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# *Experiences of Dengue Patients and Healthcare Professionals in Public Hospitals of Rizal, Philippines*

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***Abstract***

*Dengue is a disease that plagues the Philippines, and the experiences of dengue patients and healthcare workers in public hospitals in Rizal in response to the rising dengue cases remain to be further investigated. This study seeks to gather information through interviews with healthcare professionals and dengue patients from public hospitals in Rizal, Philippines to interpret and consider their experiences to improve the effectiveness, efficiency, and quality of treating dengue cases. A qualitative study was conducted through semi-structured interviews of three dengue patients and three healthcare workers obtained through snowball sampling. A thematic analysis was used to synthesize the data. It was found that patients had experiences with problems due to understaffing, difficult accommodations, and the lasting effects of the disease on their mental and physical health. Healthcare workers were shown to suffer from severe workload due to the high number of patients, difficulties communicating with patients, and insufficient facilities. This sheds light on the experiences of each group and the aspects of healthcare in public hospitals of Rizal that may be improved, such as budget allocation, creating more tertiary hospitals, improving work conditions of healthcare professionals, more efficient healthcare systems, and more. This aligns with the theoretical framework, showing the relationship between systemic availability and individual capability which negatively affect a patient's and a healthcare worker's journey.*

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## Introduction

Dengue is a disease that plagues the Philippines, and recently, it has only been getting worse. Cases of dengue are up by 75% this year compared to 2024, according to Mr. Herbosa, the chief of the Department of Health in the Philippines (Ombay, 2025). Dengue can be very severe and even fatal if untreated, posing a big problem to Filipinos who do not have proper access to good-quality healthcare (World Health Organization, 2025). This study aims to gather information through interviews with medical professionals and dengue patients from Rizal, to interpret and consider their experiences and context when formulating possible solutions for the betterment of the quality of healthcare in public hospitals in similar areas. With this, the study aimed to solve the population gap in studies regarding the lived experiences of these people who are affected by dengue cases, which will include the response of healthcare professionals to the rising number of dengue cases and the struggles of patients. This study interviewed both medical professionals and patients to provide health professionals, researchers, and policymakers of Rizal with sufficient information to come up with solutions that are beneficial for both parties, since they are the people who are most affected by this issue.

### *Significance of the Study*

This study will benefit health professionals such as doctors, nurses, and hospital managers, as they will be guided on how to properly treat dengue patients with experiences and feedback from the patients themselves, thus ultimately benefiting dengue patients, as it seeks to shed light on areas of improvement regarding dengue treatment. Researchers, policymakers, and government leaders, especially those from Rizal province, will benefit from this study because it equips them with information on the problems that need to be addressed and how they can create effective policies or provide assistance.

### *Scope and Delimitations*

The scope of the study is mainly focused on the individual perspective of dengue patients and healthcare officials in public hospitals in Rizal, highlighting issues like healthcare access, service quality, cost, sustainability, socioeconomic capabilities, and many more. This study faced multiple limitations in this research, such as personal privacy and response bias of the participants in answering the interviews.

### *Background of the Study*

Spatial inequality has been observed with the accessibility of healthcare services in the Philippines. Rural areas in the Philippines are associated with poorer accessibility to healthcare facilities (Leyso & Umezaki, 2024). Due to understaffing, poor infrastructure, location, and inadequate resources, healthcare services in rural areas face many challenges.

Though there may be available health centers, people struggle to visit due to distance and expenditures, like patients in a study from the Island Municipality of Jomalig, Quezon Province. Some patients rely on quack doctors, resulting in the escalation of their sicknesses (Collado, 2019).

The number of dengue cases in the Philippines has increased by 73% in the first two months of 2025 compared to the same period in 2024 (Montemayor, 2025). Those living in rural areas have a higher dengue risk than those in urban areas (Seposo et al., 2023). This may be due to the less reliable water systems and unsafe waste disposal in rural areas (Man et al., 2023). With the rising cases of dengue this year, the response of healthcare services to dengue in rural areas may have become less efficient.

Rizal is a province in the Philippines. The experiences and responses of healthcare professionals working in public hospitals and patients in Rizal to the rising cases of dengue are yet to be further researched.

### *Healthcare Issues in the Philippines*

Despite numerous signs of substandard healthcare quality in the rural regions of the Philippines, issues specifically focusing more on dengue in said rural areas remain relatively underinvestigated. The quality of healthcare services in rural areas remains a critical matter, with both the hospitals and the communities facing significant challenges. Public hospitals in remote areas often face multiple issues, like a lack of resources and limited services, due to external factors such as their location, which greatly affects transportation cost, infrastructure, and the overall state of the communities. Because of this, the majority of the population in rural areas is greatly affected by this due to the public hospitals being the main and only source of health care

in such remote regions. Thus, quack doctors and faith healers became the norm. Delving into this, one of the most prevalent illnesses faced by the Philippine population is dengue because of the tropical climate of the country. The main objective of this review was to thematically examine and correlate already existing studies, theories, and determinants that align with the human experiences of dengue patients and healthcare professionals in public hospitals of Rizal.

### *Dengue in the Philippines*

Dengue is one of the most prevalent diseases that plagues the Philippines as a tropical country, resulting in financial and economic burdens. The first recorded case of Dengue in Manila occurred in 1954, and it has been endemic up to the present. Since then, programs have been implemented by the government to control dengue outbreaks and promote health awareness in communities, such as the "4 o'clock habit", which involves the emptying of water containers to inhibit Aedes breeding sites. In 2016, the Dengvaxia vaccine developed by Sanofi was promoted to increase efforts in dengue prevention. However, after two years, Sanofi disclosed that the vaccine may cause 'more severe disease' in those who have not been previously infected by dengue. This caused numerous lawsuits and public outrage, setting healthcare awareness a few steps back due to the widespread mistrust and fear towards the public health sector and the government (Ong et al., 2022; Gregorio et al., 2024). Along with inadequate health literacy, the public developed a negative perception of vaccines and medical care (Mabale et al., 2024; Mendoza et al., 2020). Furthermore, the weighted average medical cost of a hospitalized case was $565.04 and $120.38 for an ambulatory case. The direct medical cost of dengue is estimated at $345 million (Edillo et al., 2014). As of March 11, 2025, the Department of Health reports 62,313 dengue cases from January 1, 2025, to March 1, 2025, noting that it is 73% higher than the amount of reported dengue cases in the same period from the previous year (Montemayor, 2025). The public's lack of confidence in the Philippines' healthcare system, along with costly treatment fees and logistical accessibility hurdles, discourages patients from accessing proper medical intervention.

### *Determinants of Healthcare*

Determinants can be defined as the factors that influence an individual's access to healthcare services (Tzenios, 2019).

### *Individual Determinants*

Individual determinants such as income, education level, health literacy, and cultural views have an impact on an individual's capacity to obtain healthcare services. Low-income patients may be unable to access healthcare services due to the lack of health insurance and the inability to afford transportation to healthcare facilities. In addition, they may choose to prioritize paying for other necessities and delay critical healthcare services due to financial insecurity. Individuals with a lower level of education may struggle to make educated health decisions, obtain healthcare assistance, and interpret healthcare information. Moreover, individuals lacking health literacy may find it difficult to understand health information, communicate with healthcare workers, and lack awareness of critical health information to prevent health-related issues. Furthermore, cultural views and behaviors such as reluctance to seek medical services or distrust towards healthcare systems may impede the individual from getting the proper treatment they need (Tzenios, 2019). A cultural view that may be taken into account as a determinant is the widespread mistrust and fear towards the public health sector due to the Dengvaxia controversy (Gregorio, 2024).

