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‘Routine’ or ‘crisis’ – the search for excellence

Herman B ‘Dutch’ Leonard and Arnold M Howitt examine the different modes of emergency response that are required for routine or crisis (unconventional) emergencies
Emergency management requires readiness, as near to instantaneous as possible, for a wide range of contingencies that happen only episodically. The variety of potentially severe challenges includes: natural catastrophes like the Pakistan earthquake and the Asian tsunami in 2004, and Hurricane Katrina in the United States in 2005; outbreaks of new diseases, like Severe Acute Respiratory Syndrome (SARS) in 2003 and the perceived threat of avian influenza; technology failures and industrial accidents such as mine cave-ins in China, or major transportation disasters such as the founding of an Egyptian ferry in 2006; and terrorist attacks such as the 9/11 assaults on the World Trade towers and the Pentagon, the anthrax-laced letters that closely followed in 2001, Trade towers and the Pentagon, the anthrax-attacks such as the 9/11 assaults on the World of an Egyptian ferry in 2006; and terrorist attacks such as the 9/11 assaults on the World Trade towers and the Pentagon, the anthrax-laced letters that closely followed in 2001, the train bombings in Madrid in 2004, and the London subway and bus bombings in 2005.

Achieving excellence

In many countries today, therefore, crucial questions are being asked by emergency management professionals, governments and citizens. How can they ensure readiness when disaster threatens lives, property, professional reputations, government credibility, and even ways of life? How can they build on basic emergency response capabilities so they can act effectively in a moment of extreme crisis?

Efforts to improve emergency management capabilities are complicated further by the fact that effective preparedness and emergency operations require not one, but two modes of response that differ significantly from each other. Neither is the best mode in all situations; both are essential components of emergency management’s repertoire. Response organisations, we believe, must master the art of deploying each mode effectively and learn to recognise the circumstances when each is likely to be more beneficial than the other.

Some emergencies, even quite severe ones like hurricanes or major structural fires, happen with a degree of regularity that allows responders to anticipate and prepare for them specifically. Other emergencies are far harder to anticipate because they happen very infrequently or are wholly unexpected.

In both types of event there are high stakes and urgency, great uncertainty about conditions and appropriate tactics, and a substantial degree of contingency — ie, variability in possible outcomes resulting from different choices of action. But the distinguishing feature of the second type of emergency is novelty — key situational features that are totally new, sufficiently out of the ordinary, or present in unusual combinations; so that the normal way of responding proves inadequate or even counterproductive. Hence the need for two modes of operation.

The first mode of response is the more familiar. When a particular type of emergency — even if it is very severe — happens sufficiently frequently in a location where people have the resources to organise and prepare, it becomes a routine event. For example, familiarity makes a severe residential or commercial fire, or a tropical hurricane, manageable for experienced responders.

Imagine a serious highway accident in which three passenger cars collide with a tractor-trailer, injuring six people — three severely — while disrupting traffic in both directions. Emergency calls go out to highway police, the fire department, the ambulance service, a nearby hospital, the highway department, and a private towing company. Each group responds and takes care of different dimensions of the emergency. Police command traffic flow and maintain security around the scene. Emergency medical personnel minister to the victims, performing triage. Firefighters douse the flames. Hospital emergency staff, alerted by the emergency medical technicians, ready teams to treat the specific needs of the most severely injured victims. Highway department personnel oversee private crews removing damaged vehicles from the site. Within a few hours the injured have been cared for, damaged vehicles removed from the accident scene and traffic is once more flowing.

While each highway accident differs in key particulars, the fact that similar situations have been faced many times before means that response organisations have learned lessons, developed procedures, trained the appropriate professionals, and given them practice so they can deploy and act quickly by ingrained experience.

The key elements of excellent response in routine emergencies are:
- High awareness: Developing a detailed understanding of the nature of this kind of situation and an understanding of its key elements — to know what facts and observations are relevant and, therefore, which to collect;
- Recognition-primed decisions: The ability — through training, practise, and operational experience — to recognise patterns of circumstances and trigger appropriate, nearly autonomic responses;
- Comprehensive scripts: Well-engineered general ‘routines’ that provide step-by-step assignment of roles and responsibilities for dealing with the emergency;
- Modest customisation: Well-defined methods for adapting the general routine to the specific instance;
- Well-defined, highly-developed skills: Training in the skills necessary to customise and execute the routines;
- Leadership: Leaders who are trained in the knowledge and methods of the situation and response, who are practised at organising, deciding, and directing execution in this type of situation, and who are selected on the basis of their prior training, as well as having both the experience and performance and are better able than others to organise and direct responses of this kind;
- Command presence: A leadership approach (generally, an authority-based, command and control structure) that performs well in directing the customisation and execution of the routines;
- Hierarchical structure: An organisational structure (generally, a hierarchical system) suited to customising general routines to specific circumstances and executing them effectively; and
- Precision execution: Implementing well-designed and practised routines both precisely and accurately.

