# Development of pharmacy emergency management guidelines

**Wendy Walker, Vice-President of the Military and Emergency Pharmacy Section of the International Pharmaceutical Federation, outlines what that organisation is doing to create and share standardised emergency management guides.**


## ABSTRACT

**There is little doubt that the list of disasters the world has witnessed in the last decade have resulted in high cost damages and great human suffering. While many organisations have responded to the nations and areas affected by disasters, from a pharmacy perspective, there seem to be very few, if any, procedures, plans or guidelines to refer to or follow. Those few documents that do exist are not standardised, nor widely disseminated. This article describes what the Military and Emergency Pharmacy Section (MEPS) of the International Pharmaceutical Federation (FIP) is doing to address the situation.**


## Background

There are many definitions for both terms emergency and disaster. Wikipedia, the free encyclopaedia offers the following definitions:

- Emergency – a situation that imposes an immediate risk to health, life, property or environment. Most emergencies require urgent intervention to prevent a worsening of the situation, although in some situations, mitigation may not be possible and agencies may only be able to offer palliative care for the aftermath.[1]
- Disaster – a natural or man-made (or technological) hazard resulting in an event of substantial extent causing physical damage or destruction, loss of life, or drastic change to the environment. A disaster can be ostensively defined as any tragic event stemming from events such as earthquakes, floods, catastrophic accidents, fires, or explosions. It is a phenomenon that can cause damage to life and property and destroy the economic, social and cultural life of people.[2]

1 Wikipedia, The Free Encyclopedia. At: http://en.wikipedia.org/wiki/Emergency, [28 October 13].

2 Wikipedia, The Free Encyclopedia. At: http://en.wikipedia.org/wiki/Disaster, [28 October 13].

The United Nations definition of a disaster combines the above two: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.[3]

Therefore, by extrapolation, when a disaster occurs, an emergency ensues. Assistance will be required from external agencies and will invariably involve pharmacy support. As this external support may take time to be readily available, the immediate response must be provided by local agencies. However, without a robust disaster response plan detailing the emergency management guidelines, an effective and rapid pharmacy response may not be feasible.

## Introduction

The International Pharmaceutical Federation (FIP) recommends the inclusion of the pharmacy profession in the disaster response planning process and the actual response (FIP Statement 2006), in order to maximize the effectiveness of not only the pharmacy response, but also the overall health plan and response to emergency situations. By having members of the pharmacy profession on the planning and response teams, victims of disasters will be ensured continued access to pharmaceutical care.

Additionally, pharmacist expertise can be sought in:

- developing casualty treatment guidelines
- suggesting medicines and other health care items for inclusion in national, regional and local stockpiles
- ensuring proper logistics (packaging, storage, handling, labelling) and dispensing of emergency supplies of medicines, and
- ensuring appropriate deployment of emergency medicines.

Pharmacists may also be employed as first responders, in triage, immunisation and administration of medicines. As each phase of a disaster response

3 United Nations Terminology. At: www.unisdr.org/we/inform/terminology, [28 October 2013].

requires different supplies and skills, the pharmacist can advise on the best treatment of various injuries and illnesses given the available medicines. For example, in the *response* phase, trauma and lacerations may be prevalent, whereas in the *recovery* phase, there is more emphasis on infections, communicable diseases and the more chronic physical and psycho-psychiatric conditions. Pharmacists are well placed to provide immunisations required and can educate responders and the disaster-affected personnel on both detection and prevention of diseases.

As the name suggests, the Military and Emergency Pharmacy Section (MEPS) of FIP consists of military pharmacists (uniformed and civilian) from across the globe working side-by-side with emergency pharmacists from civilian organisations. Due to the nature of MEPS membership and the first-hand experience and knowledge contained within, the Section can provide input to disaster management planning from a pharmacy perspective.

