WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Prevalence of Compliance with Outpatient Follow-Up Check-Up Among Discharged Patients at a Level 2 Government Hospital in Puerto Princesa, Palawan: A Basis for Policy Plan

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ABSTRACT

Skipping post-discharge checkups is a serious problem, leading to poorer health and more hospital readmissions. A recent descriptive, retrospective study at a Puerto Princesa hospital looked at 1,115 patient records from 2022-2024 to understand why so many people weren't following up. The results were alarming: only 18.3% of patients showed up for their scheduled appointments. This wasn't consistent across the board; surgery patients had a much higher compliance rate (46.88%) compared to obstetrics patients (a mere 2.86%). The study found that age, gender, marital status, type of care received, and the reason for admission all played a role in whether or not patients returned for follow-up. Men (27.49%) were more than twice as likely to attend than women (12.93%), a difference largely due to the extremely low rate among new mothers. Clearly, the hospital's current system isn't working. A "one-size-fits-all" approach isn't cutting it. The extremely low postpartum follow-up rate is especially worrying. In response, a new plan called "Project REACH" is being implemented. This plan focuses on several key areas: improving postpartum and newborn care, standardizing discharge procedures based on the successful surgery department model, and providing extra support for patients at higher risk of not following up. This aims to improve patient care and prevent unnecessary hospital readmissions by increasing attendance to post-discharge follow-up check-up.

Keywords: *Prevalence, Compliance, Outpatient, Follow-up , Check-up, Philippines*

I. INTRODUCTION

BACKGROUND OF THE STUDY

Effective healthcare extends beyond the confines of hospital walls. Successful treatment often hinges on consistent post-discharge follow-up care, which plays a crucial role in patient recovery, management of chronic conditions, and prevention of readmissions (Jack et al., 2013). These follow-up appointments allow healthcare providers to monitor patient progress, adjust treatment plans as needed, address emerging complications, and reinforce crucial self-management strategies (Kripalani et al., 2007). Unfortunately, despite the recognized importance of post-discharge follow-up, non-compliance remains a significant challenge across various medical conditions and patient populations (Hertz et al., 2016).

Non-compliance with recommended follow-up appointments can have serious consequences. It can lead to a deterioration in health status, increased risk of readmission, higher healthcare costs, and diminished quality of life (Krumholz et al., 2013). For patients with chronic conditions like heart failure, diabetes, or mental health disorders, consistent follow-up is particularly critical for managing symptoms, preventing exacerbations, and optimizing long-term outcomes (O'Connor et al., 2010). Failure to adhere to follow-up schedules can disrupt the continuity of care, making it difficult for healthcare providers to effectively manage these complex conditions.

Several factors contribute to non-compliance with post-discharge follow-up recommendations. These include patient-related factors such as lack of awareness about the importance of follow-up care, financial constraints, transportation difficulties, forgetfulness, and low health literacy (Al-Abri & Al-Balushi, 2011). System-related barriers, such as scheduling difficulties, long wait times, inadequate communication from healthcare providers, and lack of care coordination, can also hinder adherence (Gulliford et al., 2002). Furthermore, social determinants of health, such as socioeconomic status, cultural beliefs, and social support networks, can significantly influence a patient's ability and willingness to engage in follow-up care (Berkman et al., 2014). Understanding the specific factors that contribute to non-compliance within particular patient populations and healthcare settings is essential for developing targeted interventions to improve follow-up rates. Globally, research consistently demonstrates a strong correlation between patient adherence to medical recommendations and positive health outcomes (World Health Organization, 2003). Conversely, poor adherence is consistently linked to increased morbidity, mortality, and healthcare costs (Osterberg & Blaschke, 2005; Sokol et al., 2005). This association is particularly evident in the management of chronic diseases, where adherence to long-term treatment plans is crucial for preventing disease progression and complications.

Factors contributing to non-compliance are complex and multifaceted, often involving a dynamic interplay of patient-related, provider-related, and healthcare system-related factors. Patient-related factors encompass a range of individual characteristics, including health literacy (Paasche-Orlow & Wolf, 2005), socioeconomic status (Berkman et al., 2014), access to transportation (Syed-Abdul et al., 2018), cultural beliefs, and perceived need for treatment. Provider-related factors, such as communication style (Street et al., 2009), shared decision-making practices, and appointment scheduling flexibility, also play a significant role. Furthermore, healthcare system factors, including appointment availability, continuity of care, the use of follow-up reminders (Kripalani et al., 2007), and the overall organization of care, can significantly impact adherence. The increasing prevalence of chronic diseases and an aging population further underscores the urgent need for effective strategies to support patients in managing their health conditions beyond the hospital setting (World Health Organization, 2015). As the burden of chronic diseases rises, optimizing adherence to post-discharge care plans becomes increasingly critical for improving patient outcomes, reducing healthcare costs, and enhancing quality of life.

This study delves into the rate of compliance with scheduled outpatient follow-up appointments among patients discharged from a Level 2 government hospital in Puerto Princesa, Palawan. The goal is to understand the patient-related factors behind non-compliance and develop evidence-based policies and strategies to improve patient adherence and overall post-discharge care.

LITERATURE REVIEW

The transition from hospital to home is a critical and often vulnerable period for patients. Effective discharge planning is essential to ensure a smooth transition and continuity of care, with post-discharge follow-up appointments being a cornerstone of this process. These appointments provide an opportunity for healthcare providers to assess the patient's recovery, monitor for complications, manage medications, and reinforce education provided during hospitalization. The World Health Organization (WHO) has long emphasized the importance of a seamless continuum of care, and post-discharge follow-up is a vital component in achieving this goal. The problem of non-compliance is particularly acute in developing countries like the Philippines, where the healthcare system is often fragmented and resources are limited. The Universal Health Care Act in the Philippines aims to address some of these systemic issues by promoting integrated and comprehensive healthcare services (PwC Philippines & PCHRD, 2021). However, barriers at the individual, provider, and system levels continue to impede optimal follow-up care. A study at the Philippine General Hospital (PGH), a large tertiary government hospital, found a staggering lost to follow-up rate of 47% among discharged patients, highlighting the severity of this problem in the local context (Punzalan et al., 2020).

