

Health protocol adherence to emerging and re-emerging diseases: Basis for community engagement

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Abstract

Compliance with health protocols is crucial in managing and preventing the spread of emerging and re-emerging diseases, which present a significant risk to public health. This study aimed to assess Adherence to Health Protocols on Emerging and Re-Emerging Diseases: Basis for Community Engagement. Specifically, to investigate the health protocols implemented within the community, the level of adherence to these protocols (including mask-wearing, social distancing, isolation, vaccination, self-monitoring, and reporting of cases), the factors that influence adherence, and the effectiveness of community health protocols in order to develop a strategic approach for fostering community engagement in the prevention and control of emerging and re-emerging diseases. This study employed a mixed-method approach involving residents from Municipality of San Luis, Taal, and Lemery as respondents and Barangay Health Workers as interviewees. The findings revealed adherence to health protocols was positively associated with community engagement. Communities that were more involved in planning and implementation had higher rates of adherence and better disease control outcomes. Moreover, factors such as communication strategies, trust in healthcare providers, and access to healthcare services influenced health protocol adherence. Taking into the account of these findings, suggestions were formulated, including enhancing communication tactics, nurturing trust, and broadening the availability of healthcare services. It also highlights the significance of community participation in promoting adherence to health protocols for emerging and re-emerging diseases. These findings have practical implications for public health practitioners and policymakers as they work towards devising efficacious strategies for preventing and controlling the transmission of the disease.

Keywords: emerging diseases, community engagement, social distancing, social isolation, vaccination

Health protocol adherence to emerging and re-emerging diseases: Basis for community engagement

1. Introduction

Emerging infectious diseases are new or previously unknown diseases that appear in a particular area. They can also refer to known diseases that are spreading rapidly or occurring in new locations. These diseases often catch health authorities and communities off guard because they cannot be easily controlled. They pose a significant threat to public health on a national scale. On the other hand, reemerging infections and diseases are ones that reappear after a period of decline. This can happen due to a lapse in public health measures or the emergence of new strains of familiar disease-causing organisms. Examples of emerging diseases include HIV, SARS, Lyme disease, E. coli, hantavirus, dengue fever, and Zika.

Community engagement has been considered an essential component, involvement, and participation in organizations for the welfare for some cause at the community level. However, the involvement in the community is the main concern on how to approach Covid-19, emerging and other Reemerging illnesses in the country. In line with this, the community must follow the health protocols to lower the number of cases within that area. In order to effectively implement measures and address immediate needs in response to emerging and reemerging diseases like COVID-19, it is critical to engage with communities. It entails actively incorporating individuals, families, and communities in order to satisfy their unique needs and promote resilience. We can limit the spread of infections by working together and fostering teamwork. Community participation is especially crucial for reaching out to underrepresented people and ensuring equal responses. We can build a shared vision for a healthier future and find solutions to promote and maintain excellent health regimens by taking an inclusive approach.

In the Philippines and even in Southeast Asia, South East Asia is considered a vital zone globally in terms of the risk of the outbreak of the emerging infectious disease (EID), which is inhabited by more than 30% of the global population, and thus infectious diseases are still the leading cause of death in this region, despite impressive improvements in health and health-care infrastructure. South East Asia, particularly the Philippines, is prone to the development of many emerging infections due to the presence of various factors such as poverty, overpopulation, and an inadequate preventive health system (WHO Global Burden Disease, 2017)

Adherence to health protocols is critical in avoiding and controlling emerging and reemerging diseases, although people do not always do so. To overcome this issue, researchers intend to assess adherence to health practices particular to certain disorders. This assessment serves as a foundation for community engagement since it identifies areas for improvement and informs tactics for effectively engaging communities in adhering to the protocols. Healthcare professionals can better protect individuals and communities from the hazards of these diseases by simplifying and improving adherence to health regimens, therefore, the researcher aims to assess Health Protocol Adherence to Emerging and Re-Emerging Diseases: Basis for Community Engagement.

The study will give insight to the government on how the authorities will improve the strategies in the public adherence to the preventive and control measures in the spread of emerging infections, also this will give rise to awareness of the benefits of compliance to health protocols among students doing their affiliations in the hospital, in community and for the future researcher that will make more research like this. The study has utilized the individual personalities from selected barangays residing in the three Municipalities such as Taal, San Luis and Lemery regardless of age, gender and educational attainment.

Objectives of the study - The study analyzed the adherence to health protocols on emerging and re-emerging diseases as basis for community engagement. Specifically, this study aimed to determine: 1) the health protocol

implemented in the community; 2) the adherence in health protocol in terms of wearing mask, social distancing, social isolation, vaccination, self-monitoring, case reporting); 3) factors influencing the adherence to the protocol; and 4) the effectiveness of health protocols implemented in community health; 5) and propose plan of action on the Drive for Community Engagement on the Prevention and Control of Emerging and Re-emerging Diseases.

2. Review of related literature

2.1 Emerging and Reemerging diseases

Emerging infectious diseases are newly appearing infections or those that have experienced a rapid increase in incidence or geographic spread, whereas reemerging diseases are previously known illnesses that have resurfaced after a significant decline in occurrence, (CDC,2019). Several factors have been identified as contributors to the emergence or re-emergence of high-threat pathogenic diseases in recent years, including pathogen adaptation or increased virulence, changes in host behavior, international travel patterns, interactions between humans and animals, economic downturns, the effects of climate change, and the influence of industrial and economic development. According to the World Health Organization (WHO, 2022), Emerging infectious diseases are characterized as illnesses with an infectious origin that have experienced a noticeable increase in incidence among humans over the past few decades or have the potential to pose a significant future threat. Re-emerging diseases, on the other hand, refer to the reappearance of a previously known infection after a period of decline or disappearance in its incidence. The ongoing COVID-19 pandemic serves as a prime example of a formidable threat that continues to instill fear and pose substantial risks not only to individuals but also to families, communities, and societies at large.

