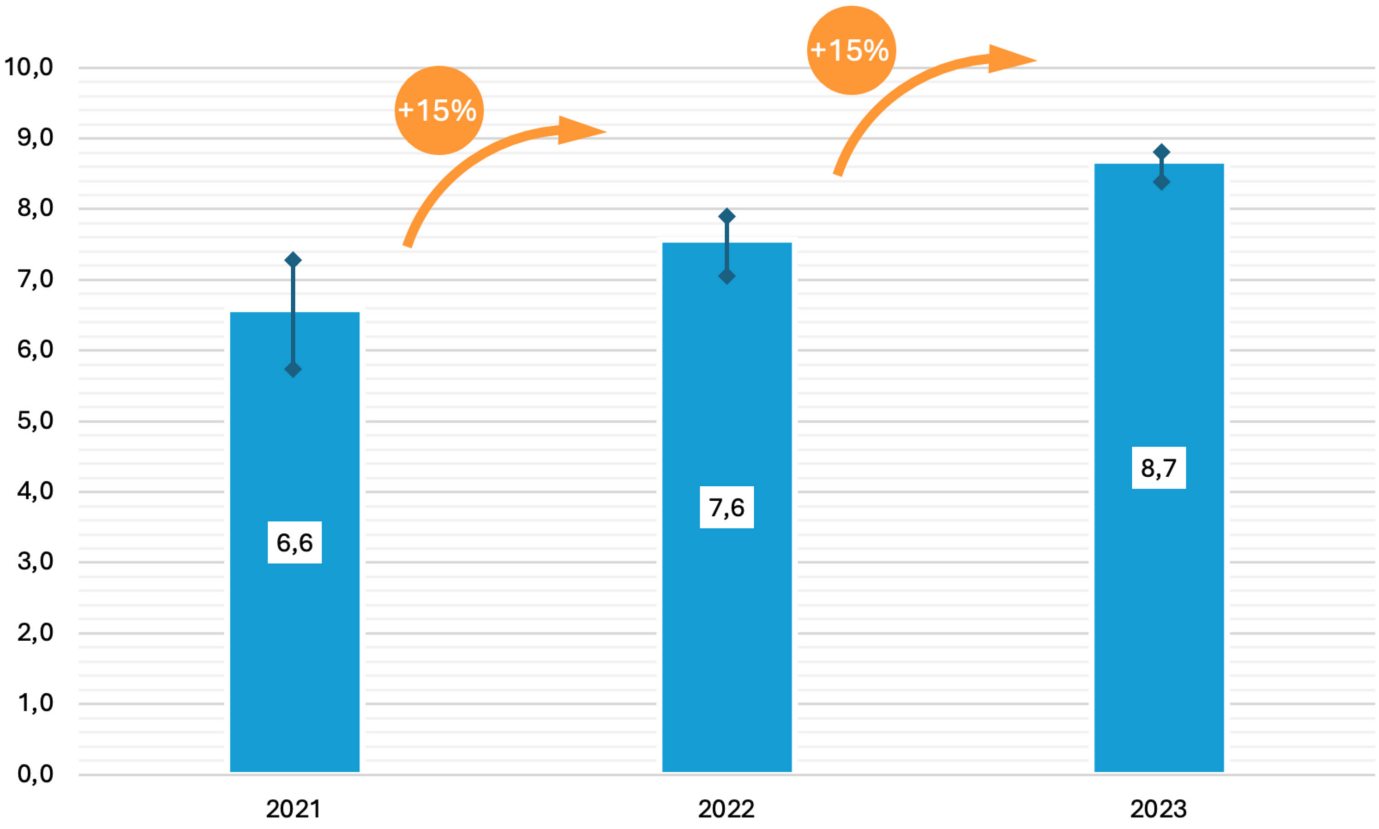

Figure 2 VinMec Healthcare System's annual safety report overall rating means (with SD) over time with a percentage of improvement in the rating. 2021 was the baseline year before the intervention.