International Context

Globally, studies have reported a wide range of follow-up appointment compliance rates. A review by Hertz et al. (2016) emphasized that missed follow-up appointments constitute a substantial threat to quality of care, although they did not provide a specific global average. Other studies have shown compliance rates ranging from below 30% to over 80%, depending on the specific context (Al-Abri & Al-Balushi, 2014; Jack et al., 2009). For instance, studies focusing on patients with chronic conditions like heart failure have reported concerningly low follow-up rates, often below 50% (Krumholz, 2013; O'Connor et al., 2009). This is particularly troubling given the high risk of decompensation and readmission in this patient population. Similarly, patients with mental health conditions often have low rates of follow-up, which can lead to poor long-term outcomes. Conversely, studies focusing on specific interventions or programs designed to improve follow-up adherence have sometimes demonstrated higher compliance rates (Jack et al., 2009). For example, the Project RED (Re-Engineered Discharge) program, a comprehensive discharge planning and follow-up intervention, significantly increased the likelihood of patients attending their appointments (Jack et al., 2009).

Philippine Context

A study conducted at the Philippine General Hospital (PGH), a national referral center and tertiary government hospital in Manila, provides a sobering glimpse into the reality of follow-up care in the Philippines. The study found that of 619 patients included, the outpatient follow-up rate was only 36.3% (Punzalan et al., 2020). This means that nearly two-thirds of patients discharged from this major hospital did not return for their scheduled follow-up. The same analysis revealed a lost to follow-up rate of 47% (Punzalan et al., 2020). For specific conditions, the situation may be slightly different, but still concerning. A registry of heart failure patients in the Philippines found that 84.77% of enrolled patients had at least one follow-up visit (Agbing-Aban et al., 2021). While this rate appears higher, the study acknowledged that data on outpatient care after discharge is generally sparse in past registries, and the study's design as a registry might have encouraged higher follow-up rates than what is seen in routine practice (Agbing-Aban et al., 2021).

Furthermore, while not a direct measure of follow-up appointment compliance, data on medication adherence can serve as a proxy for engagement with post-discharge care plans. In the Philippines, medication adherence for chronic conditions like hypertension is reported to be as low as 20% to 50% (Abon et al., 2022). A survey by the Philippine Heart Association revealed that while 65% of hypertensive patients received treatment, the adherence rate among those treated was only 66%, resulting in a control rate of just 20% (Abon et al., 2022).

Factors Influencing Compliance with Post-Discharge Follow-Up

Patient-Related Factors

While some studies have found associations between demographics like age, gender, and education level and follow-up compliance, the findings are often inconsistent (Al-Abri & Al-Balushi, 2014). Some studies suggest that older patients may be more compliant, possibly due to a greater perceived need for care, while others have found the opposite, perhaps due to mobility issues or cognitive impairment. In the Philippines, a systematic review on medication adherence for hypertension found that being female, married, and employed were associated with higher adherence (Abon et al., 2022).

Further, low health literacy is a significant barrier to effective healthcare, including adherence to follow-up recommendations (Berkman et al., 2011). A patient's perception of the importance of follow-up care and their beliefs about their health and illness play a crucial role in their decision to adhere to recommendations (Kripalani et al., 2007). Patients who do not believe follow-up is necessary or who have fatalistic beliefs about their illness may be less likely to comply. In the Filipino context, traditional health beliefs and the use of folk medicine can also influence health-seeking behaviors (Nalus & Biong, 2021). Some Filipinos may delay seeking professional medical care until their symptoms are severe, adopting a more crisis-oriented rather than preventive approach to health (Lingap Pangkabataan, n.d.).

Meanwhile, mental health disorders, such as depression and anxiety, can significantly impact a patient's ability and motivation to engage in follow-up care (O'Connor et al., 2009). A study on hypertensive patients in the Philippines found that depression was directly associated with medication non-adherence (Abon et al., 2022). Further, a study at PGH found that the patient's own worsening health condition was a major reason for being lost to follow-up, suggesting that some patients may be too unwell to travel to the hospital (Punzalan et al., 2020).

Provider-Related Factors

A strong and trusting relationship between the patient and their healthcare provider is a powerful predictor of compliance (Jin et al., 2008). In the Philippines, the quality of the patient-provider relationship has been shown to be a factor in medication adherence (Abon et al., 2022). Moreover**,** the quality of education provided to patients upon discharge is critical. If patients do not understand their diagnosis, treatment plan, and the rationale for follow-up, they are less likely to comply. The use of the "teach-back" method, where patients are asked to explain the instructions in their own words, has been shown to improve understanding and adherence (Kripalani et al., 2007).

Healthcare System-Related Factors

Difficulties with scheduling appointments, long wait times, and limited access to healthcare facilities are major barriers to follow-up care (Gulliford et al., 2002). Patients who cannot easily schedule appointments or who face transportation challenges are less likely to comply. In the Philippines, a study on primary care consultations found that the median turnaround time was 29 minutes, but this could vary significantly, with some consultations taking much longer (Bautista et al., 2022). The use of appointment reminders, such as phone calls, text messages, or automated calls, has been shown to be an effective strategy for improving follow-up rates. In the Philippines, mHealth interventions using SMS and voice calls have been tested to support adherence for HIV patients, demonstrating the potential of technology to address this issue (van der Kop et al., 2021). A fragmented healthcare system, where there is poor communication and coordination between different levels of care, can lead to discontinuity and confusion for patients (PwC Philippines & PCHRD, 2021). The Philippine Universal Health Care Act aims to address this by establishing healthcare provider networks, but the implementation of this is a long-term process (PwC Philippines & PCHRD, 2021).

