

LA FORMAZIONE IN MEDICINA DEI DISASTRI

Pier Luigi Ingrassia, MD, PhD



ORGANIZZAZIONE AD ALTA AFFIDABILITA'

Organizzazioni che, oltre ad obiettivi e requisiti di efficacia, efficienza e qualità, perseguono anche quello dell'affidabilità, intesa come la **capacità** di un'organizzazione **di operare in contesti rischiosi** minimizzando la possibilità di commettere errori ed incidenti

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DISASTRI e MAXIEMERGENZE

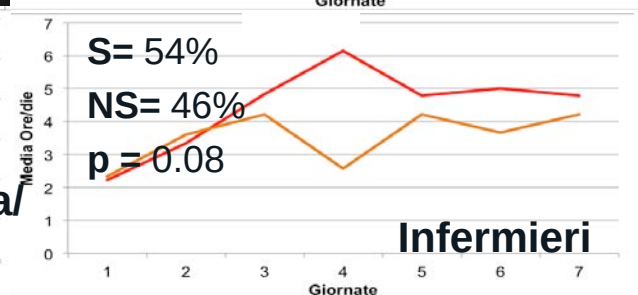
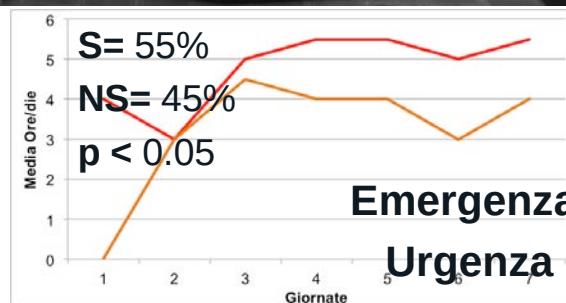
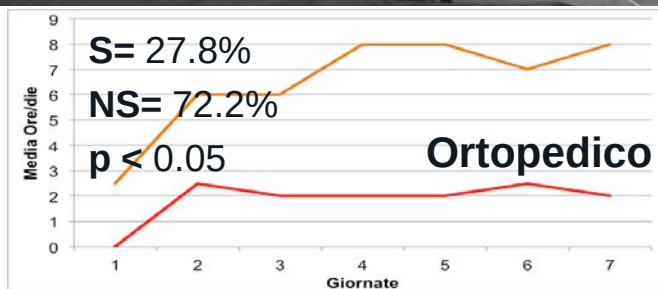
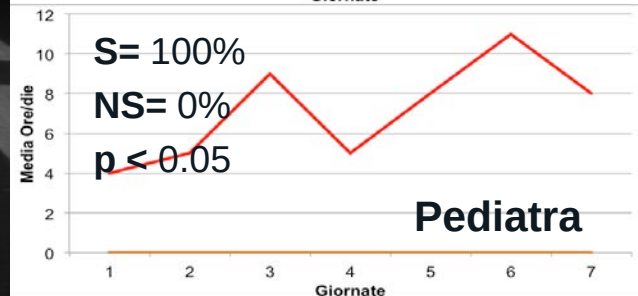
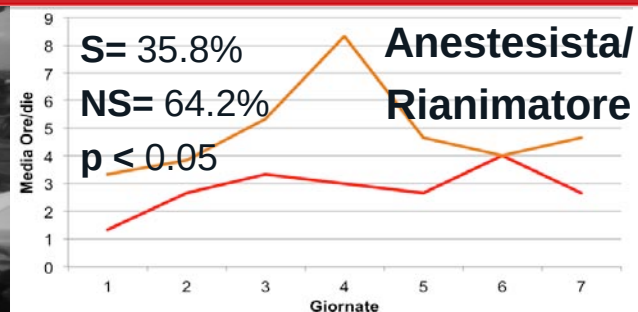
- ✓ Eventi che richiedono personale altamente qualificato che abbia non solo **competenze** cliniche ma anche **non-cliniche**, come tattica e strategia.
- ✓ La formazione svolge chiaramente un ruolo fondamentale nello sviluppare **competenze** spesso **diverse** dalla normale pratica quotidiana



Grant, J. Measurement of learning outcomes in continuing professional development.
The Journal of Continuing Education in Health Professions, 19: 214 – 21, 1999



Carico di lavoro degli operatori nella risposta sanitaria ad un disastro: «il tifone Haiyan, Filippine»