In short, organisations that perform well in a routine emergency environment are based in a well-defined, well-developed and ingrained expertise about the nature of emergencies of this type, in the knowledge of how to handle them and in the skills necessary to deploy that knowledge. This expertise is at once substantive, procedural and organisational. It involves factual knowledge of how situations of this kind evolve and what the key factors are, understanding of and ability to deploy the relevant response actions and routines, and an ability to operate effectively in a...
Some forms of crisis do not arrive suddenly; they fester and grow, arising from more ordinary circumstances that often mask their appearance well-defined organisational setting.

Some emergencies, however, are not like those previously experienced. Because of unusual scale, a previously unknown cause, or an atypical combination of causes, responders face novel challenges – the facts and implications of which cannot be completely assimilated in the moment of crisis. The 2004 Asian tsunami far exceeded immediately available capacities for response. In 2005, Hurricane Katrina, with novel combinations of flooding and infrastructure loss, created unusual needs and simultaneously invalidated standard responses. The earthquake in Pakistan several months later simultaneously created needs and destroyed available capacity.

These crises (or unconventional) emergencies are defined by significant novelty, which ensures that understanding of the situation, at least at the outset, will be relatively low. There will be no executable script that provides a comprehensive, reliable, and fully adequate response. Existing routines will be inadequate to the demands of the moment and may even be counter-productive, given the novel circumstances faced. Dealing with a crisis emergency therefore means that the response must operate beyond the boundary of plans, existing capabilities, and readily available resources. Response will necessarily be incompletely planned, and resources and capabilities will generally be (or seem) inadequate. Improvisation will be of the essence. In true crisis emergency situations, effective leadership will have to organise and carry out rapid and effective innovation, under high stress, in the context of fear.

**Performance Frame**

Effective response under these conditions has three necessary phases: First, the establishment of awareness, during an ‘understanding’ phase; second, the development of a design for action, during a ‘design’ phase; and third, the implementation of the chosen actions, during an ‘execution’ phase characterised by implementation of unpractised actions that go well beyond our existing plans and resources. This process then continues as observations of the results of the actions build understanding of the new situation as it continues to evolve.

Excellence in coping with crisis emergencies, therefore, means dealing effectively with the specific challenges that novel circumstances generate:

- **Low awareness:** By definition, the novelty of the situation implies that there is less than complete understanding of the circumstances, or even of which circumstances are relevant. Responders do not necessarily know which facts and observations are relevant and, therefore, which to collect;

- **Cognitively-driven decisions:** Given the uncertainties born of novelty and the corresponding lack of available comprehensive routines, decisions cannot reliably be driven by pattern recognition (because, by definition, the patterns are not available). Decision-making must proceed through a standard analytical process, ie the identification of objectives, the development of alternatives, the prediction of likely results from different approaches, and the choice of a best action;

- **Lack of comprehensive scripts:** Scripts developed for routine situations may be applicable, but may prove inadequate in scale, or even counterproductive as a result of conditions not previously encountered in tandem. By definition, there is no ‘playbook’ from which the response can be directed;

- **Extensive customisation:** The existence of significant ‘novelty’ implies that significant customisation or improvisation is likely to be needed. Existing routines may provide useful elements of the response, but may have to be adapted creatively and melded in unusual and unpractised combinations;

- **Incompletely specified skills:** Since new actions may be taken, skills will not have been developed comprehensively for either the design or the execution of the required response. While existing skills will be useful, the need for the relevant skill base for components of what is being invented and improvised cannot reasonably have been foreseen and, in most likelihood, will not be available;

- **Leaders:** These must be adaptive, comfortable sharing authority and responsibility, able to elicit information, ideas, and proposed solutions from her/his team;

- **Muted command presence:** A leadership approach generally oriented to producing effective collaboration, this will seek to facilitate the development of understanding and the design of a new approach through invention and improvisation, followed by a more authority-driven approach during the execution phase;

- **‘Varially flattened’ structure:** An organisational structure well suited to collecting a broad range of information (because, at least in the early phases, it will not necessarily be clear what information is relevant) and to absorbing and processing it and developing a range of alternatives. This initially calls for a ‘flattened’ structure, but in the later phases a more hierarchical structure is probably necessary to execute the chosen approach reasonably efficiently; and

- **Fault-tolerant execution:** Because newly improvised approaches or previously untried combinations of existing routines may be implemented, execution is likely to be much less precise than in routine circumstances, this means that more tolerance of imperfections and errors in execution is called for.

