NMFRDisaster

identifying the Needs of Medical First Responders in Disasters

Human impact of disasters

Training methodology and technology

BACKGROUND PAPER

Sinergie S.r.l.

SEVENTH FRAMEWORK PROGRAMME

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NMFRDisaster

identifying the Needs of Medical First Responders in Disasters

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- Ambulance Zorg Nederland (NETHERLANDS)
- Charles University (CZECH REPUBLIC)
- Danish Red Cross (DENMARK)
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Background

The main objective of this project is to understand what kind of human impact disasters can have on medical first responders (MFRs) involved in rescue operations. Identifying the needs of first responders subsequently means concentrating on the effort of determining the best practices to help rescuers cope with problems and necessities they face – i.e., their education & training.

On one side, academic research and publications and research institutes' works and projects need to be studied. On the other side, existing education programs and training practices used by organizations will have to be discussed, trying to find out what the best practices now available are and what potential improvements could be made and/or what future options are being outlined - possibly taking advantage of developments in research, too. This last point is particularly important, because one of the focuses of this project actually is coordination and sharing of knowledge between first responders and research institutes.

The first step is to have an overview on some of the research already carried out on this topic. Starting from here, go on and determine a series of key issues and possible knowledge and practice gaps to be dicussed during workshops where rescuers and experts will meet and share their views and experiences.
The idea is to initially concentrate on rescuers' needs from the human point of view, and then consider education and training matters as well. However, these two topics overlap constantly, so making a strict distinction is very difficult and not always possible or even desirable.

"A Little Warning"

In this projects, *Medical First Responders* are considered as "trained personnel (with different levels of training from basic to the advance level e.g. e.g. Police, Fire Fighters, Emergency Medical Service, Military, Red Cross, etc), who belong on a long term basis to an organization (excluding from the scope of this project spontaneous volunteers and bystanders)." *Emergency situation* or *disaster* are defined as "a

sudden interruption of daily activities (of the private person, society or organization) requiring medical assistance (including psychosocial assistance)."

However, these definitions need to be adopted with a certain amount of caution, because there's no worldwide accepted standard for terms and definitions. In fact, there isn't always an agreement on a national level either – e.g., differences between US states.

The report has taken into consideration existing literature, reflections and experiences at a worldwide level, paying particular attention to researches related to major events and to guidelines and guidance elaborated by multidisciplinary groups and by organizations working in the field of emergency and health care.

Works and researches not yet published have been considered, too, thanks to their authors' permission to quote them. This was done in order to offer an up to date outline of the situation, to examine research tendencies and gaps, and to provide further food for thought.

These preliminary remarks have to be kept in mind both when analyzing the state of the art and when drawing conclusions.

1. First Responder Profile

Basing themselves on evidence offered by disasters such as the Oklahoma Bombing (1995), 9/11, the California Fires, the Tsunami, Hurricane Katrina and Hurricane Rita, the American Group Psychoterapy Association (AGPA) outlined a "**First Responder profile"**[1], which appears to be quite interesting and perhaps illuminating, in the sense that it offers a key to understand what possible common weak points first responders have and how they probably will react given certain circumstances. Pointing out weak points and strengths generally common to all emergency personnel undoubtedly can lead to a better understanding of what their needs are and of how to assist them and work with them successfully.

[1] American Group Psychoterapy Association (AGPA), *Guidelines for Working with First Responders (Firefighters, Police, Emergency Medical Service And Military) in the Aftermath of Disaster* Suzanne B. Phillips Psy.D., ABPP, CGP, Dianne Kane DSW,CGP, www.agpa.org.

First of all, first responders have a **"Mission First" perspective**. They all share a **"Band of Brothers mentality"** (i.e., "leave no man behind" code). They also expect not to get injured and not to feel stress. Their attitude is **"Don't get hurt, don't feel and don't get off the line."** First Responders have an "**insider-outsider mentality"**. They think people outside their group wouldn't be able to understand what they've been thought anyway, so probably it's not even worth trying to explain.

It is difficult for First Responders (FR) to recognize the cumulative stress associated with their work as well as the fact that some catastrophes are so great and disasters so extensive, that no one can get away without experiencing the symptoms related to trauma. For example, it is beyond what could ever be imagined for Fire Department City of New York (FDNY) to lose 343 brothers in 9/11, for Reservists to look for bodies in the aftermath of the Tsunami or for Police in New Orleans to be caught between disaster and disorder. Another difficulty is the fact that in many of the services the major barrier to seeking care for mental health issues is the **stigma** associated with mental health problems as a "career killer. "

In First Responders there is often a **" functional" delay in symptoms** (anxiety, depression, physical problems, ASR, PTSD) until the mission is over. Occurring months even years later this can be alarming to them and their families. For example, the mental fallout from the Oklahoma City bombings in 1995 didn't peak until 12 to 18 months after the event, as reported by a document developed in collaboration between the New Jersey Disaster Critical Incident Stress Response and the Center for Public Health Preparedness at UMDNJ[2].

Another FR Profile is the one outlined by the above mentioned joint study carried out by NJ Disaster Critical Incident Stress Response and the Center for Public Health Preparedness at UMDNJ. According to this study First Responders (Police/Fire/EMS/Rescue Workers) are: "Protectors", "Helpers" "Rescuers" "Risk Takers" "Caretakers" "Miracle Workers". Their main personality traits consist in being obsessive-compulsive, having control issues, being action orientated and risk takers, having an high need for stimulation, being highly dedicated, getting easily bored, feeling the need to be needed, having difficulty saying "No". First Responders also

[2]*First Responders: Self Care, Wellness, Health, Resilience & Recovery*, a program developed in collaboration between NJ Disaster Critical Incident Stress Response and the Center for Public Health Preparedness at UMDNJ (University of Medicine and Dentistry of New Jersey), www.njcphp.org/fr.cfm.

appear to be “caretakers” and family orientated, and to have a high tolerance for stress and an addiction to trauma.

Further we can consider not only other personal negative factors and possible specific consequences (caretaker guilt, fluctuation, divorce rate, drug and alcohol abuse, physical disorders, burn-out syndrome) but also personal benefits of relief work.

2. Factors that affect MFR response to disasters

MFR response appears to be dependant on a whole gamut of factors. We have the individual rescuer’s resilience ability and the organizational strength of the agency he/she is part of on one hand, the ability of professionals or of other kind of counselors assisting on the other. Level of resilience[3][4][5] and reactions to cumulative or traumatic stress differ according to individual’s past and present history, personality, flexibility of coping strategies, to prior training received, to the group’s team spirit, to social support one receives, to expression of acknowledgments, to effectiveness of professional care or peer support or (psychological) debriefing offered, etc.

There are, however, other factors that affect reactions and are not related to the individual and the group he/she works in. First of all, the scale and nature of the disaster influence reactions, as said by psychiatrist Carol North, M.D., who studied, amongst other disasters, the mental health effects in the aftermath of the Oklahoma City federal building bombing and the 9/11 attacks. “Bigger is worse than smaller. Human-caused tragedies are worse than natural ones, and terrorism is worse than engeneering failures.” [6] These factors influence the response of all people exposed to disasters, not only of rescuers, who have some similarities with the general public,

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[3] Bonanno, G. A., & Mancini, A. D. (2008). *The human capacity to thrive in the face of extreme adversity*. Pediatrics, 121, 369-375

4 Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). *What predicts psychological resilience after disaster? The role of demographics, resources, and life stress.* Journal of Consulting and Clinical Psychology, 75, 671-682.

[5] Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2006*) Psychological resilience after disaster: New York City in the aftermath of the September 11th Terrorist Attack.* Psychological Science, 17, 181-186.

[6] Aaron Levin, *Assessing First Responders’ Needs favored over Formal ‘Debriefing’*, Psychiatric News October 21, 2005, Volume 40, Number 20, page 5, American Psychiatric Association, pn.psychiatryonline.org.

but also show some differences. Other studies will have to be carried out to make more specific statements on this matter.

There also could be a significant relationship between the prevalence and risk factors of current stress related problems and the different occupations involved in rescue work, as put forward by a study that compared the prevalence and risk factors of current probable PTSD across different occupations involved in rescue/recovery work at the WTC[7].

