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A Comparative Analysis of Far Eastern University's (FEU) University Health Service Framework and World Health Organization (WHO) Standards in Responding in Influenza Viruses A (Alphainfluenzavirus influenzae) and B (Betainfluenzavirus influenzae)

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Abstract—Influenza continues to pose a significant threat to public health worldwide, particularly in developing countries with limited healthcare resources. This study aimed to examine the influenza preparedness framework of Far Eastern University (FEU) and compare it to the World Health Organization's (WHO) Pandemic Influenza Preparedness Framework to assess alignment with international standards. Using comparative research design, the study analyzed institutional documents, policies, and operational practices, complemented by interviews with personnel from the University Health Service (UHS). Findings revealed that while FEU-UHS effectively implements localized prevention and response information strategies—such as vaccination programs, dissemination, and case management protocols-it operates on a different scale and scope compared to the WHO's global surveillance and pandemic response initiatives. FEU's framework is largely consistent with WHO guidelines, particularly in promoting vaccinations and early response measure; however, opportunities exist for strengthening surveillance systems, real-time data-sharing, and broader health emergency planning. The study underscores the importance of continuously aligning institutional health strategies with evolving global standards and recommends future research across other institutions to further explore local adaptations of international health frameworks.

I. INTRODUCTION

Influenza, also known as the common flu, is one of the world's most pressing health challenges, affecting both the individual as well as the community. The disease is caused by the virus Betainfluenza influenzae and Alphainfluenza influenzae, the latter being more prevalent for infections. Transmissions typically occur through aerosol or airborne. Outbreaks typically happen during the rainy season, from June to December. In the Philippines, influenza follows a seasonal pattern in which cases sharply rise during the rainy season from June to December, with August having the highest incidence rate (Lucero et al., 2016). Due to this seasonal pattern, it is also referred to as 'seasonal influenza'.

Influenza manifests through various symptoms such as fever, coughing fits, sore throat, nasal congestion, muscle

pains, and fatigue. Although it often resolves on its own, the disease still poses a major threat, especially in countries with underdeveloped countries (Oshitani et al., 2008). Influenza often targets the individual's Limited preventative health measures such as vaccines further exacerbate its effects and increase its infectivity within the community.

The World Health Organization (WHO) established the Pandemic Influenza Preparedness Framework as well as its Guidelines for Clinical Management in Severe Illness from Influenza Virus Infections, intending to implement global influenza preparedness. Using WHO's Global Influenza Surveillance Response System (GISRS), it regulates the movement of influenza viruses as well as monitors the spread of seasonal influenza, detects the emergence of pandemic strains as well as encourages the sharing of knowledge about viruses, and advocates equitable access to benefits (Rourke, 2019).

In the Guidelines for Clinical Management in Severe Illness from Influenza Virus Infections, there are two classifications of management: preventative and curative. Adding to the recommendation of having yearly influenza vaccinations, WHO recommends administering antiviral medication during post exposure prophylaxis. This does not replace the yearly influenza vaccine. Baloxavir is recommended to be taken as both a preventative tool for persons exposed to influenza as well as patients who suffer asymptomatic symptoms. It is not recommended to be administered those who are in high risk in developing influenza, rather they are advised to take Oseltamivir and Zanamivir. The data shown is reflective within the WHO's guideline which who that aforementioned recommendations are justified merely with very low to moderate quality evidence and should be administered conditionally (World Health Organization, 2024).

At Far Eastern University (FEU), where a diverse population of students navigate the balance between social relationships and the academics of higher education,

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understanding and addressing topic matters regarding health is a must to one's health and productivity. Despite the availability of the university's health services via the University Health Clinic (UHC), many students experience health issues that undermine their quality of life. This study aims to identify the university's framework against influenza and compare it to the World Health Organization's Pandemic Influenza Preparedness Framework and assess if it's within the global standard.

1.1. Scope and Limitations

This study focuses on the comparison between the World Health Initiative's approach to combating seasonal influenza to Far Eastern University's Health Service methods, particularly preventative strategies and response protocols. The data collected is sourced from the World Health Organization's website as well as the information given by the University Health Clinic.

