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**Governing Disasters, Its Challenges to Integrated Network of Emergency Preparedness: A Systematic Literature Review**

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**ABSTRACT**

Disaster governance faces multiple challenges given the large variety and amount of resources, skills and expertise that adequate disaster response commands. Disasters do not necessarily respect territorial boundaries, or may overwhelm the capacity of any nation. Therefore, a collective, joint or even global effort becomes essential to overcome the crises. The paper is aimed to identify the nature of disaster governance and its challenges to integrated networks during emergency situation. The researcher utilized systematic integrative literature review using content analysis technique. Due to diverse potential findings, the review utilized a certain degree of limitations as criteria for selection. A multi-staging strategy was developed to identify the significant and relevant review literatures. Key words such as disaster, risk, management, emergency, governance were used to retrieve significant literatures. ProQuest is the only database used in the literature retrieval. The reviewer also limited the selection process by using considerable criteria. The literature is published from January 2015 to January 2017 internationally. Literatures were excluded if they did not meet the inclusion criteria set by the reviewer. Based from the analyses, literatures revealed that disaster governance is highly dynamic, complex, multi-level, multi-actor and fragmented and patchy in nature. Particularly, disaster governance takes place a broad range of both public and private sectors at various levels. This involves various phases of management, thus challenges the disaster governance. Furthermore, the literature unveiled that some of the challenges encountered by the disaster governance include people, limited resources, out-of-date or inaccessible materials, technology and jurisdictional politics. Therefore, it is concluded that emergency preparedness is an essential component of the disaster governance and the health care delivery system. Standardized strategies concerning disaster preparedness that allow flexibility in consideration of factors which challenges the governance. This creates a more comprehensive planning approaches and in turn, a more prepared citizens.

**Keywords:** disaster governance, emergency preparedness, integrated network

**INTRODUCTION****Background of the Study**

Over the past decades, the huge and protracted impacts on human lives caused by disasters have revealed a dire need for improved national and international protection frameworks, and essentially for better disaster governance. Several international initiatives have sought to improve the delivery of care especially during emergency situations and disasters, in particular by clarifying rights and duties, standards and procedures.

This paper is developed to better coordinate and synthesize different regimes on disaster governance and the role of integrated networks for care delivery during emergencies.

**Problem Statement**

The review is aimed to identify the nature of disaster governance and its challenges to integrated networks and domains during emergency situation.

Specifically, the study sought to answer the following:

1. What is disaster governance;
2. What are the challenges/barriers of governance to integrated networks and domain as responders;
3. What are the opportunities brought by disasters to integrated networks

**METHODS**

The researcher utilized systematic integrative literature review using content analysis technique. Due to diverse potential findings, the review utilized a certain degree of limitations as criteria for selection. A multi-staging strategy was developed to identify the significant and relevant review literatures. Key words such as disaster, risk, management, emergency, integrated network, governance, healthcare, nurses, role, preparedness, community preparedness, challenges, reduction, were used to retrieve significant literatures. ProQuest is the only database used in the literature retrieval.

