

A command system for all agencies?

The United States is building a national emergency response system to handle large-scale emergencies, write **Arnold M Howitt** and **Herman B 'Dutch' Leonard**. But there are shortcomings that need to be addressed if failure or incomplete adoption are to be avoided

WITH DEVASTATING SWIFTHNESS in late December 2004, the Indian Ocean tsunami demonstrated how emergency management systems could be stretched to breaking point. With no advance warning, emergency responders had to mobilise many forms of disaster aid in highly dispersed places; use personnel and resources from many organisations, effectively integrating them so that help would not be delayed or compromised by poor co-ordination or turf disputes among responders; and sustain responders and emergency aid in the field until local governments were capable of taking over again.

The tsunami affected more people, extended across a wider geographic area, and left impacts that will last far longer than the response system was prepared to handle. This was not simply a result of a severe natural disaster striking developing nations. Other crises that might plausibly hit developed countries potentially share these features – eg an epidemic caused by an emergent infectious disease like SARS or bird flu, catastrophic systems failure at a nuclear plant, or a terrorist attack with weapons of mass destruction.

National system

It is to face such situations that the United States, spurred by the terrorist assaults of September 2001 and the anthrax letter attacks that followed shortly thereafter, is seeking to build a national emergency response system capable of handling novel, large-scale emergencies. The National Incident Management System (NIMS), mandated by the US Congress in the Homeland Security Act of 2002, seeks to diffuse and extend an innovative system of operational co-ordination for emergency responders. President Bush has now directed all federal emergency response agencies



photo: Andrea Booher/FEMA News Photo

to adopt NIMS. States and localities, too, must adopt NIMS as a condition of receiving federal emergency preparedness grants.

NIMS has enormous promise for improving crisis response. Yet successful implementation, which requires collaborative action across the boundaries of professional disciplines, jurisdictions, and levels of government, is by no means assured. Notwithstanding the Congressional mandate, presidential directives to federal agencies, and regulatory requirements and financial incentives for state and local governments, obstacles abound along the path to NIMS implementation. It will take sustained commitment, energy, and skill – by senior emergency response officials at all governmental levels, probably over a decade or more – to

The Incident Management System referred to in this article was initially devised 35 years ago in California to fight wildland fires but has since spread to other states and other emergency professions

make NIMS fully functional. Moreover, there is a major issue of political legitimacy and authority in complex emergency situations that has not yet been adequately addressed.

Requirements

At root, NIMS is a national requirement that emergency response organisations adopt a form of the Incident Command System (ICS) or Incident Management System (IMS). This system was devised to fight wildland fires but has since spread to other states and other emergency professions. IMS is a flexible template for leading crisis operations which, rapidly assembled, enables organisations to frame and rapidly implement response actions under enormous pressure.

IMS has important strengths in organising emergency response. It factors critical emergency tasks, establishing a clear division of labour and assignment of functional responsibility. It unambiguously defines the chain-of-command, provides a manageable span of control for each function, and establishes a resource allocation decision-making structure – critically important to avoid dispute about "who's in charge" and to enable rapid deployment and direction of personnel and equipment. It systematically promotes information flows up, down, and across the organisation – and to the public.

As a result, IMS is highly flexible in response to incident type, scale, and location. It has been applied to wildland and urban fires, industrial explosions, earthquake response, hospital emergency room operations, and hostage scenarios – even to the recovery of debris from the doomed space shuttle Columbia. IMS, moreover, is designed to be boundary spanning. It facilitates co-operation between different response organisations and makes sure that their focus on major matters of substantive and managerial concern does not waver as a result of the disorder and stress of disaster settings.

Challenge of Diffusion

These features help explain why IMS has proven versatile and effective in diverse settings. Looking across professions and jurisdictions in the United States, however, one sees considerable variation in IMS "market penetration." IMS has taken deep root in wildland and urban/structural firefighting, as well as among emergency medical services and disaster management co-ordinators. By contrast, although IMS has been formally adapted for hospital-based emergency responders, it has not been widely adopted in this setting. Law enforcement agencies have often been sceptical or hostile. Moreover, some professional groups likely to be key responders in certain future crises – eg public health infectious disease specialists coping with a bioterror attack or a newly emergent flu strain – have little or no experience with IMS.

Several states have formally required all emergency response agencies to utilise IMS or closely related systems. California has been most successful; but after more than a decade, the roots of IMS are still shallow in some professions. Other states have pressed their IMS mandates less urgently and therefore have had less impact.