Identifying Deficiencies in National and Foreign Medical Team Responses Through Expert Opinion Surveys: Implications for Education and Training

Ahmadreza Djalali, MD, PhD;¹ Pier Luigi Ingrassia, MD, PhD;¹ Francesco Della Corte, MD;¹ Marco Foletti, MD;¹ Alba Ripoll Gallardo, MD;¹ Luca Ragazzoni, MD;¹ Kubilay Kaptan, MSc;² Olivera Lupescu, MD, PhD;³ Chris Arculeo;⁴ Gotz von Arnim, Dipl.Ing;⁵ Tom Friedl;⁵ Michael Ashkenazi, MPhil, PhD;⁶ Deike Heselmann, MA;⁷ Boris Hreckovski, MD;⁸ Amir Khorram-Manesh, MD, PhD;⁹ Radko Komadina, MD, PhD;¹⁰ Kostanze Lechner, Dipl., PhD;¹¹ Cristina Patru, MD, PhD;¹² Frederick M. Burkle Jr., MD, MPH, DTM;¹³ Philipp Fisher, MD⁷
on behalf of Scientific Committee of DITAC Project

Training and Education

The participants confirmed that the most important element of disaster preparedness is training and education. In fact, training is the cornerstone of an effective response to disasters. However, experts assert most disaster management training programs are not effective because:

- Disaster training programs are not comprehensive and competency-based.
- The quality and quantity of training programs are insufficient.
- There is neither a worldwide strategy nor standardized curricula for training on disaster management.
- There are no standardized criteria on how to select the trainees for disaster training courses.
- There are a limited number of professional trainers for disaster management.
- Budget limitation is often a serious challenge. There is seldom sufficient budget to build a well-organized training package in disaster management.
- One result of the lack of standardized training programs is that more lives may be lost inadvertently during or after disasters. Responders, who are usually not well trained, attempt to do their best during disasters, but more damage may result from their unskilled rescue attempts.
- It is necessary to develop a competency-based training curriculum. The quality of training programs and their impact on field operations needs evaluation, which will result in updating and providing a high-quality training program.

Core competencies in disaster management and humanitarian assistance: a systematic review.*

Alba Ripoll Gallardo, MD; Ahmadreza Djalali, MD, PhD; et al.

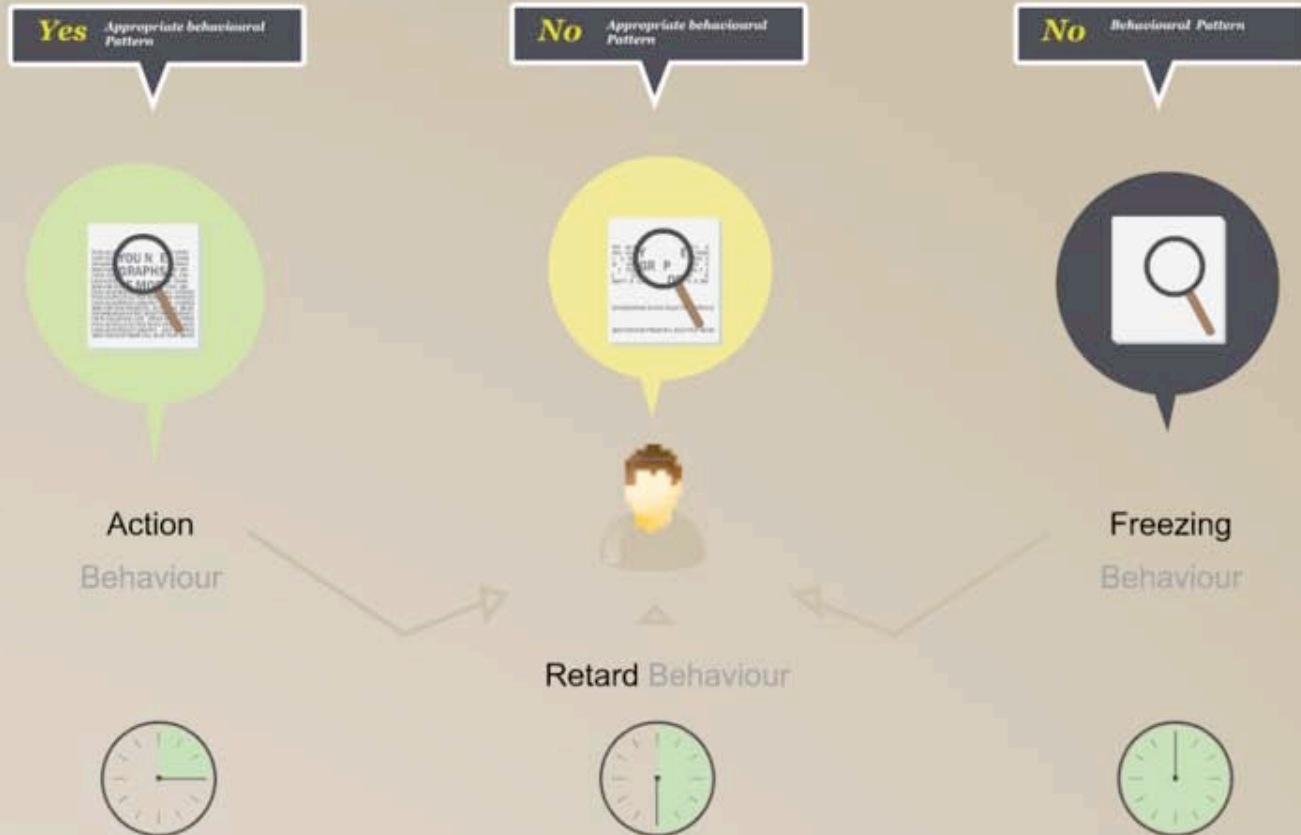
- ❖ a lack of agreement on the terminology used for competency-based definition and phrasing
- ❖ most targeted discipline was nursing
- ❖ main method adopted for competency development was consensus building

