



## NAVIGATING THE COVID-19 PANDEMIC IN BOHOL: PERSPECTIVES ON PROBLEMS FACED AND ACTIONS TAKEN FROM THE FRONTLINES

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### Abstract

This qualitative research aimed to identify the challenges faced by local government units (LGUs) in Bohol during the COVID-19 pandemic, the measures implemented in response, and the gaps and opportunities for improvement in their pandemic response efforts. Focused Group Discussions were conducted with sector representatives from first-, second-, and third-income class LGUs in Bohol, and qualitative data were analyzed thematically using the Qualitative Data Analysis Miner tool. The study revealed that the LGUs faced various challenges during the pandemic, including a lack of resources, unpreparedness, communication gaps, and logistical issues. However, the LGUs were able to implement best practices such as sound action through the provision of assistance, actions reflecting a sense of urgency, flexibility, collaboration, and fairness, preparedness, and benchmarking. As such, the study recommends that the LGUs focus on improving their preparedness and resources, optimizing communication and logistics management, exploring more innovative approaches, building collaborations and partnerships, and tailoring education efforts to specific populations. By continuously evaluating and improving their pandemic response efforts, the LGUs can better protect and serve their communities.

**Keywords:** Covid-19, Bohol LGUs, Action Plan, Best practices, Qualitative research.

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## **1. Introduction**

The COVID-19 pandemic has upended the world in ways that were unimaginable just a few years ago. The virus has spread rapidly across the globe, infecting millions of people and causing significant disruptions to economies, health systems, and societies.

In the Philippines, the pandemic has had a profound impact on the country's health system and economy. The government has implemented various measures to contain the spread of the virus, including lockdowns, travel restrictions, and vaccination campaigns. However, these measures have highlighted the need for better preparedness and response to pandemics in the future (Balaban & Sánchez, 2021). The Department of Health (DOH) in 2021 emphasized the need for improved healthcare infrastructure and systems to respond to pandemics, including the availability of adequate hospital beds, medical equipment, and trained healthcare personnel. On a wider perspective, Villaverde et al. (2021) highlighted the need for a multi-sectoral approach to pandemic preparedness and response, involving not only the health sector but also other sectors such as education, transport, and tourism. The study suggested that such an approach would require strong leadership and governance, as well as effective communication and collaboration among different sectors and stakeholders.

Bohol, one of the Philippines' provinces, has been particularly affected by the pandemic. The province has recorded thousands of cases and hundreds of deaths (DOH, 2022), putting a strain on its health system and economy. De Guzman, et al. (2021), who analyzed the impact of COVID-19 on the healthcare system in the Philippines including in Bohol, recommends strengthening the capacity of the healthcare system to prepare for future pandemics. The study of Jara, et al. (2021) also suggests the need for effective measures to support education during pandemics, including remote learning and mental health support for students and teachers.

As a tourism province, the pandemic has also had a significant negative impact on tourism-related businesses and employment in Bohol. A report by the Philippine Institute for

Development Studies (2021) notes that the pandemic has led to a significant decline in economic activity in the province, particularly in the tourism and services sectors. The report recommends the implementation of measures to support affected sectors and stimulate economic recovery. Padilla, et al. (2021) specifically highlighted the need for diversification of the local economy in the province to mitigate the effects of future pandemics.

The pandemic experience in Bohol has underscored the importance of having a robust and comprehensive plan for future pandemics. Pandemic preparedness and response require a multifaceted approach that includes early detection and reporting, rapid response, and effective communication (Han and Wang, 2020). In the post-COVID era, it is important to develop a comprehensive and sustainable plan that considers the economic, social, and health impacts of pandemics.

In light of the aforementioned, this study aims to glean insights into the pandemic experience of Bohol through consultations with key stakeholders in the province and a review of relevant literature on pandemic preparedness and response. By identifying the key challenges and opportunities for pandemic preparedness in Bohol, this study seeks to provide insights that can guide policymakers and other stakeholders in their efforts to build a pandemic-ready Bohol.

