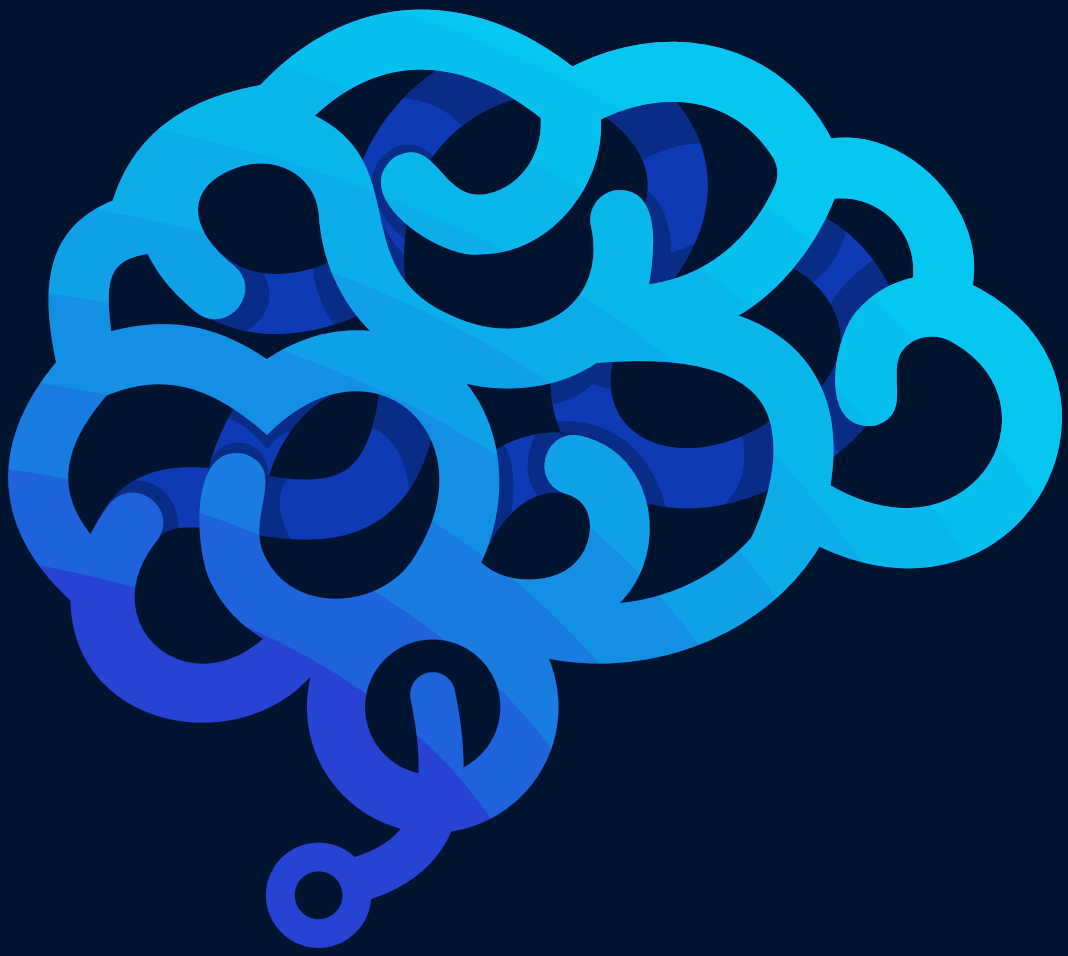

OPERATIONAL ‘HOT’ DEBRIEFS FOR POTENTIALLY TRAUMATIC EVENTS

The role of an operational hot debrief in learning from an incident and reducing the risk of harm to first responders.

Mark Welch
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With sincere gratitude for the support from the Emergency Services Foundation, Rotary and Fire Rescue Victoria

Foreword

The idea for this project originated in 2023, when I started my role as Commander of the Performance and Assurance Unit at Fire Rescue Victoria (FRV). A key part of my role is to review operational incidents and encourage continuous improvement within our organisation. While collecting relevant data can take various forms, a primary source of our information comes from debriefings.

Since commencing my role, there have been a number of significant potentially traumatic events attended by FRV personnel. It was noticeable that our debrief approach for these incidents varied, and the absence of evidence-based guidelines was possibly a contributing factor. As a trained peer for FRV and an advocate for firefighter mental health, it seemed possible to me that our inconsistent approach risked the mental health of firefighters. These risks included exposing firefighters to multiple debriefs, not allowing firefighters sufficient time to process events before operational debriefs, operational debriefs being managed by untrained facilitators, unclear parameters for operational debrief discussions, and the exclusion of at-risk firefighters from operational debriefs. So, the question for me became: how do we learn from potentially traumatic events without compromising the well-being of firefighters?

I explored various sources to determine if any other emergency services, both in Australia and internationally, had developed procedures that addressed the above question; however, I found no clear guidelines in different agencies.

I also researched peer-reviewed literature about debriefs for firefighters following potentially traumatic events. While it was difficult to find research on an approach to operational debriefs for first responders that also addressed well-being (other than Critical Incident Stress Debriefing, which is not regarded as best practice), several papers were found on debriefs in emergency medicine departments that did. These papers discussed clinical debriefing tools and how they could be used following potentially traumatic events, such as resuscitations, to develop lessons and promote improved well-being of staff.