Socio-Economic Factors

Socio-economic factors are among the most powerful determinants of healthcare access and compliance. Financial constraints and lack of health insurance can significantly limit access to healthcare and hinder follow-up compliance (Al-Abri & Al-Balushi, 2014). Patients who cannot afford co-pays, consultation fees, or medications may be forced to forgo necessary follow-up care. In the Philippines, the capacity to pay is a major perceived barrier to healthcare (PwC Philippines & PCHRD, 2021). A study at PGH identified socioeconomic reasons as one of the most frequent reasons for patients not attending their outpatient consults (Punzalan et al., 2020) while a Philippine study on hypertension found a direct relationship between social support and medication adherence (Abon et al., 2022).

Consequences of Non-Compliance with Post-Discharge Follow-up

Some research has found that timely follow-up visits were paradoxically associated with a higher prevalence of post-discharge Adverse Events, which is likely due to confounding by indication or information bias, meaning that patients scheduled for early follow-up may already be at higher risk for AEs due to the severity of their condition (Tsilimingras & Kountz, 2017). In some cases, non-compliance with post-discharge follow-up can have life-threatening consequences. A study investigating medication adherence following acute myocardial infarction found that patients who discontinued their prescribed medications within a month of discharge had an 80% higher chance of dying within the first year (Kleinsinger, 2010).

On the ther hand, non-compliance with follow-up appointments is a significant contributor to hospital readmission rates. Studies have shown that patients who miss follow-up appointments are more likely to be readmitted to the hospital within 30 days of discharge (Hasan et al., 2010). In the Philippines, the link between poor follow-up and high readmission rates is evident. The study at PGH that reported a 47% lost-to-follow-up rate also found a 16% readmission rate, with time to readmission being just 12.4 days on average (Punzalan et al., 2020). Another study in a tertiary hospital in Manila reported an 18% readmission rate within 30 days (Sy & Ang, 2020). For specific high-risk populations, such as patients on dialysis, the 30-day readmission rate at PGH was even higher, at nearly 37% (Punzalan et al., 2020).

Several factors have been identified as predictors of readmission in the Philippine context. These include a high-risk score on the HOSPITAL prediction model, having a prior admission within the last 30 days (Punzalan et al., 2020), having multiple comorbidities (Punzalan et al., 2020), and the presence of a nosocomial infection during the initial admission (Sy & Ang, 2020). These findings highlight the importance of identifying high-risk patients at discharge and implementing targeted strategies to ensure they receive adequate follow-up care.

Interventions to Improve Compliance with Post-Discharge Follow-up

Providing clear, comprehensive, and patient-centered discharge education is a fundamental step in improving compliance. This should go beyond simply handing out written instructions and should involve interactive methods like the "teach-back" technique to ensure comprehension (Kripalani et al., 2007). The widespread use of mobile phones makes SMS reminders a particularly promising and cost-effective strategy (van der Kop et al., 2021).

Implementing a standardized and comprehensive discharge planning process can help to ensure that all necessary components of post-discharge care are addressed. This includes medication reconciliation, scheduling of follow-up appointments before discharge, and clear communication with the patient's primary care provider (Jack et al., 2009). The use of technology to provide remote care is a rapidly growing area with great potential to improve follow-up compliance. Telehealth visits can eliminate the need for travel, reduce costs for patients, and provide a convenient way for providers to monitor patients' progress. In the context of the COVID-19 pandemic, the use of telehealth in the Philippines has accelerated (Lee et al., 2021), and it represents a valuable tool for post-discharge care moving forward.

As envisioned by the Philippine Universal Health Care Act, creating integrated care networks that facilitate communication and collaboration between hospital-based providers and primary care physicians is essential for ensuring a seamless transition of care (PwC Philippines & PCHRD, 2021). When there is a clear and coordinated plan for follow-up, patients are less likely to fall through the cracks. Moreover, nurses play a crucial role in patient education and discharge planning. Nurse-led interventions, such as face-to-face visits and motivational interviewing, have been shown to be effective in improving medication adherence in patients with chronic diseases, and these approaches could be adapted to improve follow-up appointment compliance (Al-Mulla et al., 2023).

PHILOSOPHICAL UNDERPINNING

The philosophical underpinning of this capstone research rests on the principle of patient-centered care and the social determinants of health. It acknowledges that individual patient characteristics, including demographics, socioeconomic status, health literacy, and cognitive function, significantly influence their ability to adhere to post-discharge care plans. This study recognizes that healthcare is not just about medical interventions, but also about addressing the social and environmental factors that impact health outcomes. Therefore, it seeks to identify and address these broader determinants of health to create more effective and equitable healthcare systems.

THEORETICAL FRAMEWORK

Understanding why some patients diligently follow post-discharge care plans while others do not is a critical challenge in healthcare, as low compliance can hinder recovery and lead to poor health outcomes. To better understand the drivers and barriers influencing patient adherence, this issue can be examined through established behavioral theories, including the Health Belief Model, the Theory of Planned Behavior, and Social Cognitive Theory.

The Health Belief Model (HBM)

The Health Belief Model (HBM) (Rosenstock, 1974) posits that health-related behaviors are guided by an individual's perceptions of threats, benefits, and barriers. Key components include perceived susceptibility (risk of complications), perceived severity (seriousness of complications), perceived benefits (value of the follow-up), and perceived barriers (e.g., cost, time, transportation). The model also incorporates self-efficacy, or a patient's confidence in their ability to perform the recommended action. Applying this to post-discharge care, a patient who perceives a high risk of complications and believes the follow-up is beneficial is more likely to attend. Conversely, if a patient faces significant logistical or financial barriers, they may be less likely to comply, even if they believe the care is important. Recent research continues to validate the HBM's relevance. A 2024 study on HPV vaccine acceptance in Bangladesh successfully used the HBM to understand parental decisions, confirming that perceived susceptibility to HPV, severity of cervical cancer, and benefits of vaccination were key determinants (Islam et al., 2024). Similarly, a 2023 study in Indonesia on stunting prevention found that HBM constructs like perceived vulnerability, severity, and obstacles were significant predictors of parental health behaviors.

The Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) (Ajzen, 1991) centers on intention as the primary predictor of behavior. This intention is shaped by three core factors: the patient's attitude toward the behavior (Is follow-up a good idea?), subjective norms (What do my doctor, family, and community think I should do?), and perceived behavioral control (How easy or difficult will it be for me to attend?). In the context of post-discharge care, a patient's intention to attend is stronger if they have a positive attitude, feel that their doctor and family expect them to go, and believe they can overcome barriers like childcare needs or transportation costs. A 2021 study by Gwyneth C. A. highlighted that numerous barriers, including financial and transportation difficulties, hinder postpartum check-up attendance in the Philippines, reflecting low perceived behavioral control. A 2022 study by Kasting et al. applied the TPB to understand COVID-19 vaccination intentions among pregnant individuals, finding that attitudes and subjective norms were powerful predictors of the intention to get vaccinated, underscoring the theory's utility in explaining health decisions in maternal populations.

Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT) (Bandura, 1986) emphasizes the dynamic interplay between personal factors (like beliefs and self-efficacy), environmental influences (like social support and access to care), and the behavior itself. Key SCT concepts include self-efficacy, outcome expectations (the anticipated results of an action), and observational learning (learning from others' experiences). SCT suggests that when follow-up care is presented in a structured way with clear instructions, it can boost a patient's self-efficacy. Patients who are confident in their ability to manage their care, expect positive outcomes, and have seen others successfully navigate similar situations are more likely to comply. A 2023 scoping review confirmed that SCT is a widely accepted and effective framework for designing health promotion interventions in primary care, as it addresses the critical interaction between personal, behavioral,

and environmental factors that drive health behavior change (Shrestha et al., 2023). This reinforces that building a patient's confidence and skills (self-efficacy) is a crucial step for improving health outcomes.

CONCEPTUAL FRAMEWORK

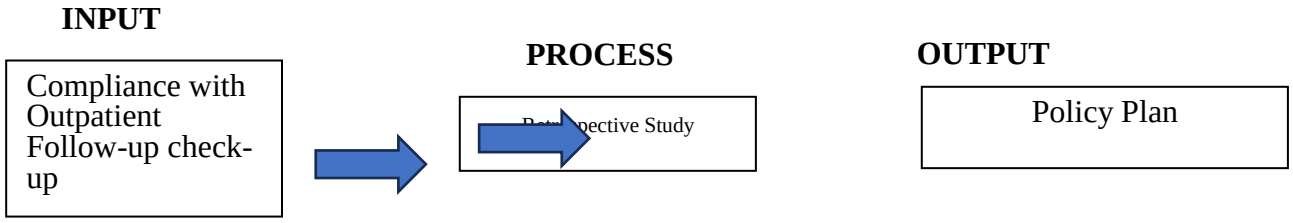

Figure 1. Conceptual Framework of the Study

The conceptual framework illustrates a research approach focused on improving healthcare outcomes. It begins with the Input, identified as "Compliance with Outpatient Follow-up check-up". This signifies the initial area of concern or the subject being investigated: the degree to which patients adhere to their scheduled follow-up appointments after outpatient visits. The framework then outlines the Process as a "Retrospective Study". This indicates that the research methodology will involve looking back at existing data, such as patient records, to analyze past compliance rates and identify potential factors influencing these rates. This historical analysis aims to uncover patterns and insights without direct intervention during the study period. Finally, the framework's Output is a "Policy Plan". This demonstrates the practical objective of the research: to translate the findings from the retrospective study into actionable policies or strategies designed to enhance patient compliance with outpatient follow-up check-ups in the future. In essence, the framework describes a pathway from observing patient behavior to understanding its root causes through historical data analysis, culminating in concrete recommendations for systemic improvement

STATEMENT OF THE PROBLEM

This study seeks to determine the prevalence of compliance with Outpatient Follow-up Check-up among Discharged Patients at a Level 2 Government Hospital in Puerto Princesa, Palawan. Specifically, this study aims to answer the following question:

1. What is the demographic profile of the Discharged Patients in the Level 2 Government Hospital in Puerto Princesa, Palawan in terms of:
    - 1.1 Age
    - 1.2 Gender
    - 1.3 Civil Status
    - 1.4 Social Service Classification
    - 1.5 Location
    - 1.6 Type of Service availed
    - 1.7 Discharged Diagnosis?
2. What is the prevalence of compliance with outpatient follow-up check-up among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa, Palawan in terms of attendance to follow-up check-up within specified timeframe when group according to demographic profile?
3. Is there a significant relationship on the demographic profile and prevalence of compliance with outpatient follow-up check-up among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa, Palawan?
4. What are the recommended interventions or strategies to be included in the policy planning to improve compliance with outpatient follow-up checkup among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa?

HYPOTHESIS

H0:

There is NO significant relationship on the demographic profile and prevalence of compliance to Outpatient Follow-up check-up among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa.

Ha:

There is a significant relationship on the demographic profile and prevalence of compliance to Outpatient follow-up check-up among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa.

SIGNIFICANCE OF THE STUDY

The results of this study, focusing on the prevalence of prevalence with outpatient follow-up check-ups among discharged patients at the Level 2 Government Hospital in Puerto Princesa, will be beneficial to several key stakeholders:

The Patients: Understanding the factors that influence compliance will empower patients to take a more active role in their post-discharge care. By identifying common barriers and misconceptions, this study can inform interventions designed to improve adherence to follow-up schedules, ultimately leading to better health outcomes for patients.