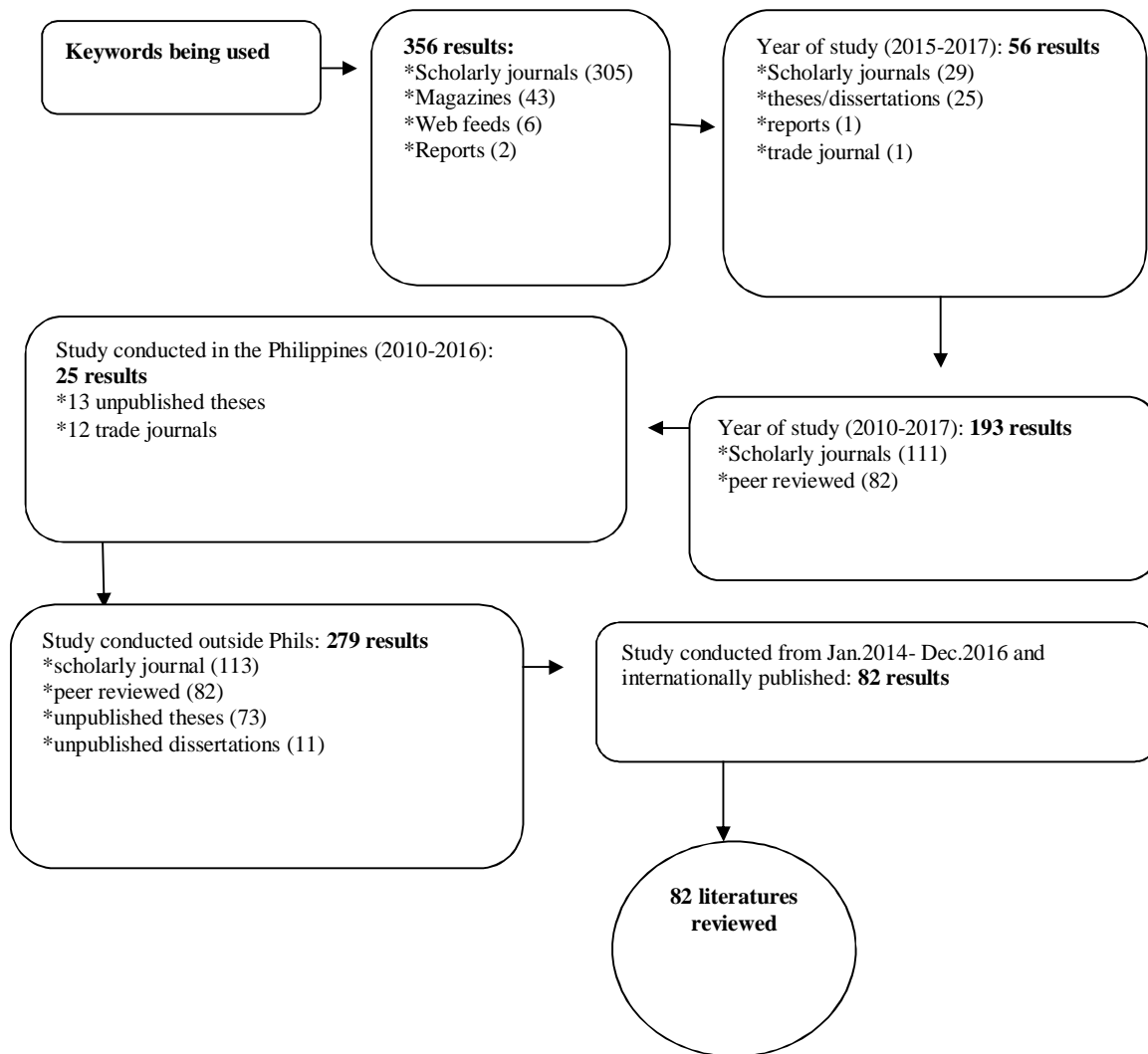


Figure 1. Method structure

Figure 1 shows the method designed by the researcher to identify literatures for review. The reviewer also limited the selection process by using considerable criteria. The literature is published from January 2014 to December 2016 internationally. Literatures were excluded if they did not meet the inclusion criteria set by the reviewer.

## RESULTS

### Disaster Governance

Based from the review, literatures revealed that disaster governance is highly dynamic, complex, multi-level, multi-actor, and fragmented in nature. Particularly, disaster governance takes place amongst a broad range of public and private actors at various levels (from local to the global) and involves various types of activities, in various phases of disaster management.<sup>(1)</sup>

According to Gall<sup>(2)</sup>, disaster governance is a set of interrelated norms, and institutional actors and practices that are designed to reduce the impacts and loosely associated with disasters. Disaster governance goes beyond governmental settings, powers, processes and tools by encouraging collective actions through engagement of all stakeholders operating at all scales- from local to global.

### Challenges of Governance to Integrated Networks

Literature reviews revealed that the creation of integrated network for emergency care is tested by several factors thus, challenges governance. Emergency care according to Carr<sup>(3)</sup> is an essential component of the care delivery system, however received little attention during debates for health care reform. As a result, emergency care during disasters remains outdated and fragmented.

The challenges to any change in or redesign of the system are myriad. Barriers to change for connecting emergency care fall into five basic categories: people, quality and processes, technology, finances and jurisdictional politics.

#### *People*

The current system has shortages of physicians, nurses, pharmacists, respiratory therapist, medical technologist and information technology professionals that limit its capacity to respond to time-sensitive conditions. This limitation worsen as the population ages, patients' conditions become more complex, and increasing numbers of insured people further reduce the availability of providers. These resources are also poorly distributed all throughout the region.

#### *Quality and processes*

Facilities with larger medical staffs, multiple specialists and specialized care resources generally are referral centers "downstream", typically large cities, which accept patients from small facilities "upstream", typically in less urban areas. This unidirectional flow is fraught with problems such as inefficiency, ineffectiveness, delays in care, poor handoffs, and unnecessary travel-all of which are contrary to the goal of delivering high-quality, patient-centered care. The lack of collaboration, feedback and communication associated with the continuing transfer of patients from smaller to larger hospitals shifts knowledge and learning away from the local providers and may undermine local clinical skills and knowledge over time. Current efforts to improve performance are mostly local, limiting the development of integrated networks of care. The lack of quality metrics and transparency at the system level makes it difficult to reliably identify performance issues that need solution.