During my early research, I approached subject matter experts, including psychologists, to determine if any relevant research had been published that I may have overlooked. I was also curious about why I hadn't been able to find any research that connected debriefing for emergency medicine departments and emergency service organisations. In one case, I was told that "it's probably because nobody has done it yet". This was essentially the catalyst for developing the proposal for the Emergency Services Foundation scholarship and initiating a journey to gather more evidence to support our approach to safe and effective operational debriefs. I'd like to thank all who have encouraged me to pursue this topic.

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Acknowledgements

Firstly, I would like to thank the Emergency Services Foundation and Rotary for their support of this project. Their support has enabled me to establish contacts and consult with subject matter experts on this important topic, and produce a report that draws on knowledge to guide future operational debriefs for potentially traumatic events (PTEs). Further, it has opened the door to further research about how operational debriefs can be better managed for emergency service organisations.

I'd also like to thank Irina Tchernitskaia and the FRV Psychological Services Team for helping to refine and clearly articulate my topic, as well as the FRV Executive Leadership Team for their support of my submission.

I would also like to thank Dr Erin Smith for her generous time and encouragement in completing this report. Your insights, knowledge and guidance has helped enormously, and I am incredibly appreciative. Similarly, I would also like to thank Grant Hocking for your support and obvious passion for this topic, which have further helped me to complete this work. As part of my travels to Scotland, I would like to express my great appreciation to Dr Craig Walker for finding time to speak to me (prior to a shift in the Emergency Department, no less) and sharing your valuable insights about your work to date.

Not to be outdone, I would also like to thank Dr Emma Phillips for your generous time and the stimulating conversation about your work (providing tea and biscuits at your home while on maternity leave). Good luck with your PhD, and I look forward to reading further papers from you in the years to come.

I would also like to thank Leni Rademacher from the Rivers Centre in Edinburgh. I would like to not only thank you for your time, knowledge and hospitality (I owe you a coffee), but for the walking tour of New Town and Dean Village. Also from the Rivers Centre, I want to thank Dr Paula Easton for making time in a busy schedule. You will probably notice that your insights and knowledge provided some valuable direction for the final report.

Finally, I would like to thank Professor Neil Greenberg for his generosity when in London. This was one of the most stimulating conversations I have ever had, and it was a challenge to keep up with the volume of interesting content you shared. Thanks for the time you gave in a busy schedule, and I owe you breakfast. Through Professor Greenberg, I would also like to thank Chris Bowles and Ian James from West Sussex Fire and Rescue and Natalie Cole from South East Coast Ambulance Service for your incredibly generous time.

Introduction

The central challenge is to develop evidence-informed debriefing practices that preserve the benefits of operational learning while protecting the psychological wellbeing of first responders.

Performance reviews are vital for teams aiming to meet and maintain high standards. In emergency services, they often take the form of an operational debrief, a longstanding practice borrowed from the military's After Action Review (AAR) model. The AAR assesses team performance by methodically exploring four key questions: What was planned? What actually occurred? Why did it happen? What should be done differently next time?

Alongside the longer debrief, the 'hot debrief' has become a helpful addition. Done right after an incident, it aims to gather quick and useful lessons while the event is still fresh in everyone's mind. Over recent decades, the meaning of 'debrief' has broadened beyond its operational origins. Growing awareness of mental health issues among military and emergency services personnel prompted the development of psychological debriefing models, most notably Critical Incident Stress Debriefing (CISD).

CISD was designed as a structured group discussion to help personnel process distress following potentially traumatic events. While historically popular, CISD has since been subjected to extensive empirical evaluation. Research evidence has consistently shown that CISD does not prevent post-traumatic stress disorder (PTSD) or other long-term psychological issues. In some cases, it may even heighten the risk of adverse outcomes (Rose et al., 2002; van Emmerik et al., 2002). Major systematic reviews and meta-analyses have reached similar conclusions, resulting in a clear consensus within the scientific literature.

Reflecting this evidence base, authoritative guidelines—including those from the National Institute for Health and Care Excellence (NICE, 2018), the World Health Organization (WHO, 2013), and the American Psychological Association (APA, 2017)—explicitly advise against the routine use of single-session psychological debriefing following trauma exposure.

The rejection of CISD has created an unintended challenge for emergency services: the term 'debriefing' has become ambiguous. Personnel are often uncertain whether a debrief following a traumatic event is intended for operational learning or for psychological support.

This lack of clarity raises important practical and ethical questions:

- Should operational debriefs be conducted after potentially traumatic events?
- If so, how can they be structured to ensure they do not cause psychological harm?

From a safety-first perspective, operational debriefs after traumatic events may be considered inappropriate, given the risk of exacerbating distress among participants. Conversely, from a high-performance perspective, learning from these incidents is critical to improving outcomes in future operations.

The central challenge, therefore, is to develop evidence-informed debriefing practices that preserve the benefits of operational learning while protecting the psychological wellbeing of first responders. This tension also underscores the need for further research into debriefing processes in high-stress, high-risk environments, such as emergency services.

Hot debriefs in high-stress environments

Literature suggests that hot debriefs provide a structured mechanism for both capturing lessons learned and promoting the psychological wellbeing of medical personnel following potentially traumatic events.

Although literature directly addressing operational debriefing approaches for learning and wellbeing among first responders remains limited, a growing body of evidence supports the use of hot debriefs within emergency medicine, which achieve both objectives. Literature suggests that hot debriefs provide a structured mechanism for both capturing lessons learned and promoting the psychological wellbeing of medical personnel following potentially traumatic events, such as cardiac arrests and resuscitations. Current research has primarily focused on the design and implementation of hot debrief tools that enable hospital staff to conduct timely, efficient, and purposeful debriefs in high-pressure clinical environments.

