HEALTH AND MENTAL HEALTH EMERGENCY RESPONSES IN WUHAN TO COMBAT COVID-19

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Abstract
The traditional Disaster Management Cycle describing the four stages of Preparedness, Response, Recovery and Mitigation is employed to provide guidelines for emergency management. The World Health Organization in 2019 based on the DM concept developed the Health Emergency and Disaster Risk Management Framework (Health-EDRM) to provide guidelines for governments to counteract the effects of all disasters including that of a public health nature. Health EDRM recognized a number of paradigm shifts including that to all sectors approach and all community approach. Then as we all know the COVID-19 broke out as an unprecedented pandemic that over 1.5 million of lives have up to now lost. Wuhan was the first hardest hit city in China and also in the world. Health-EDRM was put to test immediately and the merits as well as the inadequacies of the Health-EMDR framework can be examined against the COVID-19 attack. China has revamped its emergency management system and establish the Ministry of Emergency Management in 2019. The importance of grass root involvement in emergency prevention is fully recognized however the mechanism of social psychological mobilization is still unaddressed. The aim of this paper is to discuss the needs for integrating social and psychological responses into the framework as revealed by the tremendous needs for psychological counseling and consequently the explosion of online counseling services for Wuhan residents manned by volunteer counselors all over China. A model of Emergency Management Hexagon composes of 12 emergency engineering has been proposed by Wong et al. in 2019. Adding to this Hexagon a framework of Social and Psychological EDRM is outlined in this paper. It is suggested that one more paradigm shift for Health-EDRM is to shift from focusing on physical health to focusing on holistic health, that is to develop SocioPsychological – EDRM.

Keywords: Emergency Management，Social Psychological Emergency Response, Crisis Intervention, COVID-19 Response, Community Resilience.

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Paradigm shift of International disaster Management system

United Nations Office of Disaster Risk Reduction is an international organization responsible for the implementation of International Strategy for Disaster Reduction - UNISDR，UNISDR had already hosted a number of world conferences on disaster reduction and submitted the results to the United Nations for adoption. Taking 1994 Yogohama Strategy and 2005-2015 Hyogo Framework of Action HFA2 for example，Yogohama Strategy proposes to strengthen Prevention，Preparedness and Mitigation. Hyogo Action proposes that participating countries should build the Resilience of Nations and Communities for Disasters from 2005 to 2015, which shows the paradigm shift in international emergency management. At the same time, the Program for deepening the Reform of the Party and State institutions, issued by the CPC Central Committee in 2018, pointed out the measures to set up an emergency management department to improve the level of national emergency management and the ability of disaster prevention, mitigation and relief.

International and domestic experiences tell us that modern emergency management needs to make the following paradigm shift：

1. From a single focus on post-disaster emergency to a focus on disaster prevention and avoidance, prevention is better than treatment；

2. From a single focus on rescue mechanism to a focus on comprehensive catastrophe management mechanism；

3. From a single focus on the central rescue model to a focus on cultivating community self-rescue capacity model

It can be seen that the above three international and domestic shifts in modern emergency management echo the call for International Strategy for Disaster Reduction. In the internationally recognized emergency management, the Hyogo Framework 2 follows Emergency Management Cycle in the stage of disaster emergency management：

1. Preparedness Phase

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[2]联合国减少灾后危机署 《兵库行动纲领 2005-2015（Hyogo Framework of Action HFA）》联合国 2005 年月 22 日 https://www.unisdr.org/we/coordinate/hfa

2. Response Phase

3. Recovery Phase

4. Mitigation Phase

Figure 1 : Emergency Management Cycle

Although the four-phase disaster management program is relatively simple and easy to understand, in its application the management authority will easily neglect some key measures and forget to implement and monitor these measures in the process. The advantage to have a more detailed theory will enable governments to allocate resources effectively and designate the main responsible departments in different phases, so as to avoid having a crisis response system in vain, and fail to implement the responsibility to specific government departments. Emergency management is a cross-sectoral work. If responsibilities are not defined clearly and assigned to respective institution or personnel specifically, it is bound to fail in emergency response, especially when key areas of disaster prevention and preparedness are neglected. Every time when a major disaster occurs, the leaders of a city, province, or even a country will intervene nervously. But as soon as the disaster settles down, the promise for prevention and preparedness becomes lip services.

In 2019, World Health Organization (WHO) published the Health Emergency and Disaster Risk Management Framework3 which emphasizes the critical importance of prevention, preparedness and readiness, together with response and recovery, to save lives and protect health. It outlines the need to work together because EDRM is never the work of one sector or agency alone. It shows how the whole health system can and must be fundamental in all of these efforts. The vision of EDRM stated that,

"highest possible standard of health and well-being for all people who are at risk of emergencies, and stronger community and country resilience, health security, universal health coverage and sustainable development".

and the outcomes addressed
"countries and communities have stronger capacities and systems across health and other sectors resulting in the reduction of the health risks and consequences associated with all types of emergencies and disasters".