### *Structural Determinants*

Structural determinants to the access of healthcare are the factors that affect the availability, distribution of healthcare services, and their physical accessibility. Some of these structural determinants are the number of healthcare facilities, specialists, and government funding. The availability of healthcare is determined by the number of healthcare facilities in the region, the number of specialists, and government funding. On the other hand, the distribution and accessibility of healthcare services are determined by the location of healthcare facilities and the accessibility of transportation, both of which are especially significant determinants for rural areas. Lastly, the quality of healthcare is another structural determinant of healthcare that refers to the effectiveness, safety, and patient-centeredness, which are overall dependent on the healthcare facilities, technology, treatments, and trained healthcare professionals (Tzenios, 2019). Rizal is made up of 13 municipalities and 1 city, and has both urban and rural areas (McLeod, 2025). Due to this, the

geographical location, transportation, and availability of healthcare facilities may be determinants for the accessibility of healthcare services.

### *Systemic Determinants*

Systemic determinants are defined as the factors that influence the design and financing of the healthcare system. The funding of healthcare systems is a crucial factor that considers the roles of different stakeholders, such as the government, the private sector, and individuals. Additionally, government mandates, policies, regulations, reimbursement, primary care, and human resources contribute to the affordability, accessibility, and equity of healthcare (Tzenios, 2019). The funding of healthcare in Rizal directly impacts the quality of healthcare and is a determinant that affects the patients' experience.

### *Maslow's Hierarchy of Needs*

Maslow's Hierarchy of Needs was proposed by Abraham Maslow in 1943. It states that fundamental human needs must be met. Without healthcare, humans cannot function optimally. It is one of the factors that contribute to reaching one's full potential (McLeod, 2025). Consequently, professional healthcare providers have applied the theory in their field.

Nurses in California, U.S.A., illustrated this during the COVID-19 pandemic. Their basic needs, such as access to food, shelter, childcare, and sleep, were established before the pandemic's arrival. Due to the hazardous nature of the sickness, regulations were set so that the nurses felt safe while working. Mental wellness was also given importance. By achieving these needs, a supportive environment was created, helping the nurses care for their patients better (Hayre-Kwan et al., 2021). During an endemic in the Philippines, such as dengue, Maslow's Hierarchy of Needs is key to achieving quality healthcare for both providers and patients.

### *Conflict Theory*

This theory suggests that there is a struggle for access to resources because of the imbalance of power in a society. It is stated that decisions are made by more dominant groups in favor of themselves, which is driven by the personal priorities of those in power, according to a descriptive study by Prayogi (2023). According to an analysis of conflict in the Philippines, a root cause of violent conflicts arises from poor or a lack of proper governance. Although quite extreme conflicts were used as examples in this analysis, these roots are all present in most parts of the Philippines. Poverty and marginalization were common drivers of conflict that were mentioned to be prominent in the south, while it is usually political drives that cause inequalities nationwide (Herbert, 2019). This theory could explain why the country's resources are not being allocated properly to improve the quality of healthcare for the marginalized.

### *Similar Studies on Filipino Healthcare*

Multiple studies on the effectiveness of healthcare in the Philippines have been conducted, centering on the experiences of the citizens.

A mixed methods study based in Samar, Philippines, concluded that though there was a high level of satisfaction with health services among the citizens, there was a lack of awareness regarding communicable disease prevention, basic oral hygiene practices, and family planning/reproductive health. Free healthcare services were also underutilized due to difficulties accessing health centers and the lack of facilities and medical supplies.[3] As the study investigated the residents' awareness, access, and satisfaction in relation to healthcare in a rural municipality, there may be similar findings in this study.

Accessibility of dengue treatment in Rizal may be affected by the number of older people and residents' income. Rural areas in the Philippines were found to have less access to inpatient and outpatient healthcare facilities (Leyso & Umezaki, 2024).

Folk illnesses and medicine may also influence dengue treatment. Faith healing is part of the Philippines' rich culture and is prevalent, especially in rural sectors. For example, in Partido District, Camarines Sur, folk healing done by "Albularyo" is prevalent, from diagnosing the illness to treatment. Expensive consultation fees from health professionals hinder the willingness of citizens to turn to them (Cerio, 2020). This is also true in the Island Municipality of Jomalig, Quezon Province, in Luzon. As health services are far, patients go to quack doctors, resulting in the escalation of their sickness (Abello et al., 2016). In addition, due to the 2016 Dengvaxia controversy, the public has developed distrust towards the healthcare system and the government. This

discourages dengue patients from availing the health services and treatments they need, potentially leading them to attempt alternative medicine (Ong et al., 2022).

The delay of admission is a factor in poor dengue response. In Region VIII from 2008 to 2014, severe dengue cases were more likely to be admitted late, possibly resulting in higher fatality rates. For mild cases of dengue, public hospital patients tended to be admitted later than private hospital patients. Individuals with limited economic resources often rely on public hospitals, frequently delaying seeking care until their symptoms become critical. This existing strain is severely exacerbated during dengue epidemics, which dramatically increase patient volume and can overwhelm public health facilities. Consequently, the quality of treatment is further degraded by the pre-existing lack of resources within these institutions (Abello et al., 2016).

Since these determinants all have effects on the overall quality and accessibility of healthcare, understanding the causes and effects of these determinants can help address and formulate solutions for the betterment of the poor healthcare system. Maslow's Hierarchy of Needs and the Conflict Theory manifest in the conceptual framework as it explains how economic inequalities develop, and how they affect the individual's ability to prioritize health and access quality healthcare as part of the determinants previously stated (Hayre-Kwan et al., 2021; Prayogi, 2023; Herbert, 2019). Understanding how biases stemming from the Dengvaxia controversy can greatly affect the study's assessment of an individual's experiences or trust in the healthcare system (Mabale et al., 2024; Mendoza et al., 2020). This, in turn, would affect the structural and systemic determinants of healthcare.

The patients' awareness of proper self-care and hygienic practices is one of the factors that are to be considered when understanding their context. To add on to this, not many studies focus on the context and the experiences of healthcare workers. These perspectives of healthcare professionals should be considered since they directly affect some determinants, like the availability of services for patients. There is also a lack of studies regarding the accessibility of medical facilities, specifically in Rizal. To bridge this gap, a study was conducted to thoroughly gather data from this specific area to focus on the factors that most affect this specific community.

## Conceptual Framework

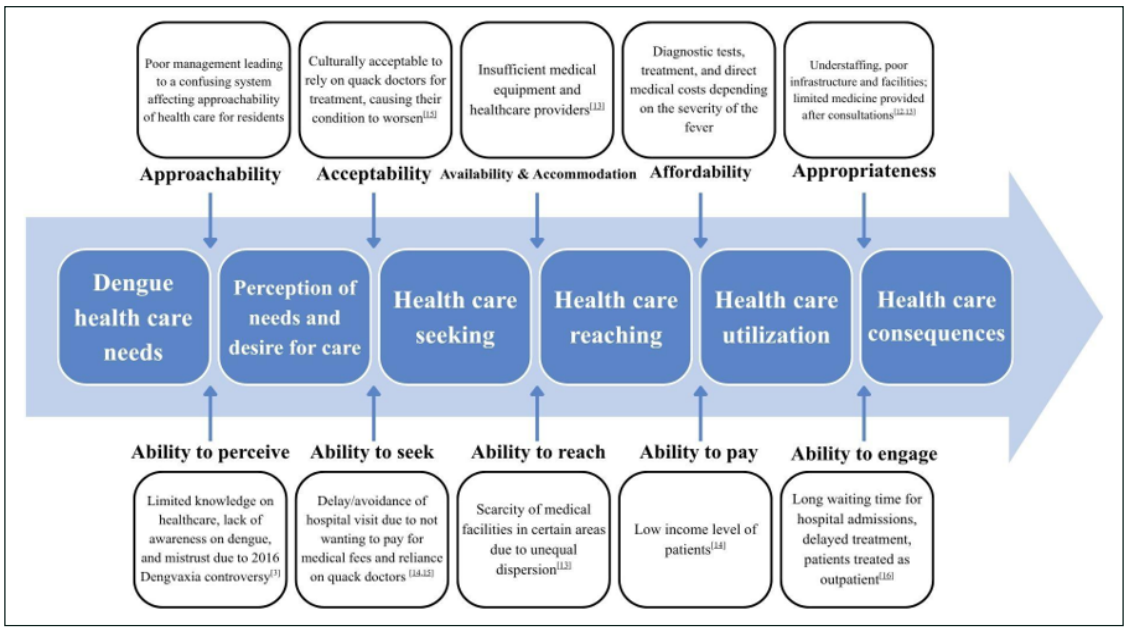


**Figure 1:** Philippine healthcare in the context of dengue

This conceptual framework adopts Levesque's framework, as it centers around healthcare access. The framework identifies healthcare needs in relation to dengue and factors that may prevent healthcare from being effective. The

dimensions and determinants of healthcare describe the possible experiences of patients and healthcare professionals in rural public hospitals (Levesque et al., 2013). Using this framework in this study served as a guide when formulating questions for the interviews.