For the purposes of this review, two hot debrief tools were selected due to their strong alignment with the Fire Rescue Victoria debriefing framework and their explicit emphasis on both organisational learning and staff wellbeing. These tools are STOP5 from the Royal Infirmary in Edinburgh and Theatre Team Tool (TTT) from the Scottish Centre for Simulation and Clinical Human Factors. The evaluation of these tools considered several key dimensions, including debrief structure, the language employed, the expertise of facilitators, the physical setting, group dynamics, the ability to achieve its desired outcomes (learning and wellbeing), and the overarching objectives guiding the debrief process.

To ensure the tools were being appropriately considered in the first-responder context, evaluation of the tools considered several key dimensions, including debrief structure, the language employed, the expertise of facilitators, the physical setting, group dynamics, the ability to achieve its desired outcomes (learning and wellbeing), and the overarching objectives guiding the debrief process.

Hot debrief tools for emergency medicine

The STOP5 hot debriefing tool was developed at the Royal Infirmary of Edinburgh, with support from the Scottish Centre for Simulation and Clinical Human Factors, to provide a rapid and structured process for debriefs after major trauma, deaths in resuscitation, or pre-hospital callouts. It begins with a wellbeing check and intent statements, with the facilitator reading the wording verbatim from the tool to ensure consistency.

STOP5 has led to meaningful improvements. Within its first year, 10 equipment and process changes were made and 14 further opportunities for improvement were identified.

The process follows four clear steps: summarising events, identifying things that went well, discussing opportunities to improve, and assigning points to action and responsibility. Designed to last only five minutes, the STOP5 process is displayed in resuscitation rooms, allowing anyone to initiate a debrief, although the team leader most often leads it.

In practice, STOP5 has led to meaningful improvements. Within its first year, 10 equipment and process changes were made and 14 further opportunities for improvement were identified. Studies have shown that the tool supported enhancements in resuscitation equipment, airway management, non-technical skills, and team education. It has also been positively received, with participants reporting that the duration was appropriate, their clinical skills were strengthened, and they gained psychological benefits. Research has further linked the tool with reductions in burnout and intent to leave. At the same time, its emphasis on self-reflection rather than criticism appears to foster psychological safety and peer support. Champions remain key to embedding its use, and an electronic version has been suggested to increase uptake and improve data collection.

The strengths of STOP5 lie in its simplicity, memorability, and time efficiency, making it well-suited to fast-paced emergency medicine and first responder environments. It promotes a learning culture, keeps discussions focused, and helps build team morale and communication.

A notable strength (of the Theatre Team Tool) is the closing section, which includes self-care recommendations and a QR code linking to support resources. The tool also prompts discussion of systems, teamwork, and equipment, keeping focus on clinical learning.

The Theatre Team Tool (TTT) was developed as a bespoke clinical debriefing framework for theatre teams, recognising their multidisciplinary nature, high staff turnover, use of specialised equipment, and exposure to potentially traumatic events (e.g., peri-operative cardiac arrest risk 1:3000).

Clinical debriefs can serve three purposes: debrief to learn (DTL), debrief to manage (DTM), and debrief to treat (DTT)—the latter, otherwise referred to as CISD, is now discouraged. The TTT integrates DTL and DTM, beginning with set statements to clarify purpose, duration, and confidentiality, while allowing participants to leave at any time. Like STOP5, it incorporates open emotional screening, though challenges remain in identifying "significant negative emotions", particularly for inexperienced facilitators. Developers recommend experienced facilitators for complex or emotive events.

The tool emphasises psychological safety by avoiding personal identifiers, encouraging debriefs for any reason, ensuring sessions are voluntary, conducted in quiet spaces, and guided with empathy. For routine scenarios, facilitators are advised not to probe traumatic details or force participants to engage.

A notable strength is the closing section, which includes self-care recommendations and a QR code linking to support resources. The tool also prompts discussion of systems, teamwork, and equipment, keeping focus on clinical learning. Although more complex than STOP5, it is structured to support consistent facilitation.

The TTT is a newly implemented program, and further evaluation is needed to determine its effectiveness across various settings, including first responder environments where the tool's complexity may pose a challenge.

Revisiting the (operational) hot debrief

The basis of both STOP5 and the TTT was to provide a tool to guide inexperienced debrief facilitators when conducting debriefs for learning opportunities in a busy environment, with the additional consideration of staff wellbeing. The review of both hot debrief tools provides evidence for effectiveness in an emergency medicine setting, while stimulating further discussion about evidence that supports an appropriate operational debrief process for first responders.

Analysis of the STOP5 and TTT hot debrief tools revealed several key themes relevant to debriefs, including objectives, structure, language, facilitation, timing, location, group size, and composition. These themes have been considered alongside peer-reviewed evidence and from data collected from interviews with subject matter experts to generate the following considerations.

Debrief objectives

Participants are more likely to engage openly when the objectives of a debrief are unambiguous.

The objectives of hot debrief tools, such as STOP5 and the Theatre Team Tool (TTT), are twofold: to facilitate learning and support participant wellbeing. As described by Dr Craig Walker, co-author of STOP5, both tools were deliberately designed to acknowledge the psychological impact of critical events while enabling teams to reflect on operational performance. To address wellbeing explicitly, each tool begins with a short prelude, typically framed as a question such as "Is everyone okay?" or "How is everybody feeling?" before moving into the operational elements of the debrief, which focus on establishing facts, sharing observations, and identifying lessons learned.