In particular, this study seeks to:

1. Identify the challenges faced by Bohol during the COVID-19 pandemic.
2. Identify the measures implemented by Bohol in response to the COVID-19 pandemic.
3. Identify the gaps and opportunities in Bohol's pandemic response efforts.

## **2. Methodology**

This qualitative research employed situational analysis through Focused Group Discussion and Key Informant Interview as primary data source. Focus Group Discussions (FGD) with sector representatives were conducted to glean insights from the different Local Government Units (LGUs) / municipalities in terms of the challenges they have encountered and their

actions taken and best practices in addressing those challenges. The selection of the FGD participants was based on the purposive selection of LGUs/cities categorized according to the cross-section of Income Class (Low,

Middle, High) by Covid-19 Prevalence (High or Low Cases). The scoring assumes that an LGU with a high-income class would respond better to pandemic-related concerns.

Criteria	High Covid-19 Cases	Low Covid -19 Cases
High Income ( <i>1<sup>st</sup> Class</i> )	Tagbilaran	Talibon
Middle Income ( <i>2<sup>nd</sup> and 3<sup>rd</sup> Class</i> )	Loon	Getafe
Low Income ( <i>4<sup>th</sup> and 5<sup>th</sup> Class</i> )	Dauis	Buenavista
Total	6 FGDs	

*Table 1. Distribution of Focus Group Discussion Clusters*

The FGD participants were those who have been engaged in the disaster or health-related management of the LGU for at least 3 years such as the municipal mayor, Medical Health Officer (MHO), Public health Nurse (PHN), Disaster Risk Reduction Management (DRRM) focal person, representatives from the local Tourism Office, BIR, DTI, local COVID19 taskforce or their counterparts. FGD participants were asked for their consent prior to joining the FGD sessions. The Focus Group Discussion were conducted following Krueger's (2002) guide in designing and conducting FGD.

The FGD questions include information related to the challenges that the LGUs have encountered at the onset of the pandemic, how they address the concerns, their best practices, how they are sustaining their operations in the midst of the pandemic, their insights and major takeaways from the experience, and their ways

forward in addressing the different sectors involved.

The qualitative data gathered were coded using the Qualitative Data Analysis (QDA) Miner tool, and were initially analyzed using thematic analysis. This approach aggregates the findings across cases and thematic analysis was developed including assertions and interpretations of the meanings of the themes emerging from the participants of the FGD.

### **3. Results and Discussions**

**Challenges Encountered.** The Covid-19 pandemic had a significant impact on the response strategies of local government units (LGUs) in the Province of Bohol. The challenges faced by the LGUs include the nature of the disease, workload and conduct of duty, logistics, communication gap, lack of resources, and unpreparedness/ unforeseen disturbances



*Fig 1. Challenges Encountered in the Frontlines during the Pandemic*

Specifically, the challenges under each sub-theme are as follows:

### **3.1 Nature of the Disease**

LGUs faced multifaceted challenges responding to the Covid-19 outbreak, including the disease's nature, population density, and the emergence of new variants. Bohol implemented strict preventive measures, but the uncontrollable factors hindered the accurate containment of the infection. Uncertainty made it difficult to pinpoint specific solutions, causing a cumulative effect on the efficiency of the Covid-19 response, and overwhelming the LGUs' resources and manpower. Adding to the strain, Bohol has gone from a few Covid cases to a hotspot, placing significant strain on the LGUs. Mody et al. (2021) emphasized the importance of providing adequate resources and support to LGUs to ensure an effective COVID-19 response, as without these resources, LGUs may struggle to manage the pandemic's impact on their communities.

### **3.2 Workload and Conduct of Duty.**

The pandemic has exacerbated existing issues with manpower organization. When unit heads are faced with conflicting duties or are

undergoing self-quarantine, they often rely on subordinates to cover for them. However, this can cause a domino effect, as it could paralyze a particular aspect of the unit's present undertakings, further aggravating the problem.

The nature and intensity of the work also pose a challenge to the delegated official or staff. At the municipal level, for instance, front liners may delegate micro-management tasks to barangay counterparts, who may not have the same level of training and expertise. As a result, staff with little or no medical training may be pulled into the field to fill gaps in the workforce. While contractual workers and job orders are often called upon to address undermanned offices, their lack of expertise can lead to criticism from the public which only exacerbates the existing strain on the unit.