2023 (figure 2). The reduction in score dispersion can be interpreted as a homogenisation of practices towards greater safety (scores' increase). We assessed the impact of developing a safe culture within VMHS' anaesthesia department with two surveys (at the programme start and 18 months) using the Survey on Patient Safety Culture (SOPS) Hospital Survey V.2.0 questionnaire.[13] We observed increased reporting of adverse events and errors (figure 3A,B). The number of people reporting no events had been halved compared with the previous year (nine times less than the data from the North American database).[14]

DISCUSSION

This study highlighted the net and lasting positive impacts of a pedagogical action designed to promote a shift in mindset and culture to enhance psychological safety. This was achieved through a combined intervention of e-learning and full-scale simulation at the institutional level. Metrics demonstrated strong adherence to e-learning, significant improvement in knowledge acquisition, perceived impact on clinical behaviours and overall safety scores across the healthcare system.

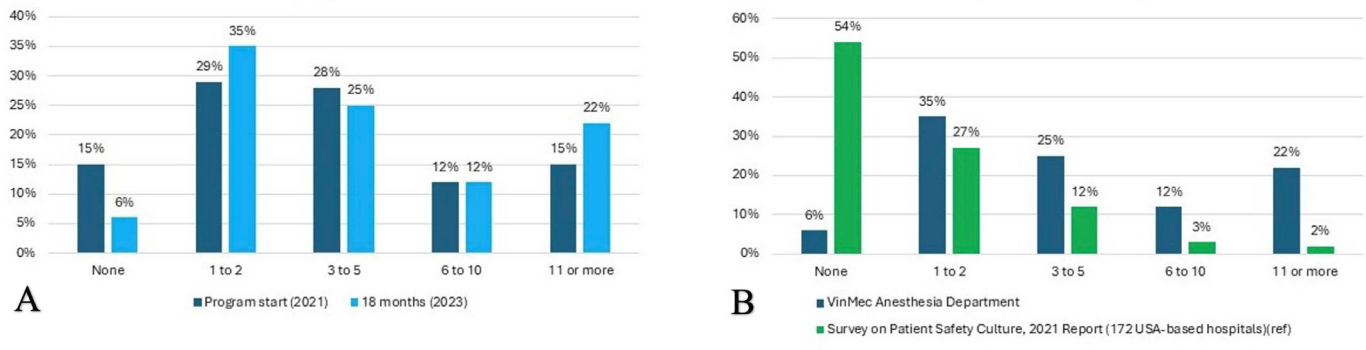

Figure 3 (A) Number of events reported for VMHS anaesthesia department at the start versus 18 months of the intervention. (B) Comparison of the number of events reported in the past 12 months in VMHS anaesthesia department versus the 172 hospitals of Safety Culture report,[13] at 18 months of the intervention start. VMHS, VinMec Healthcare System.

The positive effects of the execution are evident across all four Kirkpatrick levels. Level 1 does not require detailed discussion because it is standard; its primary expected effect is to encourage adherence to the concept and approach. Level 2 demonstrates the effectiveness of the e-learning tool and its value for pre-activation, aiming to maximise the benefits of full-scale in-person simulation sessions. Level 3 encompasses both stated and observed behavioural changes; it reports on changes participants claimed they have applied and those that were actually observed. We believe the successful implementation of these changes was facilitated by the fact that the intervention was applied to all VMHS anaesthesia teams within a short timeframe. Level 4 is significant as it shows objective changes in practice, indicating improved quality and safety of care: an increase in reported events and a consistent enhancement in quality audits over time. It is important to note that, aside from any unidentified external factors, the reported educational intervention is the only one implemented in the VMHS anaesthesia department during the observed period that could have influenced the objective criteria described, thus supporting the assumption of a causal link.

These findings reinforce that psychological safety is not merely a passive byproduct of effective leadership but a skill that can be systematically developed through structured training interventions. By integrating e-learning with full-scale simulation, we have shown that behavioural change can be achieved at scale, even within hierarchical and geographically dispersed healthcare systems.

However, for sustainable transformation, leadership commitment and organisational alignment are essential. Without institutional buy-in, even the most well-designed interventions may be seen as isolated initiatives rather than fundamental cultural shifts. The significant rise in speaking-up behaviours, safety incident reporting and team collaboration observed in this study shows that psychological safety is not just an abstract ideal but a tangible, trainable competency that measurably impacts patient safety.