2.1 The scale and nature of a disaster

Professor North explains how data collected after studying about 15 disasters seem to suggest that larger disasters and man-made disasters, especially terrorism, have more serious mental health effects. She specifies, though, that no one has yet collected the data that would be needed to definitively demonstrate this.
Natural disasters are thought to be associated with the mildest mental health consequences, although such a statement is not universally accepted. Technological disasters, especially the ones involving human error, may generate different psychosocial needs and greater emotional problems and/or psychopathology. Acts of terrorism, with their willful human origins, may be associated with the most severe mental health sequelae[8].
Considering the nature of the event, though, isn't sufficient, adds Professor North. Other important characteristics in a disaster typology are the scope and magnitude of the event, unexpectedness, its duration, repetition and recurrence, terror and horror it brings to people.

The importance that scale, scope and time or duration of disasters have is also pointed out in a report released by the Center for Disaster Research and Education, Millersville University of Pennsylvania, and based on interviews with FRs in the immediate aftermath of Katrina[9]. After reporting some considerations that emerged

[7] Megan A. Perrin, M.P.H., *Differences in PTSD Prevalence and Associeted Risk Factors Among World Trade Center Disaster Rescue and Recovery Workers*, Am J Psychiatry 164:9, September 2007, ajp.psychiatryonline.org.
[8] North CS., *Epidemiology of disaster mental health*, In Ursano RJ, Fullerton CS, Weisaeth L. & Raphael B. (eds): Texbook of Disaster Psychiatry. New York: Cambridge University Press, 2007; Chapter 2, pp. 29-47.
[9] Henry W. Fischer, Kathryn Gregoire, John Scala, Lynn Letukas, Joseph Mellon, Scott Romine, Danielle Turner, *The Emergency Management Response to Hurricane Katrina: As*

from the interviews, the authors state: “If we consider the events faced by both the victims of and the responders to Hurricane Katrina, we find at least one clear message […] it is time to consider that everything we think we know about the behavioral and organizational response to disaster may vary by the severity, (i.e., scale and scope) of the disaster as it disrupts the everyday normal activities of human being. In the current discussion, the argument is advance that the knowledge base in research literature should be examined and compared to a disaster scale”. Authors argue that the research community needs a disaster scale in order to initiate the re-examination of research findings and propose that the scale advanced by sociologist Henry Fischer in 2003[10] be used as a model (although it may not be the final version adopted).

In his paper, "The Sociology of Disaster: Definitions, Research Questions, Measurements in a Post-September 11, 2001, Environment," Professor Fischer reflects on what sociologically constitutes a disaster and on how in a post - 9/11 environment this discussion is imperative. Fischer believes that his 10-category scale would be a very useful tool for disaster researchers and practitioners. Researchers could better understand the applicability and limitations of their findings. The scale would also work as a generator of research question, since responses should vary according to the category of a disaster. Practitioners, on the other hand, would be able to better organize appropriate preparatory and response actions.

2.2 Individual factors as preeminent?

Professor North explains how her studies also show that individual factors are perhaps the strongest predictors of postdisaster psychiatric problems – especially pre-existing psychopathology. Disaster severity and level of exposure are important predictors of outcomes, but are not the strongest ones. As already mentioned, her findings apply to general population, not only to rescuers.

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told by the First Responders – A Case Study of What Went Wrong and Recommendations for the Future, Quick Response Research Report 189, Center for Disaster Research and Education, Millersville University of Pennsylvania, 2006. Online <PDF> from. www.colorado.edu/hazards/research/qr/qr189/qr189.pdf.

[10] Fischer, H. W. , *The Sociology of Disaster: Definitions, Research Questions, Measurements in a Post-September 11, 2001 Environment*, 2003-08-16, Paper presented at the annual meeting of the American Sociological Association, Online <PDF> from www.allacademic.com/meta/p108165_index.html.

Carol North mentions **gender** as a strong predictor – "women exhibit twice the prevalence of PTSD, other anxiety disorders, and major depression as men". As anticipated, **pre-existing psychopatology** is a robust predictor, but "is neither necessary nor sufficient to generate PTSD after disasters". Furthermore, "With increasing exposure and greater severity of the traumatic event, previous psychiatric history is less predictive, and greater numbers of those with no prior psychiatric history develop PTSD".

A well-known predictor of postdisaster mental health problems is the **occurrence of other adverse life events -** directly related to the disaster as well as indirectly associated, and unrelated events - in the postdisaster period. "Disasters intrude into people's lives in the context of their existing situations and problems, and these existing issues are likely to continue to be a powerful predictor of outcomes in disaster settings", says Professor North.

Professor North explains how rescue workers are **a group with some peculiar features**. Their response needs further studies – Professor North is currently working on a study on 9/11 rescuers. Rescue workers may have varying exposures to a disaster and pre-existing characteristics – some of which discussed in the FR profile - that may translate into different mental health effects. "They may be exposed to grotesque and horrific experiences in the aftermath of disaster, and in some disasters, as in the September 11 attacks on the World Trade Center, they may personally encounter danger and sustain injuries, may experience bereavement for fallen colleagues, and they may know direct victims". Plus, **self-selection and selection** for this type of work, training, simulations, drill and experience in this work may lend resilience to this group. A previous study[11] conducted by Professor North showed how among fire-fighters who served as rescue and recovery workers after the Oklahoma City bombing, PTSD was less prevalent compared to survivors of the bomb blast. "The resilience seen in fire-fighters may be related to their career selection, their preparedness and experience, the fewer injuries they suffered, and postdisaster mental health interventions", were the conclusions.

[11] Carol S. North, M.D., M.P.E. Laura Tivis, Ph.D. J. Curtis McMillen, Ph.D. Betty Pfefferbaum, M.D., J.D. Edward L. Spitznagel, Ph.D. Jann Cox, M.S.W. Sara Nixon, Ph.D. Kenneth P. Bunch, B.A. Elizabeth M. Smith, Ph.D., *Psychiatric Disorders in Rescue Workers After the Oklahoma City Bombing*, Am J Psychiatry 2002; 159:857–859.

The importance of individual factors is recognized by Antares foundation[12], whose guidelines for good practice recommend that assessments include an evaluation of the following data regarding individuals seeking employment as FR: a) physical and psychological health, past and present; b) influential life events (including past exposure to traumatic events and how they have been dealt with); c) personal characteristics such as resiliency, coping mechanisms, and motives for undertaking humanitarian aid work; d) the ability of the staff member to work in team; e) how past difficulties in personal and professional life have bee dealt with; f) the staff members needs with respect to training and or support.

2.3 Organizational factors

Contrary to what many people think, it is often not the violent or extreme experiences in themselves that cause stress in staff and volunteers. The International Federation of Red Cross and Red Crescent Societies points out in its psychosocial support manual13 that stress reactions of humanitarian staff and volunteers are instead often caused by their working conditions and organizational arrangements.

Work conditions that cause stress are for example an unclear or lacking job description, poor preparation and briefing, or lack of boundaries for work. If there is inconsistent or inadequate supervision this will add to the stress, or if the staff member or volunteer feels unsupported at their workplace. Very often staff and volunteers may also be personally affected by the suffering that they are a part of addressing. Harsh working conditions related to the nature of the event can of course also cause stress, such as when the volunteer or staff member has to perform physically difficult, exhausting, and dangerous tasks.

The already mentioned report released by the Center for Disaster Research and Education, Millersville University of Pennsylvania, and based on interviews with FR in

[12] Antares Foundation, *Managing stress in Humanitarian Aid Worker - Guidelines for good practice*, second edition, July 2006, available online <PDF> at www.antaresfoundation.org.
[13] International Federation Reference Centre for Psychosocial Support: *Community based psychosocial support. A training manual.* (2nd version, draft format), 2008.

the immediate aftermath of Katrina[14] tries to point out what went wrong and to make recommendations for the future. Among factors that jeopardized rescuers' work are communication failures, difficulties in handling relationship with media, lack of an efficient organization within single organizations and lack of coordination between the different agencies.

As far as organizational issues are concerned, responders reported to have felt exhausted already before impact. Instead of providing adequate shifts, agencies had them staying up preparing 24/7, and as a result a lot of rescuers were burnt out after only 48 hours. "I would recommend that others in the future plan for down time, no matter how bad things look or get", said one rescuer. Conclusion: "Organizations need to develop plans for responders to have time on and time off, even during disasters. Otherwise, they burn out and become worthless".