This study does not cover problems that may arise from influenza. The result of the study is only applicable to the current 2025 program of WHO and the UHS. It does not account for future updates or broader epidemiological impacts.

1.2. Significance of the Study

This study holds significant value in both academic and practical contexts. By comparing the University Health Service (UHS) framework of Far Eastern University (FEU) with the standards set by the World Health Organization (WHO) for responding to Influenza Viruses A and B, the research aims to evaluate the preparedness, response protocols, and overall alignment of local university health services with global health directives.

For FEU administrators and healthcare providers. The study provides evidence-based insights that can guide improvements in health service delivery, emergency preparedness, and policy formulation. It highlights strengths and gaps in FEU's response to influenza outbreaks and suggests specific areas for alignment with international best practices, ultimately contributing to the health and safety of the university community.

For the academic community. Especially researchers and students in public health, health administration, and virology, the study serves as a valuable case analysis demonstrating how institutional health systems can be benchmarked against international standards. It contributes to the growing body of literature on localized pandemic and epidemic preparedness within educational institutions.

For public health practitioners and policymakers. The study underscores the importance of integrating global standards at the local level. It can inform broader efforts to create resilient healthcare frameworks in schools, universities, and similar institutions, especially in urban environments where disease transmission can be rapid and widespread.

Ultimately, this research encourages accountability and proactive health governance by emphasizing the importance of harmonizing institutional health responses with global health standards in order to mitigate the spread of highly contagious influenza viruses.

1.3. Statement of the Problem

Despite the growing need for effective influenza preparedness in educational institutions, the alignment of university-level health service with international standards remains uncertain. This study seeks to examine the extent to which Far Eastern University's (FEU) health service framework aligns with the World Health Organization (WHO) standards in responding to influenza viruses Α (Alphainfluenzavirus influenzae) and B (Betainfluenzavirus influenzae). Specifically, it aims to identify the similarities, differences, and existing gaps between FEU's current practices and the WHO framework, with the goal of improving institutional response strategies and promoting public health resilience.

- To what extent does Far Eastern University's (FEU) university health service framework align with the World Health Organization (WHO) standards in responding to influenza viruses A (*Alphainfluenzavirus influenzae*) and B (*Betainfluenzavirus influenza*)? What are the key similarities and differences between FEU's current influenzas A and B response protocols and
- the WHO's recommended framework?2. What gaps or areas for improvement can be identified in FEU's health service framework when compared to WHO standards for influenza A and B preparedness and response?

II. METHODOLOGY

This study makes use of a comparative analysis to evaluate the alignment of Far Eastern University's University Health Service (FEU-UHS) influenza preparedness procedures with the World Health Organization's (WHO) *Clinical Practice Guidelines for Influenza*. Formed from Donabedian's structure-process-outcome (SPO) model (Donabedian, 1988) and the WHO health systems building blocks (WHO, 2007), the methodology integrates a conceptual framework (Figure 1) that shows how institutional practices interconnect with global standards. Below, the research design, data collection, participants, sampling, and analytical strategies are detailed, followed by a visual representation of the framework.

A. Research Design

The research design follows a comparative analysis approach, focused on analyzing FEU-UHS and WHO as two interconnected systems. The design formed from Baxter and Jack's (2008) emphasis on structured exploration of bounded systems is adapted to focus on documentary exploration rather than human subjects. This would be separated into three sequential parts starting with document identification and selection, this involves gathering the relevant institutional data and global documents from FEU-UHS and WHO respectively. Specifically, policies on vaccination mandates, health advisories, and case management protocols. The second part focusing on thematic comparison that tackles on identifying key themes from both FEU-UHS and WHO documents, this includes prevention strategies, surveillance, mechanisms, vaccination protocols, and response measure. And the Final Part Gap Analysis, identified discrepancies between FEU-

UHS practices and WHO standards is to be examined and noted for discussion to further provide information on possible actions to take. This phased design allows the researchers to provide a systematic format of analysis.