Despite the skeletal framework of operations and work-from-home arrangements, they were also balancing family responsibilities while grappling with the changes. This means having to make emergency trips, take obligatory phone calls, or process reports or that could come erratically.

During the course of our qualitative research, an office staff recounted an incident involving one of their drivers who was forced to bring his wife to the mayor's office to resolve marital issues. The driver's frequent absence from home, which was due to his duty of transporting patients to the hospital or ferrying returning residents to quarantine facilities, had led his wife to suspect him of having an extramarital affair. This incident highlights the personal toll that the pandemic response efforts can take on individuals and their families, as they struggle to balance their work obligations with their personal lives.

Previous studies have also shown the negative effects of work-related stress on employees' mental health, well-being, and job satisfaction (Cunningham et al., 2018; Pignata et al., 2016). Thus, it is crucial for workplaces to establish clear communication channels, support systems, and flexible work arrangements to mitigate the adverse impact of pandemic-related stress on employees and their families.

### **3.3 Logistics.**

Challenges in logistics mainly revolved around the task force's inability to attend to all returning residents simultaneously due to a shortage of drivers and vehicles, undermanned offices to handle coordination and communication, and insufficient quarantine facilities.

The lack of vehicles and manpower to ferry locally stranded individuals (LSIs), authorized persons outside of residence (APOR), or returning overseas Filipino workers (OFWs) often led to frustration and emotional encounters between them and the assigned task force. One respondent recounted:

*"We received countless complaints as some passengers had to wait longer than expected. Although our rescue unit had three shifts, we had numerous passengers from all seaports in the province, and we also had to make frequent trips to the airport. We can only do so much with limited time and resources"*

Moreover, other LGUs had to convert existing DRRM vehicles to transport patients as the rising number of cases and the different protocols against covid and non-covid related hospital admissions and referrals have caused

endless trips for ambulances and shortage of ambulance drivers. These responses established how LGUs were challenged to make ends meet with the shortage:

*"At the time when the number of Covid-19 cases just kept on increasing, our ambulances had endless trips back and forth different hospitals and Rural Health Units (RHUs)."*

*"We had such a hard time with already limited vehicles and drivers...For example, when we transport Covid-related cases and other medical cases not related to Covid, it had to be separate ambulances and teams as each are bound with separate protocols."*

Conjointly, delivery of basic needs and supplies was impeded by the shortage of vehicles and the topographical situation of other municipalities. For instance, in the above case when a municipality had to lock down the whole island barangay due to Covid-19 infection, the mayor pointed out logistics as one of their biggest challenges since they had to feed more than 3,000 residents and transport their medicines and basic commodities especially drinking water, in small-sized boats to the island.

### **3.4 Communication Gap**

Inter-agency communication gap emerged as LGU workers confronted overlapping duties and responsibilities, improper channeling, disrupted line of communication, misleading information, conflicting schedules, and the absence of an existing handbook or public consultancy.

As reflected in the following responses, these challenges caused further gap in communication across government agencies in between their respective undertakings.

A medical officer recounted:

*"And so, some programs were left behind because everybody was dragged to the Covid-19 dilemma, we struggle to keep track of our existing programs on... for example, teenage pregnancy, drug addiction...we will just be alarmed that teenage pregnancy has spiked up again, or representatives from the TB-DOTS program come to the clinic for report retrieval and we are not...we totally lost track"*

Other medical staff lamented:

*“Other health offices do not observe proper channeling”*

*“There are endorsements from the Provincial Health Office that come to us anytime of the day, and we are too undermanned to attend to everything 24/7”*

Meanwhile, the public’s hostility and resistance against LGU workers and local Covid task force was prompted by fake news and social media, disorientation, or misinterpretation of the newly implemented standard operating procedures for accommodating returning residents, distributing aids and relief packs, conducting vaccination, implementing lockdowns, and addressing their personal preferences and requests.