The Level 2 Government Hospital in Puerto Princesa: The findings will provide valuable data to the hospital administration and healthcare providers. This information can be used to assess current discharge procedures, identify areas for improvement in patient education and follow-up care coordination, and develop targeted strategies to enhance compliance rates. This, in turn, can contribute to improved patient outcomes and more efficient use of hospital resources.

Hospital Healthcare Providers (e.g., Nurses, Physicians): The study results will offer insights into the challenges patients face in adhering to follow-up appointments. This understanding will enable healthcare providers to tailor their communication and support to address individual patient needs and promote better compliance.

Community Healthcare Providers: The research will shed light on the factors that lead to patients being lost to follow-up. This is of immense value to CHPs who are often responsible for tracking the health status of community members. By being aware of the high-risk factors for non-compliance, they can prioritize their home visits and interventions for patients who need the most support. Furthermore, this understanding will help them make more timely and appropriate referrals back to the hospital or to other healthcare facilities when necessary.

The Department of Health (DOH) and Policy Makers: On a broader scale, the study's findings can contribute to the development of national strategies and policies aimed at improving post-discharge care and increasing compliance with follow-up recommendations. The data can inform the design of public health campaigns and interventions focused on promoting the importance of follow-up care and addressing barriers to access.

Future Researchers: This study will serve as a valuable resource for future research exploring related topics. The data and findings can be used to build upon existing knowledge, compare results across different populations and settings, and further investigate the complex factors influencing post-discharge care compliance.

The Researcher: This study provides the researcher with practical experience in conducting research and contributes to the existing body of knowledge on post-discharge care. The findings can also inform the researcher's future practice and advocacy efforts related to improving patient care and promoting health.

SCOPE AND LIMITATIONS OF THE STUDY

This study sets out to explore the prevalence of compliance with outpatient follow-up check-ups among patients discharged from the Level 2 government hospital serving Puerto Princesa, Palawan. The research will specifically focus on this patient population, examining their adherence to recommended follow-up appointments. Data collection will encompass several key areas. The study will gather demographic information from participants, including age, gender, civil status, social service classification, type of service received, and location (municipality). Critically, it will also collect data regarding the prevalence of compliance with scheduled outpatient follow-up appointments. The analysis phase of the study will then investigate the relationship between these collected demographic characteristics and the observed compliance rates. Finally, based on the findings of this analysis, the study aims to identify and recommend potential interventions or strategies that could be implemented to improve compliance with outpatient follow-up check-ups, ultimately contributing to better patient care and outcomes.

This study, while offering valuable insights, acknowledges certain limitations. Its confinement to a single institution raises the question of generalizability. The findings may not fully reflect the complexities of patient compliance in other healthcare settings, which might have different patient demographics, resources, or organizational structures. Furthermore, the study's reliance on existing hospital records presents a potential limitation. While these records provide a valuable source of data, they may not capture the full spectrum of factors influencing a patient's decision to adhere to post-discharge follow-up recommendations. There may be nuanced social, economic, or personal circumstances not documented in the medical record that play a crucial role. Finally, the study's primary focus on patient-related factors, while important, represents a deliberate narrowing of scope. While it sheds light on individual patient characteristics influencing compliance, it does not delve deeply into the potential contributions of provider-related factors, such as communication styles or scheduling practices, or broader healthcare system issues, such as appointment availability or follow-up support systems. A more comprehensive understanding of compliance would ideally encompass these broader influences.

DEFINITION OF TERMS

Prevalence of Compliance: The prevalence of compliance, based on attendance at outpatient scheduled appointments, is the proportion of patients who attended their scheduled appointments within a defined timeframe, out of the total number of patients scheduled for those appointments.

Outpatient Follow-up Check-up: A scheduled appointment with a healthcare provider after a patient has been discharged from the hospital to monitor their recovery, address any concerns, and ensure appropriate ongoing care.

Discharged Patients: Individuals who have been released from the hospital after receiving medical treatment.

Demographic Profile: A set of characteristics that describe a population, such as age, gender, civil status, socioeconomic status, and location.

Social Service Classification: A categorization system used by the hospital to classify patients based on their socioeconomic status and access to social services.

Type of Service: The specific management or service received by the patient during their hospital stay.

Location: The location of municipality where the patient resides.

Interventions: Actions or strategies implemented to address a specific problem or improve a situation, in this case, to increase compliance with outpatient follow-up appointments.

Alagang Pinoy Tagubilin (APT): A program in the Philippine healthcare system focused on providing comprehensive and patient-centered care, including post-discharge instructions and follow-up.

II.METHODOLOGY

This chapter presents the methodology that was used in conducting the research study. Discussed here are the study design, sampling size and technique, setting of the study, data gathering instrument, data gathering procedure, limitations of the study, data analysis, and ethical consideration.

Research Design

This descriptive, quantitative, retrospective study will investigate the prevalence of compliance with outpatient follow-up check-up among discharged patients from a Level 2 government hospital in Puerto Princesa, Palawan, between January 1, 2022, and December 31, 2024. The primary aim is to identify factors associated with compliance to inform the development of a policy and intervention. Using secondary data extracted from patient health records (electronic and physical), the study will analyze the proportion of discharged patients who attended their scheduled or recommended follow-up appointments as indicated in the Alagang Pinoy Tagubilin or within seven (7) days from the scheduled date of out-patient follow-up. Compliance will be defined as documented attendance at a scheduled follow-up appointment or within the specified timeframe. Potential patient related-predictors of compliance such as age, gender, civil status, social service classification, type of service availed, location, and discharged diagnosis will be obtained and examined.

Research Site

The research will be conducted at a Level 2 government hospital located in Puerto Princesa City, Palawan, Philippines. This 213-bed hospital serves as the end-referral of different government hospitals in the province. The hospital's address is at 220 Malvar St., Bgy. San Miguel, Puerto Princesa City Palawan, 5300.