2.2 Health Protocol

Health protocols are a set of rules and procedures that outline the appropriate behavior and actions to be followed in formal scenarios. In the context of workplace safety, these protocols, also known as safety procedures, provide employees with step-by-step guidelines to ensure the safe execution of specific tasks or procedures. The term "protocol" encompasses both the actual process and the internal document created by an organization (EHS-INSIGHT, 2020). To maintain worker safety, it is critical for both employees and individuals to strictly follow to requirements that define the proper use of Personal Protective Equipment (PPE), such as safety glasses, gloves, masks, and hard helmets. Furthermore, regular and thorough handwashing is a crucial and very effective practice for preventing germ transmission, given that even clean hands can harbor germs. Additionally, drinking plenty of water, avoiding distractions and crowded areas while maintaining a safe distance, participating in optional safety training, using proper lifting techniques, teamwork and collaboration, and other personal activities that promote mental health and cooperation should all be practiced. The most effective method of preventing and controlling diseases is immunization. The widespread use of face masks help to limit virus transmission among those who are asymptomatic but infected, as well as those who are infected but not yet exhibit any symptoms.

Maintaining physical distance is critical for limiting the spread of infection which involves keeping distance between yourself and another individual including family members, as the infections can still be contagious. This is an essential step in slowing down the spread. The various infectious diseases that can be transmitted through physical contact between individuals based on knowledge of transmission, clinical manifestation, and prevention in controlling the spread (Jones and Smith, 2022). One practical way to handle this issue and engage the community is to encourage people to stay at home as much as possible, avoid crowded and public places, and actively discuss preventive measures in which members of the community can participate practically.

Multifactorial factors from various sectors can influence the emergence or reemergence of diseases. According to Lerner and Berg (2017), environmental changes, international travel and trade, and global food production and distribution can all contribute to the emergence or reemergence of infectious diseases.

Furthermore, the spread of familiar diseases to previously unaffected locations or populations might result in new outbreaks, particularly in places experiencing large changes in biodiversity. Infectious disease reemergence can be driven by causes such as antimicrobial resistance in vectors, as well as disruption and constraints in public health systems. Among the significant areas of interest include the study of disease patterns and new infections, cases of emerging and re-emerging diseases, and the impact of pathology on the emergence of infections, both locally and globally. The Philippines, for example, is dealing with emerging and re-emerging illnesses such as tuberculosis and nosocomial infections. This field of study also includes the present state of infectious disease pathology and measures to combat infectious disease threats.

Reduced public health resources can result in the unnoticed emergence of new diseases or drug resistance. There have been various epidemics of transmissible diseases in the Philippines, including leptospirosis, dengue fever, meningococemia, and tuberculosis. These outbreaks have highlighted the importance of improving local, national, and global pandemic preparedness (Tan and Relente, 2017). With the continued rise in the number of infections that can spread across regions and endanger public health, it is critical to prioritize resources for disease prevention and control to reduce morbidity and mortality rates, impede trade, and minimize economic impact.

On a local, regional, and global scale, a range of interventions have been put in place to slow the spread of new and reemerging disease. Movement restrictions, social distancing strategies, mandatory mask-wearing in specified contexts, and active participation in testing, contact tracing, and isolation protocols are examples of these methods. The success of these methods in preventing and limiting transmission, yet, largely depends on how well they are recognized, accepted, and integrated into people's daily lives. The issue of compliance with these procedures has remained unsolved throughout the pandemic. During lockdown, complying with social distance and self-isolation procedures during lockdown is more than just obeying or disobeying laws. According to Gelkopf et al. (2021), adherence to these metrics involves a variety of actions, including overt rule violations and individual variations in rule interpretation. A person who openly violate the law are referred to as overt rule violators, whereas those who interpret unclear or changing regulations to suit their interests are referred to as subjective rule interpreters. Recognizing these different types of adherence can assist public health officials in developing interventions that encourage compliance while reducing the risk of disease transmission. As a result, Individuals can be responsible by engaging in activities that lessen the possibility of coming into contact with others, hence lowering the danger of virus transmission or contraction. Despite these diligent efforts, an increasing number of people are becoming infected with the virus. People have valid reasons for leaving their houses, performing vital duties such as acquiring necessities or caring for vulnerable individuals. However, the public and government decision-making processes regarding what acts are permissible and safety remain unclear.

The government has implemented many infection prevention and control measures since the commencement of the COVID-19 pandemic and other emerging and reemerging diseases. In terms of risk communication, rather than depending solely on fear-based messaging, there should be a greater emphasis on improving people's comprehension of the effectiveness and practical application of these measures. Individuals who perceived the recommended measures for social distancing and self-isolation as clear and effective were more likely to adhere than those who did not (de Bruin et al., 2020). In addition, it has been discovered that trust in the government, health authorities, and science was related to adherence to preventive measures. Individuals who reported with high levels of anxiety or uncertainty, on the other hand, were less likely to follow the recommended measures. It is critical to provide clear and consistent communication as well as trust-building efforts during infectious disease outbreaks to promote adherence to preventive measures. People with less knowledge of the disease may consult fewer information sources and distrust widely disseminated information (Lin et al., 2020). As a result, making information more accessible, understandable, and transparent can help to foster trust and encourage people to take recommended preventive measures. The results underscore the significance of effective communication and efforts to build trust in motivating individuals to adhere to preventive measures during outbreaks of infectious diseases. This is because people with less knowledge of the disease may consult fewer

information sources and distrust information that is very clear to the public.

The potential detrimental impact on public health can be reduced by implementing a sound strategy of presenting evidence to diverse audiences via credible sources, and then customizing the message method based on the target demographic. Depending on an individual's motivations, emphasis might be placed on the personal rewards of safeguarding others, as proposed by Loenhout et al. (2021), or on moral principles, values, or societal norms.