The essence of effective response to novel or crisis emergencies thus also lies in a form of expertise, but in a very different form than the expertise used in routine emergencies. In the face of novelty, no one is a ‘substantive’ expert – no one knows precisely what to do. Response leaders, under stress, have to think their way through – developing understanding of a situation with potentially great and unknown uncertainties, analysing possible courses of action, and then executing untired, untested, and unperfected sequences of actions. Leading people and organisations through such an
intrinsically chaotic experience requires a form of expertise – expertise in adaptive leadership, a very different form of leadership than that used by successful leaders in routine emergencies.

**Sudden vs Emergent Crises**

Many emergency situations occur suddenly and are unavoidably noticeable: a major earthquake, the landfall of a major hurricane, a bomb blast. But some forms of crisis do not arrive suddenly. They tester and grow, arising from more ordinary circumstances that often mask their appearance. We term such situations emergent crises – a special and especially difficult category. When SARS emerged in south China in the winter of 2002–2003, it appeared first as a series of unexplained deaths in a region that has, annually, many unexplained deaths. The famous 1979 nuclear accident at the Three Mile Island power plant in Pennsylvania started as a simple pump failure – out of which spun an escalating series of failures and mistakes until a major crisis was underway. What makes emergent crises problematic?

Often, experts are not adept at recognising that their approach is not working.

First, they arise from normally variable operating conditions, making emerging problems difficult to spot as a break from typical operating and response patterns. There had been previous pump failures at Three Mile Island, and these had always responded to the routine procedures that were applied at the time of the crisis. But two other challenges also arise in recognising emergent crises.

When, and if, the problem is spotted, an individual or group with technical expertise in the issue (as it is understood at the time) is generally assigned to address it. These responders are likely to take ‘ownership’ of the problem and its resolution. Generally, this will work. The situation will be diagnosed correctly, the team chosen because of its capacity to address situations of this type, and the response sized appropriately to address the problem.

But what if the diagnosis is not entirely correct? If the standard approach doesn’t work? If the response is too small or too late? A second major challenge of coping with emerging crisis situations is that the initial responders, if not immediately successful, may either fail to diagnose their inadequacies or resist calling for additional help. Often, experts are not adept at recognising that their approach is not working. They ignore ‘disconfirming evidence’ (ie the flow of data tending to show that what they are doing is not working) and ‘escalate commitment’ to their existing approach. The person or team working on the situation may not only believe that they are about to succeed (with just a little more effort and time), but also feel pressure not to lose face if they fail to handle the assigned situation. Thus, they may resist help. As experts (the reason for their dispatch in the first place), they may have difficulty imagining who else might be better qualified to handle the situation.

The third reason that emergent crises are challenging is that they present crisis managers with all of the challenges of managing true crises, but which now arise in the context of organisations and teams that have already been deployed and are working on the situation in terms of standard practice. In a sudden crisis, obvious to all as a crisis, the response organisations may not be as resistant to engagement with others (senior political officials, for example) because they see immediately that the situation makes extraordinary demands and is not ‘business as usual’. In an emergent crisis, however, the initial responders are less likely to see the novelty and more likely to resent the intrusion of those they may regard as untrained and unneeded.

Table 1 summarises the differences between excellence in routine and crisis emergencies.

**Operating in Two Modes**

On the other hand, confronting novel events is inevitable in a rapidly changing world. An organisation that can only execute against detailed plans or operate in strict hierarchical fashion will not be able to cope with the novel features of a true crisis. Unless it can improvise effectively and operate flexibly, it will be trapped in routines that can prove inadequate or even counterproductive. Response organisations must develop the capability of operating in both modes – and, quite critically, recognising under the pressure of unfolding events when each is appropriate. This is extremely difficult under the best of conditions, and even more so if the need for excellence in both modes of operation is not explicitly confronted.

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