In EDRM framework, the Core principle are :

- risk-based approach;
- comprehensive emergency management (across prevention, preparedness, readiness, response and recovery);
- all-hazards approach;
- inclusive, people- and community-centred approach;
- multisectoral and multidisciplinarycollaboration;
- whole-of-health system-based;
- ethical considerations.

It is very obviously to see the paradigm shifts from the core principles and values inside emergency management.

From	To
Event-based	Risk-based
Reactive	Proactive
Single-hazard	All-hazard
Hazard-focus	Vulnerability and capacity focus
Single agency	Whole-of-society
Separate responsibility	Shared responsibility of health systems
Response-focus	Risk management
Planning for communities	Planning with communities

Figure 2

 EDRM also strongly emphasized that the health part needs multisectoral and multidisciplinary collaboration.

Wuhan Outbreak and respective Crisis Response

When China was attacked by the COVID-19 in January of 2020 we thought that we can draw from our experiences from SARS, a similar public health crisis for China happened in 2003, and could handle this outbreak competently. Surprisingly, we found that he COVID-19 is totally different from SARS, in its way of spreading among the population and threatening the healthcare systems. There are many warnings of the epidemic deliberately circulated from different sources four to six weeks ahead of the outbreak. China Center of Disease Control sent two expert groups to inspect the city of Wuhan. On January 23, 2020 announced by the Epidemic Prevention and Control Headquarter of Wuhan that the citizens should not leave Wuhan without special reason by land, by water or by air. This is actually a result of the plan made by the CPC Central Committee a day before to implement comprehensive and strict control over personnel outflow for the whole Hubei province and particularly the city of Wuhan.

While, this is the milestone of the impact stage. From December, 2019 to March 2020, we can divide the outbreak into five sub-periods(Pan A. et al. 2020).

The impact stage

Firstly it was from December 8, 2019 to January 9,2020, unfortunately, there were no intervention. The second period, from January 10 to 22 in 2020, was characterized by massive human movement due to the Chinese New Year holiday.

The rescue stage

From January 23, 2020 the city was shut down meaning traffic restriction and started home quarantine, which was practiced until February 1. Then from February 2 to 16, the centralized quarantine and treatment were adopted. Finally from February 17 to March 8 when the study was concluded, universal symptom survey was conducted for all residents in Wuhan.

Whole community 5 in 1 Response

The five-in-one mass prevention and mass treatment group consists of grid management coordinators of the community resident committee, the cadre of women's federation, civil police, medical workers, property cleaning personnel, and other community service personnel.

They are the backbone of off-line community resident services, which compose the robust defense line of mass prevention and mass treatment, responsible for the all-around implementation of various measures of joint prevention and control. In this period a total of 32,583 confirmed cases were recorded with most cases occurred between January 20 and February 6, with a spike on February 1. It is obvious that the centralized quarantine and treatment were extremely effective in bringing the daily records of confirmed cases down even though a comprehensive testing was provided after February 17. Not until April 8 the Wuhan shut down of was terminated.

Crisis intervention and psycho-social support during the shut-down period of Wuhan

On January 23, Wuhan restricted its citizens from leaving either by land, water or by air. People were caught in a state of horror and immense anxiety. Responding to the crisis, practitioners with professional background in social work, psychological counselling and health service from all over China were recruited on a voluntary basis by local social workers and formed into 'online groups' to provide psycho-social support.

SWAB, a NGO specialised in disaster response, was invited to offer crisis intervention (CI) training. Content of training followed closely the Group Crisis Intervention Manual (Mitchell & Everly, 2000). Applications of CI were also introduced (Roberts, 2005). A CI Readiness Check List was made available to counsellors to assess their availability, adaptability, awareness and attentiveness on their own (Wong, 2014).

Subsequently, supervisions were offered to 120 counsellors for 38 sessions. A total of eight teams of counsellors, five of them trained in counselling psychology, one in social work and two in both professions, were served. There were 16 supervisors certified by International Critical Incident Stress Foundation in Individual and Group CIs, plus 14 social workers to take records, were organized by SWAB as the supervisors group. In February, 18 sessions of supervision were held, and 20 in March. Total number of attendees was 471 (Wong, 2020).

