CHAPTER 20

Contingency Management for Future Pandemics and Lessons from the Covid-19 Pandemic at Rukmani Birla Hospital, Jaipur

[1]Tripti Bhaskar
[1]Student, IIHMR University

[2]Dr. (Col) Mahender Kumar
[2]Professor, IIHMR University

DOI: https://doi.org/10.52458/9789349381018.2025.eb.grf.ch-20
Ch.Id:- IIHMR/GRF/EB/RAHM/2025/Ch-20

INTRODUCTION

Many nations experienced a dual-wave pattern in reported cases of COVID-19 during the 2020 pandemic, characterized by an initial surge in spring followed by a subsequent wave in late summer and autumn. Empirical evidence indicates variations in the impact of the virus between these two periods, including differences in age distribution and disease severity. This study aims to compare the characteristics of the two waves using data from equivalent 3.5-month periods. The first period, spanning from March 15 to June 30, encompasses the entirety of the first wave, while the second period, from July 1 to October 15, covers part of the ongoing second wave at the time of writing. Analysis of 204 hospitalized patients during the first period and 264 during the second period reveals that individuals in the second wave were generally younger, and both hospitalization duration and case fatality rate were lower compared to the first wave. Moreover, the second wave exhibited a higher proportion of children, pregnant women, and post-partum individuals [1]

The notable shift in the treatment approach for COVID-19 following the initial wave of the epidemic was indicative of an enhanced understanding of its underlying pathogenic mechanisms, including coagulopathy and hyper-inflammation. The evolution in therapeutic strategies, marked by the increased use of effective interventions such as thromboprophylaxis, judicious administration of corticosteroids, and remdesivir, along with improved respiratory management, likely contributed to a significant reduction in the risk of death observed after the first wave (W1). The subsequent decrease in the risk of death between the second wave (W2) and the third wave (W3) poses a more complex interpretation. Notably, there were no substantial

alterations in patient management between these two periods, and the potential factors influencing this reduction may extend beyond the examined confounders. The sensitivity analysis exploring the impact of the wave's intensity on the risk of in-hospital death suggests that the decline during W3 may be, at least in part, associated with the lower incidence of COVID-19 in Lombardy during that period [2].

RESEARCH QUESTION

What was the importance of contingency planning, methods to achieve it and its implementation for future preparedness?

RESEARCH OBJECTIVES

1. To identify the insights gained from the COVID-19 pandemic.
2. To grasp the significance of contingency planning.
3. To develop a contingency plan for potential second and subsequent waves.

RESEARCH METHODOLOGY

The study employed a secondary research design, wherein existing data and studies were collected and evaluated. The research was conducted at Rukmani Birla Hospital in Jaipur, spanning from 1st February 2021 to 19th June 2021. The focus of the study was on the Members of the Medical Operations Management (MOM) committee of the Clinical Pathways Committee (CPC). The primary objective was to analyze the current strategies implemented to combat the second wave of the COVID-19 pandemic at the hospital. Furthermore, the research aimed to formulate a plan for the anticipated third wave, aligning

with the guidelines provided by the Government of Rajasthan and the World Health Organization.

The study population comprised all inpatient department (IPD) patients at Rukmani Birla Hospital, Jaipur, regardless of whether they presented with COVID-related symptoms. To gather comprehensive insights, a qualitative assessment approach was adopted. This method involved extracting data through open-ended conversations, interviews, and focus-group discussions. By delving into the experiences and perspectives of the MOMs within the CPC committee, the research sought to uncover valuable information that could contribute to the refinement of existing strategies and the development of proactive measures for future waves of the pandemic. The reliance on secondary research, coupled with the qualitative assessment approach, facilitated a nuanced understanding of the hospital's response to the ongoing health crisis and informed strategic planning for the anticipated challenges ahead.

RESULTS AND DISCUSSION

The risk analysis segment evaluated the potential hazards posed by COVID-19, including issues such as limited testing facilities, inadequate access to basic health facilities, oxygen shortages, and challenges in the availability of medications and ambulance services. These identified risks served as a foundation for developing strategies to mitigate, prepare for, and respond to the various challenges associated with the pandemic. The risk mitigation section delineated specific actions taken to address health risks related to COVID-19. It emphasized promoting personal safe behaviour, providing mass casualty management training, and evaluating health infrastructures in high-risk areas. This approach aimed to reduce the probability and severity of

COVID-19-related issues, enhancing the overall resilience of the healthcare system. The risk preparedness segment built on the mitigation efforts by emphasizing public awareness, strengthening community-based first aid, improving healthcare infrastructure in high-risk areas, and expediting vaccination campaigns. These measures were designed to enhance readiness to respond to the impact of the pandemic, ensuring a more effective and coordinated approach.

The contingency plan outlined a structured response framework, assigned responsibilities, and detailed the preparedness actions required. The coordination aspect highlighted the importance of a mutual and synergic health sector response, uniform decision-making, and procedures for requesting global assistance. Information and planning focused on joint risk assessments and ensuring the availability and understanding of response triggers. Health operations and expertise involved technical guidance on mass casualty management, early warning and response systems, and the shipment of basic health services to areas with limited access. Operations support ensured an undisturbed supply chain, and the finance section addressed contingency funds, budget repurposing, and donor appeals. The plan also emphasized human resources management, including emergency standard operating procedures and engagement with potential donors for critical resources. The action plan further broke down objectives, activities, and priorities. Key activities included mapping high-risk areas, evaluating healthcare facilities, training healthcare staff, and planning for new drugs and vaccinations. The contingency plan specifically outlined decisions made during the first Clinical Pathways Committee (CPC) meeting at Rukmani

Birla Hospital, including the composition of the COVID team, admission protocols, and logistics for COVID-positive patients.

CONCLUSION

In conclusion, the novel coronavirus has undeniably exposed vulnerabilities in healthcare systems worldwide, and India's experience with the second wave has been particularly stark. The unexpected resurgence caught many off guards, leading to devastating consequences. The initial success in managing the first wave, followed by a premature assumption that the virus had subsided, resulted in a lapse in precautionary measures and a subsequent surge in infections and fatalities. The impact of the second wave has been profound, affecting not only urban areas but also reaching into rural populations and even children. Overwhelmed crematoria and hospitals bear witness to the severity of the crisis. Data revealing a substantial increase in the need for oxygen support during the second wave underscores the urgency of being adequately prepared for unforeseen events.

REFERENCES

1. *Iftimie, S., López-Azcona, A. F., Vallverdú, I., Hernández-Flix, S., de Febrer, G., Parra, S., ... & Castro, A. (2021). First and second waves of coronavirus disease-19: A comparative study in hospitalized patients in Reus, Spain. PloS one, 16(3), e0248029.*

2. *Giacomelli, A., Ridolfo, A. L., Pezzati, L., Oreni, L., Carrozzo, G., Beltrami, M., ... & Antinori, S. (2022). Mortality rates among COVID-19 patients hospitalised during the first three waves of the epidemic in Milan, Italy: A prospective observational study. PloS one, 17(4), e0263548.*