## Research Methods

### *Research Design*

A qualitative research design was employed, as it is one of the most well-known research designs and has been used to evaluate health services (s). Semi-structured interviews will be conducted to allow flexibility and in-depth responses from the participants (Ruslin et al., 2022). The data collection was conducted from December 2025 to March 2026.

### *Sampling Technique*

The researchers collected the experiences of both healthcare professionals and former dengue patients from Rizal, Philippines. Healthcare professionals must have experience in caring for dengue patients in public hospitals in Rizal. The dengue patients must have availed treatment, or are currently availing treatment, from a public hospital in Rizal within the time frame of 2019 to the present, excluding 2020 (or during the COVID-19 outbreak). Patients who received treatment from the same timeframe were selected to ensure that the information on healthcare treatment is current. This is especially relevant as, due to the COVID-19 pandemic, healthcare treatment has changed significantly. Snowball sampling, a non-random sampling method, was used to recruit the participants to reach healthcare professionals and dengue patients who were harder to access (Naderifar et al., 2017). Three healthcare professionals and three dengue patients were selected for the interviews. The initial interviewees were contacted by the researchers. Then, the participant referred the researchers to dengue patients as well as other doctors who have treated dengue patients.

### *Collection of Data*

All participants, specifically three dengue patients and three healthcare workers with experience in managing dengue, were required to sign an informed consent form to participate in the interviews. The participants then proceeded to the online interviews, where they shared information about their personal experiences and perspectives.

### *Data Analysis*

A thematic analysis was conducted to identify the common themes in the experiences of dengue patients and health professionals. According to the findings of a similar thematic study, themes that affect dengue treatment-seeking behavior, all of which were potentially relevant to the study, were identified: the perceived inaccessibility of health services, limited treatment options, and self-treatment as the most common treatment approach. These were some considerations taken during the formulation of themes (Le et al., 2024). The themes compiled from the data gathered from the interviews were used to form insights regarding the healthcare system of Rizal and to deliberate recommendations for improving dengue healthcare.

## Results

Thematic analysis was conducted to answer the research question “What are the experiences of dengue patients and healthcare professionals in public hospitals of Rizal?” as well as the sub-questions, “How do healthcare professionals in public hospitals in Rizal respond to the rising dengue cases?”, “What are the various experiences of dengue patients as they stay at a public hospital in Rizal for treatment?”, and “What could be done to improve the effectiveness, efficiency, and quality of treating dengue cases?”.

**Table 1:** Thematic Analysis for Dengue Patients

| **Theme 1:** Initial Reaction | | |
|---|---|---|
| **Code Cluster** | **Responses** | **Codes** |
| Symptoms | "My feet were really…I couldn't walk, my feet had no strength." (Ruby)<br>"I thought it was just a fever at first, but when I got tested, it was dengue." (Sally)<br>"I started getting rashes…" (Ariel) | No strength<br>Fever<br>Rashes |
| **Theme 2:** Problems Due to Understaffing | | |
| **Code Cluster** | **Responses** | **Codes** |
| Difficulty/Delay in Accommodation | "You won't be taken care of unless the patient's condition is an emergency, so you really have to wait." (Ariel)<br>"The emergency rooms were full, so when I went there, they made me wait for an emergency room until I vomited, and only then did they admit me in the ward." (Sally) | Few nurses<br>Lining up |
| **Theme 3:** Interactions with Healthcare Workers | | |
| **Code Cluster** | **Responses** | **Codes** |
| Friendly Disposition | "Yes, especially the nurses there. They were okay." (Ruby)<br>"They didn't really talk to me personally but I guess they were more caring." (Sally) | Friendly<br>Caring |
| Treatment | "She is constantly monitored, because of her condition, she is a SPED." (Ariel)<br>"They monitored us regularly to check if the patient is okay or not." (Ruby) | Regularly Monitored |
| **Theme 4:** Settling | | |
| **Code Cluster** | **Responses** | **Codes** |
| Comparison to Private Hospitals | "Of course private [hospitals] have good service; the only thing is, if the patient doesn't have any money, they can't afford it. So, they have to go to public [hospitals]." (Ariel)<br>"Because it was a private hospital. You're really taken care of, you stay clean, you're alone in your bed, there's nothing to complain about." (Ruby) | Good service<br>Nothing to complain |
| **Theme 5:** Public over Private | | |
| **Code Cluster** | **Responses** | **Codes** |
| Economics | "...if the patient doesn't have any money, they can't afford it. So, they have to go to public [hospitals]." (Ariel)<br>"Yes, there is. In public hospitals, we have someone we can consult. Especially for indigenous people like us."(Ariel) | No money<br>Can't afford |
| **Theme 6:** Traditional Medicine | | |
| **Code Cluster** | **Responses** | **Codes** |
| Herbal Treatments | "... papaya leaves…I blend them and drink the juice." (Ruby)<br>"Here in the mountains, we use herbal [medicines]." (Ariel) | Herb<br>According to ___ (relative) |

| **Theme 7:** Issues with the Facility | | |
|---|---|---|
| **Code Cluster** | **Responses** | **Codes** |
| Limited Capacity | "It was filled to the brim…in Morong, so we were transferred to another hospital." (Ariel)<br>"Two persons in one bed." (Ruby)<br>"We had to share with random people." (Ruby) | Sharing<br>Full<br>No space |
| **Theme 8:** Lasting Effects | | |
| **Code Cluster** | **Responses** | **Codes** |
| Trauma Caused by Sickness and Treatment | "It was really traumatizing." (Ruby)<br>"...every morning or night, they will collect my blood to check if it's free of dengue or if my platelet count has increased. Even if it's early in the morning, they will check my platelet count." (Sally) | Trauma<br>Hard<br>Tiring |

Table 1 shows the themes generated from the dengue patients' responses. From the responses, code clusters were taken and codes, and then further grouped into eight main themes. These themes were Initial Reaction, Problems Due to Understaffing, Interactions with Healthcare Workers, Settling, Public over Private, Traditional Medicine, Issues with the Facility, and Lasting Effects.