The lack of communication destroyed much of the interagency coordination for an extended period of time: "ironic in a high tech communications age, the most reliable and helpful communication equipment was reported to be the ham radio". As far as communication issues are concerned, the London Resilience Forum offers a series of practical advice, which include the following: a) emergency responders need to have dedicated communications that will work in an emergency; b) do not rely on one single mobile phone provider; c) fixed phones: review requirements for incoming and outgoing lines in crisis, and compare with current capacity provided; d) pagers: so long as they are sufficiently independent of other networks, consider using pagers for alerting and mobilisation, including pre-set pager groups, where this function is critical; e) radio: action must be taken to make responders' primary means of communications (usually radio) fully capable of meeting their communications needs in a crisis. Interesting the suggestion of education the general public on the need for phone discipline in a crisis, (for example, only use mobile phones for essential purposes, make short calls to establish people's safety - to land lines where possible - then stay off the network).

Mass media can be **a useful resource as much as a big problem** for rescuers. In the case of Katrina, for example, the media were extremely helpful in calling attention to problems that needed to be redressed and in providing information to responders as

[14] *The Emergency Management Response to Hurricane Katrina: As told by the First Responders – A Case Study of What Went Wrong and Recommendations for the Future*, Center for Disaster Research and Education, Millersville University of Pennsylvania, 2006.

well – in some cases the media were the only source of information for an extended time. On the other hand, rumor was often reported as fact, creating extreme confusion and tension both among general public and rescuers. Responders indicated they needed "more training in how to deal with the mass media when they converge in such large numbers, are pushy and rude". Suggestion: create a media pool and provide regular news conference rather than allowing reporters to go wherever they want to go within the disaster area.

Similar conclusions were drawn by the London Regional Resilience Forum. "The Forum agreed that media monitoring was required to ensure that unhelpful messages were removed from the news media. It also agreed that the involvement of the media in future exercises could be useful in ensuring that they give accurate and timely information in the event of a future incident"[15].

Recognizing the importance of learning how to deal with mass media, US Federal Emergency Management Agency (FEMA) offers rescuers a training course dedicated to crisis communication and relationship with media during a crisis.

There has been many publications reflecting research in risk perception and crisis and risk communication and including key principles of crisis communication preparedness.

Important issue is pro-active providing suitable information to media during and before the emergency situation[16].

[15] London Regional Resilience Forum, *Looking Back, Moving Forward, Lessons identified and progress since the terrorist events of 7 July 2005*, September 2006, www.londonprepared.gov.uk/londonsplans/resilienceforums/.

[16] U.S. Department of Health & Human Services (2005): Terrorism and Other Public Health Emergencies: A Reference Guide for Media; A Field Guide for Media http://www.hhs.gov/disasters/press/newsroom/mediaguide

3. What MFR and the agency they work for can do

3.1 "stress management techniques", "CISM", "self-care", "buddy system" and other coping strategies

One of the fundamental abilities rescuers should have is the ability to recognize early signs of stress and to cope with them positively. The organization they work for is involved in this stress monitoring process as well.

US Department of Health & Human Services offers several resources that tackle this subject. Among them stands *A Guide to Managing Stress in Crisis Response Professions*[17] - professions which include medical first responders - produced by the Substance Abuse and Mental Health Services Administration (SAMHSA), a unit of the Center for Mental Health Services (CMHS). This guide focuses on general principles of stress management and offers **practical strategies that can be incorporated into the daily routine of managers and workers**. Stress prevention and management should address both the worker and the organization, and should offer a chance to **anticipate stressors and shape responses**, rather than simply reacting to a crisis when it occurs. The idea is to provide **a framework for stress management strategies.**

Such an idea, providing workers with the right framework in order to enable them to cope successfully with physically and emotionally draining situations, is put forward by APA Task Force on Resilience[18], and by Antares Foundation[19], too.

Understanding the stress cycle and how to react to it positively is considered part of rescuers' duties, says SAMHSA's *Guide,* which points out how "If stress is extreme and not managed, some individuals may experience posttraumatic stress disorder

[17] SAMHSA, *A Guide to Managing Stress in Crisis Response Professions (SMA05-4113)*, Booklet, 2005, Online Publications, mentalhealth.samhsa.gov.

[18] American Psychological Association (APA), *Fostering Resilience in Response to Terrorism: For Psychologists Working With First Responders*, Fact Sheets for Psychologists, www.apa.org/psychologists/resilience.html. The American Psychological Association [www.apa.org], created in 2002 a Task Force on Promoting Resilience in Response to Terrorism, with the objective of developing information on psychological resilience and coping with disasters. The Task Force has produced nine fact sheets intended to assist psychologists seeking to foster resilience in a variety of populations, including first responders.

[19] Antares Foundation, *Managing stress in humanitarian workers. Guidelines for good practice*, second edition, July 2006.

(PTSD)." [US government has a National Centre for PTSD[20], dedicated first of all to veterans, but offering *Psychological First Aid guidelines* that can be applied to all groups at risk, including MFR].

PTSD is the biggest concern, but increased substance use or abuse is also a big worry. "While researchers appear to be divided on whether substance abuse disorders increase following a disaster, there is evidence to suggest that substance use increases. While substance use increases alone do not qualify as substance abuse disorders, they can create potential health and public safety problems. This is of particular concern when the affected people are crisis response personnel who may have responsibility for public safety as part of their job duties." As Antares guidelines point out, "Workers suffering from the effects of stress are likely to be less efficient and less effective in carrying out their assigned tasks. They become poor decision makers and they may behave in ways that place themselves or other members of the team at risk or disrupt the effective functioning of the team".

The International Federation of Red Cross and Red Crescent Societies also recognize that humanitarian workers are affected by stress and critical situations. In the manual *Managing Stress in the Field,* information about stress, and simple ways to deal with it, are provided. Among the self-help strategies given are giving words to the experience; call, talk or be with someone; get information on usual reactions; use activities to reduce tension; monitor intake of coffee, alcohol and nicotine; and keep to daily routines as much as possible. [21]

MFR need to pay constant attention to their feelings and reactions, not only in their own interest, but also because of the enormous responsibility towards other people they have. This also means organizations must ensure staff well-being, along with carrying out their primary mission.

Talking about what can be done before a disaster strikes, SAMHSA guidelines underline the need for emergency personnel to be familiar with NIMS Incident Command Structure and the role their organization has in such system. It recommends that workers be regularly trained on stress management techniques on one hand, on safety procedures and policies on the other.

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[20] www.ncptsd.va.gov.
[21] International Federation of Red Cross and Red Crescent Societies: *Managing Stress in the Field*, 2004

[National Incident Management System (NIMS), developed by the U.S. Department of Homeland Security (DHS), "developed so responders from different jurisdictions and disciplines can work together better to respond to natural disasters and emergencies, including acts of terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management."[22]]

Strategies to be considered during the crisis involve a **clear definition of individual roles** (to eventually be rediscussed if necessary), the creation of respite areas where workers are also visually separated from the scene, the media and the public, the provision of regular work breaks, the alternation of high-stress and lower stress functions, the effort to try and reduce as much as possible the impact of noise, odors and tastes on workers.

To be considered attentively is the following suggestion given to agencies, "Partner inexperienced workers with experienced veterans. The **buddy system** is an effective method to provide support, monitor stress, and reinforce safety procedures."[23] Various remarks on the importance of ties between co-workers are present in APA Fact sheet and in NIOSH Traumatic Incident Stress information for emergency workers.

APA directions also share with SAMHSA guidelines the value given to **"informational debriefings"to be held at each shift change**, with the purpose of updating information, checking the current status of the work environment, discussing new challenges and operational strategies.

SAMHSA *Guidelines* point out the need for **post-crisis interventions**, too. Despite the efforts of trying to prevent stress factors and then trying to cope successfully with the ones they cannot avoid, first responders can experience a strong negative reaction also when the disaster is completely over. The guide offers some tips that may appear to be extremely banal, but at the same time probably aren't always kept in due consideration: "Allow time off for workers who have experienced personal trauma or loss. Transition these individuals back into the organization by initially assigning them to less demanding jobs", "Develop protocols to provide workers with **stigma-free counseling** so that workers can address the emotional aspects of their experience", "Institute **exit interviews and/or seminars** to help workers put their

[22] For more information on NIMS, www.fema.gov/emergency/nims.

[23] SAMSHSA, *A Guide to Managing Stress in Crisis Response Professions*, 2005.

experiences in perspective and to validate what they have seen, done, thought, and felt", "Provide educational services or workshops around stress management and self-care", "Offer **group self-care activities and acknowledgments**."