## Pharmacy Emergency Management Guidelines

Various MEPS members have participated in many congresses, seminars and workshops for emergency response from a pharmacy perspective in places like Hyderabad, India in September 2011, Kobe, Japan in October 2011, Chongqing, China in September 2012, Amsterdam, The Netherlands in October 2012, and Dublin, Ireland in 2013. The congresses and seminars presented the lessons learned from a variety of disasters and the workshops were held to progress the development of Pharmacy Emergency Management Guidelines (PEMGs) using those lessons learned.

A discussion document was submitted in February 2103 by MEPS to the FIP Bureau suggesting a Working Group with a wider membership be established by the Federation to further develop the Guidelines. The Board of Pharmaceutical Practice of the FIP agreed, and two MEPS members (the current Secretary and a past-President) have been elected to the Board of the Working Group which was created in September 2013.

Any good plan will have at least four phases. The plan being developed by MEPS for the wider pharmacy community has four phases. There are:

1. Reduction or risk mitigation - potential risks are identified and actions are taken to eliminate or reduce the impact.
2. Readiness or preparedness - operational systems and capabilities are developed and exercised prior to and in preparation for a disaster and emergency response.
3. Response – the action taken prior to (if there is a warning, e.g. Tsunami), during and after the disaster.
4. Recovery - the co-ordinated efforts and processes to establish immediate, intermediate and long-term regeneration of a disaster-struck area.

These phases meet those already in practice for most emergency response organisations. From a pharmacy perspective, the Reduction/Risk Mitigation phase should come first and possibly last, as there is access to a vast number of lessons learned from previous disasters. The Plan must be flexible enough to adapt to the national, regional, local and individual levels of input and assistance requirements.


Pharmacy Emergency Management Guidelines workshop in Chongqing, China Sep 12. L-R: Commander Sylvain Grenier (Canada), Special Projects Officer MEPS; Lieutenant Colonel Wendy Walker, Vice-President MEPS; Mrs Danica Irwin (Canada), invited guest; Colonel Chen Zheng-yu (China), President MEPS; Mrs Jane Dawson (New Zealand), Secretary MEPS.


Military and emergency pharmacists in FIP attendance in Dublin, Ireland 2013.

## Considerations

Seven main themes have been identified out of the international fora that should be considered when developing the Guidelines. These considerations include:

- medicines
- pharmacy law
- patient information
- communication
- human resources
- transportation, and
- plans/planning.

These themes are accompanied by various issues and challenges identified by MEPS members when responding to disaster and emergency situations.

### Medicines

The major issue identified under this theme was shortage. That is, with the destruction of infrastructure (manufacturer, wholesaler, retailer, and private and commercial accommodation) comes the loss, and therefore, the scarcity of medicines. There are more acute health requirements associated with emergency response and if combined with the lack of supply, there is an increasing need for outside assistance. Donations are always done with the best of intentions; however they are not always appropriate for each circumstance. One possible solution would be to stockpile certain medicines associated with disaster and emergency response. These stockpiles could be located strategically to ensure minimal downtime and disruption.

### Pharmacy law

Another consideration is the legal requirements for the conduct of pharmacy business. For example, the local pharmacy may have been destroyed and was the only licensed dispensing premises. How is this overcome and how can a pharmacist legally conduct business at another site; it may even be a tent? Additionally, more thought needs to be given to pharmacist prescribing (limited supply only) using known patient history and a patient's own knowledge of their medicines. This will reduce the number of patients required to visit a doctor and will allow doctors to treat more acute and urgent cases.

### Patient information

This is not just information about the patients who have visited the pharmacy, that is, the dispensing records and histories, but also includes information that pharmacists can offer to patients affected by the disaster. Based on extensive experience of many MEPS members, this is a major area of concern and one in which pharmacy and pharmacists can make a significant contribution. During both the *reduction* and *readiness* phases, planners must consider details of how to manage a patient's expectations of medicine supply. That is, what if their usual brand of medicine is unavailable? How do you counsel the patient on change?