Making NIMS a truly national system thus presents multiple challenges. IMS must be promoted in geographic areas where it is novel or not widely used, extended to professions like policing which have previously resisted commitment, and introduced to individual responders who have not been exposed to IMS.

Genuine professional commitment, not just formal adherence, must be earned. It is too easy to attribute reluctance to adopt or use IMS as mere professional conservatism, turf protection, or not-invented-here pique, although elements of each may be manifest in some circumstances. Deeper causes are at work

Support must be mobilised within these areas and professions, resources secured to cover the non-trivial costs of training and exercising at all levels and principles and practices must be drilled down through response agencies to rank-and-file responders.

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What is the question?

One way to think about this problem is to ask, "What is the question to which IMS is the answer?" For wildland and urban/structural firefighters, the answer is clear. Their work regularly requires clarity of command and assignment of responsibility, collaboration among responders and mutual aid providers who may never have worked together before, scalable organisational practices for fires of varying types and sizes, and in-the-moment allocation of scarce personnel and equipment resources. Overall flexibility is critical, but so is a high degree of standardisation. The pieces must fit together when the scale of action changes or, as is often true for wildland fires, the emergency lasts for weeks, requiring regular relief and substitution of key personnel.

For firefighters, IMS was a creative – even necessary – managerial invention that addressed core professional problems. It made good sense to train and exercise all personnel in the system and use it regularly even to respond to small events. IMS became virtually second nature when emergent crises made it essential.

For law enforcement in the US, by contrast, the answer is less certain. Comparing policing to firefighting, one notes that active field co-ordination involving significant numbers of officers occurs much less regularly (though it does occur, for example, in security for large events, hostage takings, and drug busts). Collaboration with mutual aid providers from other jurisdictions is quite rare. Hence, the need for IMS may seem less compelling; and the costs of preparing personnel and the organisation as a whole may seem more burdensome, perhaps unjustified. Similarly, other response professions, particularly public health and hospital-based emergency medicine, may, for varying reasons, find it difficult to identify the key operational questions for which IMS is the answer.

As implementation of NIMS proceeds, therefore, it is important, first, to make a compelling case for need. Professional leaders

in fields like policing and public health must become convinced and persuasively argue to their peers and subordinates that more highly integrated, capable emergency response systems that cut across professional disciplines and jurisdictions are essential. Even if their agencies' daily work does not involve such challenges, in the future they may have to cope with novel, large-scale crises that arrive with the speed and relentlessness of the tsunami. Other future crises – such as a pandemic flu – may begin more gradually but spread rapidly and widely and affect our lives over a sustained period.

Recognising the need for IMS is a necessary but not likely sufficient condition to drive change in those professions that have not already bought into the concept. Many forms of organisational innovation are relatively simple compared to the sort that implementing NIMS involves. Often change can be effected mainly by altering management policies, shifting budget or personnel resources from one unit to another, or creating an independent unit to undertake new functions – strategies that require commitment and action only in some parts of an organisation.

But IMS requires pervasive systems development. Success demands new learning and adaptation of routines by rank-and-file personnel, so it must be established through a comprehensive training and exercising programme. This type of change is time intensive, hence costly in personnel terms; and it may compete with other operational priorities.

Establishing NIMS, moreover, requires more than internal organisational change. Fully realised, NIMS co-ordinates networks of organisations. Some are within a single jurisdiction, but others must be linked across jurisdictions and government levels. Because common executive authority does not hierarchically connect these agencies, organisational co-ordination requires bargaining and mutual adjustment. It will not be created merely because of a national statutory mandate.

Driving Change

It is quite possible that the energy animating the NIMS initiative will dissipate, leaving failure or incomplete adoption. If the NIMS diffusion process is to be successful, proponents will have to devise a multi-layered strategy to make the vision a reality.

At the federal level, where the impetus for creating NIMS originated, officials cannot depend on the efficacy of the regulatory mandate in the Homeland Security Act. It will no doubt prove necessary to provide a federal "carrot" as well as this "stick." In reality, the threat to withhold financial aid from local governments will prove

difficult to impose given likely Congressional pressure. Both the federal government and the states could encourage local jurisdictional commitment by providing financial incentives to defray at least some of the training and exercising costs involved, though current federal budget politics make this problematic; and high quality technical assistance will be essential for localities with limited experience.