The **ability of taking care of oneself** is essential. Rescuers must be given as much external help and support as possible, but they first of all need to help themselves. "Supervisors, managers, and workers must assume responsibility for their own **self-care**", and this also means **learning how to recognize and pay attention to early warning signs of stress reactions**. Rescuer must work on self-awareness, lead a balanced lifestyle, keep in mind stress reduction strategies and manage workload sensibly. Similar suggestions are offered by NIOSH (National Institute for Occupational Safety & Health) and AGPA (American Group Psychotherapy Association) documents.

Taking care of oneself isn't an easy task, so SAMHSA's Guidelines mention once more the importance the "**buddy system"** can have, getting co-workers to agree to keep an eye on each other's stress reactions.

In summary, **stress management** is considered essential to emergency management in general. In order to manage stress successfully workers must get **a solid understanding of their roles and responsibilities**, offer **support to colleagues**, think about their own **self-care**, and **seek help** when they need it. This also requires overcoming **stigma** often associated with possible stress reactions of MFR. The main starting point here mast be attitude that postdisaster reactions are normal reactions of human being (including MFR) to abnormal situation.

In recent decades **Critical Incident Stress Management (CISM)** is developing system handling of extreme stress among rescue professional. The International Critical Incident Stress Foundation, Inc. (ICISF)[24] is a non-profit, open membership foundation dedicated to the prevention and mitigation of disabling stress through the provision of: Education, training and support services for all Emergency Services professions; Continuing education and training in Emergency Mental Health Services for the Mental Health Community; and Consultation in the establishment of Crisis and Disaster Response Programs for varied organizations and communities worldwide.

[24] http://www.icisf.org/

3.2 Stress symptoms evaluation grid

The National Institute for Occupational Safety & Health and its *Traumatic Incident Stress: information for Emergency Response Workers* describe the dangers and symptoms of traumatic incident stress that can occur during rescue operations in disasters, and includes resources for coping[25]. [By using the term "**traumatic incident"** psychologists refer to an incident that may involve exposure to catastrophic events, severely injured children or adults, dead bodies or body parts, or the loss of colleagues, for instance].

Having pointed out how traumatic incidents might produce unusually strong emotional reactions that may interfere with workers' ability to function at the scene or later, the sheet offers a detailed list of **possible symptoms of stress -** some of which are listed in SAMHSA's common stress reaction list, too. These symptoms range from **physical** (chest pain, difficulty breathing, shock symptoms, fatigue, nausea/vomiting, dizziness, profuse sweating, rapid heart rate, thirst, headaches, visual difficulties, clenching of jaw, nonspecific aches and pains), to **cognitive** (confusion, nightmares, intrusive memories, disorientation, heightened or lowered alertness, poor concentration, memory problems, poor problem solving, difficulty identifying familiar objects or people), **emotional** (helplessness, apathy, anxiety, guilt, grief, denial, severe panic – rare – fear, irritability, loss of emotional control, depression, sense of failure, feeling overwhelmed, blaming others or self) and **behavioral** (intense anger, withdrawal, emotional outburst, temporary loss or increase of appetite, excessive alcohol consumption, inability to rest, change in sexual functioning). NIOSH tries to establish some sort of priority between such symptoms. As far as physical symptoms are concerned, it advices to **seek medical attention immediately** in case of chest pain, difficulty breathing, severe pain, or symptoms of shock (shallow breathing, rapid or weak pulse, nausea, shivering, pale and moist skin, mental confusion, and dilated pupils). **Mental health support** is instead strongly reccomended if emotional symptoms or distress continue for several weeks or interfere with workers' daily activities.

[25] NIOSH, *Traumatic Incident Stress: Information For Emergency Response Workers*, October 2001, Emergency Preparedness & Response - Emergency Response Resources - Emergency Responders, www.cdc.gov/niosh.

NIOSH grid of stress evaluation and its tips for coping with it were accepted and are currently being used by Italian *Ministero della Salute*[26]. Italian Department of Health mentions as references NIOSH and its guidelines seen above, and the National Center for PTSD, Veterans Affair.

Working with information about symptoms of PTSD certain risk exists in accordance to suggest some of them.

3.3 Humour as a coping strategy

A first research carried out by the Università Cattolica del Sacro Cuore of Milan[27] showed how sense of humor is quite common among rescuers, especially after rescue operations. Rescuers say that humor has different beneficial effects on their job and well-being.

One third of rescuers interviewed believes humor helps them relax and feel better physically. More than half of them say humor has a positive psychological effect, helping them to minimize problems and overcome difficult and embarrassing moments. Moreover, laughing helps to relieve tensions.

Alternative coping strategy is transcendental opinion, religious faith and rituals.

[26] Ministero della Salute, Emergenze Sanitarie, Professionisti Sanitari, Maxi-emergenze, Gestione degli Effetti, *Gestire lo stress degli operatori*, www.emergenzeiss.it

[27] Fabio Sbattella - Marzia Molteni, *L'umorismo in emergenza*, Quaderno secondo di Psicologia dell'Emergenza, ISU 2008.

4. What others can do for MFR

4.1 The organization: working on prevention

Organisations have a responsibility for their people. *The Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support in Emergency Settings* provides a set of actions specifically aiming to prevent and manage problems in mental health and psychosocial well-being among staff and volunteers.

The IASC guidelines point out that "The provision of support to mitigate the possible psychosocial consequences of work in crisis situations is a moral obligation and a responsibility of organisations exposing staff to extremes. For organisations to be effective, managers need to keep their staff healthy. A systemic and integrated approach to staff care is required at all phases of employment – including in emergencies – and at all levels of the organisation to maintain staff well-being and organisational efficiency." [28]

Antares Foundation offers guidelines[29] intended to help humanitarian agencies and their staff to address stress. Actions suggested involve staff members, colleagues, managers and the agency as a whole. Although guidelines refer specifically to humanitarian workers and their organization, the best practices they propose can be applied to rescuers in general.

These guidelines aim at drawing more attention (and resources) towards the need of an adequate care system for national and international staff. Principles outlined are meant to be universal, but each organization has to make necessary adjustments to adapt these principles to its own specific context and culture. Antares Guidelines originated from The Code of Conduct of People in Aid[30] and are intended to be complementary to the Code.

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[28] IASC: *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*, 2008, p. 87

[29] Antares Foundation, *Managing stress in Humanitarian Aid Workers - Guidelines for good practice*, 2006.

[30] People in Aid, *The Code of Conduct*, online version, www.peopleinaid.org/code/online.aspx. The Code is the result of years of international collaboration by a wide range of NGOs, international organisations, public bodies and private sector firms. As a management framework, it is also an important part of agencies' efforts to improve standards, accountability and transparency amid the challenges of disaster, conflict and poverty.

Both the Guidelines and the Code stress on the importance of an agency having its own written policies. “Ambiguous, inconsistent, or non-existent policies run the risk of antagonising staff and damaging the organisation”, that’s why “At least a basic set of core policies are required for effective staff management”[31], ensuring at the same time that policies take into account the local legal and cultural context (the right approach is “think globally, act locally”). Staff deserves to benefit from the best policies an organisation can offer, and not to just be “covered by the legal minimum, or where that does not exist, nothing at all”, is .People in Aid’s sharp conclusion.

Antares emphasizes the need to match policies and supportive practices with the specific needs of the staff, which vary at a local, national and international level. It also underlines the need for agencies to take into account risks individual workers could face “as a result of their gender, sexual orientation, race, ethnicity, nationality, or other predisposing personal factors”[32]. Antares reminds agencies that among other factors that can influence workers’ stress is the lack of clear policies regarding issues such as communication and information sharing, work hours, regulations concerning vacations, ways of communicating with home, and many more.

Another concern shared by both organizations is the importance that must be given to the “management of people”. As Antares points out “Field managers are expected to be role models for staff under their supervision with respect to conducting themselves in ways that mitigate stress”[33], so the agency needs to provide periodic refresher training in these areas for field managers and supervisors”. Other important priorities from a management perspective are team building and managing of any conflict within the team, as well as facilitating regular access to communication between staff members and their families or loved ones.