B. Conceptual Framework

The study's conceptual framework, illustrated in Figure 1, synthesizes Donabedian's SPO model and WHO's health systems pillars to compare FEU-UHS and WHO influenza preparedness strategies. The framework is structured into three dimensions:

- 1. Structural Inputs: Institutional policies (FEU) and global guidelines (WHO).
- 2. Process Components: Prevention, surveillance, response, and equity strategies.
- 3. Outcomes: Alignment levels (high/medium/low), gaps, and recommendations.



Figure 2.1: Comparative Policy Alignment Framework

Description of Figure 2.1:

- Structural Inputs: FEU's institutional policies (e.g., vaccination mandates) and WHO's global guidelines (e.g., universal vaccination) form the foundational layer.
- Process Components: FEU's localized strategies (e.g., targeted campaigns) are juxtaposed with WHO's standardized approaches (e.g., GISRS surveillance).
- Outcomes: The comparative analysis identifies alignment levels, gaps (e.g., financial barriers), and actionable recommendations (e.g., subsidized vaccines).
- Comparative Analysis: A matrix synthesizes findings across the four components, as detailed in Table 1.

C. Data Collection and Sampling

Data for FEU-UHS was sourced from UHS Dr. Desiree Chionson (2025). WHO data derived from the *Clinical Practice Guidelines for Influenza* (2023) and GISRS documentation. As a comparative analysis, the study did not involve human participants. Instead, purposive sampling was applied to select relevant policies and guidelines:

- FEU-UHS: Sampled documents included vaccination mandates, health advisories, and case management protocols.
- WHO: Sampled guidelines focused on seasonal influenza preparedness and equity.

Sampling Criteria:

- Relevance to influenza prevention, surveillance, response, or equity.
- Publication within the last five years (2020–2025).

D. Data Analysis

Data analysis for the research shall be guided by a systematic, descriptive method of comparatively assessing Far Eastern University's University Health Service (FEU-UHS) influenza preparedness system against World Health Organization's (WHO) standards. The method focuses on methodological rigor through manual thematic coding, iterative comparison, and alignment assessment to ensure replicability and transparency.

The first step, which we will refer to as descriptive analysis, is a systematic reading of FEU-UHS and WHO documents to capture their essential components. FEU-UHS policies, for example, like student vaccination for off-campus programs, will be routinely tracked against WHO recommendations in favor of universal influenza vaccination of all individuals aged six months and older. This step provides a foundation for a central understanding of each framework, determining key components such as prevention strategies (e.g., vaccination regimens), surveillance systems (e.g., internal symptom screening in FEU versus WHO's Global Influenza Surveillance and Response System), and response programs (e.g., isolation policies).

In the second phase, thematic comparison, manual iterative reading and annotation of the documents will be done to identify repeated themes. For instance, FEU-UHS's utilization of institutional platforms such as Canvas for the dissemination of health advisories will be coded under the theme of "health communication" and compared with WHO's worldwide campaigns encouraging vaccination uptake. This inductive coding, following Saldaña's (2021) qualitative method, enables themes to emerge organically from the data. Intercoder reliability will be tested using Cohen's kappa (McHugh, 2012) to ensure consistency, with two independent reviewers cross-checking a subset of coded documents.

The third phase, alignment evaluation, uses Donabedian's (1988) structure-process-outcome model to measure the degree to which FEU-UHS practice is aligned with WHO standards. The comparative matrix will classify findings in three dimensions:

Structural inputs, i.e., FEU's institutional immunization needs vs. WHO's global immunization promotion.

Process aspects, like FEU's domestic case monitoring as compared to WHO's global surveillance networks.

Outcomes, in which alignment levels will be categorized as full alignment (e.g., both systems prioritize vaccination), partial alignment (e.g., FEU defines specific groups, while WHO defines high-risk groups), or no alignment (e.g., FEU has no real-time data-sharing arrangements).



