

## Sustainable framework for hospital response during health emergencies

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### **ABSTRACT**

COVID-19 pandemic poses challenges to the healthcare systems worldwide, which soon exponentially strained hospitals' systems and resources, leading them to challenge dilemmas. Meanwhile, the Philippines has made remarkable emergency response efforts against this pandemic but was exhausted due to the multiple healthcare concerns that needed to be addressed. Listening to hospitals' heads and nurse managers about their strategies drove this study to realize its aim to develop a framework for hospital responses during health emergencies. Triangulation was used in data gathering anchored on Glaser and Strauss and Charmaz's constructivist grounded theory. Careful analysis, constant data comparison, theoretical sampling to ensure the saturation of categories, and generating theory intimately linked to and grounded in the data are imperative for qualitative research. Concurrent collection and data analysis assure mutual interaction between what is known and what one needs to know, along with theoretical thinking, which provides emerging ideas that are reconfirmed as new data. The research questions were answered by documentary analysis, ZOOM's virtual interviews, and focus group discussions. A purposive sampling of thirty participants comprised ten participants from hospitals in the three main islands of the Philippines, wherein eventually, thirty participants were reduced to fifteen. Hospitals have a high level of preparedness for health emergencies, and a sustainable framework for the pandemic and other health emergencies is developed in a 5-point domain: operations, morale, infrastructure, finances, and innovations.

**Keywords:** grounded theory, virtual focus group discussion, triangulation, hospital operations, innovations.

### **1 INTRODUCTION**

COVID-19 pandemic poses overwhelming challenges and strains to the healthcare systems in the world. As this virus is novel, the necessary precautions and management it entails have exponentially

strained the methods and resources of hospitals, lending them to challenging dilemmas in terms of morale, operation, infrastructure, and finances.

As Convocar (2021), the Philippine College of Emergency Medicine president, puts this pandemic reveals the hospitals' and the healthcare systems' vulnerabilities (Roper, 2021, par. 18). While the Philippines has made remarkable efforts to respond to this pandemic, such actions can be exhausted given the many healthcare concerns that the health department sustains apart from this present-day pandemic. Let alone the propensity of the Philippines to be affected by the many natural hazards, given the average of over twenty typhoons yearly and a high probability of earthquakes and volcanic eruptions, which can aggravate the issues and concerns brought about by the effects of the COVID-19 emergency (*COVID-19 Humanitarian Response Plan Philippines*, 2020).

This pandemic has allowed people and hospitals to bring out the best in them on a positive note. It has highlighted the potential impact they can have, which Norbash (2020), and Interventional and Neuroradiologist from the University of California, calls the rapture of action or the opportunity to do things that otherwise could not have been done. The challenge is given to most hospitals because this pandemic presents many issues and concerns apart from primary care that hospitals deliver, ranging from morale to operational to financial aspects (Norbash, 2020) and infrastructure. There are several ways and measures established by Philippines hospitals that are rich and insightful. These initiatives and decisions are all in place to respond to the call of the time, but no one knows yet whether these are effective for quick response as there is no research-based evidence that can warrant it. If all these initiatives are streamlined and put in a framework, addressing the health emergencies could be more efficient during the crisis and beyond.

Every hospital worldwide has been searching for international policies, experiences, and data-driven analyses as they venture into developing their policies in response to the crisis (Schleicher & Reimers, 2020). Research is needed to guide hospitals, especially those in the Philippines, strategically implement a strategic framework for hospital response. Bound by their vision, mission, and goals, hospitals must be clear of their mission and the direction they want to go (Mehta, 2020). It must involve an extensive participatory instead of a theoretical approach (Reich, 2020). Thus, listening to the voices of the hospital heads and nurse managers on their strategies to respond to this pandemic would drive this study to the fruition of its aim, which is to develop a framework for hospital responses during health emergencies.

While strategies to respond to this pandemic abound, depending on their locale, the need to pool them together to come up with one guiding framework is paramount for hospitals to respond effectively and efficiently to any healthcare emergency such as this pandemic. There has been no framework

established yet in the Philippine setting. Diverse as the situations of hospitals may perhaps be, a framework to refer to in times of emergency will save the day.