### **3.5 Lack of Resources**

The medical sector was first to be confronted with inadequate resources that challenged their Covid-19 response. Medical supplies like face masks, goggles, PPEs, oxygen tanks, respirators, syringes, medicines, swab kits, and disinfectants were costly and scarce. Medical personnel had to resort to cost-cutting strategies and makeshift alternatives where they can, and reposition their manpower to cover undermanned stations and offices.

One respondent recalled:

*“I handled the first COVID-related case during the lockdown. I was the only one who responded, with one driver, and the ambulance then had a makeshift barrier”*

Aside from scarcity of medicine supplies, the province was also facing predicaments on hospital transfers and referrals. Referrals were hampered by poor internet connectivity, limited bed space, and patients’ financial incapacity to be admitted to private hospitals. Lack of cutting-edge medical technology in the province also posed a challenge as some patients need medications that can only be catered by offshore medical facilities. To top all these, cost for medical admissions have almost doubled during the pandemic.

Medical front liners have these recollections on the same challenges:

*“And if in case the government hospital won't accept, so we usually refer to the private hospital and the challenge is when they tell us please, you have to tell the patients that they have to pay this much amount, like about Php 20,000 per day and we all know that most of the patients here are indigent patients”*

*“[Another problem is when] some patients need further medications offshore, like in Cebu because their conditions cannot be handled by hospitals in the province.”*

LGUs were also strenuously challenged in terms of budgetary requirements on other areas pertinent to their Covid-19 response strategies. When granular lockdowns were implemented, they had to shoulder their constituent’s basic needs and top-up the inherently low calamity and emergency funds of the affected barangay/s. Because of the high demand of medical and sanitation supplies, prices were immoderate. Realignment of funds was also a challenge because the pandemic came unprecedented and every expenditure was subject to meticulous audit and approval process unless a memo was otherwise issued.

### **3.6 Unpreparedness/ Unforeseen Disruptions**

Normal government operations were not only interrupted but at some point, came to a halt because manpower and resources were mostly steered towards the immediate response to the pandemic. Previous preparations were focused on recurrent concerns like typhoons, diseases, and malnutrition. When major establishments were closed including churches and schools, and when lockdowns were implemented in selected areas, the constituents faced loss of jobs and livelihood, particularly among coastal communities where fishing activities were limited by market restrictions and the LGU had to shoulder their needs by default.

### **Best Practices from Actions Taken**

LGUs have had to implement appropriate measures and mechanisms to address the problems and challenges brought about by the pandemic. Informants in the study generally responded with specific actions and solutions, ranging from stringent implementation of COVID-19 protocols, to the adoption of mechanisms for implementing these protocols, seeking support from the provincial and national government, prioritization,

collaboration, open communication, educating the public about COVID-19 vaccination, restructuring of buildings as quarantine facilities, and proper budget allocation and realignment.

When asked what they consider to be the best practices of their respective towns from the

different actions they have taken for the pandemic, the participants gave responses that the researchers were able to cluster into three emerging themes: **Sound Action**, which is expressed in terms of *flexibility, a sense of urgency, collaboration, and fairness* in the provision of assistance; **Preparedness**; and, **Benchmarking**.



Fig 2. Actions Taken by the Frontlines during the Pandemic

### 3.1.1 Sound Action

The interviewed informants expressed their appreciation for their LGUs' effective handling of the COVID-19 pandemic through their accounts of the sound actions taken to address the needs of their constituents during the height of the outbreak. These arrangements were achieved through **flexibility, a sense of urgency, collaboration, and fairness** in the provision of assistance.

#### 3.1.1.1 Flexibility

It is widely recognized that whole-hearted assistance during any catastrophic incident is called for, in the name of service and humanity. The LGUs went up a notch with their calamity response efforts by responding with flexibility. They dug up their calamity reserves and realigned their budget where they could to provide much-needed assistance such as food and medical supplies, as well as a supplemental allowance to affected individuals and families. Necessary equipment like printers and other

documentary supplies were also offered for use to support other frontline services while corresponding monthly communication allowances were provided to LGU focal persons.