**Under review at Disaster Med Public Health Preparedness*

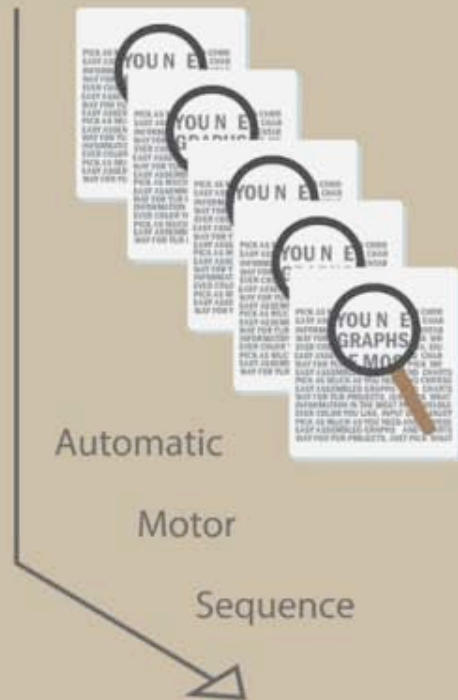
I disastri sono situazioni **complicate** e **stressanti**, caratterizzati da una sostanziale **incertezza**, dalla **compressione del tempo** e dalla necessità di cure qualificate.



Automatic Action



Simulation



Immediate Automatic
Reaction



Decision Making
Recognition primed



<http://www.youtube.com/watch?v=imDFSnklB0k>

Simulazione

Un **ambiente realistico** i cui gli studenti compiono dei **compiti significativi** e sperimentano **conseguenze appropriate** come risposta al loro comportamento.

Immersività



Table- top exercise

Cognitive Theory of Multimedia Learning (Mayer)

