Be Prepared: things my scoutmaster never told me

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Preparedness, a term that originated in the military lexicon and connoted a readiness for war, has become one of the new watchwords of emergency medicine. In this issue of the Journal are two articles dealing with emergency department (ED) preparedness (see pages 12 and 18). These articles are interesting to consider, both for their similarities and for their advocacy of ED preparedness.

Gorman and colleagues[1] observed that essentially no British Columbia hospital pharmacy director self-reported adequate stocking of essential antidotes as recommended in published consensus guidelines. Similar data exist for Ontario[2] and Quebec[3] hospitals, and indeed for every jurisdiction around the globe where such surveys have been performed. Various corrective strategies have been proposed, and occasionally implemented with infrequent success. Invariably, the clear conclusion is that voluntary compliance by the individual hospital is very unlikely to achieve minimum standards of antidote availability.

This is not surprising because preparation for uncommon events is not usually a high priority at the local level. Consider, by way of analogy, the scenario of an individual homeowner being solely responsible for fire department, police or military protection, or for 911 service. If it were legal, perhaps a large proportion of households would opt out of such collective initiatives, in favour of other shorter term and more tangible needs. These services have historically been organized and funded collectively, as one of the benefits of society.

In the same way, centralized directives, perhaps coordinated by provincial poison information centres, will be required to correct deficiencies in antidote stocking in Canadian hospitals. The equally important corollary, however, is that the cost burden be shared centrally or collectively, or such initiatives are likely to fail. The potential benefits of centralization include measures to help ensure appropriate use of expensive antidotes, rotation of soon-to-expire antidotes and facilitation of interhospital transfer of selected patients.

What about preparing for the accidental or intentional release of chemical, biological or radioactive agents? In the other article on the topic in this issue, Kollek[4] describes the findings of a Web-based survey, in which relatively few ED directors self-report recent "live" mock disaster exercises, adequate decontamination areas, or antidotal readiness — despite proximity to hazardous material manufacturing, transportation and storage. Again, the implementation of corrective measures will certainly consume both time and money, and is unlikely to occur unless this burden can coordinated and shared collectively.

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But there is an important contrast between the nature of events these two papers anticipate, which helps to illustrate a concept frequently overlooked under the Boy Scouts' mantra of preparedness. Their difference lies in the shape of the probability density function, which describes the likelihood of a given patient with the relevant exposure presenting at any given hospital during a given time interval. This probability is important as a measure of the overall likelihood of implementation at the local level. It also underlies the operative principle that very rare events, es-

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pecially if clustered, attract disproportionately greater attention than distributed common events. Consider, for example, the high-impact advertisement stating that smoking tobacco kills the equivalent of a fully loaded jumbo jet crashing every day in North America. In fact, the annual number of deaths from acute poisoning in North America exceeds the death toll from the September 11th terrorist events,[5] but poisoning deaths are usually distributed in place and time.

How is this relevant to ED preparedness? It is a sad irony of the current health care environment that many Canadian EDs are unprepared to deal with the next ambulance due to overcrowding, let alone the victims of a nerve gas attack. If "disaster" is defined as "demand overwhelming available resources," we have such disasters occurring every day across the country.

Every day, thousands of Canadians — from infants with fever to elderly with chest pain — present to EDs and cannot be seen by a physician within the recommended CTAS time frames. Every week, individual patients with serious digoxin, methanol or isoniazid poisoning present to an ED that does not have adequate quantities of the life-saving antidote readily available. And perhaps every year, during a multi-casualty incident, a select number of individuals sustain catastrophic but treatable injuries, but timely identification and intervention are compromised by an overwhelmed and underprepared system. The question of relative importance is not easy to answer, but the answers we chose must reflect our priorities as a society.

Preparedness is about more than a stockpile of atropine, or qualifying for another merit badge. To be "emergency responsive," a system requires some slack or redundancy. The shift of inpatient care from the ward to the ED has jeopardized the open-door availability of the ED, the access portal for acutely ill or injured patients. This shift will also compromise its ability to plan for and to deal with unexpected serious poisonings and injuries.

The recent emphasis on issues of preparedness offers an opportunity to scrutinize many aspects of the emergency response network. The emergency medicine community has an obligation to ensure that this scrutiny also encompasses the greater issue of capacity and availability of the front-line EDs to deal with individual patients with common conditions, as well as clusters of patients with rare disorders.

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