Community engagement is a valuable community-based approach that incorporates the active participation of individuals and families in a variety of health intervention and strategies to prevent and manage infection and disease transmission. The involvement of the community has sparked innovative thinking among policymakers, community leaders, and healthcare professionals as they navigate emerging challenges to highlight the transformative potential of community engagement in addressing new complexities in the realm of public health, Doll et al. (2018). A variety of strategies are used in community engagement (CE) interventions to get communities involved in enhancing their health and wellbeing. By actively engaging communities based on their geographical location or other common interests, such interventions play a critical role in fostering equity and increasing the accessibility control measure of communicable disease. Sociology, political science, cultural anthropology, organizational development, psychology, and social work are just a few of the disciplines that have made major contributions to the advancement and application of community engagement initiatives (Minkler et al., 2019).

2.3 Community Adherence

This refers to which individuals in a community adhere to health guidelines and policies aimed at reducing disease spread. Trust in government institutions, leaders, social norms, and perceived risk of contracting the disease all have an impact. Individuals who trusted the government and leaders were more likely to follow health guidelines than those who perceived the risk of contracting the disease as low (Mabalot et al., 2021). Additionally, social norms also play an important role in community adherence; those who believed that residents were not adhering were less likely to follow. By addressing these issues, policymakers can focus on and improve community adherence and reduce disease spread.

Emerging diseases have recently emerged or rapidly spreading within a population or geographic area. Furthermore, this classification includes diseases that have seen a large increase in human cases during the last two decades (CDC, 2021). Furthermore, diseases with an increase in human incidence over the last 20 years are included in this category. In the future, low-income countries that are dealing with an influx of patients seeking treatment for emerging and reemerging infections such as COVID-19 may benefit from using community health workers (CHWs) for home-based care (World Health Organization [WHO], 2021). To ensure the successful management of such diseases through home healthcare-based approaches, patients' eligibility and suitability for home or resident areas must be evaluated. Health protocols implemented in each community must be followed, such as mask use, isolation and physical separation, frequent handwashing, disinfection and sanitation, self-submission when symptoms appear, self-categorization, medication and supplementation, and especially the prevention of complications. In the Philippines, data analytics during the past and recent years of having the emerging and reemerging diseases, multiple outbreaks of newly emerging diseases have continually put the community at danger of reoccurring infections such as leptospirosis, dengue fever, meningococemia, TB, and others. This circumstance emphasizes the dangers involved, as well as the significance of increasing readiness at the local, national, and global levels to effectively confront future pandemics and possible health emergencies that could grow dramatically. The proliferation of novel pathogens is causing a rising number of diseases that cross geographical boundaries and constitute a severe threat to public health. This condition has the potential to cause substantial illness and death, disrupt trade, and have a detrimental impact on a country's economy and healthcare system. Various social and economic variables contribute to the formation of new diseases and the recurrence of previously managed or eliminated infectious diseases, worsening the situation. These influencing

variables include demographics, such as population density and distribution; international travel and tourism; socio-economic aspects; and environmental considerations. Finally, urbanization encroaches on and destroys animal habitats, increasing cattle output, man-made ecological changes, and nation's vulnerability to calamities. As mentioned by DOH (2019), emerging and re-emerging transmissible diseases cause a lag between the design of strategies and their practical implementation due to their unexpected nature. To close this gap, proactive methods that guarantee readiness and responsiveness in anticipation of unfavorable outcomes that could lead to pandemic proportions of illnesses are required. To lessen the effects of public health concerns, proactive and multidisciplinary preparedness is required.

2.4 Theoretical Framework

This research is anchored on the Theory of Reasoned Action by Fishbein and Azjen (2018), a psychologist who explained and discussed that an individual's health-related actions are driven by their intention to engage in a particular behavior, which is shaped by their attitude toward the behavior and subjective norms influenced by social and environmental factors. Subjective norms are influenced by a person's perceived control over their behavior as well as their surroundings. In general, having an optimistic mindset, positive subjective standards, and a sense of perceived control contributing to higher intents and an increased possibility of regulating behavior changes that result in better health outcomes, in relation to the study. The Theory of Reasoned Action-Planned Behavior can be used to predict health behaviors as well as to devise and carry out health promotion and preventative programs. Subjective standards provide a framework for comprehending the actions of healthcare providers, patients, caregivers, and members of the community. These theories have successfully guided the enforcement of health protocols aimed at preventing and controlling emerging and re-emerging diseases.

Therefore, factors that influence an individual's attitude and subjective norms can assist public health officials and healthcare providers in developing effective strategies to understand and promote health protocol adherence. For instance, if a person has a negative attitude toward wearing a mask, interventions can be designed to address their concerns while also providing information about the benefits of mask use. Similarly, if a person believes that few people in their social network are adhering to health protocols, interventions can be designed to promote social norms that prioritize health and safety. In essence, the Theory of Reasoned Action provides a beneficial foundation for explaining and promoting compliance with emerging and re-emerging health procedures. Public health officials and healthcare providers can develop more effective interventions to promote behavior change and protect public health by addressing individuals' attitudes and subjective norms.

3. Methods

Research Design - The researcher employed a descriptive quantitative research design, which entailed collecting quantifiable data from the study's population within a specified geographic region for a subsequent analysis. The descriptive quantitative research approach allowed the researcher to obtain data in a measurable format in order to provide insights into the population of the study. A descriptive research study is a form of research that tries to characterize the characteristics or behavior of a group or topic being examined. It is frequently done by observation, questionnaires, or other methods that collect quantitative data, which can subsequently be examined statistically. Creswell (2014) defines descriptive research as "a type of research that describes the characteristics of a population, situation, or phenomenon". The fundamental goal of a descriptive investigation is to create an accurate and comprehensive image of the subject under consideration, which may then be used to inform subsequent study or decision-making.