The characteristics of COVID-19

Why this public health crisis caused such panic for people, we can analyze it via its characteristics. One vital sign of the sickness is short of breath, which is quite painful for human beings. Secondly, it is such a pain of loss for families, and also, because the severe infectiousness, many people recovered while still suffering from guilty of shame and stigma from communities. Also, it has a high fatality rate if detection is late, for patients with complication sickness, and when medical equipment is inadequate; it is a moblization challenge more than a preparedness issue and it is a psychological health problem more than a physical health problem.

Psychological reactions of people in Wuhan

Researchers found that the needs presented to the hotline services after the outbreak of SARS in 2003, were mainly information seeking, availability of resources and then personal problems and emotions (Leung & Wong, 2005). The three aspects form the most frequently raised concerns by help seekers in hotline services, one followed the other as SARS crisis moved beyond the impact stage. A similar pattern was witnessed in the Wuhan web-based counseling services reflected by our supervision records. It is important to point out that though the presenting problems at the early stage were informational and resource needs, they are inseparable from emotional needs expressed in terms of anxiety, fear, helplessness, despair and exhaustion.

Community mental health response

Up to March 12, there were altogether 44491 verified cases of corona viruses from the city of Wuhan. Six city districts have recorded more than 5000 ex-patients. (Hubei Health Commission, 2020) Community leaders and youth volunteers can be trained to identify and report people who exhibit depressive symptoms. Community Health and Mental Health Educational and Promotional Projects should be launched as soon as possible. Crisis Intervention in these complex situations is definitely challenging to all disaster workers.

lessons learned from Wuhan's Social-Psychological intervention

In this case, it is a digital warfare, psychological intervention is greatly assisted by digital technology; it pulls professional human resources from whole country;it allows social workers and counselors to assist even in RESCUE, by helping to identify asymptomatic cases; it allows psychological services to provide medical information (EMPOWERMENT) and facilitate the matching of medical resources with the most needy.

Meanwhile, it is the perfect example of whole community approach. It allows for psychological care and comfort. It facilitates hospice care and grief therapy, which helps to prevent post traumatic stress disorder（PTSD） and facilitate recovery. Inside the community, during the lock down, huge numbers of community workers provided assistance to disadvantaged groups showed strong

community support. Moreover, it is a community capacity education campaign.

Of course, for human beings, it is a very good chance to gain information, education, empowerment, and most importantly, resilience.

Conclusion

There is a perennial gap between theory and practice, between academia and active professionals in the field of disaster management. This gap means that valuable lessons are not learned and people die or suffer as a result.---By Alejandro Lopez-Carresi et al., International Lessons in Risk Reduction, Response and Recovery.

Contributions of the DM Cycle Theory

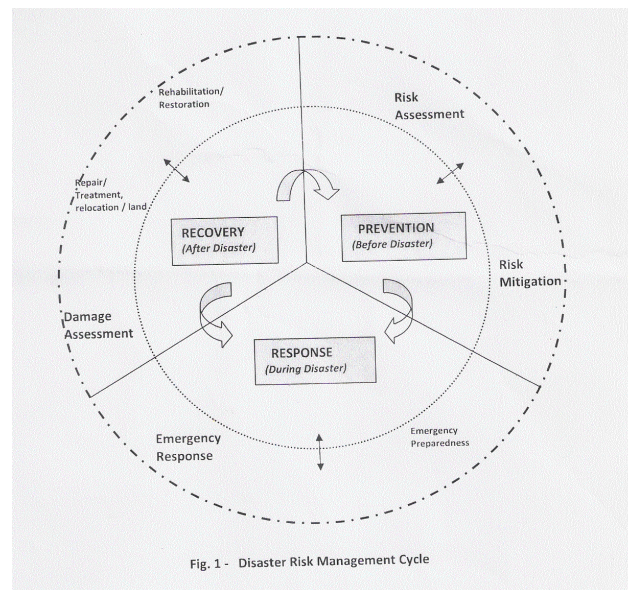
Fig. 1 - Disaster Risk Management Cycle

Figure 3: Disaster Risk Management Cycle

The DM cycle theory promotes the paradigm shift from reactive disaster response to the proactive national plans, from relying not on linear mechanism to a circular DDR system, from rescue to assessing risks, identifying vulnerabilities, conducting risk reduction, and further to capacity building and building resilience in the community.

International Strategy for Disaster Reduction promotes the following four objectives as tools towards

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reaching disaster reduction for all:

- Increase public awareness to understand risk, vulnerability and disaster reduction globally.