## 2 FRAMEWORK

The study was anchored on the Theory of Attribution by Heider (1958) and the Evidence-based Management Theory of Barends, Rousseau, & Briener (2014), with the nursing theories of Nightingale, Roy, and Orem as cited by Almeida (2020) interspersed as the exploration progressed. As applied to health care management, the Attribution Theory investigates the merits, drawbacks, and failures of a health care system or program. This theory describes one possible health care management theory used to create a safer environment for patients. In the context of this study, this theory helped investigate hospital characteristics to provide a safer and more effective way of responding to any healthcare emergencies.

The second health care management theory which underpinned this study for the quantitative dimension was the Evidence-based Management Theory. Evidence-based management employs critical thinking and the best available evidence in making managerial and people-related decision-making. This theory originated in medicine, but it has included education, nursing, criminology, and public policy. Starting with the premise that decisions should be based on a combination of critical thinking and the best available evidence-based on information, facts, or data supporting a claim, assumption, or hypothesis, evidence-based management is an emerging movement that is driven by the belief that management practice is based on research which leads to the enhancement of the quality of management decisions (Rousseau, 2012). This focuses on disseminating the best available evidence resulting from rigorous and relevant research to practitioners.

The third set of theories used in the study consisted of nursing theories such as the Environmental Theory of Florence Nightingale, the Adaptation Model of Nursing of Sr. Callista Roy, and the Self-Care Deficit Nursing Theory of Dorothea Orem. Given that the nurses play a vital role in response to this pandemic, looking into nursing care within the health care context can explain the care practice, management, and education which guide nurses in the "systematic, critical, reflective, humanized, ethical and holistic care, covering biopsychosocial aspects of the individual, family, and community, to legitimize the integrality, universality, and equity" (Salviano, et al. 2016; Brandão et al., 2019).

The qualitative aspect of this study was anchored on Grounded Theory, which was rooted in Glaser & Strauss (1967), who wrote *The Discovery of Grounded Theory: Strategies for Qualitative Research*. This pivotal study elucidated how a theory could be generated from data inductively. Throughout this collaboration, Glaser & Strauss (1967) questioned the appropriateness of using a scientific verification method for this study. During this investigation, they crafted the constant

comparative method, a vital element of grounded theory, while generating a theory of dying first described in *Awareness of Dying* (1965). This constant comparison

of data was employed in data gathering to keep near the procedure followed by Glaser and Strauss as this study was undertaken. The constant comparative method is deemed an original way of organizing and analyzing qualitative data.

### **3 OBJECTIVES**

- 1.To develop a sustainable framework for hospital response to a health emergency.
- 2.To develop a model for hospital response during healthcare emergencies.

### **4 METHODOLOGY**

This qualitative study used Glaserian and Straussian with the constructivist grounded theory of Charmaz (2014), emphasizing the meaning-making of the study participants in the course of the data gathering to generate a substantive grounded theory of a framework for hospital response to a health emergency.

This qualitative study assumes that while the physical world is different from the perception itself, the reality is social. The emergence of how individuals subjectively experience the world and how they perceive it is drawn from the words they use. The reality as perceived by the individual is a process, partial, and subjective. Hence, this study investigates the process by which the participants and the researcher interpret. The data themselves include the language and statements of the subjects in the form of descriptions and narratives, along with the researcher's notes and making memos about the circumstances, participants' tone of voice, and theoretical implications. With constructivist grounded theory, this study used close examination and analysis of the data to build up the inductive meaning. Meanings, categories, and theories are grounded in the data, emerging from the data, through inductive analysis, coding, and interpretation.

Thus, this grounded theory study assumes the value of the participant's words and manner of delivery in a situational context which may take the researcher in a direction in the interview process. The research design is also subject to the phenomenon of the emergence - of categories, patterns, meanings, and theories.

This study was conducted nationally, representing Luzon, Visayas, and Mindanao hospitals. Each major island was allocated ten participants from ten different hospitals to have a bigger picture of the Philippine setting.

Thirty (30) participants who have leadership roles in hospitals and were actively immersed during the outbreak of the coronavirus disease (Covid-19) pandemic were selected to participate in the study. These 30 participants come from the three major islands in the Philippines, Luzon, Visayas, and Mindanao, who were carefully selected as individuals with a broad grasp of the topic under investigation.