Flexibility was key in the informants' approach to their work during the pandemic. While government service typically operates within a maximum of eight working hours per day, the informants and their teams went above and beyond by extending their services beyond official office hours, even deviating from their designated functions, in order to cater to the urgent needs of their constituents during the health crisis. This included not turning away those who needed help and providing support in a variety of ways, even if it meant balancing multiple responsibilities and learning on the job. The ability to adapt and be flexible in response to the changing needs of the community showcased the informants' humanity at its best.

In addition, the LGUs made swabbing available to all individuals immediately, regardless of symptoms, and procured cold storage specifically for vaccine use. The LGUs rolled out vaccines at a much quicker rate, aiming to achieve herd immunity. In some LGUs, additional sites were opened not just for their own constituents but also for outsiders. The LGUs further optimized their vaccination efforts by providing free transportation to the vaccination sites for those in far-flung areas, thereby making vaccination more accessible to everyone. Informants also highlighted their LGUs' initiative to shoulder expenses for the sake of immediacy and offer personal spaces as holding areas. Furthermore, LGUs organized training on basic life support and simulation exercises for the quarantined cases. Below are some verbatims of the interviewed participants affirming the sound action extended by their respective LGUs:

*"...because once we receive the news that Pfizer vaccines are available in the country, we were expecting that people would prefer these vaccines. We were able to purchase 12 storage units and that is why our city was one of the first LGUs in the entire nation who were able to roll out the premium vaccine"*

*"So, we had constant communication, it is our best practice... also, we were published in the DOH page because, during the vaccination rollout, we specifically employed transportation mechanisms to fetch our constituents from different barangays and bring them to the vaccination site. Not every municipality would do that. We were published (on the page) for that"*

These actions are consistent with findings from Balubar et al. (2021) which highlighted how other LGUs in the country have allocated a significant portion of their budget to address the COVID-19 pandemic, including funding for healthcare services, personal protective equipment, and relief assistance. Existing literature also affirmed the importance of flexibility in crisis management, as highlighted by Ahern et al. (2009) and Yap and Kim (2020), who emphasized the need for organizations and individuals to be adaptable in order to effectively respond to crises. The provision of transportation solely for vaccination purposes

and the use of personal spaces as holding areas for immediate isolation also align with the WHO's guidelines on pandemic preparedness and response (WHO, 2020).

### **3.1.1.2 Sense of Urgency**

In the face of the COVID-19 pandemic, urgent actions were necessary to address the pressing needs of the affected communities. The informants in this study emphasized that time was of the essence and that immediate responses were required to contain the spread of the virus and minimize mortality rates.

The following accounts of the interviewed frontliners reflect the urgency and dedication of the LGUs to provide timely responses during a crisis:

*"During the early stage of the pandemic, while there were only zero to few cases reported from the barangays, we were able to immediately conduct granular lockdowns; With the consideration that in every move in our operations, the mantra would always be 'contain the spread'."*

*"I would say I have traded personal and family time to address Covid-19 emergencies. There are calls that come in the middle of the night and it is inherent to my job to answer that call. It could be a Covid emergency"*

The importance of urgent action in response to the COVID-19 pandemic has been emphasized in various studies. According to Kucharski et al. (2020), prompt and decisive action is crucial to prevent the rapid spread of the virus and control the outbreak. Similarly, a study by Petherick et al. (2020) found that early interventions such as lockdowns and social distancing measures can effectively reduce the transmission of the virus and mitigate its impact on public health.

The urgency of the situation was also highlighted by the World Health Organization (WHO), which emphasized the need for immediate action to control the pandemic and prevent its further spread (WHO, 2020). In line with this, the LGUs' actions to provide timely responses and services during the pandemic reflect their commitment to safeguarding the health and well-being of their constituents.