Participants of the study - The two hundred sixty (260) respondents of this quantitative study were the barangay residents from the top 10 Barangay with the highest number of identified emerging and reemerging diseases residing from 3 municipalites residing in Taal, San Luis and Lemery, that have been confined in their homes for home health care management. The target respondents were selected using quota sampling to ensure good representation of each barangay. The participants of the study were characterized as follows: respondents

comprising 32% of the subjects came from the 31-39 age bracket, while the 40-49 age group got the second highest frequency of 84 comprising 30.0 percent. Less than 30 years old are those who were included in 25.7% and the least seen in 32 participants are from 50 years and above and 11.4% in its record. The 50.4% of the total participants are female while 141 participants are male covering 49.6% of the total respondent population. However, the participants' religion was outnumbered by Roman Catholic comprising 77.5% followed by Born again Christians with 12.5%, thereafter seen as third and fourth from Iglesia ni Cristo and Muslim with 8.9% and 1.1% respectively. As for highest educational attainment, most of the participants were secondary graduates with 41.1% of the total participants, 20.4 from vocational and college gained 21.4%. The least number of participants are from postgraduate courses which comprise 4.3%

Research Instruments - A custom-made research tool, developed using pertinent literature, was employed in this study. The questionnaire had four parts. Part I determines the health protocol. Part II elicits data on the level of adherence to health protocol in terms of wearing masks, social distancing, social isolation, vaccination, self-monitoring, and case reporting. Part III determines the factors influencing adherence to the protocol and Part IV of the questionnaire deals with the effectiveness of health protocol in community health. The researcher developed questionnaires as the tool for data gathering to support ideas from the respondents that are identified and showed a willingness to take part and meet the requirements of the study. For checking and reviewing, the researcher has consulted the research adviser for comments, suggestions, and further corrections or modifications if necessary. The initial draft of the research paper was delivered for review to the research adviser, and all comments and suggestions were accepted. These provided feedback on the manuscript in the form of comments and revisions.

Data Gathering Procedures - Due to the restriction brought on by the pandemic with the safety precautions and health protocol requirements that were still observed and implemented, the researcher gathered the data through mixed methods using questionnaire through Google Forms and focus group discussion questionnaire survey method. To ensure good dissemination of data from the respondents, the community health worker or BHW was requested to cascade the questionnaire to be disseminated to the respondents with the use of social media, email or face to face survey. The purpose of the study was discussed to the respondents in details. The respondents were assisted with their queries or concerns that needed to be addressed. Responses for the questionnaires were immediately subjected for consolidation and analysis-ready for interpretation.

Data Analysis - The researchers used the following statistical tools in interpreting and analyzing the gathered data: (1) Frequency Distribution. This statistical analysis determines the tally of participants who answered for a certain item on the questionnaire. The procedure was utilized by the researcher to calculate the average value for each item on the questionnaire. (2) Weighted Mean. The average score of respondents for each item on the questionnaire was calculated using the allocated weights for each answer option. This provided the numerical significance of each item on the questionnaire. (3) Ranking. This decided which items on the table are the lowest, highest, and which went in the middle of those two. It was used for making it easier for researchers and readers of the study on determining which of the things on the list of questions is the most important. (4) Mean. This is an aid in determining the value of the questions, which was included in surveys based on the number of respondents corresponding to the parameters presented.

Ethical Considerations - The researcher solicited consent from the respondents before allowing them to fully engaged in the study. The study submitted and evaluated by Lyceum of the Philippines University – Batangas – Research Ethics Review Committee. The following ethical principles was observed in this research. To guarantee full disclosure and conformity to ethical requirements, the informed consent form included all relevant information regarding the study's aim, objectives, and potential benefits to researchers and respondents. The participants were reminded that their participation in the study is completely optional and that they were entitled the right to withdraw at any time. Compliance with the Data Privacy Act was guaranteed throughout the process of the study to safeguard the privacy of the participants. None of the information provided was made public in any way that may be used to identify the respondents, and the data was secured and accessible only by

the researchers and approved personnel. The researchers ensured to provide a pressure-free environment to allow the participants to give their responses freely. The privacy and confidentiality of the respondents were upheld throughout the data collection and analysis process. The value of beneficence was considered, observed and employed in the conduct, performance and output of the study. This guaranteed that all data were reported honestly and that the responses were not to be altered or manipulated to meet predictions or interests. This helped the researchers ensure that accurate and reliable data were delivered throughout the study.

4. Results and discussion

Table 1 presents health protocols implemented in the community with a composite mean of 3.49 with a verbal interpretation of moderately implemented. Among the items cited, practicing respiratory etiquette like covering the mouth or nose when coughing and sneezing and proper waste disposal, and doing personal hygiene including handwashing and hand sanitation obtained the same mean score of 3.54.

Table 1

Health Protocols Implemented in the Community

	Weighted Mean	Verbal Interpretation	Rank
1. Practicing of respiratory etiquette like covering mouth or nose when coughing and sneezing and proper waste disposal.	3.54	Highly Implemented	1.5
2. Minimizing the exposure to those vulnerable groups like elderly, person with underlying conditions and PWD's.	3.53	Highly Implemented	4
3. Doing personal hygiene including handwashing and hand sanitation	3.54	Highly Implemented	1.5
4. Allocating proper PPE's including wearing of mask and other protective equipment's	3.50	Highly Implemented	5
5. Conducting environmental hygiene and cleanliness routine disinfection of the surface areas	3.46	Moderately Implemented	8
6. Observing physical distancing at least 1m apart.	3.47	Moderately Implemented	6
7. Detecting and monitoring symptomatic individual or family.	3.54	Highly Implemented	3
8. Isolating of individual or family with suspected or confirmed case	3.44	Moderately Implemented	9
9. Prioritization for testing with group of higher risk infection	3.46	Moderately Implemented	7
10. Following standard protocol in vaccination for disease prevention and protection	3.43	Moderately Implemented	10
Composite Mean	3.49	Moderately Implemented	

Legend: 3.50 – 4.400 = Highly Implemented; 2.50 – 3.49 = Moderately Implemented; 1.50 – 2.49 = Fairly Implemented; 1.00 – 1.49 = Not Implemented

However, items such as conducting environmental hygiene and cleanliness routine disinfection of the surface areas (3.46), isolating of individual or family with suspected or confirmed case (3.44) and following standard protocol in vaccination for disease prevention and protection (3.43) rated the least.