Figure 2. Map of the Philippines and Puerto Princesa Palawan as the Research Site

Sample and Sampling Design

The target population for this retrospective study comprises all patients discharged alive from a Level 2 government hospital in Puerto Princesa City, Palawan, between January 1, 2022, and December 31, 2024. Given the need to ensure proportional representation of each year's discharged patient population, a stratified random sampling technique will be employed based on the year of discharge (2022, 2023, and 2024). To determine the minimum required sample size, the Raosoft Sample Size Calculator will be utilized. The calculation will incorporate the following parameters:

Population Size (N): The total number of patients discharged alive during each year of 2022, 2023, and 2024. This data will be obtained from hospital statistical reports.

Margin of Error (e): A predetermined acceptable margin of error set at 5% for this study.

Confidence Level: A predetermined confidence level set at 95% for this study.

In each year's calculated sample size, a simple random sampling method will be used to select the individual patient records that will be utilized in this study. Any records that are found to be unusable after selection, such as those with missing required data, will be replaced using the same random sampling method within the affected year.

Research Instrument

This retrospective study will utilize a data extraction form specifically designed to capture relevant information from patient health records, Alagang Pinoy Tagubilin (APT) records, and the Integrated Hospital Operations and Management Information System (iHOMIS) records. These records will serve as the primary data sources for this research.

The data extraction form will be structured to systematically collect the following variables: The Patient Demographics such as Age, Gender, Civil Status, Social Service Classification, Type of Service availed, Location, and Discharged Diagnosis; the Outpatient Follow-up Schedule or the date of scheduled outpatient follow-up appointment; and Compliance with Follow-up through documentation of attendance or non-attendance at the scheduled outpatient follow-up appointment within the defined timeframe, based on both outpatient health records and APT records.

Validation of Instrument

To ensure the content validity and clarity of the data extraction form, as well as the appropriateness of the data extraction process and overall research methodology, review and evaluation will be requested from a panel of experts, comprising medical records specialists, and/ or masters in hospital administrators. This includes the research design, sampling strategy, and data analysis plan as well as procedures for accessing and interpreting patient health records, and APT records, and iHOMIS data. The panel will provide feedback on the feasibility and practicality of the data extraction process and Appropriateness of the sampling and statistical analysis methods. Based on the expert panel's feedback, data extraction process, and research methodology will be revised as necessary. All revisions will be documented to maintain transparency. This expert review will establish content validity, and ensure the research process is sound.

Data Gathering Procedure

The researcher will submit a formal request to the Medical Center Chief coursed thru the Head of the Professional Education, Training, and Research Unit (PETRU), outlining the study's objectives, data requirements, and ethical considerations. Upon receiving approval, the researcher will proceed to the hospital's Health Information and Management Department, and will examine the census of all patients who were discharged between January 1, 2022 and December 31, 2024 generated and extracted from the iHOMIS in MS Excel format. Following examination, the researcher will utilize the stratified random sampling method, as previously described, to identify the specific discharged patients to be included in the sample. Upon determining the samples, other patient and details in the previously generated and extracted census will be eliminated and the data to be retained will only include patient hospital number, demographics, hospitalization and outpatient encounter details. Other data needed as defined in the data extraction form which is not seen in the iHOMIS generated data will be extracted manually from the Patient's Health Records such as date of out-patient follow-up schedule. This manually extracted data will be accordingly tabulated in the previously mentioned MS excel file containing the list and other details of the samples.

Data Analysis Procedure

Initially, the dataset will undergo a rigorous cleaning and preparation process. This will involve the identification and correction of any inconsistencies, missing values, or outliers. Descriptive statistics will be employed to provide a comprehensive overview of the study population. This will include the calculation of frequency distributions and percentages that will summarize patient demographics and compliance rates. To analyze relationships between variables, chi-square tests will be used for categorical variables and Cramer's V to measure the strength of association.

Ethical Considerations

The researcher will ensure that confidentiality and privacy of patient information are maintained and will be used exclusively for this study. Further, informed consent is obtained from the Medical Center Chief and Department Head of the Health Information Management for data collection and analysis. Data security measures will be implemented to protect patient information from unauthorized access using password-encrypted file.

III. PRESENTATION, ANALYSIS, AND INTERPRETATION OF RESULTS

The Table 1 below presents the demographic profile of the Discharged Patients in the Level 2 Government Hospital in Puerto Princesa, Palawan.