III. RESULTS AND DISCUSSION

To address the inquiry of this study, it utilizes comparative analysis of the World Health Organization's framework for Pandemic Influenza Preparedness and the Far Eastern University's Health Services Framework in addressing communicable diseases within the FEU community. This section will detail the data, and the method of analysis used.

1. To what extent does Far Eastern University's (FEU) university health service framework align with the World Health Organization (WHO) standards in responding to influenza viruses A (*Alphainfluenzavirus influenzae*) and B (*Betainfluenzavirus influenza*)?

Far Eastern University's Health Services (FEU-UHS) and the World Health Organization show a strong alignment with WHO standards. Particularly in its multi-faceted and proactive approach to influenza prevention and management of cases. FEU-UHS directly mirror WHO's recommendations to halt rapid transmission that includes information dissemination through various channels, reinforcing health protocols for management of suspected cases and practices such as wearing of facemask, hand hygiene and getting vaccinated as an utmost priority to protect not only the individual but also the broader community.

In terms of medical care services, FEU-UHS provides outpatient medical treatment using the guidelines and protocols mandated for managing influenza cases. This policy mirrors the World Health's Organization (WHO) highlights standardized guidelines for diagnosing influenza and clinical management, to ensure that individuals suspected of the virus receives appropriate pre and post care management.

On health protocols, the FEU-UHS consistently follows the WHO's recommendations such as wearing of face masks, regular and proper hand disinfection, and maintaining physical distancing. These are some of the measures that resonates with WHO's guidelines when it comes to prevention and control of infection and other pathogenic viruses.

FEU-UHS dissemination of information is within the university community by using platforms such as printed publication materials, institutional documents, e-mail blasts to students, and through Canvas (learning management system used by the institution). This effort parallels with the approach of encouraging the public to improve awareness and promote vaccination uptake by the WHO.

When it comes to immunization, FEU-UHS mandates vaccination of influenza for students that are engaged in offcampus activities in addition to other required vaccines such as Tetanus-Diphtheria (TD/TDAP), Hepatitis B, and MMR depending per the student's program. While the WHO does not strictly enforce to get vaccinated, they only strongly recommend annual vaccination for influenza among individuals that are six months and older, especially the immunocompromised and others that are in high-risk categories such as workers in the health care industry.

The management of suspected and confirmed cases, the FEU-UHS implements physical distancing during acute phase of illness and isolation depending on case-to-case basis, and most importantly, referring to specialists for severe cases. It

aligns with the clinical practice established by WHO, that advocate for distancing, symptom monitoring, and case management.

Category Area of Alignment	Far Eastern University – UHS	World Health Organization
Medical Care Service	Provides outpatient medical treatment	Establish guidelines for influenza diagnosis and management.
Health Protocols	Safety protocols and precautions based on the established guideline by the WHO such as wearing face masks, hand disinfection, physical distancing.	Establishes treatment guidelines such as appropriate medications and supportive care recommendations for managing symptoms.
Dissemination of Information	 Information materials e.g. publication materials Institutional documents (e.g. student handbook) Email blasts E-bulletin or video 	Encourages public health campaigns to promote vaccine uptake globally.
Immunization	Mandatory influenza vaccination for students participating in off- campus activities; TD/TDAP, Hep-B, and MMR are required for specific cohorts.	Recommends annual influenza vaccination for all individuals aged ≥6 months, prioritizing high-risk groups (e.g., healthcare workers, immunocompromised persons).
Management of suspected and confirmed cases	 Physical distancing during the acute phase. Isolation on a case- to-case basis. Referral to specialists as needed. 	Published WHO Clinical practices guideline for influenza such as observing physical distancing that applies to patients or suspected individuals with seasonal influenza and other forms of influenza viruses.

TABLE 3.1. Results and Discussion on Statement of the Problem number 1.

1.1. What are the key similarities and differences between FEU's current influenzas A and B response protocols and the WHO's recommended framework?

Far Eastern University – University Health Services (FEU-UHS) only operates within the university, serving the students, faculty, and staff working on campus or affiliated with the campus. In contrast, World Health Organization (WHO) is on a global level, which meant that they are working on a broader scale; coordinating with the countries that are members of the organization and the international health systems.