#### *Technology*

Technology and equipment such as that involved in cardiac catheterization, magnetic resonance imaging, and specialized surgery can facilitate rapid accurate diagnoses. However, the early interventions that these technologies can offer are maldistributed, with specialized diagnostics and therapeutics concentrated in larger referral centers. This necessitates transfer of patients to these fixed assets from smaller facilities.

The ability to share data and images in smaller facilities and rural areas is restricted by the lack of interoperable medical record systems, limited broadband capacity and limited health information technology expertise. The lack of interoperable clinical systems further restricts collaboration and forces the movement of patients for evaluation and definitive care.

### *Finances*

Financial incentives are misaligned. The Emergency Medical Team Association<sup>(4)</sup> requires only hospitals to provide needed care regardless of financial considerations. The association's intent to create a safety net has paradoxically resulted in this new form of "patient dumping" that puts the burden on smaller local hospitals to pay for both evaluation and treatment and transfer of patients to larger facilities.

Physician and prehospital reimbursement structures are also misaligned. Emergency medical services providers are reimbursed only if they transport patients to emergency department, limiting their ability to avoid transporting patients whose condition improves with on-scene care. Physicians are reimbursed only for face-to-face interactions. Thus, patients being treated in the emergency department with time-sensitive conditions who need subspecialty evaluation that is not available locally have limited options, often involving transfer or timely follow-up care.

Too many avoidable transfers away from local care can also undermine the economics of local facilities and lead to a spiral of events resulting to closure of a hospital. Despite the growing volume of patients overtime, the number of operational hospitals declined by 12% over the past 20 years.

### *Jurisdictional politics*

Each hospital develops its own mechanism for granting practice privileges to providers. This unnecessary variation in administrative processes and approved levels of practice is a major impediment to resource sharing and collaboration. In addition, specialists often limit their availability to one or two hospitals in an area because each facility has a different credentialing process that is onerous and time-consuming.

State licensing processes are expensive to maintain, and states take months to accept or reject a provider's application. These barriers to collaboration and the provision of emergency care within a region are exacerbated when health care demands exceed local resources, as in the case of disasters or public health emergencies.

## **Opportunities Brought by Disasters to Improve Integrated Networks and Domains**

Despite these challenges, many elements already exist that can be leveraged to remodel the emergency care system. Rapidly occurring changes in each category are creating opportunities for increasingly patient-centered and value-based regional systems requiring developed, coordinated and accountable emergency care systems.

### *People*

The need for continuous provision of early interventions and the delivery of high-quality emergency care has workforce implications that must be addressed. To provide comprehensive care to clients, hospitals must have ready access to needed physicians and specialists or at least inform the public of their current capabilities in real time. All resources that are in short supply should be shared across regions in order to help patients and providers in need.

### *Quality and processes*

Health care providers would do well to adopt the strategy in which competitors cooperate to leverage each other's resources to lower costs, expand markets, and increase the value of the services they provide. Regionalized approaches are also needed to move information collaboratively to strengthen systems financially, minimize erosion of experience, and strengthen hospital capabilities and preparedness within a given region. Facilities should be put in place agreements for exchanges of information, virtual consultations for emergency care, and regional coordination and management of medical resources. These care coordination exchanges could help bridge gaps in resources and personnel across settings of care.

### *Technology*

Integrated care systems should demonstrate this area of opportunity through using shared medical records that increases efficiency, lower cost and improve outcomes. Medical expertise is virtually available through use of secure high-resolution audio or video conferencing, mobile devices and tablets. Advances in high-quality

broadband internet access in rural areas and cloud-based computing systems that maximize demand for local support for information technology can accelerate remote collaboration.

### *Finances*

Payments limited to traditional models of medical care stymie innovations such as alternative destinations; using paramedics to provide care in the community, such as vaccinations and home visits; and telemedical consultations. Emerging payment models such as medical homes, accountable care organizations to increase coordination and integration of care within the region. These emerging models foster the leveraging and sharing of scarce resources to increase both their impact and the distribution of risk.

### *Jurisdictional issues*

Key to improving patient outcomes in emergency care is overcoming of barriers to local and regional cooperation. Recent natural disasters have highlighted the need to share information and resources cross jurisdictions. Multiple states should create health care coalitions that can be both strengthen day-to-day emergency care and build the capacity to respond to large-scale disasters.

Regions are beginning to develop centralized tracking of care resources to better coordinate the movement of patients and information.

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