Recruitment and selection of personnel is the third common concern. The Code insists on the effectiveness and fairness of the procedures, which must be constantly monitored. Antares insists on the screening and assessment that must be carefully undertaken before recruiting somebody. That’s because, as mentioned previously, individual factors appear to have an enormous importance as far as rescuers’ response to an emergency situation is concerned. The agency needs to understand:

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[31] People in Aid, *The Code of Conduct*.
[32] Antares Foundation, *Managing stress in Humanitarian Aid Workers - Guidelines for good practice*, 2006..
[33] Antares Foundation, *Managing stress in Humanitarian Aid Workers - Guidelines for good practice*, 2006.

a) the minimum health and resiliency requirements for high risk and high stress assignments; b) the likelihood of adverse or maladaptive responses to risks and stresses in prospective staff and staff seeking new assignments. Based on the results of such screening/assessments, the agency has to suitably match staff members to specific assignments.

Antares also asks agencies to provide all workers with adequate pre-assignment preparation and training in managing stress, in order to enable rescuers to help themselves (we've already discussed what MFR can do for themselves). Keeping in mind how strong stigma can be among FR, Antares warns agencies that "Many aid workers develop a facade of toughness and believe that they shouldn't complain. Others may not recognize the signs of stress in themselves", so "It is the presence of the expectable stressful experiences rather than worker complaints that should trigger agency scrutiny of stress responses in its employees"[34]. Team managers need to monitor stress both on a routine basis and when critical incidents/traumatic events occur (during and after such events). The agency has to have an explicit written policy that it will respond constructively (and not punitively) to any revelations of stress, this also to try and encourage workers to be more open and report any signs of stress and difficulty they recognize in themselves.

4.2 Professionals working with MFR

As already seen in FR profile offered by AGPA**,** first responders have a "Mission First" perspective, so any support or response offered to these groups must **recognize the importance of the mission.**

AGPA suggests that psychotherapists working with first responders keep into due consideration the importance in such contest of reminding First Responders of the need for **"self care"** (sleeping, eating properly, hydrating, allowing oneself down time, listening to music, exercising, praying etc.) and that they take advantage of the **"buddy care"** mechanism (psychotherapist can gather information more easily if they remember that, given the Band of Brothers mentality, First Responders are more likely to respond to an informal inquiry as to how their buddies are doing than a focus on themselves). Assuring **chaplain presence** (Chaplains' role is important because disaster brings with it loss, grieving, burial rites and an assault of belief

[34] Ibid.

systems) is a good response. Another important lesson learnt in time is that close **collaboration with peer counselors** from within the identified culture is a viable way to reduce barriers to mental health care. This also means that pre and post event training of peers is essential**.**

Another strategy that has proven itself to be useful is **"The Walk Around"**. "Walking around during the acute and sub-acute stages of disaster offers a non-intrusive supportive presence to assess self-care, listen, normalize, provide information (if asked), and informally assess the need for higher levels of care. The Walk Around brings the support services to the First Responders. It was used by the Military at the Pentagon after 9/11, in New York after 9/11 and after the Oklahoma Bombing. The Walk Around should always be an officially sanctioned intervention and is most effectively done with a peer counselor from the service, a member of the service or a Chaplain – If you are not part of the culture or already known to the service, their presence lends you credibility."[35]

Professor Fabio Sbattella analyzes **psychological competencies** needed **during emergencies** and tries to outline psychological abilities that every rescuer should have and abilities that relate to emergency psychologists[36].

Sbattella explains how the so-called "emergency psychology" or "disaster psychology" is a result of the converging of several disciplines, such as development psychology, psychology of communication, cultural psychology, social psychology, clinical psychology and educational psychology. Who seeks to become an emergency psychologist needs to keep in mind he'll be working in unconventional settings (such as tent cities or roads) and needs to understand very well the rationale behind all emergency personnel's work.

Having emergency psychologists involved in rescue operations is very different from just generally talking about the use of psychology during emergencies. Professional psychologist need to be specifically trained in order to face emergencies, through master's degree, specialist courses, apprenticeships, etc. However, it is also important that all rescuers receive some training and education on psychological issues, for example through refresher courses. Lombardy Region has already

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[35] American Group Psychoterapy Association (AGPA), *Guidelines for Working with First Responders (Firefighters, Police, Emergency Medical Service And Military) in the Aftermath of Disaster*, Suzanne B. Phillips Psy.D., ABPP, CGP, Dianne Kane DSW,CGP, www.agpa.org.

[36] F. Sbattella, *Competenze psicologiche nelle emergenze: verso una definizione di ruoli e saperi*, Università Cattolica del Sacro Cuore, Unità di Psicologia dell'Emergenza e dell'Intervento Umanitario, area di download, www.unicatt.it.

activated some initiatives that point towards this direction, offering a refresher course to medical staff of 118 emergency service, while a master's degree is offered to a limited number of professionals.

Professor Sbattella reports how there still isn't in Italy an agreement on how and when to involve psychology professionals during an emergency. One point of agreement, however, is the need to have an highly specialised professional coordinating all psychosocial interventions and procedures, a sort of "psychosocial manager". Suggestions differ, instead, when it comes to the teams working under the coordinator's supervision. Sbattella describes the two principal models outlined. According to one of these models, coordinators could count on two different kind of resources: flying squads (external resources) and resources within the local health centres. Flying squads would be the ones to work in the field (in a separate and safe place, like a tent or a camper van). Thay would be divided in units only made up of emergency psychologists, which would intervene in the immediate aftermath of a disaster, and units made up of different professionals (emergency psychologists, social workers, educators, sociologists, communication, security and transportation operators), which would take care of more general psychosocial support. Intervention, however, wouldn't end here. There would be local professionals adequately trained in emergency psychology and able to work in synergy with flying squads – this suggestion also keeps into account the fact that a lot of services in Italy are decentralized.

According to the other model, all resources should be resources of the local health centres. Each centre should have a "crisis unit", divided into two components, a clinical and a psychosocial one. The clinical component would work with Advanced Medical Post (AMP). However, this model emphasises less on interventions in the immediate aftermath of an emergency and more on broad psychiatric interventions.

Professor Sbattella considers both models interesting, because they both suggest possibile courses of action and they both urge further reflection on the specific competencies needed when talking about psychology in emergencies.

In many situations, the organisations where FRs are involved do not have their professionals internally. In these situations, the International Federation Reference Centre for Psychosocial Support points out that there is need for proper referral. At times staff and volunteers will show signs of serious stress reactions or other mental health problems. It is essential that each programme has a referral mechanism for individuals in need of professional support. Agreements with local health care

facilities should be in place where staff and volunteers can receive professional assistance.[37]

4.3 Social support, Peer Support & Peer Counselor

SOCIAL SUPPORT

As already mentioned, it appears that **Peer Counselors and Chaplains** are one of the most trusted resources used by most First Responders.

NIOSH and its "What You Can Do at Home" tips focus on the need for FR to **reach out for others** and spend time both with **family and** with **spiritual or community supports**. AGPA and APA share this view as well.

APA clearly states that **"social support** appears to be of particular importance for first responders."[38] The problem is, "Many individuals complain that support networks often disappear after the acute phase of the disaster", instead it is vital that "continued individual and /or group support be provided on an ongoing basis"[39] Obviously, responders have the "right not to communicate", if they don't feel like it, but reaffirming tie with social support and religious networks as soon as possible is extremely helpful for recovery. Among possible strategies of communication, APA suggests the creation of small **peer group debriefing.**

Professor North, though, underlines how in linking social support and positive mental outcomes researchers must keep in mind that "causal directionalities are uncertain, and likely to be complex", because "Social support may be as much a function of an individual's psychosocial strength as a determiner of mental health, because well-adjusted people tend to develop healthy social support networks."[40]

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[37] International Federation Reference Centre for Psychosocial Support: *Community based psychosocial support. A training manual.* (2nd version, draft format), 2008.
[38] American Group Psychotherapy Association (AGPA), *Guidelines for Working with First Responders (Firefighters, Police, Emergency Medical Service And Military) in the Aftermath of Disaster*, Suzanne B. Phillips Psy.D., ABPP, CGP, Dianne Kane DSW,CGP, www.agpa.org.
[39] *Ibid*.
[40] North CS., *Epidemiology of disaster mental health*, In Ursano RJ, Fullerton CS, Weisaeth L. & Raphael B. (eds): Texbook of Disaster Psychiatry. New York: Cambridge University Press, 2007; Chapter 2, pp. 29-47.