The evaluation of community health protocols indicates that there is potential for improvement in some areas. Respondents reported that respiratory etiquette and personal hygiene practices were followed, but environmental hygiene and cleanliness, routine disinfection of surface areas, isolating individuals or families with suspected or confirmed cases, and following standard protocols in vaccination for disease prevention and protection were identified as areas that require more attention. Overall, the study emphasizes the significance of developing and adhering to health regulations in order to prevent and control illness spread in the community.

As stated in the Learn to Give study (2021), community assessments, work to obtain precise and relevant information about a community's needs. These assessments are crucial for evaluating current circumstances, identifying relevant concerns, and laying the groundwork for effective planning and subsequent actions. According to SA Health Infection Control Service (2022), the goal of environmental disinfection is to mitigate

the presence of infectious agents and the potential transfer of microbes between humans and things, hence lowering the risk of cross-contamination. The goal of instituting social isolation is to inhibit microorganism transmission between infected patient to other patients, hospital visitors, and healthcare professionals, hence reducing the risk of recurrent infections or colonization.

Table 2

Health Protocol Adherence in terms of Wearing of Mask

	Weighted Mean	Verbal Interpretation	Rank
1. Identify the appropriate mask for specific disease	2.92	Moderate Adherence	4
2.Ensure fitness of mask to face to cover all the buccal and nasal point of entry of virus or bacteria	2.93	Moderate Adherence	3
3.Has high filtration efficiency level mask to prevent entry of bacteria or virus	2.95	Moderate Adherence	2
4.Cleaning of hands with an alcohol-based hand rub or soap and water before and after touching the mask,	2.96	Moderate Adherence	1
Composite Mean	2.94	Moderate Adherence	

Legend: 3.50 – 4.400 = High Adherence; 2.50 – 3.49 = Moderate Adherence; 1.50 – 2.49 = Fair Adherence; 1.00 – 1.49 = No Adherence

Table 2 presents the health protocols adherence in terms of wearing the mask with a composite means of 2.94 and a verbal interpretation of moderate adherence. Among the parameters studied, the routine habit of washing hands using a hand rub based containing alcohol or soap and water prior to and subsequent using mask had the highest mean score of 2.96. This was closely followed by a mean score of 2.96 for the use of high filtration efficiency masks to prevent the introduction of bacteria or viruses, showing a reasonable level of compliance for both parameters with the same verbal interpretation as with Moderate Adherence. The least among was identified in “Identify the appropriate mask for specific disease” with a 2.92 mean score but with the same verbal interpretation as above.

The study discovered that overall adherence to health protocols linked to mask use is moderate. Participants exhibit a noteworthy level of compliance when it comes to exercising hand hygiene by washing their hands before and after handling the mask with either a hand rub that contains alcohol base or soap and water. They likewise demonstrate a high level of commitment to the usage of high filtration efficiency masks to avoid bacteria or viruses incursion. However, participants exhibited a substantially weaker commitment to identifying the right mask for specific conditions. The data imply that, while people typically comply with mask-wearing health regulations, there may be some variation in adherence across different components of mask-wearing behavior. To avoid the spread of infectious diseases, it is critical to continue educating the public about the need of wearing a mask and following all prescribed health protocols. As indicated in the research undertaken by the Centers for Disease Control and Prevention (2021), the utilization of masks is an important preventive approach in reducing infection transmission. However, other considerations must be considered, such as ensuring the mask fits well, provides enough protection, and is suitable for the person. This method can help prevent serious disease, reduce the strain on the healthcare system, and improve the overall effectiveness of mask use.

Table 3 identifies the health protocol adherence in terms of social distancing with a composite means of 2.89 and a verbal interpretation of moderate adherence. As such, the highest among the parameters presented eliminating unnecessary travel, training, workshops or nonessential meetings gained 2.94 mean score followed by maintain a prudent distance of at least 1 meter from individuals in close proximity with 2.88 mean score but with the same interpretation as above, However, avoiding highly populated areas and social gatherings was the least among moderately adhered protocol with 2.86 mean score but with the same adjectival rating as moderately adhered.

The findings suggest that although there is moderate adherence to health protocols related to social distancing, there appears to be some inconsistency in adherence across various aspects of social distancing behavior. It is crucial to continue raising public awareness on the importance of social distancing and following

all recommended health protocols to minimize the spread of infectious diseases. By doing so, it can help reduce the risk of severe illness, alleviate the burden on the healthcare system, and safeguard more people. The World Health Organization considers social distance as a valuable strategy for reducing the propagation of emerging and re-emerging diseases such as Covid-19. This preventive approach of keeping a physical distance from infected people is not a new notion or tactic; it has long been recognized as an important means of preventing disease spread. The primary goal is to slow down the peak of the epidemic, reduce the volume of the outbreak, and extend the length of cases over a longer timeframe. According to the World Health Organization (2021), this method aims to reduce the demand on the healthcare system.

Table 3*Health Protocol Adherence in terms of Social Distancing*

	Weighted Mean	Verbal Interpretation	Rank
1. Keep a reasonable distance of at least 1 meter away from the person in the next distance	2.88	Moderate Adherence	2
2. Increase physical space between other and by avoid hugging and handshakes.	2.87	Moderate Adherence	3
3. Avoid highly populated areas and social gatherings	2.86	Moderate Adherence	4
4. Eliminate unnecessary travel, trainings, workshops or nonessential meetings	2.94	Moderate Adherence	1
Composite Mean	2.89	Moderate Adherence	

Table 4*Health Protocol Adherence in terms of Social Isolation*

	Weighted Mean	Verbal Interpretation	Rank
1. Keep self away from other people or member of the household when symptoms occurred or felt	2.97	Moderate Adherence	3
2. Confine self in one isolated room or place so as to prevent exposures from others	2.98	Moderate Adherence	1.5
3. Follow Isolation protocol as instructed	2.96	Moderate Adherence	4
4. Safeguard self from acquiring another infection	2.98	Moderate Adherence	1.5
Composite Mean	2.97	Moderate Adherence	

Table 4 displays the level of adherence to the Health Protocol regarding Social Isolation, indicating a composite mean of 2.97 with a corresponding interpretation of Moderate Adherence. Safeguarding self from acquiring another infection and Confinement of self in one isolated room or place so as to prevent exposures from others gained the highest cited moderately adhere protocol as they garnered 2.98 mean score. This is followed by keeping self away from other people or member of the household when symptoms occurred or felt with 2.97 mean score and least was following isolation protocol as instructed with 2.96 mean score but the same interpretation as above. There were slim discrepancies in mean score thus all were adjectivally interpreted as moderate adherence.