This study used a non-probability sampling whose participants were obtained through purposive sampling. This method is appropriate for this kind of research design, aims, and objectives of this study which requires only a limited number of people who can serve as primary data sources.

The interviews approximated "elite interviewing" (Marshall & Rossman, 1990) in as much as subjects were chosen somewhat for their expertise. The study sought to explore and describe the perspectives and perceptions of hospital managers who had spent enough time responding to healthcare emergencies even before the pandemic. The recruitment letter, in fact, even explained to the participants that they had been chosen somewhat for their "expertise."

Elicited data emerge from participants in response to, or directed by, the investigator, whereas extant data include data that are already available such as documents and published literature. While this is one interpretation of how elicited data are generated, other approaches to grounded theory recognize the agency of participants in the co-construction of data with the investigator as driven by Charmaz's constructivist grounded theory. How the data relates is vital in developing a theory, in this study, developing a framework. This relationship translates in the data analysis following the stages of coding.

In this study, the data collection was two-pronged. One direction collected descriptive data while the other did the qualitative data from the questionnaire and interview. Descriptive data were collected to answer the questions about the demographics of the hospitals and the level of preparedness of hospitals to respond to any health emergency. Questionnaires containing these aspects were sent through google forms to the participants.

A distinctive attribute of a grounded theory is concurrent data generation, collection, and analysis. Researchers in grounded theory may combine qualitative and quantitative data as espoused by Glaser. While interviews are a standard method of generating data, data sources can include focus groups, questionnaires, surveys, transcripts, letters, government reports, documents, grey literature, music, artifacts, videos, blogs, and memos.

This study has allowed the participants and hospital administrators to know their healthcare emergency response level. Their participation in this study potentially improved their hospital and the Philippine hospitals in responding to healthcare emergencies such as this pandemic. There were no anticipated risks beyond those encountered in routine job performance evaluations. The aggregate data were presented. Thus, the participants and their hospitals were not singled out.

All information related to the study was kept confidential within the limits of the law. Any identifying information was kept in a secure location, and only the investigator had access to the data. The participants were not identified in any publication or presentation of research results. Utmost confidentiality was held through the use of codes in all written outputs. The collected data were used only for this study and were not available to anyone. Once the questionnaires were fed to the computer with specific codes, the questionnaires were shredded.

Taking part in this study was entirely voluntary. The participants chose to participate or were informed that they might discontinue their participation at any time without penalty or loss of benefits to which they were otherwise entitled. Participating or not did affect their performance or employment.

An instrument was crafted to answer the specific questions laid down in the problem statement. This instrument consisted of three (3) parts. The first part was about the demographics of the hospital, such as type (general and specialty), capability (Level I, Level II, and Level III), bed capacity, ownership, and accreditation. The second part consisted of indicators to measure hospitals' preparedness in times of health emergencies clustered under morale, operation, infrastructure, and finance. In this study, morale involved psycho-social support and healthcare welfare assurance. Operations included hospital leadership, healthcare staff education, communication, coordination, collaboration, staff contingency, sanitation, and continued service. Infrastructure refers to buildings, facilities, and technologies available in the hospitals to respond to healthcare emergencies. Finally, finances included business liquidity, financial scheme, and purchasing power. The third part of the instrument contained the interview questions, which needed a qualitative approach.

Initially, 30 experienced nursing directors/chief nurses or nurse managers were selected through purposive and theoretical sampling composed of 10 from Luzon, ten from the Visayas, and ten from Mindanao. The inclusive criteria were the following: Have served as a nursing director/chief nurse or nurse manager for at least three years; have served as a nursing director/chief nurse or nurse manager during this crisis; and willing to participate in this study.

The participants' contact information was obtained with the help of the Philippine Nurses Association (PNA). All interviewees were informed of the purpose of the study, and the dates and platforms of the interviews were determined after their consent was obtained.

