

Keep calm... and prepare

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Accepted 30 May 2017
Published Online First
26 June 2017

On 22 July 2011, a terrible attack by a lone shooter on the Norwegian island of *Utøya* cost 77 young lives, injured 78 and changed the lives of hundreds forever within 73 min. In the current international context of increased threat, sharing experience about disaster response is crucial. With some exceptions,^{1–3} many of these studies adopt a deficit-based analysis approach and focus on dysfunctions rather than positive lessons.

In contrast, Brandrud *et al*⁴ adopted an original approach. The group used the conclusions of two official and independent commissions as starting point, namely that the medical response to the incident was particularly well managed. This enabled a ‘*positive deviance*’^{5,6} analysis to draw important lessons from this incident.

The authors attempted to gather crucial insights with the help of detailed group interviews and expert review: How did a rural district hospital, *Ringerike*, that is not a level-1 trauma centre manage a major disaster effectively, despite the fact that its resources were exhausted 40 min after admission of the first patients? What can this outstanding performance teach health professionals in preparation for disaster in any setting, and especially in a non-specialist hospital?

The answers provided by the study are very relevant to disaster preparedness and training programmes everywhere. A disaster can strike anywhere and in any form—natural, accidental, man-made. Any acute health facility is potentially involved, and the stakes are especially high if it is isolated and distant from referral centres like the *Ringerike* hospital was. Terrorists may deliberately integrate this potential vulnerability into their strategy. As such, the *Ringerike* example is important as it shows that a well prepared acute care facility can cope if necessary, even if it is not a tertiary centre. Moreover, this example also shows that health professionals can rise to the occasion and cope under extreme circumstances,

despite the scarcity of medical disasters that are encountered perhaps only once (if that) in a professional lifetime.

But the lessons go beyond the disaster preparedness. They indicate how any acute healthcare facility, no matter its size, can meet the challenge to create a shared mental model and maintain an institutional memory in order to deal with rare events and to improve care. It seems that the main drivers behind the success were empowerment and the principle of subsidiarity. Subsidiarity is the idea that *no decision should be made and no function performed at a higher or more central level than can be accomplished at a more local level*. How did the hospital staff achieve this?

As Brandrud *et al* demonstrate, an important element is context. The crisis response was not conjured out of thin air. A culture of resilience existed, embedded in a favourable institutional and general context. The *Ringerike* hospital was able to implement the rationale of a national trauma system with national guidelines, shared triage rules, quality standards and evaluation, in association with a national Trauma Registry. The hospital administration provided doctrine, mission, objectives and necessary means, but refrained from micromanagement and a top-down approach and lent autonomy to front-line actors and teams to accomplish their mission. The principle of subsidiarity was respected; actors were empowered within a shared model and framework.

This framework formed the basis for a plan, which existed within what Brandrud *et al* call the ‘structure’. This plan needed to be simple and concise and most importantly, it had to be known by all actors. It was internalised through a continuous institutional learning process, which allowed implementation with no discordance from the overall structural framework. A continuous learning process allowed the plan to evolve; lessons learnt were communicated back to the teams. In this fashion, a shared adaptive mental



► <http://dx.doi.org/10.1136/bmjqs-2017-006517>



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To cite: Gauss T, Cook F.
BMJ Qual Saf
2017;**26**:786–787.

model was produced. This shared mental model then created the capacity to adapt and to improvise as a group during a crisis. When we all know what we are aiming for, but the aim cannot be reached with method A, it is easier to find a method B together.

Collective learning and training was an essential pillar of success.⁷ At *Ringerike* hospital, monthly training has been taking place for many years within the framework of a 2003 national policy (BEST: Better & Systematic Trauma Care). Such training requires institutional support: it costs time and time is money for modern health facilities. But only through repeated training could collective knowledge, competence and structure be achieved. Training tested the existing command and communication structure and furthered understanding of team members' respective roles and needs. Training turned skill and competence into second nature and achieved confidence and trust, which in turn enhanced the shared the mental model. Habituation also increased resilience—as an interviewee stated: “It makes you tolerate more”. The overall plan was an integral part of the training, with no apparent *plan-training gap*. And again, we find the principles of empowerment and subsidiarity on a multiprofessional level. These elements obviously favoured effective and legitimate leadership and active, anticipating followership. Both allowed for a robust command structure and communication, essential in any crisis management.^{8 9}

The importance of this study is that the authors demonstrate and summarise essential elements of a conceptual framework to create a shared mental model and maintain a collective memory through empowerment and subsidiarity based on knowledge and competence. This enables the capacity for dealing with a crisis situation or a rare catastrophic event and to improve care in any given health facility, both in regular and exceptional circumstances, no matter the available resources. We hope that the results presented by Brandrud *et al* will inspire others. The work should also serve as a reminder for the European and international medical community to work towards a shared

reporting structure, standardised data set and methodological approach for disaster response analysis in analogy to the *Utstein* trauma or cardiac arrest template. This will facilitate evaluation of disaster response and quality improvement in disaster management through comparison.

Acknowledgements Traumabase Group is a French research and cooperation network on major trauma management; Traumabase.eu.

Competing interests None declared.

Provenance and peer review Commissioned; internally peer reviewed.

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