On preventive measures, FEU-UHS implements protocols such as proper hand hygiene and disinfection, wearing of face masks, and physical distancing to prevent or limit the transmission of influenza within the university. Which is similar to what the WHO emphasizes, which is to implement preventive strategies through global guidelines that includes but not limited to hand hygiene, vaccination, and patient care practices.

For surveillance, the FEU-UHS monitors and tracks flulike symptoms and compliance of mandated vaccines for the students within the university. At the same time, the WHO is



overseeing an international monitoring system and a Pandemic Influenza Preparedness (PIP) Framework to identify and address influenza risks.

Per vaccination, the FEU-UHS mandates influenza vaccination for its students, faculty, staff, and participants on off-campus activities. In which, it aligns with WHO's advocacy for widespread vaccination of influenza.

When it comes to health education and information, FEU-UHS disseminates its materials through the learning management system. While the WHO provides comprehensive health education resources globally, it publishes guidelines, recommendations for safe practices, and campaigns for awareness for global wellness.

Whereas clinical management of the FEU-UHS refers patients with serious conditions to clinics and hospitals and applies influenza-specific management policies as necessary. The WHO supports similar efforts on a global scale through establishing guidelines when it comes to clinical management, procedures for treatment, and protocols for isolation for countries to adapt to their healthcare system.

Lastly, FEU-UHS resources relies on institutional and local healthcare primarily. Unlike with the WHO, that leverages its global partnerships among its members, through global collaborations and funding mechanisms to support the development and sustainment of effective preparedness and response systems for influenza.

Aspect	Far Eastern University	World Health	
	– University Health	Organization	
	Services	(WHO)	
Coverage Area	University-based (within	Global reach	
	the campus such as FEU	(participating	
	students, faculty, and	countries of WHO,	
	staff)	international health	
		systems)	
Preventive Measures	Safety protocols and	Establish guidelines	
	precautions such as	for medication and	
	wearing face masks,	supportive care such	
	hand disinfection,	as hand hygiene,	
	physical distancing.	vaccination etc.	
Surveillance	Monitors flu-like	Global surveillance	
	symptoms and tracks	and Pandemic	
	vaccination compliance.	Influenza	
		Preparedness	
X 7		Framework.	
vaccination	Mandates IIu/Influenza	Advocates for	
	foculty and staff	minuenza vaccination	
Haalth	Discomination through	Dublishes avidalines	
Education/Information	university shannals	for meterials safe	
Education/information	(a g via Outlook	nor materials, sale	
	(e.g., via Outlook,	compaigns targeted	
	Canvasy	for global wellness	
Clinical Management	Refers infected	Provides guidelines	
Chinean Management	individuals to clinics	for patient	
	and hospitals while	management.	
	enforcing isolation and	treatment. and	
	influenza management	isolation.	
	policies.		
Resources	Institutional and local	Through global	
	resources.	partnerships,	
		research, and funding.	

TABLE 3.2. Results and Discussions on Statement of the Problem number 2.

2. What gaps or areas for improvement can be identified in FEU's health service framework when compared to WHO standards for influenza A and B preparedness and response?

Upon analyzing, FEU-UHS would benefit from a specific pandemic preparedness plan with enhanced surveillance to detect and monitor influenza trends, and coordination with health authorities to come up with an effective and efficient response to influenza. Launching a crisis response task force would also improve their ability to manage complex situations and to support the FEU community. Through regular review and updates based on DOH and WHO guidelines, increased engagement with researchers and the FEU community could also further enhance their response to outbreaks as it fosters a collaborative and informed response, a goal that aligns with WHO's emphasis on the involvement of the community.