- + active information processing
- cognitive load
- information
- stress



Virtual Reality Simulation



Virtual reality training software



Live scenario

Role Playing

- active information processing
- + cognitive load
- information
- + stress

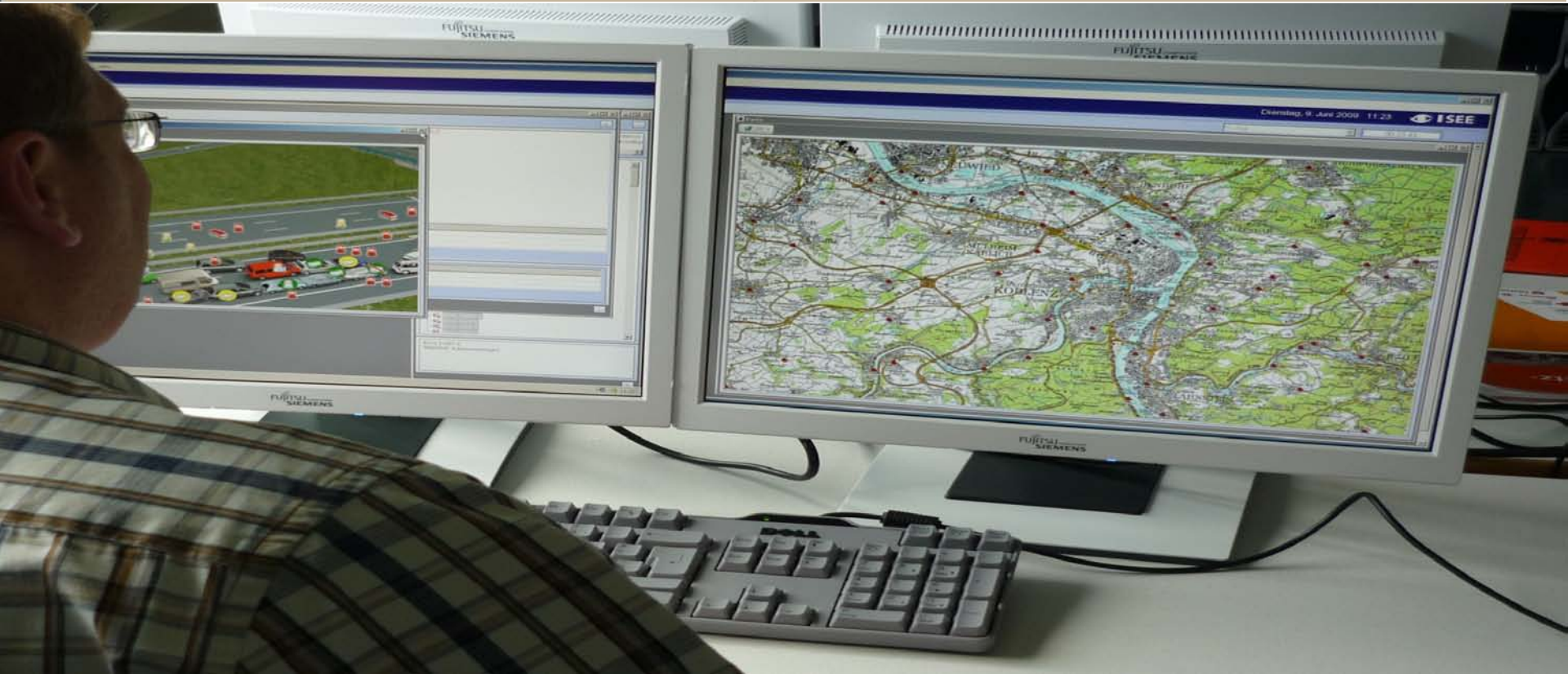


Immersività

-

+

Table- top exercise



EMERGO TRAIN SYSTEM



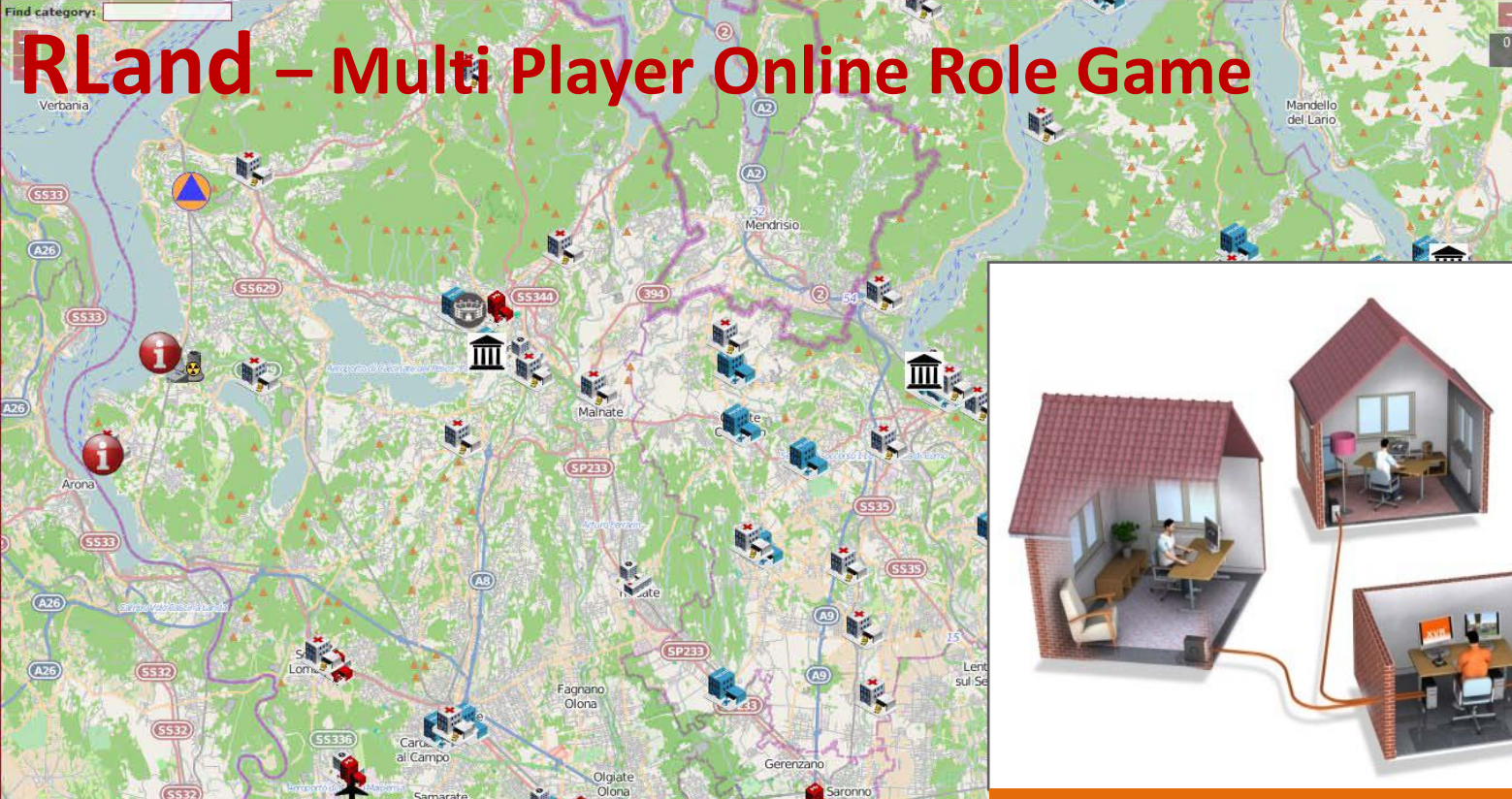
MAC SIM



ISEE



Rland – Multi Player Online Role Game



TIMEFRAMES EDITOR		
▼ Teacher		
Search:		
Category ^	Subcat. v	
☐ Coordinamento Provinciale	none	
☐ Airport	none	
☐ EMS	none	



Immersività

+

Virtual Reality Simulation







Simulazioni IBRIDE



Immersività

+

Live scenario



XVR
Crisis Media

Demo scenario

- Gemeente Nieuwrecht prikbord
- Newshire County Messageboard
- Quacker.com
- Kwaker.nl
- NewsBit.nl
- Telegram
- Spitsnieuws.nl
- NewsBit.com

Recente berichten

Er zijn op dit moment geen recent geplaatste berichten.

quacker

Name:
 Message:

Home Profile Messages Recommend

Esmé Pagman
@Quacker.com
Two trains just collided with eachother. #Easelfield

Timeline @Mentions Reuquacks Searches Lists

StephanyR
2 trains just collided!

Pinkelrinkel
The railway corporation is seriously off track ;) #Easelfield

LaAnderson
@Moningka: I'm in a stopped rain right now. Was the at overpass?

MarkyMark
#Dangerous stuff here. The cargo train looks like it is it should be carrying some kind of gas! Fear for the w Expecting ,major boom here...

HOME NIEUWS LIFESTYLE FINANCIËL UW MENING MODEL

BINNENLAND BUITENLAND SPORT PRIVÉ SHEL NIEUWS VIDEO

De Telegram

Video's

- Weer eekhoorns gezien in Assen...
- Apen weer ontsnapt in Apenheul...
- Zeehond ontmoet Rottweiler
- Onderzoek op scholen uitgelekt...