**Table 2:** Thematic Analysis for Healthcare Workers

| **Theme 1:** Overcrowding | | |
|---|---|---|
| **Code Cluster** | **Responses** | **Codes** |
| Multiple Patients In One Ward/Bed | "So, sometimes, because there are too many [patients], and then we can't transfer them to another hospital, we give waivers for patients who allow." (Aqua)<br>"How come other hospitals say that they are at full capacity? But for us, we cannot refuse patients." (Lazarus) | Too many<br>Exceeding capacity<br>Cannot refuse |
| **Theme 2:** Understaffing | | |
| **Code Cluster** | **Responses** | **Codes** |
| Few Staff, Too Many Patients | "There will be a time that two people are assigned on duty for one ward, but there are 30+ patients, so the nurses are also exhausted. So by DOH requirements, we are understaffed." (Aqua)<br>"It's really the staffing too. We are really understaffed, which is the cause of delay when operating the equipment." (Lazarus)<br>"If you want the real inside on what's happening on public hospitals, yung mga nurses kami, sometimes we act the role of the doctors as well. Kasi nga, sobrang kulang eh." (Gaia) | Understaffed<br>Lacking<br>Delay<br>Nurses act as doctors |
| Delay of Treatment | "If you're in the emergency department, we can't prioritize your treatment. What we do is we have you sign a waiver saying that we can't give you medicine in time." (Gaia) | Waiver<br>Prioritize |
| **Theme 3:** Patient Obstacles | | |
| **Code Cluster** | **Responses** | **Codes** |

| | | |
|---|---|---|
| Religious Beliefs and Folk Medicine | "It depends on their religion. Especially in dengue cases, they need to have blood transfusions. We also have to consider their religion…we have to respect them." (Lazarus)<br>"They really go to quack doctors first because that's what's closest to them." (Gaia) | Religion<br>Quack doctors<br>Closer |
| Delayed Patient Visit | "Sometimes, they get here too late. The doctors are running out of time." (Aqua) | Out of time |
| **Theme 4:** Underpaid | | |
| **Code Cluster** | **Responses** | **Codes** |
| Better Opportunities Elsewhere | "There are nurses that resigned because there were better opportunities outside." (Aqua) | Better opportunities |
| Differential Pay | "The salary is okay, but we don't have a night differential. We can't doze off, you can't bow your head. We should have a night differential." (Lazarus) | Not allowed to nap<br>No night differential |
| **Theme 5:** Demand For Tertiary Hospitals | | |
| **Code Cluster** | **Responses** | **Codes** |
| Redirect Patients to Tertiary Hospitals | "Usually, once you see them, they have bleeding. Bleeding gums. It's really a different case. Sometimes, it's their sensorium. For severe dengue cases, even their sensorium deteriorates. So, we advise cases like that to transfer to tertiary hospitals." (Aqua) | Severe dengue<br>Sensorium deteriorates<br>Transfer to tertiary hospital |
| **Theme 6:** Insufficient Facilities and Medical Equipment | | |
| **Code Cluster** | **Responses** | **Codes** |
| Resourcefulness/ Compromises | "What I was telling you, this is where you can see the resourcefulness of nurses and doctors in public hospitals (...) But here, we have to work with what we have." (Gaia) | Resourceful<br>Work with what we have |
| Delay of Requested Medical Equipment/Low Quality Equipment | "The nebulizers, due to the large number of patients, are not enough. So in the office, we always request for them. I don't know, I think the supply takes a long time to arrive." (Aqua)<br>"I buy using my own money because I don't want to be infected. Because it is just a surgical mask. It is not high grade. Meaning, its filters are not as good." (Gaia) | Supply takes a long time<br>Buy using own money<br>Not high grade |
| **Theme 7:** Recommendations For Better Healthcare | | |
| **Code Cluster** | **Responses** | **Codes** |
| Communication Needed Between Healthcare System and Government | "Eh, if that budget for resources and staffing was instead used for one big hospital in the middle of the whole Rizal just so that it can be more accessible, that would have been better for the people." (Gaia)<br>"You assumed it's complete, but it's not enough. So hopefully, the hospital should be given the priority. Since this is under the government, they are the ones to make decisions." (Aqua) | Budget resources<br>Staffing<br>Request<br>Lacking<br>Priority |

Table 2 shows the themes generated from the nurses' responses. From the responses, code clusters were

taken and codes, and then further grouped into seven main themes. These themes were Overcrowding, Understaffing, Patient Obstacles, Underpaid, Demand For Tertiary Hospitals, Insufficient Facilities and Medical Equipment, and Recommendations For Better Healthcare.

## Discussion

The study focuses on the experiences of dengue patients and healthcare professionals in public hospitals of Rizal. From the interviews, the researchers analyzed how healthcare professionals respond to the rising dengue cases, the experiences of dengue patients, and how dengue treatment could be improved in public hospitals in terms of effectiveness, efficiency, and quality. The findings suggest that both healthcare professionals and dengue patients had issues with the facilities and resources of public hospitals. Because of understaffing, dengue patients went through long waiting times, and healthcare workers had long shifts while treating a large number of patients with varying diseases. The high-pressure environment sometimes caused miscommunication between the patients and workers. It was found that healthcare professionals believe that the government must build more tertiary hospitals and give proper funding to public hospitals. Furthermore, dengue patients see the need for improved facilities and space in public hospitals.

### *Major findings and its importance for patients*

### Initial Reaction

The initial reaction describes the **symptoms** of the patient and how **where they live may affect their chances of contracting dengue**. All three interviewees had fevers that they initially did not assume were signs of dengue. Other common symptoms included rashes and a fatigued state. For example, the participant Ruby shared, *"I got a fever, it was hard to fever, and then I couldn't stand up. And to add on to that, my gums were so red when I was getting a check-up."* Similarly, another participant, Ariel, said, *"She had a fever for several days, she kept having to come back [to the hospital]. Then once she got rashes, that's when we brought her to the hospital to get treated."*

However, not all patients experienced a variety of symptoms. One participant's case was characterized only by a fever. Sally answered in the interview, *"I thought it was just a fever at first, but when I got tested, it was dengue."*

The location of the participant may also have a role in their chances of dengue exposure. For example, Ariel shared that she lived with her family near a river. Two people in her family contracted dengue at around the same time. She shared,

*"The water isn't flowing anymore, so it's stagnant, where mosquitos can breed. They got dengue one after another,* [name removed] *followed by my brother; his symptoms are similar but he wasn't confined."*

The proximity to a large body of water, a breeding ground for mosquitoes, may have made the family more susceptible to dengue.

The symptoms and locations of a patient are important to note as they contribute to potential ways to improve the effectiveness, efficacy, and quality of treating dengue cases. Knowing the symptoms and how they differ for each patient is how healthcare workers are able to address the unique conditions of the patients. High dengue exposure in Rizal is an indicator of what areas require more healthcare.

### Problems Due to Understaffing (Patient Perspective)

This theme describes scenarios that the dengue patients encountered due to understaffing. An issue that recurred multiple times was a **delay in accommodation**, specifically in the ER (emergency room). Mentioned by Ariel and Sally respectively,

*"We stayed at the emergency [room] for a while. We were there for around five hours," as well as "...they had me wait at the emergency room at first until I started throwing up. That's when they admitted me to a bed."*

The prolonged waiting time the patients had to endure, combined with the lingering symptoms of dengue, defeats the primary function of an ER, which is to provide immediate response to patients with life-threatening injuries or severe illnesses. However, it was observed from the responses that the large gap between the number of patients to the total number of nurses and doctors contributed to this issue. *"And there are really not enough doctors there sometimes... the extreme volume of patients, they cannot accommodate everyone immediately,"* Ruby stated.

With this in mind, this theme highlights common scenarios that pose a great risk for patients who cannot be admitted in time.

### Interactions with Healthcare Workers

This theme refers to communication between the healthcare workers and dengue patients. Overall, the participants found the nurses to have a **friendly disposition**. Sally shared, *"They didn't really talk to me personally but I guess they were more caring."* Their interactions with the nurses were generally positive. According to Ruby, *"They monitored us regularly to check if the patient is okay or not. So it was okay, because of course they're considering our health, if we're going to be okay, or if our condition will get worse."* The nurses regularly monitored their patients.

One of the participants, Ariel, is a guardian for a dengue patient with special needs (an intellectual disability). She shared that *"She was always monitored because she's SPED."* indicating that the nurses were understanding of the patient's condition.