This structure reflects the body of literature on debriefing practices among first responders, particularly firefighters, paramedics, and emergency clinicians. In these professional groups, debriefing has historically been oriented towards protecting the psychological wellbeing of staff following exposure to potentially traumatic events (Halpern et al., 2009). In contrast, there has been relatively little emphasis on operational learning in the immediate aftermath of such events. The decision by the designers of STOP5 and TTT to combine wellbeing and operational objectives, therefore, represents an innovation, though one that is not without challenges.

The TTT tool goes further than STOP5 in providing explicit guidance to facilitators on how to respond if participants indicate that they have been adversely affected by the event. While this approach demonstrates sensitivity to participant needs, it also raises concerns about whether combining the two aims within a single process is always the most appropriate approach. Natalie Cole, Operations Manager at the South East Coast Ambulance Service, has observed that debriefing in her service was often poorly executed, in part due to confusion among staff about the type of debrief being requested.

The importance of clarity in debriefing purpose is echoed in the work of Harvard psychologist Dr Amy Edmondson, whose research on psychological safety and organisational learning highlights that participants are more likely to engage openly when the objectives of a debrief are unambiguous. Edmondson's research affirms that clear, singular purpose in team processes supports both psychological safety and practical engagement. When debriefs have mixed or ambiguous goals—combining operational learning with emotional support—trust may erode, and participants may disengage or respond defensively. Grounding the debrief purpose explicitly aligns with Edmondson's framework: fostering trust through clarity, inviting participation, and harnessing candid reflection as a path to collective learning.

At the same time, wellbeing responses remain essential. Still, they may be more effective when delivered in parallel (to operational debriefs), through distinct channels such as Psychological First Aid, trained peer support, or access to specialist services. In this way, both organisational learning and participant wellbeing can be supported without compromising the integrity of either objective.

Concerns have also been raised about the potential unintended consequences of wellbeing-focused prompts. Trauma specialist Dr Paula Easton, from the Rivers Centre in Edinburgh, notes that questions such as "Are you okay?" may invite responses that would not have otherwise been considered ("Why wouldn't I be okay?"). Dr Easton stresses that this is not to suggest that participants can be 'talked into' poor mental health, not does it suggest that it's not ok to express 'you're not ok'. Rather, the prompts invite engagement with feelings, and not the facts of the operational response, where lessons for operational improvement can be discovered.

Similarly, Professor Neil Greenberg, psychiatrist and leading expert in military and emergency services mental health, highlighted that there is emerging evidence that psychoeducation for first responders must be carefully considered. Providing first responders with enough knowledge that they continually question their emotional response ("Why wouldn't I be ok?") following exposure to trauma may be counter-productive. Interestingly, the study referred to by Professor Greenberg further states that the type of education provided to first responders may be the most important factor: evidence indicates that training for the job (operational capability) is more effective than training for stress management (psychoeducation and wellbeing capability) before exposure to a potentially traumatic event (Wild et al, 2020).

This approach is further supported by Dr Easton, who, through The Rivers Centre, has educated first responders about mental health, sharing that being prepared and feeling competent in their roles acts like a 'protective armour' against poor mental health. This aligns with theories of self-mastery and competence, which emphasise practical skills as essential for good mental health.

Taken together, these perspectives suggest that operational and wellbeing objectives may be best pursued through separate but complementary processes. A singularly focused operational debrief provides a structured opportunity to capture lessons and improve performance, while minimising the risk of harm to participants. At the same time, wellbeing responses remain essential. Still, they may be more effective when delivered in parallel, through distinct channels such as Psychological First Aid, trained peer support, or access to specialist services. In this way, both organisational learning and participant wellbeing can be supported without compromising the integrity of either objective.

Debrief structure

The introduction of the wellbeing component in the operational debrief creates a challenge that may not be necessary for the purposes of learning and wellbeing.

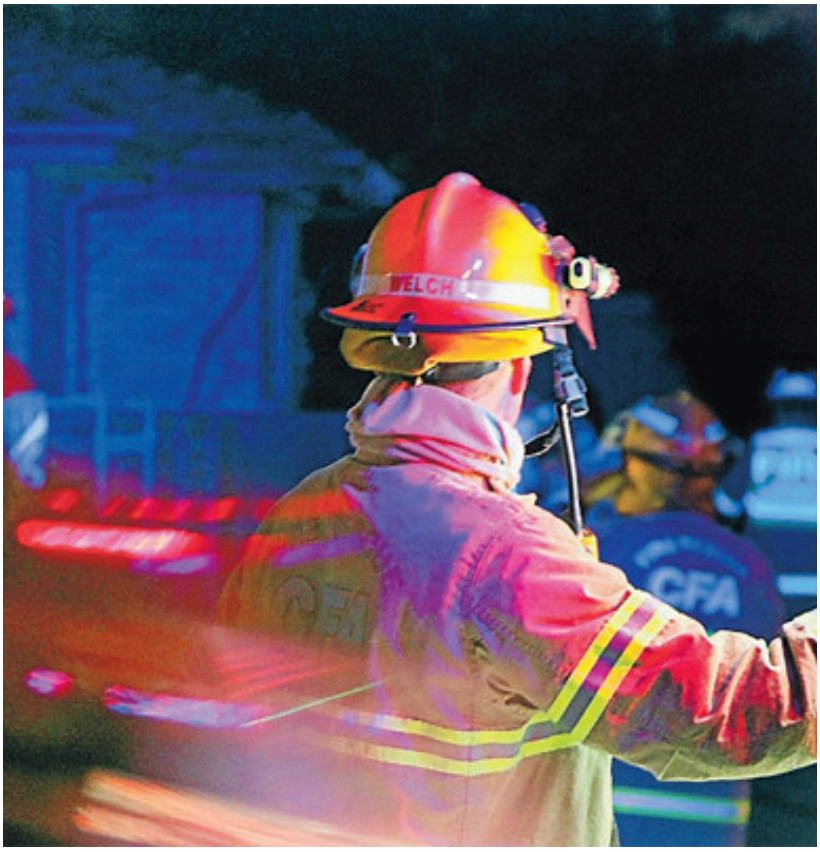
STOP5 and the TTT both follow similar structures, commencing with a prelude of structured statements and questions to guide inexperienced and/or busy medical staff. Interviews with both Dr Walker and TTT author Dr Emma Phillips highlighted the current challenges with the wellbeing questions that are part of the prelude. While STOP5 and the TTT asked different wellbeing questions, a similar challenge for both tools was whether a participant responded that they were 'not ok' or 'feeling unsettled' by the potentially traumatic event. Neither tool guided the facilitator on what to do in this circumstance. If only one staff member has an adverse psychological response to the event, does the operational/clinical debrief not proceed? Does the operational/clinical debrief proceed without them, and what are the consequences for the individual who knows the debrief will continue without them?