Component	World Health	FEU-UHS	Gap and Area
	Organization	Current	for
	Standard	Practice	Improvement
Surveillance	Active surveillance and active coordination with national data	Limited to internal case tracking	Need enhanced surveillance systems to detect and monitor trends on influenza more effectively.
Preparedness Planning	Comprehensive documentation of influenza preparedness and response plans and action.	No data presented by the University Health Services.	Presenting a specific pandemic preparedness plan and launch crisis response force for complex situations.
Health Education and Communication	Widespread posting through different online platforms with behavior- specific messaging.	Limited to posting on learning management system.	Establish pages on other platforms to reach a wider audience.
Community and Research Engagement	Highly encourages community participation and academic engagement.	Limited collaboration and student involvement.	Increase the engagement with researchers and the FEU community to promote and tailor a collaborative and informed response.

TABLE 3.2. Results and Discussions on Statement of the Problem number 2

IV. RECOMMENDATIONS

The findings of the study have contributed to a deeper understanding of the alignment between Far Eastern University's health service framework and the World Health Organization's influenza viruses preparedness standards. As the study developed, several areas emerged that warrant further attention to strengthen institutional health

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preparedness. Based on these insights, the following recommendations are proposed to:

- 1. For Far Eastern University's University Health Service:
 - 1.1. Strengthening Influenza Surveillance System. The university should develop a more formalized surveillance system for monitoring possible influenza cases within the campus. Establishing partnership with national surveillance program can enhance early detection, real-time monitoring, and timely response to possible outbreaks.
 - 1.2. Expand and Sustain Vaccination Programs. While vaccination campaigns are already encouraged, FEU could improve vaccination coverage by offering free or subsidized influenza vaccines, conducting annual vaccination drives, and integrating vaccination compliance into health clearances for all students and staffs
 - 1.3. Strengthen Health Education and Awareness Campaigns. Continuous education efforts about influenza prevention, symptoms, and management should be made to avoid possible outbreaks within the university.
 - 1.4. Establish a Crisis Response Task Force. Creating a dedicated influenza preparedness and response team would ensure more coordinated efforts during possible or an actual outbreak, enhance accountability, and streamline decision-making during health emergencies.
 - 1.5. Participate in Research and Knowledge-Sharing Networks. By engaging in regional and international influenza research initiatives could enable FEU to stay updated with evolving best practices and contribute to global pandemic preparedness efforts.
- 2. For Future Researchers:
 - 2.1. Broaden the Scope of Comparative Analysis. Future studies could include comparison between multiple universities, both locally and internationally, to gain a more comprehensive view of how educational institutions align with WHO standards and identify best practices.
 - 2.2. Assess the Effectiveness of Implemented Protocols. Future researchers may investigate the actual effectiveness of influenza protocols and response strategies by conducting longitudinal studies that track infection rates, outbreak response times, and vaccination uptake before and after specific interventions.
 - 2.3. Explore Student and Staff Perceptions. Qualitative research could be conducted to understand the awareness, attitudes, and practices of students, faculty, and staff regarding influenza prevention measures to identify areas for improvement in health education efforts.

V. CONCLUSION

This comparative study highlights that while Far Eastern University Health Services (FEU-UHS) aligns with the

broader principles of the World Health Organization's Pandemic Influenzas Preparedness (PIP) Framework, significant opportunities remain for enhancement. FEU's localized strategies, such as information dissemination, vaccination encouragement, health protocol reinforcement, and management of suspected cases, reflect an understanding of WHO's emphasis on surveillance, prevention, and response. However, the FUE framework primarily focuses on localized, immediate management rather than the broader, systematic preparedness and coordinated global response that WHO advocates.

Under the light of current global health standards, it is evident that although FEU-UHS demonstrates commendable initiatives, further steps could be taken to integrate a more structured surveillance system, establish formal collaborations with national health authorities, and implement real-time datasharing mechanisms to WHO's Global Influenza Surveillance and Response System (GISRS). Future research may explore how university health systems can develop scalable models that bridge local action with national and global influenza surveillance networks.

Practically, FEU and similar institutions could benefit from adopting a more dynamic, risk-assessment-driven approach to influenza management, investing in digital health technologies for real-time case tracking, a participating in broader public health partnerships. Ad influenza viruses continue to evolve, a multi-layered preparedness model that connect local actions to global strategies will be critical for building resilient educational communities.

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