In terms of **communicating the disease or treatment** to be done on the patient, the participants had varying experiences. For example, in Sally's case, the doctors communicated with her available parents as she is a minor. For the adult patients, Ruby and Ariel, the communication was generally positive. Ruby shared that the doctor communicated the sickness to her and the procedures that were to be done, such as the medicine needed and the scheduled monitoring.
This theme is important in analyzing the experiences of dengue patients in public hospitals. Aside from their own symptoms, healthworkers' care and treatment are also impactful in a dengue patient's experience.

### Settling

The participants' experiences of **comparing public hospitals to private hospitals** and **acceptance** of subpar protocol and facilities contribute to the understanding of the experiences of dengue patients treated in public hospitals in Rizal. Additionally, these may provide insights on how these experiences and protocols can be improved.

The participants contrasted treatment at private hospitals and public hospitals. For example, Ariel shared, *"Of course private [hospitals] have good service; the only thing is, if the patient doesn't have any money, they can't afford it. So, they have to go to public [hospitals]."*

One patient, Ruby, had a younger sibling who contracted dengue after her case. She was treated at a private hospital, unlike her sister.

*"Because when she [my sister] got dengue, my mom was an OFW, so of course, my sister is the baby of the family. So we really did everything we could for her… The hospital where my sister was admitted was really good. Because it was a private hospital. You're really taken care of, you stay clean, you're alone in your bed, there's nothing to complain about. All of them, the nurses, the doctor, they're accommodating."* (Ruby)

Ruby's experience contrasted with her sister's, as in Ruby's stay at the public hospital, there was overcrowding and below-par accommodation. For example, she said,

*"I have allergies, but I didn't tell them. Because of course, you don't pay for anything in public hospitals, so I didn't want to complain. I can't eat egg, and one day, that was the food they prepared. So I didn't have a choice but to buy food or ask someone to buy food for me outside [the hospital]."*

Because she did not have to pay any fees, she did not want to inconvenience the workers by speaking out about her allergy which in turn added to her uncomfortable experience in the hospital.

### Public Over Private

Though the participants held views that private hospitals would have better treatment, they opted to go to public hospitals due to **economics, transportation issues, and location.** Ruby shared, "*…if the patient doesn't have any money, they can't afford it. So, they have to go to public [hospitals]."* indicating the budget restraints that lead patients to seek treatment from a public hospital. Transportation issues and the effect of location also came into play for the participants. For Sally, the public hospital was easier to access due to *"it was near enough, and there's a lot of public transpo."* However, Ariel shared that "*...we live far away from the hospital. When we travel, it's really far. When there isn't service, no*

*car, it's difficult."*

Private hospitals were farther for the participants, as shared by Ruby (*"That was the nearest public [hospital]. The private ones are too far."*) and Ariel (*"That was the hospital nearest to us.")*

The accessibility of the hospital is crucial in analyzing the need for proper healthcare in Rizal. To improve healthcare, it is necessary to understand the factors of the patients' choices, as it is not just the appropriate treatment that they consider.

### Traditional Medicine

Traditional medicine concerns the alternative medicine or **herbal treatments** that the participants partook in due to influence from their family or upbringing. Ruby described the process of drinking freshly-blended papaya leaves during her stay at the hospital when her condition was not improving. This remedy was recommended by her aunt.

*"My tita makes herbal treatments. What dengue patients drink is tawa-tawa and for me, in my experience, I also drink papaya leaves, I blend them and drink the juice. After I drank it, my hemoglobin count suddenly increased."* (Ruby)

This treatment was effective in her experience and lowered her hemoglobin count.

Similarly, Ariel shared that *"Here in the mountains, we use herbal [medicines]."* She commented that in the mountainous area where she lives, most people rely on herbal or traditional medicine.

This theme shows the positive effect of traditional medicine on the experiences and conditions of dengue patients.

### Issues with the Facility

The participants recalled **issues with the facility** in terms of **equipment** and **limited capacity.** Sally shared that the equipment in her ward was *"very old"*. Ruby had a shared comfort room that was not cleaned regularly (*"The comfort rooms were used by a lot of people. So they aren't really cleaned regularly."*

Ariel shared, *"It was filled to the brim with people with dengue in Morong, so we were transferred to another hospital."* Because of the hospital's limited capacity, the overwhelming amount of dengue cases forced them to go to a different hospital. Comparably, the hospital where Ruby was admitted did not have enough hospital beds. She mentioned,

*"So we had to share with random people, each patient has to share with another patient. That was that downside. Not just me, not just dengue patients. All the patients, even if you're pregnant, a child, you have a sprain, are recovering from an operation, you still have to share beds."*

Many patients had to share beds with others, despite their diverse sicknesses.

Aside from being uncomfortable experiences for the patients, this theme points out an issue with public hospitals that must be given focus. These experiences showed that the participants were at risk of added health issues. Not enough patient capacity, uncleanliness, and no separation of patients show the need for larger hospitals and improved facilities.

### Lasting Effects

Dengue had lasting effects on the patients physically and emotionally. Ruby described her experience as traumatizing due to the physical strain, describing the **trauma caused by the sickness and the treatment.**

Ariel said that the situation was difficult because of the struggles she and her family faced in finding a hospital due to their location. Sally and Ruby had similar experiences where they had to get injections and tests regularly, adding to the stress during their stay.

Lasting Effects implies that patients' experiences did not end when they recovered from dengue. They remained in their memories and continue to live out the consequences of this event in their lives.

## *Major findings and its importance for healthcare workers*

### Overcrowding

Overcrowding refers to having a large number of patients staying in the hospital, exceeding the hospital's capacity. This phenomenon was repeatedly brought up by the healthcare professionals. This issue causes

other problems to surface such as problems with ward segregation, miscommunication, and instances of ward sharing.

All interviewed participants shared their experiences with overcrowding, specifically **sharing wards or beds**.

Aqua shared her experience in dealing with a large number of patients: *"So, sometimes, because there are too many [patients], and then we can't transfer them to another hospital, we give waivers for patients who allow."* She notes that due to having so many patients, some patients have to sign waivers as the healthcare workers will not be able to accommodate them in time.

Aqua mentioned instances of children having to share beds, and some having to sit on wheelchairs due to the hospital's incapacity to accommodate them. *"Because here, if they're kids, we can put two in one bed. Sometimes it's really too much."*

Gaia talked about children having to share the bed, just to double the capacity of the room and accommodate more patients. And she noted that even after sharing the bed, there are still patients that need accommodation.

*"That's a very common term for us, once you get admitted you have to share a bed. Meaning, the kids share the bed…Because of this, for example, if it's only supposed to have 15 patients in a ward, it becomes 30. And on top of that, there's still not enough space."*

Lazarus shared a similar sentiment: *"Sometimes, there would be 3 patients in one bed, because it's small. The children are small, so we try to fit more children in one bed."* In addition, she explains the reason why there is overcrowding: the public hospital that they are working in is not allowed to reject patients. *"How come other hospitals can say that they are at full capacity? But for us, we cannot refuse patients."*

Sharing wards is a common practice. However, it is not ideal. Gaia compared the ward conditions in the public hospital to private hospitals: *"So what I mean, in a private hospital, you're protected. Because imagine that, you each have a different room."* In addition, she explains that public hospitals resort to **putting all the same patients in one room**, which means that the patients dealing with similar illnesses or facing similar symptoms are placed in one room.

*"Considering that this is all we have in public hospitals, it is what it is. We have rooms. So we just try to give our best to assign them so we can segregate them better. Separate the infectious from the non-infectious. Then separate those with dengue from those without. So the effort I was pertaining to in the hospital was simply putting all the same patients in one room."*

Gaia elaborated further in the interview that this is suboptimal because this system does not work for all patients. Some patients may be experiencing two illnesses simultaneously, and there may be issues in categorizing what ward they should be placed in as it could put the other patients in the ward at risk.

Aqua described the system in their public hospital in order to prioritize dengue patients: *"So no matter how long the line is, there will be a separate lane for dengue. So that they can be checked by doctors easier. This is called the dengue lane. They will prioritize those patients with suspected dengue."*

Furthermore, the participants shared their experiences of **mis or lack of communication** due to overcrowding.