RSS Nieuw bericht maken Bericht bewerken

Ongeval op A15 ter hoogte van in

Er is ont de Exxon aan en ver do ind

Sportbode

- Curling komt in Nederland in opkomst...
- Wat weegt een echte tennisbal?
- Het gaat er om spannen van het weekend...
- De echte achtergrond info van de Tour de France!
- Van ijs hockey tot kunstschaatzen

RSS Bericht bewerken

Enorme rookontwikkeling Exxon B

In de Botlek woedt een grote brand in een chemisch bedrijf. Het is niet bekend of er gewonden zijn. In de rookwolk, die rijst Spijkenisse tekt, zitten giftige stoffen. Om wat

Newshire County

Home Proclaimersitemap

Environment Schools & learning Registrations Social care Messageboard Libraries

Search

Name:
 Message:

140 Submit

ghormwb
@Newshire County Messageboard
press conference @ghormwb Pressconf # Breda in first phase 140 people came forward with health complaints

Today Last week Last month Ever

Sneppie
Huge Fire @Newshire. Already grip 2! #Newshire #fire

Danny128
And one minute later another station has been alarmed. This is going very wrong, very quickly! #fire #Newshire

kwestbrabant
P200014:33:56 PRIO 1 6161 VLASWEG 4 NEWSHIRE BINBR INDUSTRIE (INC: 04) (Grip: 2) (Classification: extremely big fire)

cappuccino00
mrLion@TjnJuLI is that one of those that can go boom and take half of Newshire with it or something??

Contact

- Newshire County
- Shire Hall
- Newshire
- VRIS 20V5
- info@newshire.com

Follow us

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Business & Finance

Infrastructure

Events

Map

Simulation of online news and social media

In de huid krulpen van... is aangewezen als rampenzender. De brand woedt in het bedrijf Exxon Mobil, waar chemische producten worden



Catena di Comando



Movimenti



Trattamenti



Webcam



Triage



Google Glass™



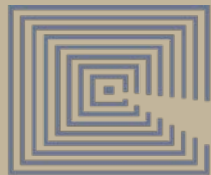
Lab e Radiologia



Droni



Crisis Resource Management



DSS

DISASTER SIMULATION SUITE

Esperienza



Debriefing

"Pratica sociale durante la quale le persone interagiscono fra di loro...riflettendo sulla comune esperienza fatta in un determinato scenario"

Medical Teacher 2009

Apprendimento

"...non efficace e perfino non etico...condurre una simulazione senza il debriefing"
Kritz, Simulation and Gaming, 2010

"...l'esposizione alla simulazione di crisi senza il debriefing sembra offrire scarso beneficio agli studenti"
Savoldelli et al, Anesthesiology, 2006

"Studi hanno dimostrato...in assenza di un feedback strutturato l'apprendimento non si realizza."
Heuleloem et al, Simulation in Healthcare, 2010

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La Formazione in Europa?

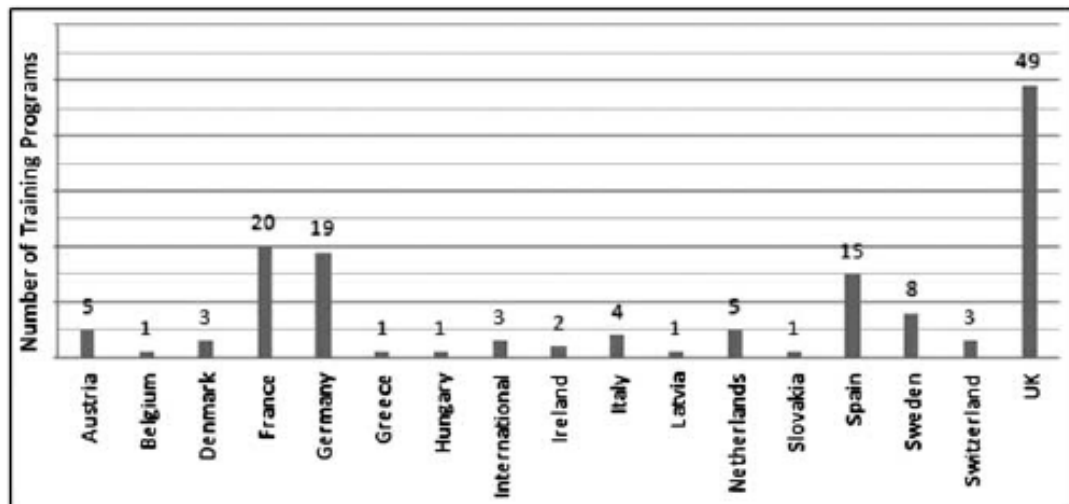


Education and Training Initiatives for Crisis Management in the European Union: A Web-based Analysis of Available Programs