According to the evidence regarding the debrief purpose, it suggests that the introduction of the wellbeing component in the operational debrief creates a challenge that may not be necessary for the purposes of learning and wellbeing.

Once the STOP5 tool has passed its wellbeing check-in and the operational (or clinical) debrief commences, the STOP5 structure has been exceptionally well thought out. According to Dr Walker, the simplicity of the tool design is a strength, as it assists debrief facilitators in following a consistent and effective process.

Providing a factual overview of the scenario prior to exploring performance is an excellent step that aligns well to first responder environments. Similar to first responder environments, responding to an event in a hospital emergency department can be dynamic and complex, with little time to plan. In this sense, the STOP5 process provides another (possibly more) suitable format for first responders beyond the After Action Review, where the goal is to assess the response against a plan. The focus of establishing the scenario is to establish facts, which are essential both for learning and wellbeing, and will be further explored in 'debrief language'.

Both the STOP5 and TTT structures guide for the facilitator to obtain observations from participants that can contribute to lessons for sustained practice or opportunities for improvement. The greater complexity of the TTT provides the facilitator with more prompts to extract observations, such as equipment, teamwork, and decision-making. Also, it offers useful questioning prompts, such as "What did you find challenging?" rather than "What could be done better?".



A lack of structure for hot debriefs was identified by the extensive review into debriefing procedures by the London Fire Brigade in 2020 as one of the key reasons that any lessons were not identified during the process, with on-scene leaders merely providing a 'verbal re-run of the incident' that did not provide any 'meaningful individual or organisational learning'.

The ability of the TTT to provide more guidance is reflective of it complexity and a trade-off made by the designer of the tool. This complexity would require any facilitator to have the TTT on hand for each debrief, rather than ever reach a point when the tool could be remembered verbatim.

In the case of the STOP5 tool, the structure first asks about "things that went well," followed by "opportunities to improve", which have generated multiple positive outcomes for the teams.

Significantly, both tools recognise that a critical component of developing learning through debriefing is to ensure that the observations from the debrief are recorded and given to the correct person for action. While this is possibly better articulated in the STOP5 tool, the closing statements in the TTT are one of its strengths. The TTT concludes with wellbeing considerations, including prompts to offer team members the opportunity to end their shift or take a break (book offline for a specified period), and the inclusion of a QR code that links to support resources for debrief participants to scan and review at their own convenience. Further use of a QR code could also be employed for collecting observations and would be worth testing.

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Debrief language

The type of language to use in an operational hot debrief could be informed by our further understanding of how the brain works and the impact trauma has on that functioning.

There is evidence that the appropriate use of language can assist with trauma management (Van Der Vol Kolk, 2014), providing the ability to heal or reduce the risk of further harm. According to the research, 'language gives us the power to change ourselves and others by communicating our experiences, helping us to define what we know and finding a common sense of meaning'.

The type of language to use in an operational hot debrief could be informed by our further understanding of how the brain works and the impact trauma has on that functioning. The left brain remembers facts, statistics, and vocabulary, while the right brain stores memories of sound, touch, smell, and the emotions that these senses evoke. Brain scans from research have shown that images of past trauma clearly activate the right brain of the person, while the left brain deactivates. From this knowledge, it would be reasonable to conclude that operational debriefs should be guided by facts, particularly the facts as they were known at the time of any decision-making, and that any language that stimulates the senses of smell in debrief participants should be avoided. This is reflected in the language used by the TTT, which, in the case summary section of the debrief to learn path, guides the facilitator in establishing what 'happened medically to the patient'.

It would be interesting to further explore through research whether an operational debrief has the ability to reactivate the left brain by focusing on facts, while reducing stimulation of the right brain, and whether this considered use of language in the debrief further aids recovery for first responders exposed to potentially traumatic events.