Aqua illustrated how miscommunication can happen with an example. *"There will always be people like that. It's really unavoidable…For example, a patient with a stomachache was scheduled for an abdominal ultrasound. In this case, they can't eat for eight hours from midnight to morning until their ultrasound. There was a miscommunication."*

Gaia described her struggles in communicating with their patients, that there is not enough time to explain the patient's current condition, the course of treatment, and why this is the course of treatment, due to other patients waiting.

*"There are patients whom we do not have time to communicate with. We were not able to explain why we needed to give such treatment or whatever happened to them. We did not have time to explain about the course of treatment. We couldn't because of time constraints, we were lacking resources. We could not explain for 30 minutes to one patient because of the other 99 patients*

*waiting for us."*

This seems to be a common occurrence in Rizal public hospitals. It determines if patients are properly accommodated and it hinders healthcare professionals from facilitating treatment in a timely manner. Thus, this theme significantly affects the experiences of dengue patients as well as healthcare professionals.

### Understaffing (Nurse Perspective)

This theme covers responses that discuss the cause and effects of understaffing. While an identical theme is present, this specific section brings light to the perspective of nurses.

The first code cluster, **Few Staff, Too Many Patients,** defines what it means to be '*understaffed'*. Gaia explained that it is common for doctors to be paired with only one nurse, and are assigned to accommodate 100+ cases, which causes shifts to last more than 12 hours. According to a Philippine Republic Act No. 7305:

*"The ratio of health staff to patient load shall be such as to reasonably effect a sustained delivery of quality health care at all times without overworking the public health worker and overextending his/her duty and service."* (Magna Carta of Public Health Workers, 1992)

Aqua mentioned that *"There are times when there are only two on duty in one ward, with 30+ patients, so we nurses are exhausted. By DOH requirements, we are understaffed."*

There are multiple responses across themes that give a reason to why these public hospitals are understaffed. In particular, Gaia highlights how hospitals are constantly hiring to solve the understaffing issue. These same hospitals will also say that they receive many applications, yet little to none of these applicants were accepted.

The second and third code clusters, **heavy workload** and **delay of treatment,** discuss the effects understaffing can have on nurses and patients respectively. While the underlying issue takes development to resolve, health workers have to endure their work to keep the hospitals functioning. The overwhelming number of cases innately causes stress and fatigue. These effects are further amplified when the distribution of work requires two nurses to manage at least 30 patients per ward (according to Aqua's response). Furthermore, society continues to demand more work from health workers, even as their workload exceeds the standard ratio. The physical demand of being a public health worker exhausts them, which limits the quality accommodation they can give to their patients. This creates several problems such as workplace arguments, mistakes, and delayed treatment. In fact, *"If you're in the emergency department, we can't prioritize your treatment. What we do is we have you sign a waiver saying that we can't give you medicine in time."* Gaia shared.

The theme emphasizes how lacking in staff can cause chain reactions to both the internal and external systems of hospitals. If the health workers cannot perform at their best, then hospitals may start losing functionality, and patients will begin suffering from its effects. Lazarus projected a case that *"We really need staff so that our working hours will be reduced."* Thus, this is a notable theme and factor in the ways that health professionals deal with the rising cases of dengue.

### Patient Obstacles

Patient obstacles, also known as individual determinants, refers to the personal hindrances that prevent the patient from accessing the care that they need. This was a recurring theme in the responses of the participants.

Firstly, the subtheme **'Religious beliefs and folk medicine'** is evident in the responses of the participants. Lazarus described her experience with patients consulting the *arbularyo* or the quack doctor first before going to the hospital. At times, patients even refuse to be treated by the hospital due to these beliefs. *"Sometimes they go to the quack doctor first. It's true because they believe in quack doctors. They have so many superstitious beliefs. Sometimes, when they are seriously ill, they bring them to the quack doctor. Sometimes they don't want to get treated."*

In addition, she expounds on the protocol in cases when patients refuse necessary treatments such as blood transfusions because it is contradictory to their religion. *"It depends on their religion. Especially in dengue cases, they need to have blood transfusions. We also have to consider their religion…we have to*

*respect them."* She mentions that the patient has to sign a waiver so that the hospital will not be held accountable for whatever happens to the patient when the patient refuses treatment.

Gaia elaborates a similar sentiment: that patients commonly consult the *albularyo* or other forms of traditional medicine before considering treatment in a hospital that practices biomedicine. *"They go to albularyos first. They think a dwarf stepped on the child, whatever…They really go to quack doctors first because that's what's closest to them. And if their condition doesn't improve, they go to hospitals. That's very common."*

She also notes that this is more common in those with a lower financial capacity: *"Yes, actually, especially for those who really don't have money. What they do, especially for dengue, they drink something herbal."* This insight adds a layer of nuance on the potential correlation between the patient's financial status and personal/cultural beliefs, and how this impacts the patient's willingness to seek treatment.

Furthermore, the patient's **inability to understand health information** seems to be somewhat prevalent in public hospitals. This impedes the patient from seeking and availing the care that they need. This obstacle makes it difficult for patients to understand medical terms, procedures, or treatments, and ultimately affects their decision making. Lazarus points out that she has to expend more time and effort for some patients to understand health information relayed to them. *"Yes, that's true. When we're in public [hospitals], there are patients who are very slow…you have to explain over and over again. Of course, you have to speak to them in a way they'll understand."*

In addition, subthemes of the patient's **inability to afford treatment** were recurring, although not as explicit. All participants shared experiences of dealing with patients who are less financially capable, albeit implied.

Finally, some **patients delay their visit** to the hospital. In these cases, they present with worse symptoms and require more intensive care from the healthcare workers. This seems to be frequent in Rizal public hospitals, possibly due to personal deterrents such as financial incapacity and expensive treatment.

*"[Interviewer]: They weren't admitted immediately. Is that a common occurrence for dengue patients as well? [Gaia]: Yeah, yeah. Actually, it's common. common yun. Yes."*

Aqua explains that in some cases, the patient visits the hospital way too late, leaving the doctors with not a lot to do about their illness. "*Sometimes, they get here too late. The doctors are running out of time."*

This addresses the research question as these obstacles to treatment affect the course of treatment that the patient is able to receive, and ultimately the patient's condition after the treatment. In addition, healthcare professionals have to adjust to these obstacles, thus significantly contributing to the experiences of dengue patients and healthcare professionals in Rizal.

### Underpaid

This theme explores how healthcare workers experienced and responded to challenges that came with an insufficient salary. Some respondents, such as Gaia, **does not rely solely on this line of work**, as she shared *"I personally have other modes of income. Not just here."*

She also stated, *"Actually, that's why I became a nurse. For experience, becuase I'm trying to work abroad. So the problem with me is, because I really don't want to, I know that I'm not paid enough for this. I'm not going to risk myself for this job."* emphasizing that they do not get compensated enough for their job, thus finding compatibility in working in another country instead.

Moreover, healthcare workers are aware of **preferable offers from other places** which leads to understaffing. According to Aqua's experience, *"So, there are nurses that resigned because there are better opportunities outside [the country]. There are times when there are only two on duty in one ward, with 30+ patients, so we nurses are exhausted. By DOH requirements, we are understaffed."*

Gaia added, *"What I mean is, in the Philippines, healthcare isn't prioritized. Not like other countries. You can see, like in my personal experience, if you are a nurse, your salary is high. And let's say that there is a*

*high cost of living, but even if they are more prioritized, they have more benefits, they have higher pay."* fully convinced that the Philippines bears low prioritization towards healthcare compared to foreign countries.