PEER SUPPORT

As stated in the **Peer Support Guidelines** (2006), ratified by **IACP (International Association of Chiefs of Police)**, "The goal of peer support is to provide all public safety employees in an agency the opportunity to receive **emotional and tangible peer support through times of personal or professional crisis** and to **help anticipate and address potential difficulties**. Ideally, peer support programs should be developed and implemented under the organizational structure of the parent agency"[41]. Obviously, since "a peer support person (PSP), sworn or nonsworn, is a specifically trained colleague, not a counselor or therapist", a peer support program has to be consider as an additional resouce, not as a substitute for any other necessary intervention. Moreover, PSPs should refer cases that require professional intervention to a mental health professional.

The NY Police Department offers a confidential, voluntary, independent, departmental assistance program, **POPPA**, which uses trained volunteer NYPD officers in peer support. The program has prooved itself to be a useful resource for FR trying to cope with post-disaster response. In the first year, there were 250 calls to the help line. Since 2001, the number of calls has increased between 900 to 1,200 each year. The proportion of callers who accept a referral for professional assistance has also increased from 30% - 45%.

Another successfull example is the New Jersey Cop 2 Cop program. It began in November 2000, and it experienced a 300% increase in calls following 9/11. Since that time, Cop-2-Cop has received over 15,000 calls.

Peer assistance programs seem to work for police rescuers, and peer support programs would almost certaintly be helpful for all rescuers trying to overcome traumatic incident personal consequences, also because police officers and their "blue culture" generally fit the "first responder profile" already discussed.

[41] *Peer Support Guidelines***,** Ratified by the IACP Psychological Services Section , Boston, Massachusetts, 2006, available online <PDF> at:
theiacp.org/div_sec_com/sections/PeerSupportGuidelines.pdf.

Another case of peer support among police officers is offered by the project named **"Il cerchio blu"**[42], which started out in Florence on 1st January 2008 and is the first project of this kind to take place in Italy. 30 officers - who had already proven themselves to be able to successfully cope with a traumatic experience and to have good communication and relational skills, followed a 164-hour course and were trained by a team of psychologists, sociologist and criminologists, and are currently supervised by psychologist – offer their support to colleagues who feel the need to share their difficulties in coping with negative events . Peer support operators don't tell others what to do, but try and help officers strenghen their own resilience capabilities. If necessary, peer support operators address officers towards more professional assistance.

Similar system is developing in Czech Republic from 1998. Czech police uses for own people 8 regional "Posttraumatic intervention teams" (formed by special trained peers, police psychologists and pasters), Czech Fire and Rescue Service has the same system using 14 teams. Both services are supported by 24/7 "Anonymous hot line for help to police and fire personnel in crisis" and by the system of internal police and FRs psychologists.

Peer support is also advocated by the International Federation of Red Cross and Red Crescent Societies: "There is evidence that an active, supportive approach to stressful situations facilitates successful coping. Allowing someone to talk about her reactions and feelings will facilitate her coping and assist her in dealing with the stressful situation. (…) The advantage of peer support is that support comes from someone who knows the situation and can provide assistance quickly. People under stress may only need some short-term help to prevent other problems from arising. Peer support also helps people to develop their personal coping skills."[43] In the Community-based Psychosocial Support training manual, the International Federation Reference Centre offers guidelines for informal peer support, as well as for peer support in groups.

Many Red Cross and Red Crescent Societies are implementing peer support systems, and more are to follow. The Austrian Red Cross has provided peer support to its workers for ten years, and now supports other National Societies wanting to implement similar systems. Barbara Juen, a professor of psychology at the University

[42] www.cerchioblu.eu.
[43] International Federation Reference Centre for Psychosocial Support: *Community based psychosocial support. A training manual.* (2nd version, draft format), 2008.

of Innsbruck and a long-time Austrian Red Cross volunteer, says that there are many situations where peer support is the best option. “In the acute phase, workers only accept help from others with field experience,” Juen says. “This is why the peer model is effective.”[44]

APA suggests that first responders consider participating in organizationally sponsored small peer group debriefings (when offered by their organization), because, “although the preventive effects of psychological Critical Incident Stress Debriefing have not been established, a small peer group debriefing may serve as a useful forum for group support and normalization of reactions”[45].

[44] Ytre: *Psychosocial support. Superheroes need not apply*. RCRC Magazine 2008.
[45] American Psychological Association (APA), *Fostering Resilience in Response to Terrorism: For Psychologists Working With First Responders*, Fact Sheets for Psychologists, www.apa.org/psychologists/resilience.html.

4.4 "on-line network" as resource to encourage among rescuers?

Aid Workers Network[46]**,** a UK volunteer-lead project, is a free service set up to enable aid workers to **share practical advice and resources** with each other .

Workers facing difficult situations can find out how others have dealt with similar situations and solved those kind of problems, and at the same time can contribute their own experience in other to help others. The project seems to have had success – currently there are almost 17 000 people in the network.
The site also collects blogs kept by aid workers from around the world. The idea that writing can be a useful tool for emergency workers to reelaborate experiences and can help them deal better with possible signs of stress is put forward, for example, by NIOSH, "Consider keeping a journal"[47].

Also APA suggests that talking about, or even writing about, their experiences may be healthy and therapeutic for first responders[48] (obviously, if first responders are not yet ready to discuss their experiences, their decision should be respected). As APA points out, though, first responders may believe that by talking about the event they will burden family and friends or that other people just won't understand" – this is consistent with stigma and insider-outsider mentality typical among FR. Keeping a blog and sharing it with other people that are able to understand what a rescuer has been trough could be a way to overcome such barriers and to create a sort of on-line rescuer community where everybody can find understanding and support.

Other examples of on-line "rescuer community" are the Italian site "Soccorritori.it"[49] and the French "Le forum de secours"[50] and "Les forums de discussion de Secourisme.info"[51].

[46] www.aidworkers.net.
[47] NIOSH, *Traumatic Incident Stress: Information For Emergency Response Workers*, October 2001, Emergency Preparedness & Response - Emergency Response Resources - Emergency Responders, www.cdc.gov/niosh.
[48] American Psychological Association (APA), *Fostering Resilience in Response to Terrorism: For Psychologists Working With First Responders.*
[49] www.soccorritori.it.
[50] www.sos112.fr.
[51] forum.secourisme.info.

5. Training and the system

Educational programs in medicine have followed the steps undertaken by theories and experimentations in the general field of education. This means medicine educational system has taken advantage of the developments carried out by studies on learning, regarding both lifelong learning and contexts and purposes of learning itself.

During the last 20 years there has been acceleration in the diffusion, also in this field, of the learning theory, particularly of the competency-based education.

Competency-based education is an institutional process that moves education from focusing on what academics believe graduates need to know to what students need to know and be able to do in varying and complex situations.

Among others both F. Marton[52] and J. Sandberg[53] explain that by means of appropriating what is known, students are expected to be equipped for dealing with the unknown. This can be achieved by forming the eyes through which students are going to see situations in their professional lives in the future.

S. Leinster[54] suggests that developing proper attitudes is a major goal of the education of all healthcare professionals. Effective performance as a healthcare professional is no longer predicated on memorizing a body of facts but depends on being able to assimilate, evaluate and use new information.

Intervention in emergency situations is characterized by 1) the need to make rapid decisions with important, highly varying, immediate and long-term consequences; 2) ambiguous conditions (due to a lack of information and the inherent complexity of dynamic phenomena), 3) the priority to safeguard civilians, and 4) conditions of great psychological pressure. Hence, a proper emergency plan is vital because it allows emergency workers to react in function of rapidly implementable procedures, putting the best-suited countermeasures into effect with no, or minimum, injury to

52 Marton, F. Towards a theory of quality in higher education. In B. Dart and G. Boulton-Lewis eds. *Teaching and Learning in Higher Education: From Theory to Practice*. Melbourne: ACER.
53 Sandberg, J. 1991. *Human Competence at Work*. Göteborg: Acta Universitatis Gothoburgensis
54 Leinster S., *Medical education and the changing face of healthcare delivery*, Medical Teacher Volume 24, Number 1, 1 January 2002 , pp. 13-15(3)

themselves or others. It is therefore necessary to develop **competencies that offer an overview of the situation and of interdependant activities**.