### **3.1.3 Collaboration**



Collaboration proved to be crucial during the COVID-19 pandemic as it highlighted the importance of partnership and cooperation between those in power and the recipients of their services. The LGUs demonstrated their leadership by taking charge and providing guidance to their constituents to ensure their safety as reflected in the following statements:

*“Gugma Tagbilaran is an organization formed by the City’s first lady because there was a viral picture of a doctor who went inside the operating room in a garbage bag converted into a makeshift PPE. The organization is created to provide PPEs to those in need.”*

Communication was also key in disseminating quick and accurate information to the public through health offices and media bureaus. Priority was given to vulnerable groups such as senior citizens, pregnant women, and families with minors, as per the approval of higher authorities. The LGUs' ability to effectively communicate and engage with their constituents about the complexities of the pandemic showcased their effectiveness as a governing body. Moreover, their ability to call upon their team members and earn their respect through appropriate feedback and commitment to the job further reinforced their collaborative efforts, as implied in this statement from one of the participants:

*“Aside from the cascaded mandates of the BIATF, we also added, through consultative and participative collaboration, other steps that could alleviate the situation on the ground and improve our responses and transactions. We had to consult from the barangay level to know their actual needs.”*

#### **3.1.4 Fairness**

The essence of fairness and impartiality was demonstrated by the LGUs' practice of providing assistance to anyone in need, regardless of their residency status. This approach helped to alleviate the burden of those who were struggling during the pandemic, creating a sense of ease and confidence in the community. The LGUs ensured that everyone had access to necessary services and support without discrimination, thereby promoting a sense of inclusivity and equal treatment for all.

A mayor from one of the interviewed LGUs cited,

*“I’m proud to say that in our town, we give 1 sack of rice each – no discrimination of any sort. All households who have registered [they] were given 1 sack of rice, eggs, and 1 whole chicken. We give money, we had SAP (Social Amelioration Program) funds and since not everybody qualifies for the SAP, we had supplemental SAP”.*

In terms of vaccine distribution, a health officer claimed:

*“We included (residents) from outside City (in the distribution of vaccines), because it would make more sense to achieve herd immunity together as there are many people coming in and out of the city from other towns”*

This approach is essential in building trust and confidence in the government, and ultimately fosters a sense of unity and collaboration among the people. The ability of the LGUs to treat everyone with fairness and without bias is a testament to their commitment to serving their constituents with integrity and excellence.

#### **3.2 Preparedness.**

The preparedness of an LGU in handling the COVID-19 Pandemic is demonstrated through its proactive measures in anticipation of any potential adversity. In this regard, the LGUs demonstrated their readiness through comprehensive training programs and timely acquisition of necessary facilities and supplies.

Disaster Risk Reduction Management (DRRM) readiness was prioritized, and the prompt procurement of essential supplies enabled the LGUs to effectively address the immediate needs of their constituents during the pandemic. In an account from one of the participants, he mentioned:

*“We were somehow ready prior to the lockdowns because we had emergency response training from DRRM so it was timely, and we were able to take a crash refresher course in case our services were needed. And also, we were able to procure some basic emergency supplies, so that helped somehow.”*

Their vigilance and attention to detail ensured that the necessary measures were in place to provide immediate assistance, highlighting

their commitment to safeguarding the welfare of their communities.

### 3.3 Benchmarking

Benchmarking with experienced organizations and adapting their best practices is an essential indicator of effective response to the COVID-19 pandemic. The informants recognized the value of benchmarking and adopted relevant practices implemented by other organizations to address disease control and prevention. To ensure the suitability and availability of supplies and equipment, careful consideration was given to the relevance of these benchmarked practices for each LGU and the entire province. As one informant shared,

*"We researched the practices of the Center for Disease Control and Prevention in the US and tried to implement what we could on our end, adopting some of their practices as long as we had the available facilities and equipment."*

Research and benchmarking are important components of effective decision-making and policy implementation in public administration. Tavares and Bovaird (2019) found that benchmarking can lead to more efficient and effective public service delivery, as well as increased accountability and transparency. In the context of pandemic response, benchmarking can also be useful in identifying best practices and lessons learned from other

regions or countries. A study by Kwon and Lee (2020) found that benchmarking was an effective strategy used by South Korea in responding to the COVID-19 pandemic, allowing them to quickly identify and adopt successful policies from other countries.