- Obtain commitment from public authorities to implement disaster reduction policies and actions

- Stimulate interdisciplinary and inter-sectoral partnerships, including the expansion of risk reduction networks

- Improve scientific knowledge about disaster reduction

As we mentioned earlier, Hyogo Framework of Action proposes that participating countries should build the Resilience of Nations and Communities for Disasters from 2005 to 2015, which shows the paradigm shift in international emergency management.
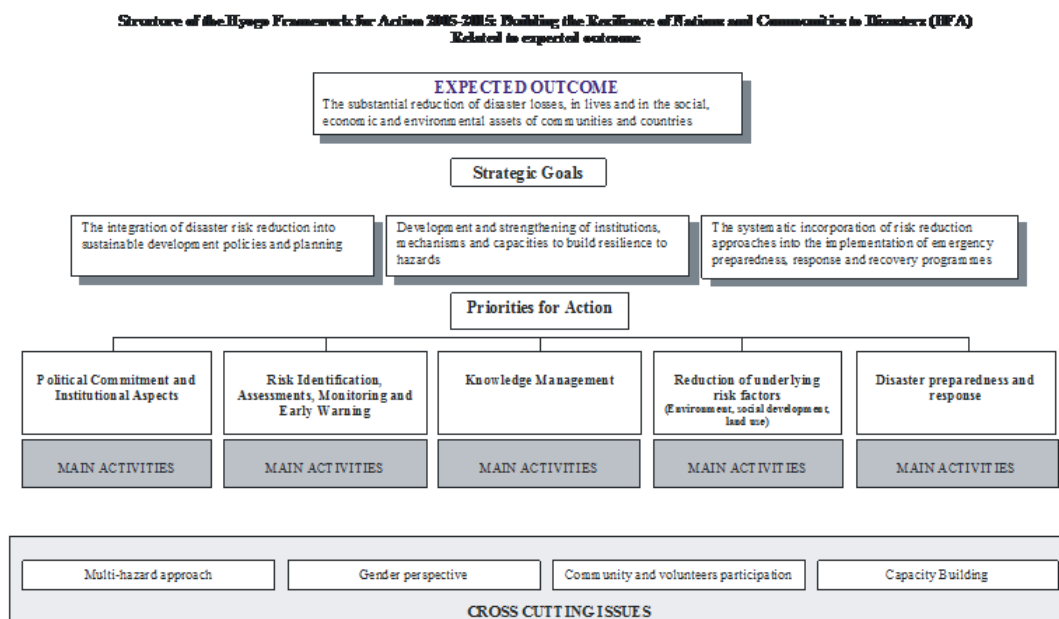

Figure 4:Hyogo Framework of Action (HFA)

While, still we got many questions to ask as 2015 has been passed and 2020, we are facing the new challenge. Are we really adopting a balanced approach? Have we put too much emphasis on government corodination power? Shall we built our strengths more on self help and mutual help ?

EM Response System in China facing new challenges

Impact of the Wenchuan Earthquake points to the need of integrating psychological crisis intervention into Emergency Management(Ma, 2008). "Government should explore psychological responses on top of material responses in disaster" (Bao, 2008). Emergencies can bring serious psychological trauma to the public and cause social unrest. Psychological crisis intervention is characterized by complexity, classification and follow-up. It includes psychological crisis prevention mechanism before, during and after emergency. The key lies in the leading responsibility of the government (Song, 2017).

We need a new approach: an integrated with social, psychological, community-centered model.

"As we know, resilience as the ability to cope or adapt to change is crucial in responding to disasters; and community empowerment is central to disaster interventions and requires the development of social capital on the basis of: Trust and empathy, Reciprocity and mutuality, Accountability, Solidarity, Collective action, Power-sharing, and so on." ---By Lena Dominelli, Durham University

Revisiting the Disaster Management Cycle Theory, analysing Response Practices in City Disasters of China, we advocated for an Integrated and Holistic Model of EM Hexagon a year ago. It integrated social psychological crisis intervention with other EM sectors, provides specific areas of concentration to different professionals, and also provided a framework/platform for interdisciplinary collaboration. We look forward to the further improvement of the emergency management system throughout the country and the further improvement of core competencies. Although disasters are inevitable, trauma can be reduced.
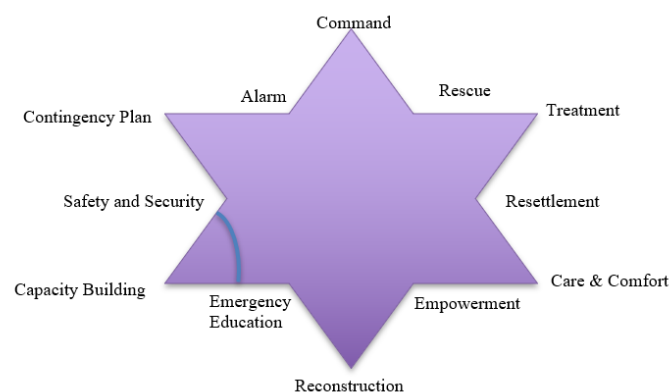

Figure 5: the EM hexagon of Emergency Management

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