Language must also, therefore, avoid any reference to personal responsibility for the outcomes of an event, which may risk further activating the right brain. Dr Walker noted that, in the debriefs he had observed, participants were more likely to offer support, based on fact, to other members of the debrief if they had shared an observation that perhaps they had not performed to an acceptable level. For example, if a team member shared in the debrief that they should have performed a task quickly, another team member, armed with a statistical fact (for example, it took 20 seconds), would provide context and reassurance to the team member about their level of performance. Interestingly, the LFB debrief review also makes a distinction about the impact of language use in debriefs.

While the above example from the STOP5 debriefs demonstrates positive support for an individual, the support was grounded in facts and was not intended to be merely 'nice'. During the LFB debriefing review, it was found that there were far more positive observations, indicating the officers' willingness to register 'good' news rather than 'bad' news. According to the review, this highlighted that "the inconsistent commentary from incident monitoring and debriefing events ... hinders opportunities for the brigade to learn from incidents". Not only does this require an understanding of language that is factual rather than 'nice', it also highlights the importance of a trained facilitator who can maintain the balance between being factual without being personal or rude. This is further explored in the next section.

Debrief facilitation

Debriefs oriented towards wellbeing necessitate specialised skills that require significant time and investment to cultivate, and the absence of such expertise introduces the risk of compounding, rather than alleviating, harm for participants.

The STOP5 tool has demonstrated its ability to achieve outcomes for both clinical improvements and wellbeing, while the TTT remains to be tested. It should be noted that STOP5 designers have not yet fully established its effectiveness for participant wellbeing, due to the potential for false negative results (such as the STOP5 tool being ineffective for participant wellbeing, rather than the wellbeing of hospital staff being poor due to organisational issues).

This suggests that the STOP5 tool is, in part, practical, as the clinical/operational debrief was facilitated by a peer (i.e., another medical professional with an understanding of the recent experience or event). According to Professor Greenberg, establishing trust in the group is essential to creating an environment where observations can be shared, and this is best achieved by peers.

However, Professor Greenberg also emphasised that a debrief tool alone would not be sufficient for a safe and effective debrief, and that training debrief facilitators was crucial. This follows the previous section on language, where an untrained facilitator may risk misusing language or deviating too far from the guidance in the debrief tool, potentially impacting a debrief participant who is experiencing some level of trauma. It should be noted that some training had been provided to hospital staff in the use of the STOP5 tool, and that more training (online) was planned.

The TTT provides guidance for simultaneously facilitating organisational learning through debriefing and safeguarding the wellbeing of personnel in the aftermath of challenging incidents. The effective navigation of these directions in the tool requires a high degree of professional competence, particularly the ability to discern when the focus of a debrief should transition from extracting lessons to managing psychological impact. Debriefs oriented towards wellbeing necessitate specialised skills that require significant time and investment to cultivate, and the absence of such expertise introduces the risk of compounding, rather than alleviating, harm for participants.

For a hot debrief, Dr Walker and Dr Phillips both agree that, while any team member may request a debrief, the role of facilitator rests most appropriately with a person who has the best overview of the event and can adequately provide an appropriate level of information to summarise the case, and this is generally the team leader. This approach also appears to be the most suitable for first responders.

Debrief timing

For a hot debrief, the use of Psychological First Aid principles and some understanding of how trauma is expressed in individuals may help to provide some improved guidance for now.

Debrief timing, such as the duration of the debrief and how long it should occur after the event, remains a difficult question to answer and requires further investigation. For a hot debrief, the use of Psychological First Aid principles and some understanding of how trauma is expressed in individuals may help to provide some improved guidance for now. According to Dr Easton, an overarching principle of Psychological First Aid is "to be a good human". More specifically, Dr Easton highlights the need for physical safety and comfort for debrief participants, particularly after attending a potentially traumatic event. This, she said, can be achieved by first responders returning to the station, having a shower and getting changed (if required), and having "a cuppa". This guidance suggests that a debrief could occur anywhere from 20 minutes to two hours after the incident has concluded.

This is also consistent with the London Fire Brigade (LFB) guidelines, which stipulate that an operational debrief should occur within two hours to facilitate an accurate recollection of events.

From the data received from participants in the STOP5 and TTT evaluation, researchers found that a duration of the clinical/operational debrief of 5-10 minutes was regarded as about right by most respondents. It could be argued that, more than just providing the opportunity to learn while in a busy and demanding environment, a debrief duration of no more than 10 minutes would reduce the likelihood of an operational debrief straying too far from its intended purpose, however, this would require further investigation to determine.

Debrief location

While many emergency services still advocate for a hot debrief to occur on scene, it's possibly time to consider the implications of that decision and recognise the benefits of leaving the scene and relocating to a 'safe' location

Dr Walker did highlight the challenges of finding a suitable location for a debrief in hospital emergency departments. The Royal Infirmary of Edinburgh has a busy and congested workspace, with three resuscitation bays side by side and open access between them via a common corridor. To conduct a clinical/operational debrief in these spaces is not always possible due to the inability to provide a private and psychologically safe environment.

It could also be argued that it is not a physically safe environment to conduct a debrief following a potentially traumatic event. As the right side of the brain activates when a person is experiencing trauma, and this trauma is represented through sounds, smells and touch, it would appear to be a risk to remain in the same environment for the debrief. In this case, it would be more preferable for the team to find a private space outside to conduct the debrief.

Conversely, first responders are surrounded by noise and smell at an incident, which, again, would activate the right side of the brain. While many emergency services still advocate for a hot debrief to occur on scene, it's possibly time to consider the implications of that decision and recognise the benefits of leaving the scene and relocating to a 'safe' location.