Table 1.Distribution of Discharged Patients by Patient Demographics

Patient Demographics	2022		2023		2024		TOTAL	
AGE	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Infant/Toddler (0-4)	67	18.11%	85	22.79%	65	17.47%	217	19.46%
Child (5-12)	18	4.86%	26	6.97%	34	9.14%	78	7.00%
Teen (13 to 19)	35	9.46%	41	10.99%	31	8.33%	107	9.60%
Adult (20-39)	136	36.76%	134	35.92%	121	32.53%	391	35.07%
Middle Age adult (40-59)	64	17.30%	47	12.60%	63	16.94%	174	15.61%
Senior Adult (60 and abaove	50	13.51%	40	10.72%	58	15.59%	148	13.27%
TOTAL	**370**	**100%**	**373**	**100%**	**372**	**100%**	**1,115**	**100.00%**
GENDER	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Male	145	39.19%	138	37.00%	128	34.41%	411	36.86%
Female	225	60.81%	235	63.00%	244	65.59%	704	63.14%
TOTAL	**370**	**100%**	**373**	**100%**	**372**	**100%**	**1,115**	**100.00%**
CIVIL STATUS	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Child	110	29.73%	147	39.41%	120	32.26%	377	33.81%
Single	124	33.51%	117	31.37%	122	32.80%	363	32.56%
Married	122	32.97%	103	27.61%	111	29.84%	336	30.13%
Widow	12	3.24%	6	1.61%	17	4.57%	35	3.14%
Divorced	1	0.27%	-	0.00%	-	0.00%	1	0.09%
Separated	1	0.27%	-	0.00%	2	0.54%	3	0.27%
TOTAL	**370**	**100.00%**	**373**	**100.00%**	**372**	**100.00%**	**1,115**	**100.00%**
SOCIAL SERVICE CLASSIFICATION	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Indigent	351	94.86%	314	84.18%	293	78.76%	958	85.92%
Financially Incapacitated	-	0.00%	45	12.06%	73	19.62%	118	10.58%
Financially capable	-	0.00%	11	2.95%	6	1.61%	17	1.52%
Full Pay	4	1.08%	1	0.27%	-	0.00%	5	0.45%
Partial Pay	15	4.05%	2	0.54%	-	0.00%	17	1.52%
TOTAL	**370**	**100.00%**	**373**	**100.00%**	**372**	**100.00%**	**1,115**	**100.00%**
TYPE OF SERVICE	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Pediatrics	81	21.89%	117	31.37%	101	27.15%	299	26.82%
Medical	113	30.54%	91	24.40%	113	30.38%	317	28.43%
Obstetrics	118	31.89%	125	33.51%	107	28.76%	350	31.39%
Gynecology	9	2.43%	4	1.07%	11	2.96%	24	2.15%
Surgery	30	8.11%	32	8.58%	34	9.14%	96	8.61%
Orthopedics	9	2.43%	3	0.80%	6	1.61%	18	1.61%
Neonatology	10	2.70%	1	0.27%	-	0.00%	11	0.99%
TOTAL	**370**	**100.00%**	**373**	**100.00%**	**372**	**100.00%**	**1,115**	**100.00%**
LOCATION	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Southern Mainland Municipalities	52	14.05%	49	13.14%	52	13.98%	153	13.72%
Island Municipalities	12	3.24%	13	3.49%	18	4.84%	43	3.86%
Northern Mainland Municipalities	54	14.59%	42	11.26%	52	13.98%	148	13.27%
Puerto Princesa City	251	67.84%	267	71.58%	249	66.94%	767	68.79%
Others	1	0.27%	2	0.54%	1	0.27%	4	0.36%
TOTAL	**370**	**100.00%**	**373**	**100.00%**	**372**	**100.00%**	**1,115**	**100.00%**
DISCHARGE DIAGNOSIS	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Certain Infectious and Parasitic Diseases (A00-B99)	37	10.00%	57	15.28%	55	14.78%	149	13.36%
Neoplasms (C00-D49)	6	1.62%	4	1.07%	10	2.69%	20	1.79%
Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism (D50-D89)	10	2.70%	6	1.61%	7	1.88%	23	2.06%
Endocrine, Nutritional and Metabolic Diseases (E00-E90)	8	2.16%	9	2.41%	10	2.69%	27	2.42%
Diseases of the Nervous System (G00-G99)	2	0.54%	3	0.80%	3	0.81%	8	0.72%
Diseases of the Eye and Adnexa (H00-H59)	-	0.00%	1	0.27%	1	0.27%	2	0.18%
Diseases of the Ear and Mastoid Process (H60-H95)	1	0.27%	1	0.27%	-	0.00%	2	0.18%
Diseases of the Circulatory System (I00-I99)	24	6.49%	22	5.90%	34	9.14%	80	7.17%
Diseases of the Respiratory System (J00-J99)	48	12.97%	66	17.69%	52	13.98%	166	14.89%
Diseases of the Digestive System (K00-K95)	25	6.76%	22	5.90%	23	6.18%	70	6.28%
Diseases of the Skin and Subcutaneous Tissue (L00-L99)	4	1.08%	4	1.07%	5	1.34%	13	1.17%
Diseases of the Musculoskeletal System and Connective Tissue (M00-M99)	1	0.27%	1	0.27%	-	0.00%	2	0.18%
Diseases of the Genitourinary System (N00-N99)	25	6.76%	17	4.56%	20	5.38%	62	5.56%
Pregnancy, Childbirth and the Puerperium (O00-O99)	117	31.62%	125	33.51%	107	28.76%	349	31.30%
Certain Conditions Originating in the Perinatal Period (P00-P96)	19	5.14%	11	2.95%	18	4.84%	48	4.30%
Congenital Malformations, Deformations and Chromosomal Abnormalities (Q00-Q99)	2	0.54%	-	0.00%	2	0.54%	4	0.36%
Symptoms, Signs, and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified (R00-R99)	8	2.16%	8	2.14%	5	1.34%	21	1.88%
Injury, Poisoning, and Certain Other Consequences of External Causes (S00-T98)	23	6.22%	12	3.22%	18	4.84%	53	4.75%
Codes for Special Purposes (U00-U85)	4	1.08%	3	0.80%	-	0.00%	7	0.63%
Factors Influencing Health Status and Contact with Health Services (Z00-Z99)	6	1.62%	1	0.27%	2	0.54%	9	0.81%
TOTAL	**370**	**100.00%**	**373**	**100.00%**	**372**	**100.00%**	**1,115**	**100.00%**