When the interaction among people and between people and their work is mindful, it means that each individual has a good awareness of the others' roles and activities, a good understanding of the common goal and gives an adequate contribution. When interrelations are mindful there is an increase in the alertness and intelligence of the system, the ability to manage the unexpected increases and errors decrease[55]. The capability to identify and manage the unexpected doesn't belong to a single person's mind but instead lies in the quality of people's interrelating.

With this in mind, we notice an institutional and legislative response that has been coherent and aimed at coordinating the different forces and providing them with common education programs.

The Council of the European Union with a decision[56] (8 November 2007) establishes a Community Civil Protection Mechanism, whose purpose is to provide, on request, support in the event of major emergencies and to facilitate improved coordination of assistance intervention provided by the Member States and the Community following one of the pillar in the E.U., the subsidiariety.

Where is stated that preparatory measures need to be taken at Member State and Community level to enable assistance intervention teams in emergencies to be mobilised rapidly and coordinated with the requisite flexibility and to ensure, through a training programme, the effective response capability and complementarity of assessment and/or coordination teams, intervention teams and other resources, as appropriate.

The E.U. points out that interventions are envisaged through modules. These modules should fulfilling self sufficient requirements, be prearranged, rapidly deployable and equipped, provided on voluntary basis. Starting from this point, to provide a good level of interoperability among modules, training and exercises are fully recommended. The modules will form the nucleus of the EU's rapid response

[55] Weick K., Sutcliffe M. K., 2001, *Managing the Unexpected: Assuring High Performance in an Age of Complexity*, John Wiley & Son Inc., San Francisco.

[56] G.U.C.E (2007/779/EC, Euratom), 01.12.2007, L 314/9 http://eur-lex.europa.eu/en/index.htm

capacity. They are now being developed for a number of different scenarios - ranging from search and rescue to fire-fighting and pumping.

To reinforce and facilitate cooperation in civil protection assistance interventions in Europe, in 2001 a European Community Mechanism Training was set up. It went into force on the 1st of January 2002. Today, 30 states participate in the Community Mechanism and share a common basis of understanding concerning the tasks, procedures and co-operation during international civil protection assistance interventions and build up a capacity to work in a multinational environment, with competent national authorities and under extreme conditions.

This training is provided using different training methods: there are virtual class room, blended learning, e-learning, fora and chat rooms.

In November 2007, at the opening of the Second Civil Protection Forum, Stavros Dimas stressed on an effective European dimension in civil protection for two main reasons. Firstly, by pooling the resources of different member states, it is possible to provide a common European response that is more effective than any member state can deliver on its own. Among other things joint efforts are cost effective.

Secondly, a well coordinated response is always a more effective response. The best intentions need to be structured if they are to be effective - and the Community Mechanism allows the right assistance to be delivered to the right place and with the minimum delay.

Stavros added that the Commission should increase investment in training and create a specialised European Institute for civil protection training that links existing centres of excellence in the Member States.

After these statements, in March 2008 there was the release of the Council's decision, establishing a Civil Protection Financial Instrument, with the purpose of enhancing preventive and preparedness measures for all kinds of emergencies such as natural and man-made disasters, acts of terrorism including chemical, biological, radiological and nuclear terrorism, and technological, radiological or environmental accidents. One of the most important strategies for intervention is a list of actions including training, exercises, workshops, exchange of staff and experts, creation of networks.

The effort that the Commissioner points out also underlines the necessity to respond to new and more complex challenges, inside and outside EU boundaries. This

requires a radical change in MFR education and training, and a converging research effort in the field of security and safety.

6. Methodologies and tools

Training for Medical First Responders is based upon different methodologies, which are put into practice by the organizations MFR work for or are developed specifically by training centres (universities and training organisations).

The different methodologies are aimed at satisfying the need to provide trainees with more knowledge than the one received during their initial/advanced training, and to prepare them for the situations they will eventually have to face on duty.

As stated by D.E. Alexander[57] indeed, **the ability to manage emergencies well can be neither acquired fully in the classroom nor learned entirely by experience**. Both theoretical instruction and a practical apprenticeship are required in order to master the art.

Therefore, the structure of a training course will have to be able to take advantage of the different methodologies, combining classroom instructions and practical training, in order to give the students the opportunity to learn how to apply theoretical knowledge, which functions as a sort of road map amid the chaos of emergencies[58].

Another important issue is making sure of structuring the training course according to the level of the participants. This means that it is necessary to know participants' abilities and previous experiences in order to structure a course. Otherwise, competencies and abilities required to attend the course can be set a priori, and this makes it easier to test the course's efficacy when it ends.

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[57] Alexander, D.E. (2000), *Scenario methodology for teaching principles of emergency management*, Disaster Prevention and Management vol. 9 n°2, pages 89 – 97

58 Drabek, T.E. (1996), *Instructor's Guide: Sociology of Disaster Course*, Emergency Management Institute, Federal Emergency Management Agency, Washington, DC

Methodologies and contents are deeply related to the expected efficacy. Measuring the efficacy doesn't only mean verifying if contents have been developed and if participants are satisfied of the time dedicated to training.

It also means verifying if actions correspond to a more general development and adaptation of MFRs' skills and coping abilities when they face highly emotional situations and have to make decisions and act having only limited resources and pieces of information.

Under this aspect, the more training methods reproduce the real context in which a MFR has to act and require the use of specific competencies (already provided by a previous training, also a traditional training such as the trainer/trainee one) and personal skills, the more these methods prove themselves to be effective.

Talking about competencies needed by rescuers to cope with hostile situations, Eric Dufés59 claims that when such competencies are determined, they can be used for the conceptualisation of national training plans to prepare rescuers to hostile situations that generate risks for his personal health and for the efficiency of his work.

The idea is that, in order to improve the performance of stakeholders in hostile situations, their competencies have to be empowered before intervention takes place. Rescuers can be prepared with several plans and, notably, with an adequate training.

However, training cannot abstract or be set apart from actions aimed at supporting the rescuer inside his organization. That's why Dufés goes on stating that in the training engineering process the analysis of rescuers' work is the centre of the process. An adapted response can, therefore, be offered to the operational needs of the stakeholders.

Thus, each arrangement which tends towards the preservation of the stakeholder's integrity, both physical and psychological, will have to be part of a global action of integration in human resources plans.

59Dufés E. (2008), *Psychosocial aspects in training rescuers: What kind of improvements is needed for empowering* individual *and organizational resilience? Which are psych aspects in the training area we want to diffuse*, Reinforce Rescuers' Resilience, Workshop 30th -31st Jan, 1st Feb.2008 Turin (I) RED project. www.cri.piemonte.it/progetti/red/.

From the point of view of psychological support, Dufés recommend a training action following the pattern of the fundamental disaster phases: 1) during the emergency; 2) after the emergency: the stakeholders come back in a more usual way of life and have to condition themselves to another departure; 3) before an emergency, the stakeholders get ready to face and cope with hostile situations.

7. Contents and standards

It can be understood from what previously stated that education programs blend with the ability of an organization to reflect on itself and to establish its own needs, according to its human resources.

However, there has to be a clear and adequate educational offer that matches these needs.

D.E. Alexander[60] reports that there is a certain lack of consensus on what courses ought to contain. It could be argued that the formulation and use of standards may the vehicle by which that consensus is obtained.

A standard is, or should be, a specification of minimum levels of acceptable content, performance and quality for a product or service. It should be designed to facilitate and encourage best practice and not impede the development of higher levels of attainment. While standards in emergency management do exist, none of them has universal applicability, for there is as yet no prevailing international consensus on what they should contain. This is true for all the major branches of the field: disaster planning, emergency management, information and communications in crisis situations and training and education.

60 Alexander, D.E. (2008), *Training and Education in Crisis Management*, *Reinforce Rescuers' Resilience*, Workshop 30th -31st Jan, 1st Feb.2008 Turin (I) RED project. www.cri.piemonte.it/progetti/red/.

Nevertheless, standards can be formulated for emergency courses. In my opinion they should begin with a statement of the principles on which training should be based. This is one way in which the quality of courses can be ensured. Secondly, standards should tackle the question of the curricular content and duration of courses. Finally, they should ensure that there is a mechanism for applying the standards themselves--i.e. evaluating and recognising courses that fulfil appropriate listed criteria. Moreover, the standards should ensure basic training, advanced training and refresher courses or recertification processes.

Professional associations, e.g. play a role in conferring legitimacy on their members and ensuring that professional standards are set and adhered to.