Another aspect of patient information is that many patients assume the local pharmacy or medical centre or hospital will have records of their medicines—both current and past—and very few patients will keep their own records. However, in a disaster situation, these records may be inaccessible, lost or unusable and emergency supply of medicines to patients cannot be affected. Add this scenario to the tourist who is effected by the disaster. How do they communicate their requirements when all they have left is their wallet or handbag, the rest has been destroyed or

washed out to sea? MEPS is in the very early stages of trying to develop a 'medicines passport' type booklet which can be either downloaded from the Internet, or obtained from their local pharmacy, and can be used as a personal medicines record. The booklet should be packed with other important documentation and items (e.g. passport, bankcards, laptop, etc) and packed for evacuation if the need arises. Travellers can also use the booklet to increase the likelihood of receiving the correct medicine in an emergency.

### Communication

The lack of communication mediums results in an uncoordinated and disjointed effort in response. As so often happens in a disaster situation, landline communications are disrupted or destroyed and mobile phone access becomes congested. The need to communicate with other health care providers is added to the need to communicate with the relief and aid teams. Language barriers with tourists and indigenous populations are also an issue faced during disaster and emergency responses. Employment of pictograms in these situations will assist with communication. Of course, with power restrictions, forethought must be given to producing hard copies of communication products to be included in the pharmacy emergency kit.

### Human resources

Without adequate human resources an appropriate response cannot be delivered. When a disaster occurs locally, everyone located in or nearby that locale is affected and the human resources required to mount a response are limited. External assistance is required.

When resources are available, they must be appropriately and adequately trained, not only to provide disaster relief assistance, but also proper pharmaceutical care. Often, business people (pharmacists) who are affected are in shock and disbelief themselves and are unable to communicate their relief requirements. Having someone with disaster relief experience assist with the provision of adequate and appropriate personnel is an advantage. Without assistance, pharmacists in disaster-affected areas may not realise they are providing below optimal care and may burn out very quickly.

### Transportation

This topic is not limited to pharmacy emergency management, however it must be considered when planning for disasters and emergencies from a pharmacy perspective. With local stock destroyed, how can it be replaced? What priority is given to pharmaceutical supplies? In recent disaster responses, distribution of medical supplies, including pharmaceuticals to treat acute illnesses and injuries, has been given top priority. That needs to be backed-up with priority regular supply of routine pharmaceuticals and other health care products. Care should be taken when requesting supply that it can be received and receipted in a timely manner. Having stock sitting beside an airfield for days in inclement weather defeats the purpose.

### Plans and planning

Having a plan would assist in providing an organised and structured response. Standard Operating Procedures can be developed from the plan, which should include the requirement for an essential medicines list. This would, in turn, alleviate some of the issues associated with many of the above-mentioned considerations.

## Conclusion

Given the perceived increasing number of disasters occurring around the world, it is far better to be even a little prepared to respond in an effective and efficient manner, than to be totally unprepared. Potential risks should be identified and mitigated as soon as, and as best as, possible. Development and dissemination of the FIP Pharmacy Emergency Management Guidelines helps ensure efficiency and effectiveness both in responding to and recovering from disasters and subsequent emergencies. It will also enable emergency response organisations around the world to reduce time and resources by not having to 're-invent the wheel'.

## References

International Pharmaceutical Federation 2006, *The Role of The Pharmacist in Crisis Management: Including Manmade and Natural Disasters and Pandemics. Amsterdam, North Holland: FIP Press. At: www.fip.org/programmes_projects?page=statements.*

### About the author

**Wendy Walker** graduated from the University of Queensland in 1991 as an undergraduate Lieutenant in the Australian Army. After 23 years in the Australian Regular Army, she retired as a Lieutenant Colonel Australian Army Pharmacist in December 2012. Wendy served in Bougainville and the Solomon Islands and has run the Australian Defence Force national logistics unit for medical, dental and veterinary stores in Sydney on two different occasions. She is currently the Vice-President of the Military and Emergency Pharmacy Section of the International Pharmaceutical Federation.

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