The underlying reasons of the respondents' answers are heavily related to their working conditions, such as the **absence of a night differential pay** regardless of taking up graveyard shifts. *"You know, personally, I am always put in the night shift. So that's the PM shift. Graveyard shift. But I don't get extra pay for that. I don't get incentives. I work on holidays, no incentives. I work on weekends, no incentives. So that's actually the main reason why I want to move to a different country. Because I feel like I'm not compensated enough."* Gaia expressed further, decided on her plan to work in another country as a result of lacking compensation despite the extra effort she puts in.

Despite working through hours of night duty, Lazarus explained a strict rule bestowed upon them, *"Especially now that there's a ruling that we can't nap. Even just 15 minutes, even 5 minutes, you're not allowed to take a nap. Obviously, we need to recharge. Let's say you take a 12 hour night shift for 2 days. It's too much."* Furthermore, she similarly disclosed the failure to provide night differential pay even with accomplishing consistent evening shifts. *The salary is okay, but we just don't have a night differential. We can't doze off, you can't bow your head. There should be a night differential."*

"This theme encapsulates the recurring challenges faced by healthcare workers, specifically the insufficiency of their income relative to the demands of their profession. It was highlighted that the risks, workload, and sacrifices that come with the respondents' work are inadequately compensated, causing them to look for other jobs that could further sustain them, or pivot workplaces and consider opportunities that would offer better support and benefits. This, however, contributes to the decreasing hospital staff and causes overwork to the healthcare workers left behind in some cases.

### Demand For Tertiary Hospitals

Demand for tertiary hospitals is essentially the need for Rizal to have more healthcare centers with the capacity to administer tertiary care. Tertiary care is specialized care that requires more advanced equipment to treat specific, complex conditions. This is necessary especially in more severe cases of Dengue, wherein the complications and symptoms cannot be treated by primary and secondary hospitals only (Torrey, 2026).

Throughout the data collection process, the participants shared that they are **not able to administer certain procedures** as workers of primary or secondary care hospitals. Their limitation as a primary or secondary care hospital is that they do not have specialized equipment to diagnose.

Gaia's response reflects this when she mentioned the lack of dengue testing kits, making it harder for workers to diagnose dengue patients. *"Again, because it's just a public hospital, our situation is, sometimes, we don't have dengue tests. The kits. Our laboratory doesn't have kits. So, we can't confirm if they have dengue."*

This limitation is also evident in Lazarus's response: *"Sometimes, our x-rays are broken, as well as our ultrasounds. Sometimes, the patient has to do them outside, but their budget can't afford it…The treatment has to be delayed."* In some cases, the patient has to avail the procedure in a different healthcare center, which may cause treatment delays and additional fees.

Along this, the subtheme of having to **redirect patients to tertiary** centers is prominent in the responses of the participants. For instance, Aqua talks about bleeding gums, a common symptom of Dengue, and the loss of sensation to which she advises the patient to seek tertiary care due to its critical nature.

*"Usually, once you see them, they have bleeding. Bleeding gums. It's really a different case. Sometimes, it's their sensorium. For severe dengue cases, even their sensorium deteriorates. So, we advise cases like that to transfer to tertiary hospitals."*

Gaia explained that at times, doctors tell their patients to visit other hospitals in order to confirm their dengue diagnosis. *"So, sometimes, the doctor just makes them leave and says to them, 'Look for another hospital that has dengue confirmation' or something like that."*

This theme is crucial in answering the research question as being a worker of a primary or secondary

hospital can limit the procedures or care they can provide due to the lack of specialized equipment. As a result, the healthcare workers have to adjust and provide care in their best capacity. In addition, the abilities and limitations of a hospital affect the care that it can provide to its patients, thus contributing to the experiences of dengue patients and healthcare professionals. Finally, this theme addresses the research question that asks what can be done to improve the effectiveness, efficiency, and quality of treating dengue cases.

### Insufficient Facilities and Medical Equipment

This theme encompasses the realities of having insufficient facilities and medical equipment. Insufficiency may pertain to suboptimal, malfunctional, outdated, or the complete lack of equipment to facilitate necessary procedures.

Healthcare workers report that public hospitals often lack supplies. When **supplies are requested, they are often delayed, lacking, or even ignored**. Gaia mentioned that she has to use her own money to buy Personal Protective Equipment (PPE) due to her hospital's lack of supplies, specifically protective equipment. *"I buy it with my own money because I don't want to get infected. Because it's just a surgical mask. It's not high grade. Meaning, the filters aren't very good."*

Furthermore, Aqua narrated that the frequently requested equipment did not come. *"The nebulizers, because of the amount of patients, it's very inadequate. So the office always requests from the higher-ups. I don't know, the supply comes slowly."*

Due to this, nurses have to resort to **making compromises and being resourceful.** *"As I said, we have to work with what we have."* Gaia recalled a time that she had to use the resources available to perform a procedure when the equipment they had was unsuitable for their patient. She had to resort to unconventional equipment and techniques to save her patient's life. In addition, Gaia reported that with the lack of diagnostic tools, they had to assume that the patient has dengue based on their symptoms and treat them accordingly.

*"But, we would have to work with what we have. So, for example, just a clinical or basing off from what you're presenting, you've had a fever for a few days, your stomach hurts, you're bleeding, it looks like you have dengue. So, based on the clinical, we just assume for now that you have dengue. And then, we treat you like so."*

This theme is important in assessing the experiences of dengue patients and healthcare workers as medical facilities and equipment determine the quality of care the patients receive, and that includes diagnosis, treatment, and prevention. In addition, it can also affect the workload of the healthcare professionals, as having to compromise takes up more effort and time. Overall, this is a factor that significantly contributes to the experiences of dengue patients and healthcare professionals, and this affects the ability of the workers to deal with rising cases of dengue.

### Recommendations for Better Healthcare

Improvements regarding healthcare systems in Rizal are much needed. Within this theme is where healthcare professionals share their own suggestions that could help influence the betterment of the healthcare Rizaleño citizens deserve.

The respondents established that the lack of communication between healthcare systems and the government must come to an end for the hospital's needs to be met. Significant factors such as building more tertiary hospitals, inclusivity of the governor's help desk, and complete equipment could be provided if the government sustains **communication** with healthcare systems. *"As I told you, we keep the hospital afloat. So, we're able to bear it. So, I guess the government thinks, 'So they can handle it after all; we don't need to add more staff.' So, it's like that."* In addition, they mentioned the need for the government to allocate more funds to create more tertiary hospitals as opposed to having more primary and secondary hospitals.

Due to the available resources, it is difficult to treat severe dengue cases. Primary and secondary hospitals are designed to cater to a wide range of services, thus treatment is less specialized. Since primary and secondary hospitals are unable to provide proper treatment to severe dengue cases, patients are referred to tertiary hospitals which have the appropriate equipment. The budget allocation in public hospitals was found to

be substandard, as shown in Aqua's experience.

*"They really should prioritize medical supplies…They [the government] should prioritize the hospital. The government is in charge of these things. They get to decide."*

A need for sufficient training for ordinary residents was shown in Lazarus's response,

*"They should start giving health teachings so they can understand. Of course, for the others that aren't able to study, so that at the very least, they are aware about what can happen, things like that, do's and don'ts, so they can lessen life-threatening occasions, so that when they urgently need to be brought to the hospital, treatment and first-aid won't be delayed, because it's usually done at home. The health teachings need to be from the government. It needs a budget."*

Because of the lack of proper health teachings, many people, especially the marginalized and uneducated, become susceptible to health issues like dengue.

### *Relationship of findings with other studies*

The theme on the personal obstacles of patients includes a section that supports the fact that it is common for dengue patients to seek medical care only after their condition worsens instead of seeking treatments when they show early symptoms. One of the nurses with the alias Aqua stated that, *"Sometimes, they get here too late. The doctors are running out of time."* This finding supports observations from a related study on the factors that affect the time of admission of dengue patients.