The LFB acknowledges this recommendation for its formal debriefs, but not for its hot debriefs, which is unusual given that it states that being back at station is a 'safe' environment. Again, this may highlight that first responders understand and recognise the benefit of psychological safety, yet still underappreciate the need for the feeling of physical safety too. The failure to recognise the need for both was borne out by multiple interviews.

Debrief group dynamics

While some debrief groups that use either the STOP5 tool or the TTT may have as many as 15 or more participants, according to Dr Walker and Dr Phillips, the most common number of participants is typically less than 10 team members. It would also be likely that, even though the groups are quite small, some team members do not know each other well.

Despite this, it has been observed during the STOP5 trial that engagement occurred by multiple members in the debrief, indicating a level of psychological safety. The evidence for determining an appropriate number in a debrief to maintain psychological safety is limited. It could benefit from further study, including an examination of the impact of how well group members know each other.

In a first responder context, particularly in the fire services, team members are generally well-known to each other, either because they are stationed together for long periods or are familiar with each other through operating in similar districts. In this sense, psychological safety has more opportunity to thrive. In most cases, a fire station has a minimum crew of between 4 and 8 members who work together regularly.

In a first responder context, particularly in the fire services, team members are generally well-known to each other, either because they are stationed together for long periods or are familiar with each other through operating in similar districts. In this sense, psychological safety has more opportunity to thrive.

The LFB review suggests that a debrief at the station is a 'safe' environment 'where people may be more open to expressing their views'.

An important consideration of this team environment and its potential to help manage trauma is widely discussed in research, where connection and relationships can play a role in managing and healing from trauma (Van Der Kolk, 2014). This was another point also made by Dr Easton, who said that an operational debrief with team members could act as 'protective armour', and that connection was an essential part of the Rivers Centre education to first responders about staying well.

Regardless of this evidence for participating in an operational debrief, participation in any debrief should remain voluntary. According to Dr Easton, the non-participation of any member in an operational debrief does not require qualification, such as an open admission that an individual is 'not ok'. The ambiguity of the decision to not attend limits the possibility of further distress through team member speculation or engagement.

It should be noted, however, that a team leader should identify a team member's non-participation and ensure that, afterwards and privately, they are aware of the support resources available.

Key findings

- Accept there is some risk to participants when conducting an operational hot debrief following a potentially traumatic incident, as it is impossible to remove all risk.
- Return to station at the conclusion of an incident for psychological and physical safety
- Give crews the opportunity to catch their breath – shower, change, cuppa – before commencing the operational hot debrief.
- Be clear about the purpose of the debrief – an operational debrief only if the objective is performance and improvement.
- A trained debrief facilitator is important, particularly to help maintain an 'operational' focus on the debrief.
- An operational focus for the debrief can help build 'protective armour' by creating feelings of competence and self-mastery.
- Have a clear, simple structure for the operational hot debrief, possibly supported by a debrief tool.
- When establishing the scenario, the facilitator must use facts as they were known at the time, avoid emotional language, and try not to reference smells, sounds or touch.
- Conclude with reference to support (QR-code if using a tool)
- Provide a method (QR-code) to collect observations
- Make operational hot debriefs a habit, so they are not only associated with potentially traumatic incidents or when things go wrong.

Recommendations

Recommendation 1
The above findings should be appropriately formatted for inclusion in a relevant academic journal. The paper should establish the current gaps in the literature about first responder debriefs following potentially traumatic events, particularly any ongoing association with Critical Incident Stress Debriefing.

Recommendation 2
The journal publication should also clearly identify current knowledge gaps and propose further research based on findings in an emergency services setting. The current knowledge gaps should also acknowledge that the conclusions of this research report only focus on the operational hot debrief, and not the extended and more formal operational debrief.

Recommendation 3
A printed operational hot debrief tool tailored to first responders should be developed to investigate whether it can assist them in facilitating an effective and safe debrief. The acronym should acknowledge the findings of this research report, while ensuring it is suitable for a first responder environment and addresses any gaps in the hot debrief tools mentioned in this report (see Appendix 1). The findings of any research conducted for the debrief tool should be recorded and translated into an academic paper for submission to a journal.

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Appendix 1

Proposed hot operational debrief processes

Purpose: Operational learning only
Structure: STOPS (scenario, things that worked, opportunities for improvement, people responsible for improvements, support)
Group size: shift or station personnel, internal only (no external agencies)
Location: in station, mess room
When: following shower, change of clothes, warm drink
Duration: no more than 10 minutes
or
Purpose: Operational learning only
Structure: 5S (situation, sustain, suggest improvement, share lessons, support crews)
Group size: shift or station personnel, internal only (no external agencies)
Location: in station, mess room
When: following shower, change of clothes, warm drink
Duration: no more than 10 minutes

Proposed emergency services debrief tool:

Allow team members time to shower, change and have a drink
When members are ready, state:

