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## Health information and intelligence management: an experience from COVID-19 at Patan Hospital, Nepal

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### Abstract

Health information and intelligence are important components of health care system. Moreover they are very crucial during disaster management. Collecting right information at right time and delivering it to right target at right time is important during disaster. During COVID-19, at Patan Hospital, the information management has been done through external communication officer who is a part of hospital incident command system.

**Keyword:** COVID-19, health information, intelligence

## Introduction

Information is an integral part of intelligence system. Health intelligence is a system of acquiring and processing information regarding health care system and management. As our emergency management and incident response depends upon these information, health intelligence is important for the successful management of any disaster. Despite this, information and communication are routinely identified as a problem area during simulation exercises and real events.<sup>1,2</sup> Nevertheless, access to smart phones, internet and social media has made the process much faster to acquire large pool of information. This has created more challenge to everyone regarding management of health information.

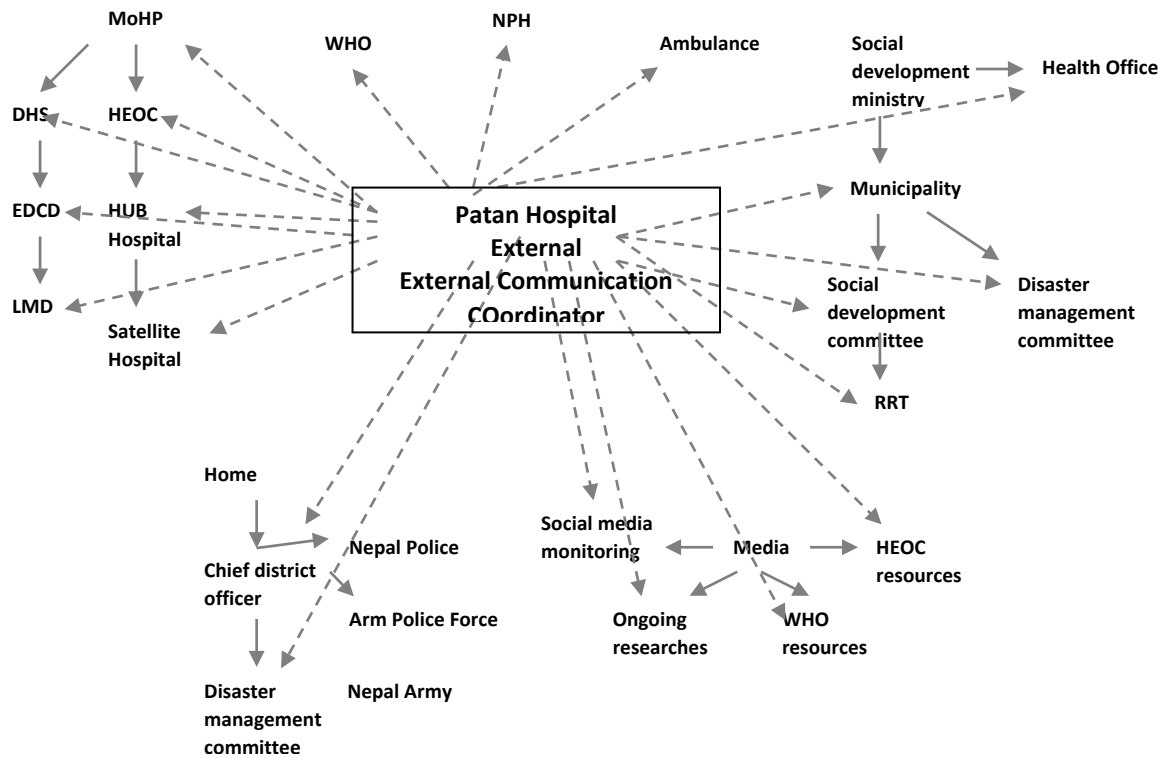
Management of COVID-19 is a challenge for the entire world at this point of time. The world is depended on the information handed over by each other. Daily incident action planning depends on the information that we receive. Therefore, at Patan Hospital, a position of external communication officer has been identified in the hospital incident command system for information management. The hospital incident command system includes, incident commander, planning officer, operation officer, logistic officer and finance officer. External communication officer is positioned under operation officer. The objective of this position is to collect information required for the response of COVID-19.

**Information and intelligence management-** Information can be broadly classified into two types: one which is related to the problem and the other related to the solution. If information is not related to either of the both, then this information might not be of priority for the present incident action plan. Thus, categorizing health information in this way helps us in prioritization of information. Once we receive information, the targeted area needs to be identified. The possible target areas of information are: supply,

support, surge and service. This information needs to be categorized and supplied to respective officers of hospital incident command. The information supplied to right person will be processed quickly and efficiently. This is very essential for the hospital incident command system. At Patan hospital, external communication officer briefs the information in a daily briefing meeting of operation committee. Operation officer in turn will brief it at daily hot debriefing of hospital incident command.

The networking is very crucial to inflow of information, Figure 1. Patan hospital is one of the six hub hospitals inside Kathmandu valley, so the external communication officer is in close coordination with Ministry of Health and Population (MoHP), Health emergency operating center (HEOC) and satellite hospitals. Patan hospital has 15 hospitals around it which functions as satellite hospitals. Communication to these satellite hospitals is done through three groups formed at the respective hospital. These are executive group, COVID-19 focal person group and intensive care unit coordinator group. Similarly, administrative information is collected from municipality office at local level and Chief district office at district level as well.

In most of the developing countries, social media and mobile technologies have not been fully integrated into disaster operation plans, and their roles and extent of use are not standardized. However, these are the important source of information. Media monitoring is one of the important and powerful way of acquiring information. There are many information in social media but it has to be carefully interpreted and analyzed. Moreover, it is also important to keep track of recent scientific evidences and advances. At Patan Hospital, we have been closely following guideline released by HEOC, interim guidance released by World Health Organization (WHO) and WHO COVID-19 database.



**Figure 1. External coordination mechanism of Patan Hospital for information management in COVID-19 response**

MoHP=Ministry of Health and Population, DHS=Department of Health Service, EDCE=Epidemiology and Disease Control Division, LM=Logistic Management Division, WHO=World Health Organization, NPHL=National Public Health Laboratory, RRT= Rapid Response Team, HEOC= Health Emergency Operating Center

**Conclusion**

Every hospital must have a proper information management system. This includes identifying source, message, messenger and destination. As there is a changing epidemiology, demand, supply and understanding of COVID-19 every day, it is essential that information management system is activated as a part of disaster management plan. Health intelligence is essential for rational use of resources and appropriate response of COVID-19.

**Conflict of Interest**

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None

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