*"Mortality in Dengue cases is often associated with treatment delay. The delay arises mainly from late hospital admission. Multiple factors influence the time of admission–for example, distance from hospitals or poor recognition of warning signs and symptoms"* (Abello et al., 2016)

Although the aforementioned study considered cases in Eastern Visayas from 2008 to 2014, this study considers dengue patients from 2019, and from 2021 to 2026. It provides evidence that the issue of late admission of dengue patients is still present until now in public hospitals in Rizal. Factors that contribute to this are the long waiting time in the hospitals and also the delayed visit of patients due to dismissing early symptoms. To add on to this, the belief with quack doctors or a*lbularyo* is also possibly a factor as to why patients do not choose to seek medical care immediately, as it was mentioned by patients Ruby and Ariel that the use of herbal medicine is quite common. The use of herbal treatments by patients was also confirmed by a nurse with the alias Gaia: *"Yes, actually, especially for those who really don't have money."* This shows that personal beliefs along with financial status adds a layer of complexity to the patient's willingness to seek biomedical care.

This study was able to provide supporting themes to a study on the "Spatial inequality in the accessibility of healthcare services in the Philippines." With this study showing overcrowding, understaffing, insufficient facilities and medical equipment as being prominent themes, it fits with the related study's statements on the factors that define lower spatial accessibility in an area.

*"Spatial accessibility… has two key dimensions: availability (i.e., the number of available healthcare facilities, healthcare workers, or hospital beds), and accessibility (i.e., travel barriers such as distance or the time that people may face when trying to access healthcare facilities)"* (Leyso & Umezaki, 2024)

Moreover, the theme that gives emphasis to the location of public hospitals and the issues on transportation to these hospitals (Theme 5 Table 1) supports the same study on the spatial accessibility of healthcare. Rural areas were characterized by poorer spatial accessibility (Leyso & Umezaki, 2024).

This is supported by the experiences of the dengue patients interviewed in this study, specifically the case of the patient with the alias Ariel: *"Like us, we live far away from the hospital. When we travel, it's really far. When there isn't service, no car, it's difficult."* Another patient with the alias Ruby also stated that *"That was the nearest public [hospital]. The private ones are too far."* These experiences support the claim that the difficulty of access to healthcare facilities due to geographical factors is a reality of the people who live in the area.

### Conceptual Framework

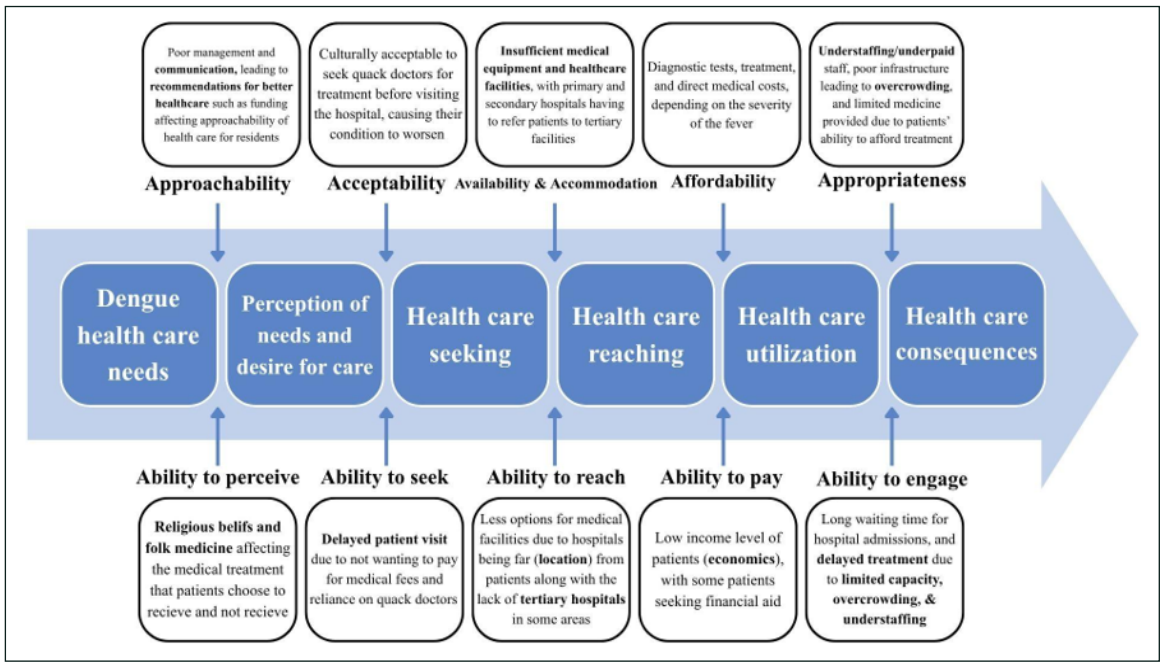


**Figure 2:** Highlighted version of Philippine healthcare in the context of dengue

A new conceptual framework based on Levesque's framework was formulated with the themes found in the study (Pyo et al., 2023(. The center of the illustration maps the linear progression that a patient takes, beginning at their healthcare needs and ending at healthcare consequences (outcome). The top row portion represents the systemic gaps within the healthcare system while the bottom half of the model represents a patient's capacity to be able to navigate through the system. This framework emphasizes the complex relationship between systemic availability and individual capability, facing challenges at any stage of the process whether cultural, financial, or systemic issues, can be seen to negatively affect the outcome of a patient's and a healthcare worker's journey.

### Limitations

This study attempted to gather the perspectives of different dengue patients and health workers across Rizal's public hospitals. However, several limitations were encountered. The first limitation was the lack of doctor representation in the sample group of healthcare workers, as only nurses were interviewed. Additionally, the researchers were unable to get a representative from all public hospitals in Rizal, which not only limits our sample size but also the breadth of perspectives. Lastly, it should be noted that some interviewees had been potentially hesitant to share recommendations on hospital improvement, due to a conflict of interest: to protect the name of their hospital.

### Future Studies

Future research should aim for a more quantitative approach, as this study is entirely qualitative. Through a quantitative approach, it will be easier to see how the themes apply to an overall population and also connect patterns and see trends between the two methods. Using scaled surveys based on the responses from the interviews in this study to translate the experiences of dengue patients and healthcare workers will quantify the data. In addition, though this study already has some themes related to comparisons between public and private hospitals, a research paper focused more on a comparative analysis between the two would be beneficial. The majority of the issues stated by our study's participants were deeply rooted in the hospital's management which is then reflected in the government's funding and policies. A study focusing on this would be of benefit. Lastly, as this study dissected the issues of public hospitals into themes, a study that aims to craft solutions for these said problems via systematic intervention or policy changes will also be useful.

## Conclusion

Despite the unique cases of each dengue patient and healthcare worker in public hospitals of Rizal, some similarities were found in their experiences. Their experiences were grouped into the themes: Initial Reaction, Problems Due to Understaffing, Interactions with Healthcare Workers, Settling, Public over Private, Traditional Medicine, Issues with the Facility, and Lasting Effects. For healthcare professionals, the themes were Overcrowding, Understaffing, Patient Obstacles, Underpaid, Demand For Tertiary Hospitals, Insufficient Facilities and Medical Equipment, and Recommendations For Better Healthcare.

The study's findings reveal that the quality of healthcare is not just about the quality of treatment received, but rather a social and economic issue with the structure of public hospitals and how they affect the experiences of dengue patients and healthcare workers. While this study revealed specific issues into themes and sub-themes, a synthesis of this suggests a systematic gap. The experiences of the participants are a result of the problems in the system's structure. Solving these issues, most importantly, requires funding, along with policy and management changes that focus on the patients and workers. Not only does this study reveal underlying management and funding issues, it also reveals that solutions to the Philippine healthcare system necessitate looking at the issue as a whole, considering its roots as a complex, interconnected social system with existing disparities. Moving forward, this research identifies specific aspects and gaps of healthcare that can be solved through policies focused on improving the accessibility, resource management, and facilities of public hospitals.

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