As healthcare systems worldwide encounter growing complexity and pressure, the question is no longer whether psychological safety should be prioritised, but rather how quickly and effectively it can be integrated into clinical practice. The Development of Mastery in Anesthesiology (DOMA) model provides a scalable and replicable framework for promoting a culture of safety that crosses geographical, cultural and hierarchical boundaries. If healthcare leaders are committed to reducing medical errors and enhancing patient outcomes, then investing in structured psychological safety training must become a global imperative—not an afterthought.

Hurdles

In our journey to implement our innovative pedagogical and strategic initiative in medicine, we encountered several significant hurdles that demanded careful navigation and creative problem-solving.

One of the primary challenges we faced was securing funding for the project. Convincing medical and financial leaders of the programme's importance proved to be a lengthy process, taking nearly a year to overcome this obstacle. Additionally, we grappled with scepticism and questioning of authority from some senior stakeholders, which required delicate management to address.

Language barriers presented another substantial hurdle. English served as the common language of communication despite being the native tongue of only one expert. To mitigate comprehension challenges, assistance in Vietnamese was available for e-learning, and we offered simultaneous translation into Vietnamese for all lectures and simulations. However, the cultural and linguistic divide posed ongoing challenges in understanding and communication.

Cultural norms and hierarchical structures within the healthcare system significantly hindered our efforts to encourage safer practices and foster horizontal communication and leadership. Moreover, the introduction of substantial changes in practice risked triggering a backlash effect, necessitating careful navigation to ensure buy-in and mitigate resistance.

The logistical complexities of conducting training sessions with large groups further compounded our challenges. Juggling multiple languages and coordinating simultaneous translation during in-person training (simulation) demanded intense cognitive effort from translators and trainers.

Furthermore, limited knowledge of local anaesthesia practices and inter-professional relational dynamics within the care system, compounded by the distance between trainers and the training site, posed significant logistical and preparatory challenges. Overcoming these hurdles required extensive preparatory discussions and adaptations to training methodologies to align with the cultural and contextual realities of the healthcare environment.

Our journey to implement innovative pedagogy and strategy in medicine was marked by numerous hurdles, from securing funding to navigating language barriers and cultural norms. Through proactive problem-solving and adaptability, we overcame these obstacles to realise our vision of enhancing patient safety and care quality within our organisation. For those looking to implement similar initiatives, it is essential to ensure alignment with organisational needs and expectations, secure full commitment, and effectively coordinate online and face-to-face training. This requires mobilising resources and expertise and anticipating and addressing potential challenges proactively.

CONCLUSION

This study shows that targeted training programmes that combine e-learning with immersive simulation can effectively transform the culture of psychological safety in healthcare, even in hierarchical and geographically dispersed systems like VMHS. Over 18 months, the structured intervention not only improved communication and teamwork but also

increased incident reporting and enhanced patient safety outcomes.

Importantly, this transformation was not only the result of acquiring knowledge but also the result of changing behaviours, supported by leadership commitment and organisational alignment. The notable increase in speaking-up behaviours, the increase in safety incident reports and the cultural shift observed within VMHS suggest that psychological safety is not an abstract ideal—it is a concrete, trainable competency with measurable impact.

However, our findings also highlight significant barriers that must be addressed for large-scale implementation, including financial constraints, cultural resistance and logistical complexities. The role of leadership emerged as a decisive factor in overcoming these hurdles—without institutional buy-in, even the most well-designed training interventions risk limited uptake and sustainability.

While this study focused on a specific healthcare system, its implications extend far beyond Vietnam. The challenges of hierarchical culture, psychological safety and soft skills training are universal across healthcare settings. Our results suggest that embedding psychological safety through structured training is not only possible—it is essential for reducing medical errors, improving patient care and promoting a collaborative work environment.

If knowledge alone is not enough to change behaviour, then healthcare systems should prioritise active, immersive learning experiences that connect theory to practice. The DOMA model provides a replicable, scalable framework for institutions around the world aiming to place psychological safety at the core of their patient safety strategies.

Psychological safety is not just a concept—it is the foundation of safer, more effective and more humane healthcare. The question is no longer whether we should implement it, but how quickly we can make it happen.

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