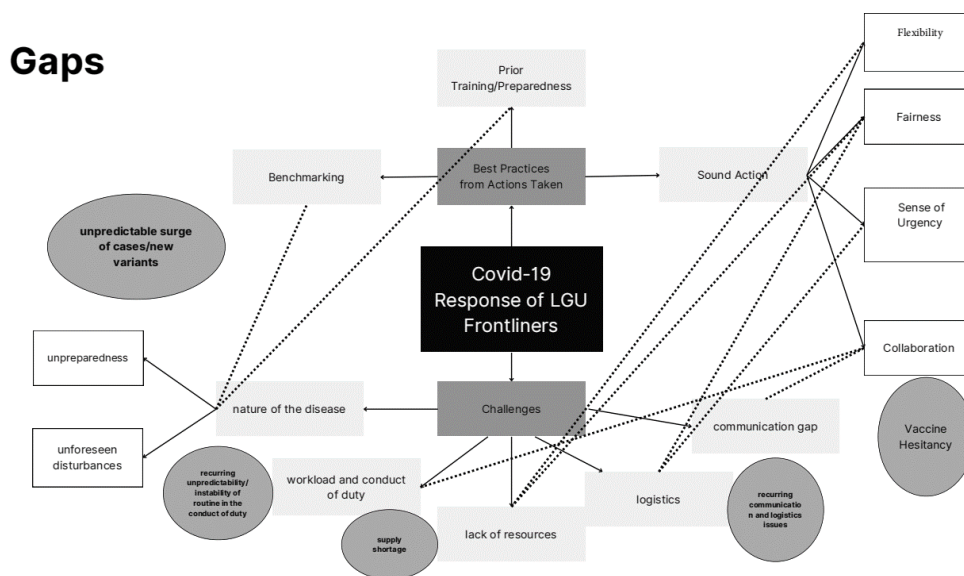
Therefore, by adopting best practices from other organizations and benchmarking their policies and procedures, the LGUs were able to improve their pandemic response efforts and better serve their constituents.

Overall, the actions and solutions implemented by LGUs have been crucial in enabling them to cope with the ongoing pandemic. While awaiting further directives from the national government and additional information on the pandemic issued by higher health authorities, these measures have provided LGUs with the necessary tools to respond effectively to the crisis. Nevertheless, continuous evaluation and improvement of these actions and solutions are essential to ensure that they remain effective in addressing the evolving challenges brought about by the pandemic.

### Gaps and Opportunities in the response efforts of Bohol LGUs

Several gaps can be spotted based on the challenges encountered and the best practices employed on the frontlines.

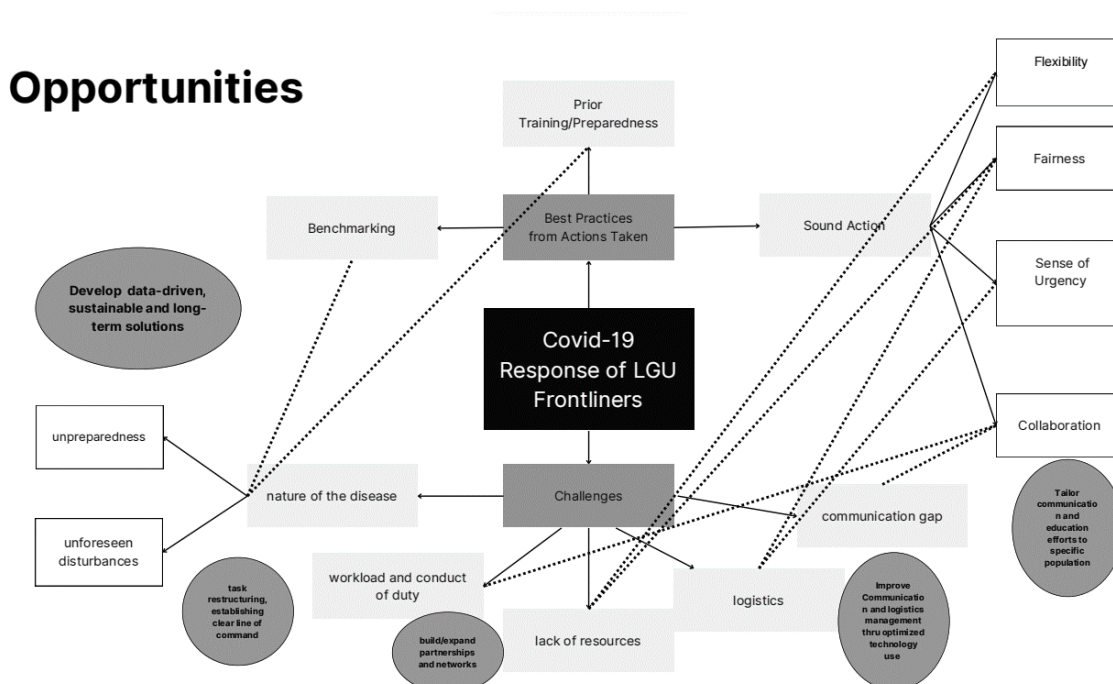
Fig 3. Gaps Identified on the Challenges Encountered and Actions Taken by the Frontlines during the Pandemic