Adaptation

Leadership from professional associations and prominent members of emergency management disciplines will also be important. Part of that effort must be devoted to the constructive redesign and adaptation of IMS principles and practices to fit the operating circumstances of professions that have not been among the original participants in the spread of IMS. While constrained by the need for NIMS to operate across agencies and professional disciplines, each professional group must also thoughtfully customise the elements of IMS to fit its own needs. If that does not happen, NIMS will be regarded as an alien intrusion unsuited to the profession's operating environment and tolerated only to the extent that federal pressure requires.

Even if such adaptation is accomplished, NIMS must become embedded in the professional culture of each discipline. That will result only when respected professional leaders see that committed agencies and individuals earn positive recognition and professional status. As steps in that direction, the associations can showcase NIMS 'best practice' at professional meetings and make NIMS a required element in professional training and certification.

At city or agency level, senior officials must endorse the need for NIMS and keep attention focused. Agencies have to develop skilled and confident personnel through ample training and by creating opportunities to apply IMS methods in exercises and actual operations. They can showcase effective applications internally and provide career recognition and rewards to individuals. If NIMS is to become a cross-professional and inter-jurisdictional system genuinely capable of responding in a significant emergency, it will have to construct those relationships methodically in advance. That means making sure that interagency exercises are regularly conducted and that planning and training activities are carried out with adjacent communities and within the region.

Missing Element

Making the NIMS vision operational, however, involves more than a massive implementation campaign. As effective as IMS has been in

handling many types of large-scale crisis responses, it is not a complete tool kit for organising all types of emergency interventions. Even in the field where it was born, IMS exhibits shortcomings under some circumstances; and these problems are likely to loom larger in some kinds of future crises for which NIMS advocates are preparing. These shortcomings need to be diagnosed more carefully, and complementary systems of emergency decision-making must be put in place and co-ordinated with NIMS.

IMS functions best when it is directed at a well defined, reasonably consistent, or clearly prioritised set of purposes. By contrast, where goals are unclear or in conflict – when difficult, controversial trade-offs must be made – IMS lacks the political and moral authority to make the hard choices that present themselves.

Criticism and discord

When a dozen major forest fires menaced southern California in Autumn 2003, the strategy developed by firefighting organisations was subjected to criticism by local, state, and federal elected officials who disagreed with both the professionals and each other about the objectives and technical means of fighting the fires. There was no adequate institutional forum in which the issues could be credibly engaged and resolved. The emergency response nearly faltered because of discord.

But it is precisely for such complex situations that NIMS is designed. If a pandemic flu, bio-terrorist attack, or nuclear plant disaster occurred, do the responders in command of NIMS – police commanders, fire chiefs, or public health directors – have legitimate authority to decide which areas should get resources and which not, perhaps even to make choices that in effect determine who will live and who will die? Do they have the community standing and ability to mobilise public sentiment behind a difficult decision or rally supportive action?

We elect leaders to make such decisions for society and to rally their communities, much as President Bush and New York's Mayor Giuliani did in the 9/11 crisis. But in a future emergency that cuts across organisational, jurisdictional, and level of government boundaries – particularly if government has been partially disabled by the crisis – it may be unclear who has this authority and difficult to assemble them.

So, as NIMS develops as an emergency response system, we must create parallel structures for making critical decisions that the public will regard as legitimate and compelling. The temporary emergency operations structure of NIMS must be paired with institutions that do have ready connections to key stakeholders

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and legitimate decision-making authority. The United States has not yet confronted this need, let alone fully thought it through and invented the emergency policy making institutions it requires. That is a step that must still be taken.

Conclusion

The National Incident Management System that the US Congress has mandated for federal, as well as state and local, emergency response has great promise for improving societal capacity to deal with large-scale, acute crises. But this mandate is not sufficient to assure that such benefits will indeed be achieved. Implementing NIMS requires solving problems of cross-professional and inter-jurisdictional diffusion of IMS practices. That requires committed action by the federal government, by the leaders and professional associations of emergency response disciplines, and by elected and professional leaders in specific communities.

As important as NIMS is to prepare more effectively for major natural and technology disasters or terrorist attacks, another critical element of emergency response has not been given sufficient attention. NIMS is a technical system that can make decisions effectively mainly when its goals in a particular situation are consistent and coherent.

When situations present complex value conflicts or trade-offs, NIMS lacks capacity to make politically legitimate decisions and to mobilise public support for subsequent action. As a result, we need to develop parallel and interconnected emergency decision-making systems that can make publicly acceptable value trade-offs and set policies that will command support. It may be critical but too late to establish such structures in the heat of the moment. CRJ

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