In this study, the investigator is the sole instrument for data gathering, keeping in mind the following aspects: reliance upon reflexivity; background as an inductive interpreter of literature; awareness of his biases; experience on both sides of that relationship; conviction regarding categories and concepts as presented in the literature; the relative paucity of literature regarding hospital response to healthcare emergency; professional curiosity about the framework can be developed to sustain the response of hospitals to healthcare emergencies, plan to consider both the literature and the data of the

research as material to subject to constant comparative analysis to generate categories, concepts, hypotheses, and theory; and the design and formulation of interview questions to elicit exploratory answers rather than yes/no responses or answers based on categories taken from the literature.

Traditionally, investigators utilized colored pens to sort, cut, and categorize the gathered data. The innovations in software technology designed for qualitative data analysis reduced the complex process and made the procedure simpler. NVivo, the qualitative data analysis software developed to manage the 'coding' procedures, is considered the best. With modern technological advances, data coding can be done electronically to obtain rigor in processing the data. Moreover, using a computer "ensures that the user is working more methodically, more thoroughly, more attentively" (Bazeley, 2007). NVivo, a Qualitative Data Analysis (QDA) computer software package produced by QSR International, has merits and is potent in improving the quality of research. It analyzes qualitative data more straightforwardly, and it provides more professional results. The software tapers the number of manual tasks and provides the investigator more time to explore tendencies, draw out themes, and arrive at conclusions (Wong, 2008).

Reliability is an important area to look into in qualitative research as an issue of accuracy can arise. However, Holstein and Gubrium (1995) asserted that accuracy is a lesser issue in grounded theory research as explained: "When the interview is viewed as a dynamic, meaning-making occasion, however, different criteria apply, centered on how meaning is constructed, the circumstances of construction, and the meaningful linkages that are assembled for the occasion." Kirk & Miller (1986) pointed out the importance of assessing reliability in traditional interviewing according to the truth of responses and accurate answers. This investigator used a recorder to capture accurate responses to rule out accuracy. Hunter et al. (2011) said that grounded theory develops a conceptual framework in progress instead of a definitive finding recognizable to people familiar with the instance and modifiable to similar settings.

## **5 RESULTS AND DISCUSSION**

The following are guide statements to determine the summary of findings in the study.

The hospitals where the participants came from were general in type, with level III status, mostly having 151-and above capacity, owned mainly by the government, and mostly ISO- accredited. In terms of preparedness for health emergencies, it came out that hospitals were highly prepared concerning morale, operations, infrastructure, and finances. Regarding hospitals' response to the covid-19 pandemic and other health emergencies, participants professed that their responses were within the four domains: morale, operations, infrastructure, and finance. Each central theme has several sub-themes within it. The sub-themes for "Morale" are psychological support and healthcare welfare assurance. The sub-themes for "Operations" are hospital leadership, healthcare staff education, communication, coordination,

collaboration, staff contingency, sanitation, and continued service. "Infrastructure" has the following sub-themes: buildings and facilities and technologies available. "Finance" has also the following sub-themes business liquidity, financial scheme, and purchasing power.

The sustainable framework for hospital response to the pandemic and other health emergencies emerged as a 5-point framework consisting of *operations* (hospital leadership, heal care staff education, planning, communication, staff contingency, and collaboration/coordination), morale, infrastructure, finances, and innovations (triaging and technology).

## 6 CONCLUSIONS

Based on the findings of the study and the results of the qualitative data, the following conclusions are drawn:

The 5-point framework with components such as Operations, Infrastructure, Innovation, Morale, and Finances is generated using grounded theory which provides a safer and more effective way of responding to any healthcare emergencies with the premise that decisions are based on a combination of critical thinking and the best available evidence-based on information, facts or data supporting a claim, assumption or hypothesis.

The characteristics such as type, capability, capacity, ownership, and accreditation have contributed to the preparedness of hospitals to respond to healthcare emergencies through the lens of attribution theory. Healthcare management in hospitals improves by understanding that there are shortcomings in the conduct and implementation of programs and policies in the healthcare setting, but there is more excellent room for improvement that can be done to foster a positive and responsive hospital for better response to any healthcare eventualities as outlined in the evidence-based theory.