Pier Luigi Ingrassia, MD, PhD;¹ Marco Foletti, MD;¹ Ahmadsreza Djalali, MD, PhD;¹ Piercarlo Scarone, MD;¹ Luca Ragazzoni, MD;¹ Francesco Della Corte, MD;¹ Kubilay Kaptan, PhD;² Olivera Lupescu, MD, PhD;³ Chris Arculeo;⁴ Gotz von Arnim, Dipl.-Ing;⁵ Tom Friedl;⁵ Michael Ashkenazi, MPhil, PhD;⁶ Deike Heselmann, MA;⁷ Boris Hreckovski, MD;⁸ Amir Khorram-Manesh, MD, PhD;⁹ Radko Komadina, MD, PhD;¹⁰ Kostanze Lechner, Dipl., PhD;¹¹ Cristina Patru, MD, PhD;¹² Frederick M. Burkle, Jr., MD, MPH, DTM;¹³ Philipp Fisher, MD⁷

Education and Training Management in the European Union A Web-based Analysis

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Figure 1. Geographical Distribution of Training Programs Distribution of identified educational and training programs in the European Union member states in 2012. One initiative is delivered by two academic centers from two countries (Italy and Belgium) *International* refers to international programs delivered by NATO.

Education and Management in A Web-based

Pier Luigi Ingrassia, MD, PhD;
 Scarone, MD;¹ Luca Ragazzo
 Olivera Lupescu, MD, PhD;³
 Michael Ashkenazi, MPhil, PhD;
 Khorram-Manesh, MD, PhD;
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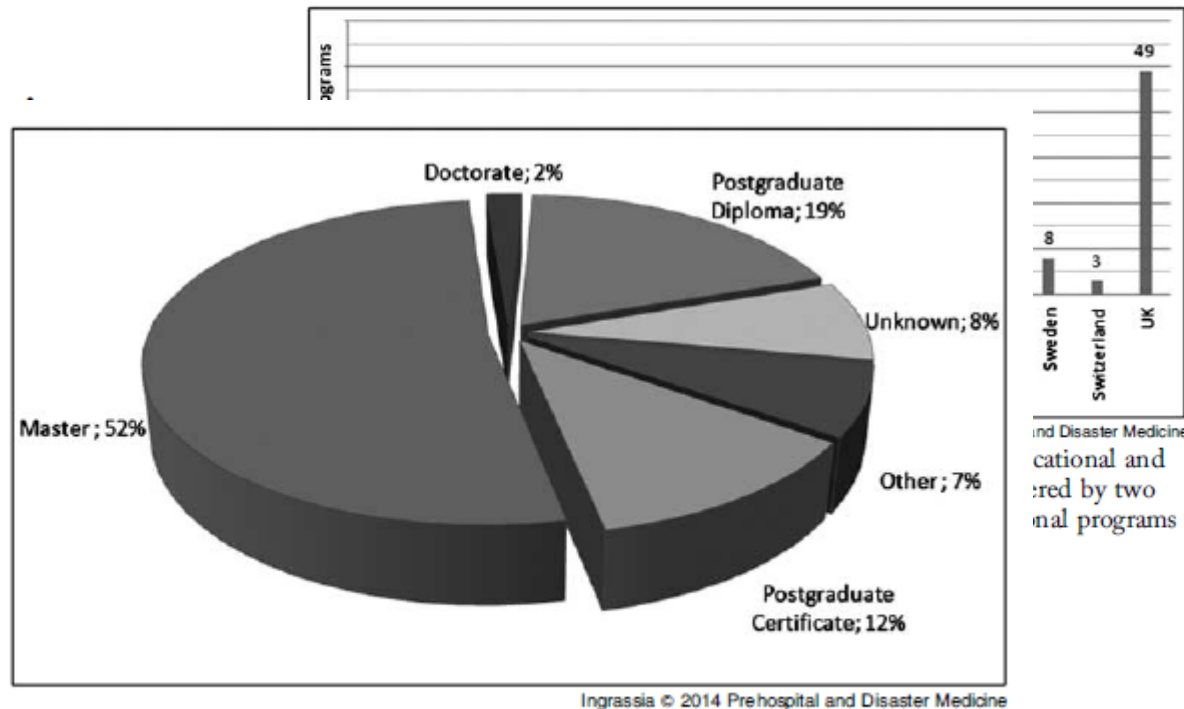