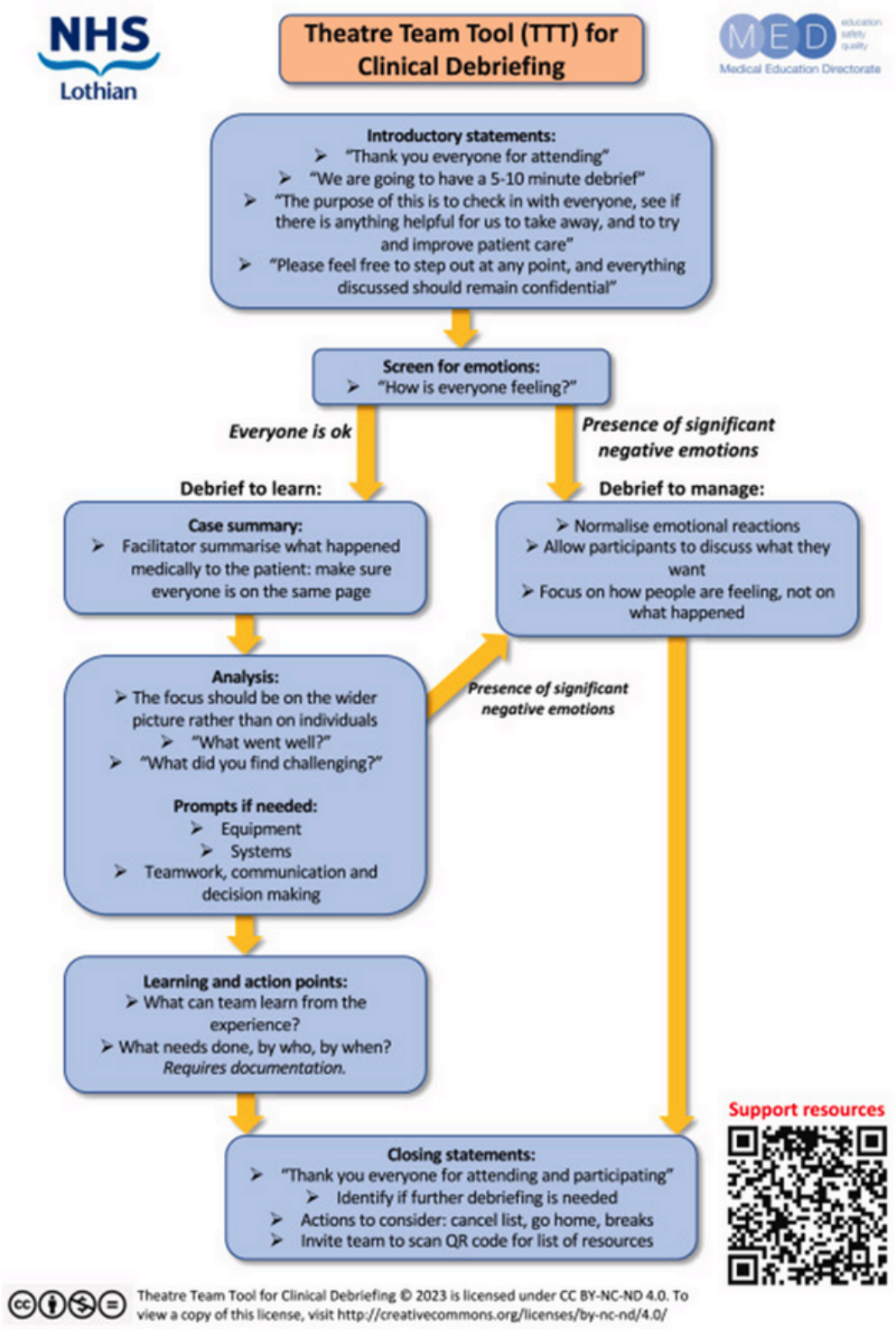
- Our goal is to be high performing
- We are going to have an operational debrief
- It will take from 5-10 minutes
- Participation is voluntary
- Any observations shared are de-identified

S: summarise the incident; facts only (what was seen and what we did); avoid emotions or discussion about sounds and smells
T: things that worked well
O: opportunities for improvement
P: person responsible for improvement (Performance and Assurance)
S: support

Appendix 2


STOP for 5 Minutes
Thank the full team and ask "Is everyone ok?"
If YES then continue as below and STATE FIRST:
• We are going to have a 5 minute team debrief
• Purpose is to improve quality of patient care; it is not a blaming session
• Your participation is welcomed but not compulsory
• All information discussed during this debrief is confidential
S Summarise the case
T Things that went well
O Opportunities to improve
P Points to action and responsibilities

Appendix 3


NHS Lothian
Theatre Team Tool (TTT) for Clinical Debriefing
MED education safety quality
Medical Education Directorate
Introductory statements:
➢ "Thank you everyone for attending"
➢ "We are going to have a 5-10 minute debrief"
➢ "The purpose of this is to check in with everyone, see if there is anything helpful for us to take away, and to try and improve patient care"
➢ "Please feel free to step out at any point, and everything discussed should remain confidential"
Screen for emotions:
➢ "How is everyone feeling?"
Everyone is ok
Presence of significant negative emotions
Debrief to learn:
Case summary:
➢ Facilitator summarise what happened medically to the patient: make sure everyone is on the same page
Debrief to manage:
➢ Normalise emotional reactions
➢ Allow participants to discuss what they want
➢ Focus on how people are feeling, not on what happened
Analysis:
➢ The focus should be on the wider picture rather than on individuals
➢ "What went well?"
➢ "What did you find challenging?"
Prompts if needed:
➢ Equipment
➢ Systems
➢ Teamwork, communication and decision making
Presence of significant negative emotions
Learning and action points:
➢ What can team learn from the experience?
➢ What needs done, by who, by when?
Requires documentation.
Support resources
Closing statements:
➢ "Thank you everyone for attending and participating"
➢ Identify if further debriefing is needed
➢ Actions to consider: cancel list, go home, breaks
➢ Invite team to scan QR code for list of resources
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