## RECOMMENDATIONS

Based on the findings and conclusions, the following recommendations are formulated:

Hospital administrators may consider this 5-point Framework for Hospital Responses during healthcare crisis as this has been tested on the ground by the hospitals during the pandemic as clear guidance in responding sustainably to healthcare emergencies;

Moreover, hospital administrators may reflect upon the specifics of operations, infrastructure, innovation, morale, and finances in their context and examine which components they need to strengthen;

Likewise, hospital administrators may review their hospital characteristics in order to address and respond to healthcare crises;



The staff contingency and augmentation of staff efforts might be considered in the future study because there might come out a shortage of nurses as the pandemic brings in novel variants;

The PNA Department of Nursing Practice may consider this framework in upgrading the standards in nursing practice, initiating measures that will upgrade the standards of nursing practice according to the 5-point sustainable framework, specifically, on the aspects of educating healthcare staff and staff contingency in the operations component which is directly involving nurses;

Nurse managers are encouraged to reflect on their competency utilization in handling their staff nurses and colleague in congruence with this 5-point sustainable framework;

A similar study with more participants and a broader scope of research setting might be conducted by future researchers as the needs of the time can be dynamic.

## REFERENCES

- Almeida IJS, Lúcio OS, Nascimento MF, Coura AS. Coronavirus pandemic in light of nursing theories . *Rev Bras Enferm.* (2020);73(Suppl 2):e20200538. doi: <http://dx.doi.org/10.1590/0034-7167-2020-0538>
- Bazeley, P. (2007). *Qualitative data analysis with NVivo.* (p6-15) London: Sage Publications Ltd.
- Charmaz, Kathy (2014). *Constructing Grounded Theory.* London: Sage Publications, Inc. Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Sage Publications, Inc. <https://doi.org/10.4135/9781452230153>
- COVID-19 HUMANITARIAN RESPONSE PLAN PHILIPPINES( 2020, May 11). *Reliefweb.* [https://reliefweb.int/sites/reliefweb.int/files/resources/200511\\_COVID\\_19%20Philippines%20HRP%20Revision%20Final.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/200511_COVID_19%20Philippines%20HRP%20Revision%20Final.pdf)
- Glaser, B. G., & Strauss, A. L. (1965). *Awareness of dying.* AldineTransaction.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies or qualitative research.* New Brunswick: Aldine Transaction.
- Glaser, B. G. (1978). *Theoretical sensitivity.* Mill Valley, CA.: Sociology Press.
- Glaser, B. G. (1992). *Basics of grounded theory analysis: Emergence vs. Forcing.* Mill Valley, CA.: Sociology Press.
- Glaser, B. G., & Holton, J. (2004). Remodeling Grounded Theory. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 5(2). <https://doi.org/10.17169/fqs-5.2.607>
- Glaser, B.G. & Strauss, A.L. (2012) “The Discovery of Grounded Theory: Strategies for Qualitative Research” *Aldine Transaction*
- Holstein, J. A., & Gubrium, J. F. (1995). *The active interview.* Thousand Oaks: Sage.
- Kirk, J., & Miller, M. (1986). *Reliability and validity in qualitative research.* Beverly Hills, CA: Sage.
- Ropero, G. ( 2021, March 7). Public urged to follow health protocols as doctors observe surge in COVID-19 cases. ABS-CBN NEWS. <https://tinyurl.com/4j5sstkh>
- Strauss, A. (1987). *Qualitative analysis for social scientists.* Cambridge, UK: Cambridge University Press.
- Wong, L. P. (2008). "Data Analysis in Qualitative Research: a Brief Guide to Using Nvivo." *Malaysian Family Physician* 3(1)
- Wong, J., Goh, Q. Y., Tan, Z., Lie, S. A., Tay, Y. C., Ng, S. Y., & Soh, C. R. (2020). Preparing for a COVID-19 pandemic: a review of operating room outbreak response measures in a large tertiary hospital in Singapore. *Se préparer pour la pandémie de COVID-19: revue des moyens déployés dans un bloc opératoire d'un grand hôpital tertiaire au Singapour.* *Canadian journal of anaesthesia = Journal canadien d'anesthésie*, 67(6), 732–745. <https://doi.org/10.1007/s12630-020-01620-9>
- Zang, J., Wu, W., Zhao, X., & Zhang, W. (2020). Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital. *Precision Clinical Medicine*, pbaa006. <https://doi.org/10.1093/pcmedi/pbaa006>