Individuals appear to have moderately adhered to health regulations linked to social isolation, based on the results reported. The protocols of protecting oneself from contracting another infection and keeping oneself in one isolated room or place to avoid exposure to others received the highest mean score. When suffering symptoms, the protocol of keeping oneself away from other individuals or household members obtained a somewhat lower mean score but was nevertheless substantially adhered to. Although the protocol of adhering to isolation protocols as instructed obtained the lowest mean score, it was nonetheless adjectivally assessed as moderately adhered. Overall, the study reveals that adherence to these protocols may vary, and it is critical to continue educating the public about the need of social isolation and following all recommended health protocols aimed at mitigating the transmission of infectious diseases.

The risk and frequency of emerging infectious diseases are increasing as people's mobility increases, international trade in food and biological products expands, and social and environmental changes occur were

emphasize by World Trade Organization, that the international travel are undeniably important to humanity. However, implementing travel restrictions and enhancing awareness among stakeholders in the trade and tourism sectors are pivotal in achieving the goal of reducing the number of cases and slowing down the spread of the disease, as emphasized by the World Tourism Organization (WTO),

Table 5

Health Protocol Adherence in terms of Vaccination

	Weighted Mean	Verbal Interpretation	Rank
1. Discuss and identified different vaccines	2.94	Moderate Adherence	4
2. Submit self voluntarily for vaccination	2.98	Moderate Adherence	1
3. Observe signs and symptoms after vaccination	2.96	Moderate Adherence	3
4. Report immediately symptoms felt	2.97	Moderate Adherence	2
Composite Mean	2.96	Moderate Adherence	

Table 5 showcases the health protocol adherence for vaccination, with a composite mean of 2.96, indicating a moderate level of adherence based on the data analysis. Self voluntarily for vaccination was the highest among the parameters mentioned which gained 2,98 mean score followed by reporting immediately symptoms felt with 2.97 mean score. However, the least among was seen in the discussion and identification of different vaccines which got the lowest mean score of 3.94 but all were presented and interpreted as moderate adherence. The adherence to immunization health policies is moderate. Among the vaccine behavior components presented, willingly giving oneself for vaccination and immediately reporting symptoms were highly adhered to, whereas discussion and identification of different vaccines had the lowest mean score but were nevertheless well adhered to. It is critical to continue disseminating the benefits of vaccination in order to protect ourselves and others from infectious diseases. A vaccination comprises pathogen antigens that are essential to boost the immune response and increase antibody formation. According to Glanz et al., (2020), mass immunization can significantly minimize disease spread and safeguard people who lack immunity. School closures and other social distancing measures were linked to lower incidence and fatality rates.

Table 6

Health Protocol Adherence in terms of Self-Monitoring

	Weighted Mean	Verbal Interpretation	Rank
1. Monitors self for temperature, RR, PR and HR, signs of body weakness or lethargy and muscle pains	3.05	Moderate Adherence	1
2. Personally record occurrence of symptoms and severity	3.00	Moderate Adherence	3
3. Report to the Barangay Health Emergency Response Team (BHERT) if close contact of individual with symptoms	3.00	Moderate Adherence	3
4. Seek referral to the Temporary Treatment facilities or hospital if necessary	3.00	Moderate Adherence	3
Composite Mean	3.01	Moderate Adherence	

Table 6 determines the health protocol adherence in terms of self –monitoring with a composite mean of 3.01 and a verbal interpretation of moderate adherence. As such, monitoring self for temperature, RR, PR and HR, signs of body weakness or lethargy and muscle pains obtained the highest mean score was 3.05, closely followed by the remaining three parameters with the same mean score of 3.00 from personally record occurrence of symptoms and severity, Report to the Barangay Health Emergency Response Team (BHERT) if close contact of individual with symptoms and seek referral to the temporary treatment facilities or hospital if necessary, all with the same adjectival rating as Moderate Adherence and same as above.

Despite the significance of human behavior in mitigating the spread of microbes and infections, limited understanding exists regarding the underlying mechanisms that drive individuals to adopt and maintain precautionary behaviors, which ultimately influence the transmission and progression of emerging and recurrent diseases like COVID-19. A recent cross-sectional survey was carried out to examine the underlying factors that promote hygienic practices based on the principles of capability, opportunity, and motivation behavior. This

framework encompasses the physical and psychological capacity to engage in relevant thought processes, the motivation involving conscious intentions and planning, and the presence of opportunities for the behavior to occur. The correlation between an individual's physical and psychological abilities and their adherence to preventive measures for COVID-19 is intricate and can be influenced by various motivational factors. However, it has been discovered that employing a single construct to address both physical and psychological capabilities may not be sufficient in completely comprehending the psychological reasons that drive an individual's adherence behavior. This insight comes from a study by (Michie et al.,2019), which underscores the need for a more nuanced understanding of the psychological aspects that influence adherence to COVID-19 precautions. The study highlights that effective interventions for fostering adherence should be informed by a thorough understanding of the psychological underpinnings that underpin this behavior.

Table 7*Health Protocol Adherence in terms of Case Reporting*

	Weighted Mean	Verbal Interpretation	Rank
1. Self-monitoring and health symptoms identification	3.05	Moderate Adherence	2.5
2. Recording using data health monitoring sheet provided by barangay	3.00	Moderate Adherence	4
3. Reporting health conditions of their respective family members and direct contacts	3.06	Moderate Adherence	1
4. Reporting to LGU health personnel for community contact tracing	3.05	Moderate Adherence	2.5
Composite Mean	3.04	Moderate Adherence	

Table 7 depicts the health protocol adherence in terms of case reporting with a composite mean of 3.04 and a verbal interpretation of moderate adherence. Reporting the health conditions of their respective family members and direct interactions obtained the highest mean score of 3.06, closely followed by Reporting to local government unit (LGU) health personnel for community contact tracing, self-monitoring and health symptoms identification was the highest mean score garnered with 3.05 and the least was the mean score of 3.00 but all parameters mentioned got a verbal interpretation of Moderate Adherence.

