

Full-scale simulation in hospital pharmacies to improve disaster preparedness

Laurence Schumacher^{1,2}, Salim Senhaji³, Birgit Andrea Gartner⁴, Laurent Carrez⁵, Arnaud Dupuis^{6,7}, Pascal Bonnabry^{1,3}, Nicolas Widmer^{1,2}

¹Specialised Center for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, Geneva, Switzerland; ²Pharmacy of Eastern Vaud Hospitals, Rennaz, Switzerland; ³Pharmacy, Geneva University Hospitals, Geneva, Switzerland; ⁴Division of Emergency Medicine, Geneva University Hospitals, Geneva, Switzerland; ⁵Service of Pharmacy, Lausanne University Hospital, Lausanne, Switzerland; ⁶Division of Surgery, Geneva University Hospitals, Geneva, Switzerland; ⁷Specialised Centre for War and Disaster Surgery, Geneva University Hospitals, Geneva, Switzerland.





BACKGROUND



PHYSICIANS, NURSES, PARAMEDICS

- Most studies focus on professions such as doctors, nurses and paramedics
- Resuscitation, emergency, disaster, etc.

PHARMACISTS

 Lack of data on the impact of preparation in the pharmaceutical professions.





OBJECTIVES







METHOD – BASED ON



Haute Autorité de Santé. Évaluation et amélioration des pratiques: Guide de bonnes pratiques en matière de simulation en santé 2012; World Health Organization Regional Office for Europe. Hospital and Health Facility Emergency Exercises: Guidance Materials 2010







METHOD – STUDY PROGRESS

4 hospitals included = 8 simulations









$\mathsf{METHOD}-\mathsf{S}\mathsf{CENARIOS}$







METHOD – EVALUATION

Structured evaluation grid for counting the expected actions (**done / not done**) and to judge their quality with a with scale from **1 to 5**.

	Expected Results		Real Results				
Details			Appreciations	Sector	Comments		
Time : 1 :15 p.m. Situation : Exercise Introduction Role : Hospital management, calm Public : Head of Pharmacy Type of communication : By telephone 31074 Message : <u>As for the exercise</u> : The crisis staff is triggered following the activation of a pre- HOCA catamaran following the disappearance of a group of young people on the riverbank and the risk of significant internal damage due to bad weather. Be prepared to deal with an increased number of requests related to medication as well as possible internal damage.	□ Yes □ No	The leaders must take command	1 2 3 4 5 1= Unsatisfactory 3= Good 5=Excellent	Direction	Time :		
	□ Yes □ No	Informs the team	12345	Direction	Time :		
	□ Yes □ No	Use structured communication	12345	Direction			
	□ Yes □ No	Presence of a disaster plan (SOP)	1 2 3 4 5	Direction			
	□ Yes □ No	Consultation of SOP (papier/computer)	1 2 3 4 5	Direction	Time:		







RESULTS – RUNNING











 (\mathbf{P})











RESULTS – EXAMPLES OF DASHBOARDS





Hôpitaux Universitaires



RESULTS – COMPARISONS

	Hospital A		Hospital B		Hospital C		Hospital D		Averages		
	Ex 1	Ex 2	Ex 1	Ex 2	p _{value}						
Rate of action performed [%]	62	75	66	83	76	91	71	85	69	84	<0.001
Global quality of all actions	2.9	3.5	2.7	3.6	3.3	3.7	3.3	3.7	3.0	3.6	<0.001
Quality of actions performed	4.0	4.3	3.6	4.1	4.0	4.1	4.0	4.1	3.9	4.1	<0.001
Time to gather command group [min]	50	5	No	5	15	5	5	5			
SOP	No	Yes	No	Yes	No	Yes	Yes	Yes			



ISPS0







RESULTS – MAIN LESSONS LEARNT

CHALLENGES

Communication :

- → Structure transmission (reformulation)
- → Setting-up of a management rhythm

IMPROVEMENTS

Full-scale simulation resulted in the creation of a disaster plan in every pharmacy that did not have one

→ Improvement of crisis management





TAKE HOME MESSAGE



Contact : info@disaster-pharmacy.ch http://www.disaster-pharmacy.ch/