Examining carefully the reasoning put forward by Alexander et al., we found a recent article in which E.B Hsu, T. L Thomas, E.B Bass, D Whyne, G Kelen and G. B Green[61], focus on the development of key competencies and terminal objectives for training of all healthcare workers in disaster preparedness.

They say that although healthcare worker training has long been accepted as an integral part of disaster preparedness, traditional training practices have not been systematically developed, rigorously examined or objectively tested.

Only in recent years has the emerging sciences of **emergency preparedness and medical education converged** and a body of evidence concerning effective practices for healthcare workforce education begun to arise.

Providing healthcare workers with effective disaster preparedness training poses several major challenges: 1) Best practices to be taught must be identified and recognized; 2) Specific target audiences and the content they should be taught must be defined; 3) Instructional content should be tailored to meet the training requirements for different job categories; 4) Effective multidisciplinary disaster response demands acquisition and application not only of factual knowledge but also complex concepts, multi-level decision making, and specific technical skills. The evaluation of whether these skill sets have been efficiently conveyed and effectively acquired presents its own inherent challenges. 5) Differences among healthcare workers such as prior training, work experience, baseline abilities and cultural background directly impact training effectiveness and must be taken into consideration for the training of large groups.

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61 E.B Hsu, T. L Thomas, E.B Bass, D Whyne, G Kelen and G. B Green (2006) *Healthcare worker competencies for disaster training*, BMC Medical Education, vol. 6

The **development of professional standards and educational programs** based on both the evidence and sound educational theory remains an important gap to be filled. In this paper, they propose a competency-based approach with specific measurable objectives derived by a national expert panel as a paradigm for healthcare worker disaster preparedness and response training.

In conclusion they point out a total of seven cross-cutting competencies and twenty-one terminal objectives for critical event training of all healthcare workers. (Fig. below)

Cross-Cutting Competencies for Healthcare Workers
1. Recognize a potential critical event and implement initial actions 2. Apply the principles of critical event management 3. Demonstrate critical event safety principles 4. Understand the institutional emergency operations plan 5. Demonstrate effective critical event communications 6. Understand the incident command system and your role in it 7. Demonstrate the knowledge and skills needed to fulfil your role during a critical event

These cross-cutting competencies are proposed as the basis for standardized training and unify the disciplines and skill levels involved.

8. Training offer

Training courses for MFRs deal with different topics and can have different contents and duration.

Courses are offered at the Awareness, Performance, and Management & Planning levels, in order to accommodate different job functions of the first responder community.

Awareness level courses are designed for responders who require the skills necessary to recognize and report a potential catastrophic incident or who are likely to witness or investigate an event involving the use of hazardous and/or explosive devices. Performance level courses are designed for first responders who perform tasks during the initial response to a catastrophic event, such as safeguarding the at-risk public, rescuing victims, or decontaminating victims. Management & Planning level courses are designed for managers who build plans and coordinate the response to a mass consequence manmade or natural event.

As far as the use of information technology in education is concerned, the large number of Internet sites which deal with hazards and disasters (we are speaking about hundreds) and the training tools demonstrates a widespread use of the information technology for basic and sometimes advanced education in the emergency management area.

A number of programs have adopted different formats to achieve their stated training and educational goals.

According to the definitions provided by Cedefop (2003)[62] e-learning is learning supported by information and communication technologies (ICT). E-learning is not

[62] *Terminology of vocational training policy* (2004) A multilingual glossary for an enlarged Europe Luxembourg: Office for Official Publications of the European Communities

limited to 'digital literacy' (acquiring ICT skills). It may encompass multiple formats and hybrid methods: using software, Internet, CD-ROM, online learning or any other electronic or interactive media.

E-learning isn't the cure-all for every educational need, but it has the potential to offer useful solutions.
Among the most recurrent problems shown by MFR organizations are the following:

1) need for a large and differentiated group of people;
2) need to contain costs;
3) impossibility/big difficulty in organizing all training sessions that could be necessary (train and retrain);
4) difficulty in recreating all conditions required by the different types of scenario (e.g. fires, destructions, etc);
5) schedule training session so that they don't represent a work overload for payed rescuers, but at the same time they can allow volunteers to participate, too.
6) Need to deliver training in an attractive and efficient way, and to recreate conditions typical of action in emergency (e.g. information shortage, scarce resources in a first phase, etc.)

Some of the above mentioned necessities can be successfully dealt with by using e-learning technologies. However, it is necessary to remember that this training method can't be set apart from all others. In fact, in order to be really efficient, it has to be included in an educational program made up of different training methods (traditional lessons, drill, role play, etc.).

Research has already examined potential and limits of e-learning, regarding both pedagogical and technological aspects, which we refer to for the sake of brevity. [63] [64] [65]

[63] Hsu EB, Jenckes MW, Catlett CL, Robinson KA, Feuerstein CJ, Cosgrove SE, Green G, Guedelhoefer OC, Bass EB: "*Training of Hospital Staff to Respond to a Mass Casualty Incident*", Evidence Report/ Technology Assessment Number 95. (Prepared by the JHU EPC, Baltimore, MD, under Contract No. 290-02-0018). Available online <PDF> at www.ahrq.gov/downloads/pub/evidence/pdf/hospmci/hospmci.pdf. AHRQ Publication No. 04-E015-2. Rockville, MD: Agency for Healthcare Research and Quality. July 2004.

We now want to give an account of some of the tools and methodologies most frequently used to train MFRs, using both information technology and more traditional means.

TABLE TOP EXERCISES

A tabletop exercise is a simulation activity in which a certain scenario is presented and participants explain what they would do to respond.

The scenario for a tabletop activity can be presented orally by an activity leader, in written text, or by audio or video means.

In a tabletop exercise sometimes all information is given at the beginning of the exercise. This way participants concentrate on action in its entirety, on decision-making and on applying theories learned. This method is particularly indicated for crisis management basic training and for training regarding the use of new procedures.

In other simulations, new pieces of information are given as the situation unfolds. This different version of the same method follows the real temporal progression of emergencies. Usually information isn't immediately all available, news need to be confirmed and sometimes they can be conflicting with previous pieces of information and require that a change in decision-making be made.

This method encourages discussions and interactions among participants, and considers the relationship between them as the best way of choosing how to intervene.

ROLE PLAYING

In a role play students take on another person's role. The success of every role play depends on whether participants know exactly what they have to do.

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[64] Gruntfest, E. and M. Weber 1998. *Internet and emergency management: prospects for the future*. International Journal of Mass Emergencies and Disasters 16(1): 55-72. Available online <PDF> at www.training.fema.gov/emiweb/downloads/IJEMS/ARTICLES/INTERENET%20AND%20EMERGENCY%20MANAGEMENT%20PROSPECTS%20FOR%20THE%20FUTURE.pdf.

[65] Battezzatti, L., Coulon, A., Gray, D., Mansouri, I., Ryan M.& Walker, R.. "*E-learning for teachers and trainers. Innovative practices, skills and competence*". Cedefop Reference Series; 49. Luxembourg 2004

This basically allows every participant to gain deep knowledge regarding their own role and the role played by other people. Competencies, roles, chain of command are among the fundamental notions to be used when intervening. This technique, which can be easily reproduced in every educational environment, typically concentrates on "who does what".

Role playing usually works better if done in small groups, but the other participants are involved, too, as observers. The trainer and the other participants watching will have to notice corrective actions and knowledge gaps. Role play is closely connected to simulation.

SIMULATION

A simulation is a model of events, items or processes that do or could exist. The main difference is that in a role play participants are usually told who they are and what they have to say, their roles are clearly defined, they both know what will happen, and what they are expected to say.

A simulation is open-ended tasks. It means that are tasks to which there is not a single absolutely correct answer or where a variety of answers are possible.

The possibility of learning by using methods and techniques that are based on and take advantage of information technology, possibility already extensively discussed in research, hasn't been fully exploited yet.

There is a bit of skepticism that has characterized and still characterizes practitioners about the profitable use of the information technology as succedaneous to the traditional training – characterized by lectures in a classroom for theoretical contents and exercises for those practical.

This situation highlights the persistent difficulty of the academic research in exchanging with practitioners. Some steps still must be done. It's a question of highlighting the applicability of the researches to the field and to the emerging problems with which the MFRs have to face, to suggest some of those new and based on the requirements of the MFRs and working on the continuous transfer of the information from a world to another.