According to the findings, there is a modest adherence to health protocols related to case reporting. The greatest mean scores were obtained while reporting the health status of family members and direct contacts, reporting to LGU health workers for community contact tracing, and self-monitoring and detecting health problems. Although the mean score for several characteristics was slightly lower, they were all adjectivally assessed as Moderate Adherence. It is critical to continue educating people about the need of reporting instances and following established health protocols in order to avoid the spread of infectious diseases. Healthcare professionals can help prevent serious sickness, decrease the pressure on the healthcare system, and safeguard selves and people around by doing so.

As demonstrated by the study of Xiaowei Ma, (2021), there is an urgent need for increased public awareness of new and reemerging infectious illnesses, Specifically, individuals with limited educational attainment and lower income levels are notably affected. The author emphasizes the significance of providing easily understandable and concise health information as a means to enhance disease prevention initiatives. The author's recommendations are based on an evaluation of existing infectious disease and public health communication expertise. The review emphasizes the significance of focused communication strategies that address the specific information needs of various demographic groups, particularly those who may experience greater hurdles to receiving health information. Overall, the author's work emphasizes the importance of continuing to strengthen public health communication and education in order to better combat new and reemerging infectious illnesses.

Table 8 presents the factors influencing the adherence to the health protocol with a composite mean of 3.51 and a verbal interpretation of highly influenced. Highest factor identified was noted in no or limited access to the internet or other media information sources with 3.56 mean score followed by dissatisfaction or lack of trust to

government towards the slow response and capacity to manage and no or limited access to the internet or other media information sources which both gained mean score of 3.54 and have the same verbal interpretation as factors with highly influenced. However, the two lowest mean score of 3.48 from Affordability to purchase PPE's like mask, respirators, gown in compliance to minimum standard protocol has verbal interpretation of moderately influence, the same verbal interpretation was seen Inaccessible or unavailability of resources in barangay especially isolated place and public utility services such as constrain road, water and electricity with 3.41 mean score

Table 8

Factors Influencing the Adherence to the Health Protocol

	Weighted Mean	Verbal Interpretation	Rank
1. Inaccessible or unavailability of resources in barangay especially isolated place and public utility services such as constrain road, water and electricity	3.41	Moderately Influenced	5
2. Affordability to purchase PPE's like mask, respirators, gown in compliance to minimum standard protocol	3.48	Moderately Influenced	4
3. Reliability of health information channel or misleading news platform	3.54	Highly Influenced	2.5
4. No or limited access to the internet or other media information sources	3.56	Highly Influenced	1
5. Dissatisfaction or lack of trust to government towards the slow response and capacity to manage	3.54	Highly Influenced	2.5
Composite Mean	3.51	Highly Influenced	

Legend: 3.50 – 4.400 = Highly Influenced; 2.50 – 3.49 = Moderately Influenced; 1.50 – 2.49 = Fairly Influenced; 1.00 – 1.49 = Not Influenced

The results indicate that various factors influence adherence to health protocols. Limited access to internet or other media information sources was identified as the most highly influential factor, which suggests that improving access to information can lead to increased adherence to health protocols. Dissatisfaction or lack of trust in the government's response and capacity to manage emerging and re-emerging diseases were also highly influential factors, highlighting the importance of effective government communication and intervention. On the other hand, factors such as affordability and accessibility of resources in isolated barangays and public utility services had a moderately influential effect on adherence to health protocols. These findings suggest that addressing factors that limit access to information and trust in government can contribute to greater adherence to health protocols.

In accordance with the result of study by Santos et al., (2021), adherence to health regimens is influenced by a variety of factors. The most influential component was discovered as limited access to the internet or other media information sources, implying that boost the access to information can lead to better adherence to health procedures. The most influential element was discovered as a lack of access to the internet or other media information sources, implying that enhancing access to information can lead to better adherence to health procedures. Dissatisfaction or lack of trust in the government's responsiveness and capacity to handle new and re-emerging diseases were also significant issues, emphasizing the significance of effective government communication and intervention. On the other hand, affordability and accessibility to personal protective equipment (PPE), resources in isolated barangays, and public utility services, on the other hand, had a somewhat influential influence on adherence to health procedures. These findings show that addressing barriers that limit access to knowledge and trust in government can help people adhere to health regulations more closely.

Table 9 displays the efficacy of community health protocols, indicating a composite mean of 2.93 and a verbal interpretation of moderately effective. The highest among the mentioned parameter was seen self - monitoring with a mean score of 3.08 followed by 3.03 mean score on isolation precaution , however, isolation precautions with 3.00 mean score and recording and reporting with the same verbal interpretation as moderately effective. Least among which ranked number 9 and 10 were seen in wearing of mask with a mean score of 2.76 and the lowest amongst was seen in Hand hygiene and disinfection if handwashing facility is not available both

with the same adjectival rating as moderately effective.

