5th International Conference on

Medical Informatics & Telemedicine

August 31- 01 September, 2017 | Prague, Czech Republic

NETWORK SCIENCE IN DISASTER AND PUBLIC HEALTH PREPAREDNESS

Liaquat Hossain[a] and **Shihui Feng[a]**
[a]University of Hong Kong, Hong Kong

Network science provides us with theoretical and methodological foundations drawn from physics, graph theory, sociology and social psychology to make sense of various complex systems in disaster and public health preparedness. Disaster and public health preparedness is a collective action conducted by a group of individuals and organizations, in which information and communication flow from multi levels becomes critical to the functioning of the complex systems. Awareness of locally situated knowledge and shared understanding of disasters among public and hierarchical governing systems can be instrumental in supporting decision making, early warning and outbreak detection. Network science enables us to analyze the underlying structures and model the dynamics of networks representative of real-world systems in disasters. From this, we can examine the effectiveness of disaster management, monitor public awareness, achieve early recognition of disaster occurrence, and enhance the robustness of response systems. Data availability provided by digital evolution can further promote the study of large scale network in disaster at local and global level. Our proposition is here to suggest effective strategies using network science to study social and organizational systems at play in disaster preparedness and response. In our presentation, we will discuss a series of work related to modelling social systems for detecting early warning signs, improving our understanding of locally situated information of disaster affected areas, and supporting communication and collaboration across public and hierarchical governing systems.

Notes:

J Health Med Inform, an open access journal
ISSN: 2157-7420

Medical Informatics 2017
August 31- 01 September, 2017

Volume 8, Issue 4 (Suppl)

Page 73