Figure 2. Types of the Certification Granted by the Identified Education and Training Initiatives

Education and Management in A Web-based

Pier I
Scaro
Olive
Mich
Khor
Cristi

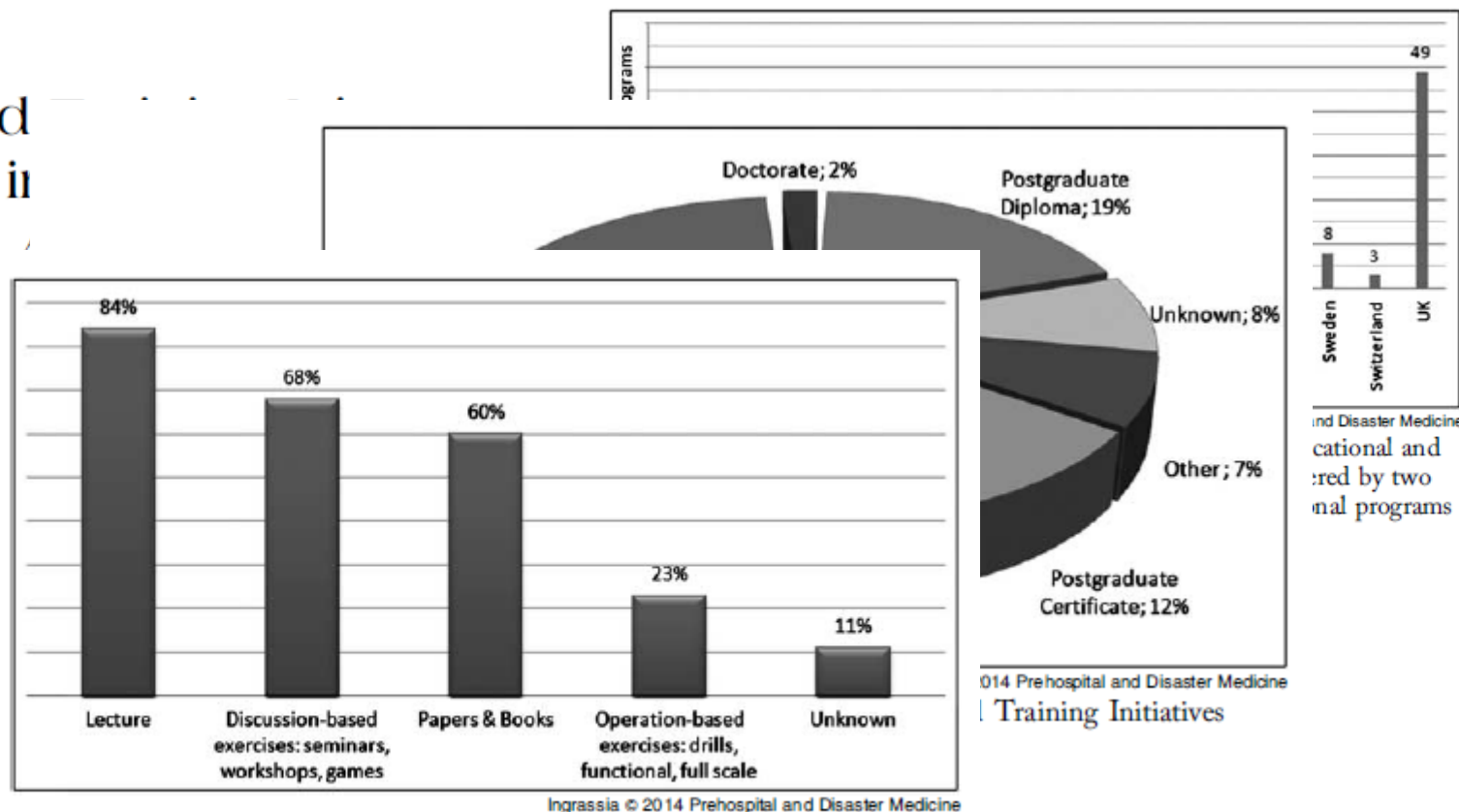


Figure 3. Teaching Methods Used in the EU Education and Training Initiatives



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UNIVERSITÀ DEL PIEMONTE ORIENTALE

CENTRO DI RICERCA IN MEDICINA
D'EMERGENZA E DEI DISASTRI

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