Table 9*Effectiveness of Health Protocols Implemented in the Community*

	Weighted Mean	Verbal Interpretation	Rank
1. Wearing of Mask	2.76	Moderately Effective	9
2. Hand hygiene and disinfection if handwashing facility is not available	2.74	Moderately Effective	10
3. Physical Distancing	2.78	Moderately Effective	8
4. Proper ventilation	2.90	Moderately Effective	7
5. Isolation precautions	3.00	Moderately Effective	4
6. Vaccination	3.03	Moderately Effective	2
7. Self- monitoring	3.08	Moderately Effective	1
8. Self-isolation	3.03	Moderately Effective	3
9. Recording and reporting	3.00	Moderately Effective	5
10. Coordination with public healthcare personnel	2.99	Moderately Effective	6
Composite Mean	2.93	Moderately Effective	

Legend: 3.50 – 4.400 = Highly Effective; 2.50 – 3.49 = Moderately Effective; 1.50 – 2.49 = Fairly Effective; 1.00 – 1.49 = Not Effective

Based on the findings, the effectiveness of community-based health protocols was successful. Self-monitoring and isolation precautions proved to be the most effective protocols, whereas wearing a mask and hand hygiene/disinfection (if a handwashing facility is not available) were found to be the least effective. These findings show that there is opportunity for improvement in the implementation and adherence to health standards, notably in the areas of mask use and hand cleanliness. Sustained motivation and support are essential in promoting greater adherence to all health guidelines, which is crucial for preventing and controlling the transmission of newly emerging and recurring diseases. The study findings, in alignment with Li et al. (2021), demonstrate that self-monitoring and isolation precautions are highly effective health protocols in curtailing the transmission of infectious diseases. The study revealed that self-monitoring and quarantine measures were successful in containing the spread of COVID-19, whereas the impact of mask usage was comparatively limited. Cheng et al. (2020) conducted a separate study and found that hand hygiene played a crucial role in preventing the transmission of COVID-19. These findings suggest that while wearing masks and hand hygiene are important measures in preventing the spread of infectious diseases, self-monitoring and isolation measures could potentially yield greater efficacy in managing the transmission of the disease within the community.

Table 10*Relationship Between Health protocols implemented in the community and Health Protocol Adherence*

	rho-value	p-value	Interpretation
Wearing of Mask	.268**	0.000	Highly Significant
Social Distancing	.259**	0.000	Highly Significant
Social Isolation	.394**	0.000	Highly Significant
Vaccination	.340**	0.000	Highly Significant
Self-Monitoring	.363**	0.000	Highly Significant
Case Reporting	.393**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 10 illustrates the association between the implementation of health protocols and the adherence to those protocols. The calculated rho-values indicate a moderate positive correlation, and the resulting p-values were found to be below the 0.01 alpha level. This signifies a statistically significant relationship, indicating that as the implementation of protocols improves, there is a higher level of adherence among the respondents.

The results indicate that there is a substantial association between the deployment of health protocols and adherence to these protocols. The moderate direct association found suggests that improved execution of health protocols leads to higher adherence by responders. This conclusion underscores the significance of excellent health protocol implementation in avoiding and managing the development of emerging and re-emerging illnesses. These findings are consistent with prior research that has discovered a beneficial association between health regimen implementation and adherence (Giao et al., 2020). This underscores the importance of developing

and implementing effective implementation techniques to guarantee that health protocols are followed correctly. Overall, the findings from the table underscore the significance of effective implementation of health protocols in promoting adherence and reducing the occurrence and reappearance of diseases.

Part V: Proposed Program for Enhancing Community Engagement in the Prevention and Control of Emerging and Reemerging Diseases

Vision: To establish a community health system that is agile and well-equipped to prevent, detect, and effectively respond to public health threats arising from reemerging infectious diseases.

Mission: To enhance and consolidate an integrated and collaborative health system focused on addressing emerging and reemerging infectious diseases, with the ultimate aim of promoting a healthier community.

Goal: To proactively prevent and mitigate the emergence and transmission of infectious diseases, ensuring public health security by effectively managing the risks associated with the emergence and spread of novel and recurring disease outbreaks.

Program Strategies: Strategies to be carried out in the Community level under the supervision and guidance of the Local Government Unit

- Policy and Guidelines Formulation
- Resource Management and Mobilization Allocation
- Coordination for Networks of Facilities
- Learning and Development intervention at the community level toward people empowerment
- Identification for Logistics Management and other Support System
- Managing Information and Communication flow for Enhance Disease Surveillance – Recording and Reporting
- Strengthening Risk Communication and Advocacy

Target Population

- All ages; constituents of the community

Area of Coverage

- Community level

Specific activities

- Meetings with different stakeholders
- Establishment of Functional Organogram
- Budget Preparation and Allocation
- Community Mapping and Planning
- Learning and Development intervention concept of people empowerment and proactiveness in the implementation phase of plan till saturation reached
- Recording and Reporting

- Monitoring and Evaluation

5. Conclusions and Recommendations

The top ten barangays in the three municipalities with the highest cases have diligently enforced health protocols. However, the prevalence of COVID-19 cases remains alarmingly high, highlighting ongoing obstacle in managing the transmission of the virus, it become evident that controlling its spread remain an enduring challenge. Residents in locations with substantial Covid-19 cases exhibit various levels of commitment to health procedures, whereas some individuals dutifully comply with the suggested measures to exhibit consistency and effective to health protocols. The significant influence of factors on adherence to health practices, as well as the subsequent impact on compliance, emphasize the importance of addressing the determinants that lead to significant improvements in adherence and, ultimately, better health outcomes for individuals and communities. An action plan was formulated based on the study findings to improve the implementation and effectiveness of health protocols in the community that focus on targeted interventions to enhance adherence to standards and promote better compliance with health practices among the residents from municipalities of Taal, Lemery, and San Luis.

The health authorities and local government units may enhance their public health capabilities by advocating, providing health education, and conducting health campaigns, with a particular emphasis on emphasizing the importance of adhering to health protocols, to better prepare for and prevent the spread of emerging and epidemic-prone infectious diseases. The collaboration and strategic efforts among the local government units may be intensified to enhance their capacity in promptly detecting and investigating outbreaks of emerging and recurring infectious diseases that pose a significant threat to the community's health. The local health authorities may develop their capabilities to effectively implement impactful control strategies for swift response by allocating resources appropriately and providing training initiatives. A program established in planning for program on enhancing community engagement may be considered in mapping out the needs of the community towards the overall community health. The local government units may create a program to strengthen the knowledge management and innovation abilities to improve their adherence on health protocols and encourage compliance with health practices. This can be performed by targeted interventions such as training programs and seminars in the framework of Community and Public Health that focus on the prevention, control, and negative repercussions of emerging and reemerging illnesses.

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