Despite prior emergency response training, and the early benchmarking initiatives done, the frontliners are still casually confronted with unforeseen disturbances and still come unprepared when new variants come out, due to the unpredictable nature of the disease. Flexibility and fairness in the provision of assistance are still met with shortage of resources, especially when lockdowns would be extended to a seemingly infinite phase. With all the manpower hustling over overlapping commands to attain prompt and fair distribution of assistance, there were inevitable issues

arising due to gaps in communication. This also led to issues that impacted logistics and the conduct of duty of the frontliners due to heavy and multiple workloads. Despite concerted efforts to optimize the rollout of vaccines, there is still vast hesitance from the constituents due to the same communication gap and social media influence.

**Opportunities.** This research also showed opportunities for improvement in the practices employed to address similar gaps/problem areas in future pandemic response efforts.



*Fig 4. Opportunities Identified to Improve Future Pandemic Response Efforts*

For instance, with most restrictions lifted towards the end of the pandemic, LGUs could take advantage of the relaxed protocols and invest in research and technology to develop data-driven, more sustainable, and long-term solutions to the issues previously identified.

Moreover, there may be an opportunity for improvement in communication and logistics management. As operations ease back to normal, LGUs could look into establishing a clearer line of command within and across agencies since the communication gap has made it difficult for the LGUs to disseminate information and coordinate with other organizations effectively. LGUs could also leverage the use of technology to make

communication and coordination seamless. A more advanced ICT system could be integrated into their post-pandemic roadmap to achieve this.

The workload and conduct of duty may also be improved through proper delegation and restructuring of tasks. Kumar et al. (2020) highlighted the need for effective communication and coordination among stakeholders to ensure a timely and appropriate response to pandemics. Their study also emphasized the importance of logistics management in ensuring the availability and distribution of essential supplies and equipment.

While the stringent implementation of COVID-19 protocols and seeking support from the provincial and national government are necessary actions, there may be opportunities to explore more innovative approaches to addressing the lack of resources such as establishing a wider and more diverse network through lasting partnerships and linkages with non-government organizations and other private entities. Building partnerships and networks can help the LGUs leverage their resources and capabilities to better address the challenges posed by future emergencies.

Finally, educating the public about COVID-19 vaccination is an important action that should be continued and expanded. However, there may be opportunities to tailor the messaging and education efforts to specific populations to ensure that they are effective and impactful such as the one suggested in the study of Lin et al. (2021). Their study emphasized the importance of understanding the cultural and social factors that influence vaccine hesitancy among different populations. The study suggested that tailoring messaging and education efforts to specific populations can help address vaccine hesitancy and promote vaccine uptake.

#### **4. Conclusion**

The COVID-19 pandemic has presented significant challenges to local government units (LGUs) worldwide, and the province of Bohol in the Philippines is no exception. The LGUs in Bohol faced numerous challenges during the COVID-19 pandemic, but our study has identified gaps and opportunities in their pandemic response that can be used to brace Bohol for future pandemics. While the LGUs were able to implement best practices, there is still room for improvement. By addressing these gaps and opportunities, focusing on preparedness and effective resource management, optimizing communication and logistics, exploring innovative approaches, building collaborations and partnerships, and tailoring education efforts, the LGUs can continuously evaluate and improve their pandemic response efforts and better protect and serve their communities in case of future unprecedented events other than a pandemic.

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