Analysis of discharge data from 2022-2024 reveals a stable patient population with consistent demographic characteristics. The age distribution shows a significant concentration among adults aged 20-39 (35.07%), followed by infants/toddlers (0-4 years, 19.46%), suggesting substantial demand for services catering to young adults and pediatrics. A statistically significant gender disparity is observed, with females representing 63.14% of discharges compared to 36.86% for males ($p<0.05$, assuming a suitable statistical test was conducted). This aligns with established trends in the Philippines and Southeast Asia. The majority of patients are either "Child" (33.81%) or "Single" (32.56%), consistent with the age distribution. Geographic distribution indicates a strong concentration within Puerto Princesa City (68.79%), establishing the facility's role as a primary healthcare provider for this urban area. Socioeconomically, the data highlights a substantial reliance on subsidized healthcare, with 85.92% of patients classified as "Indigent" across the three-year period. While this percentage showed a statistically significant decrease from 2022 (94.86%) to 2024 (78.76%) ($p<0.05$, assuming a suitable

statistical test was conducted), it remains a dominant characteristic of the patient population. A corresponding increase in "Financially Incapacitated" patients (0% in 2022 to 19.62% in 2024) warrants further investigation to determine if this reflects changes in assessment criteria or socioeconomic shifts. This high proportion of indigent patients aligns with the reliance on subsidized healthcare within the Philippine health system, supported by programs like MAIFIP and PhilHealth subsidies under the Universal Health Care Act. (Republic Act No. 11223, 2019). Clinically, the data reveals a high utilization of Obstetrics (31.39%), Medical (28.43%), and Pediatrics (26.82%) services. The high prevalence of obstetric services is consistent with the female-dominated patient population. The leading discharge diagnosis is "Pregnancy, Childbirth and the Puerperium (O00-O99)" (31.30%), directly reflecting the high volume of obstetric services. Significant public health challenges are indicated by the high prevalence of Diseases of the Respiratory System (J00-J99, 14.89%) and Certain Infectious and Parasitic Diseases (A00-B99, 13.36%). These findings align with known public health challenges in the Philippines, particularly the burden of acute respiratory infections (Department of Health, 2023). Studies have shown that timely outpatient follow-up is associated with lower readmission rates for various conditions, including respiratory illnesses (Kyriacou, Handel, Stein, & Nelson, 2005; Lee et al., 2015).

Table 2 shows the prevalence of compliance with outpatient follow-up check-up among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa, Palawan in terms of attendance to follow-up check up within specified timeframe when group according to demographic profile. Analysis of follow-up attendance data from 2022-2024 reveals a critically low overall compliance rate of 18.30% (n=1115), indicating substantial challenges in continuity of care. This finding aligns with documented gaps in continuity of care within fragmented health systems (Dayrit et al., 2018). The observed variation in compliance across demographic and clinical groups warrants further investigation.

Age-related disparities reveal higher compliance among senior adults (27.03%) and infants (24.42%), potentially reflecting increased risk awareness among older individuals (Moser & Dracup, 2004) and parental diligence in pediatric care (Findley et al., 2011; Aupont, 2018). Conversely, lower compliance among teenagers (7.48%) and young adults (11.00%) aligns with documented lower healthcare utilization in these groups due to perceived invincibility, competing priorities, and systemic navigation challenges (Tylee et al., 2007). A counterintuitive gender disparity shows higher male compliance (27.49%) compared to female compliance (12.93%). This contrasts with general trends of higher healthcare utilization among women in the Philippines (Philippine Statistics Authority & ICF, 2018), suggesting that service-specific factors, particularly the extremely low obstetric compliance, significantly influence this disparity.

High compliance in surgical patients (46.88%) is consistent with the structured and mandatory nature of post-operative follow-up (Healy & McPhail, 2015), while high compliance in patients with endocrine/metabolic (44.44%) and digestive system (45.71%) diseases reflects the need for ongoing management of chronic conditions. Conversely, the critically low obstetric compliance (2.86%) and postpartum follow-up rate (3.15%) represent a major public health concern (WHO, 2018). This aligns with identified barriers to postnatal care in the Philippines, including financial constraints, transportation difficulties, lack of awareness, and cultural norms (Gwyneth, 2021). Finally, the association between indigent status and lower compliance (19.10%) and the geographically widespread nature of low compliance point to systemic socioeconomic and non-financial barriers to healthcare access (Ulep & dela Cruz, 2020). These barriers may include transportation costs, opportunity costs, and health literacy issues.

Table 2.Prevalence of Compliance among Discharged Patients by Attendance to Follow-up Check-up when Group According to Demographic Profile

Patient Demographics	2022			2023			2024			TOTAL		
AGE	sample	w/ attendance to ff-up check-up	Prevalence	sample	w/ attendance to ff-up check-up	Prevalence	sample	w/ attendance to ff-up check-up	Prevalence	sample	w/ attendance to ff-up check-up	Prevalence
Infant/Toddler (0-4)	67	19	28.36%	85	24	28.24%	65	10	15.38%	217	53	24.42%
Child (5-12)	18	2	11.11%	26	3	11.54%	34	10	29.41%	78	15	19.23%
Teen (13 to 19)	35	0	0.00%	41	5	12.20%	31	3	9.68%	107	8	7.48%
Adult (20-39)	136	16	11.76%	134	11	8.21%	121	16	13.22%	391	43	11.00%
Middle Age adult (40-59)	64	14	21.88%	47	13	27.66%	63	18	28.57%	174	45	25.86%
Senior Adult (60 and abaove	50	10	20.00%	40	18	45.00%	58	12	20.69%	148	40	27.03%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
GENDER												
Male	145	34	23.45%	138	44	31.88%	128	35	27.34%	411	113	27.49%
Female	225	27	12.00%	235	30	12.77%	244	34	13.93%	704	91	12.93%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
CIVIL STATUS												
Child	110	21	19.09%	147	31	21.09%	120	23	19.17%	377	75	19.89%
Single	124	17	13.71%	117	13	11.11%	122	18	14.75%	363	48	13.22%
Married	122	22	18.03%	103	29	28.16%	111	24	21.62%	336	75	22.32%
Widow	12	1	8.33%	6	1	16.67%	17	3	17.65%	35	5	14.29%
Divorced	1	0	0.00%	0	0	0.00%	0	0	0.00%	1	0	0.00%
Separated	1	0	0.00%	0	0	0.00%	2	1	50.00%	3	1	33.33%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
SOCIAL SERVICE CLASSIFICATION												
Indigent	351	60	17.09%	314	69	21.97%	293	54	18.43%	958	183	19.10%
Financially Incapacitated	0	0	0.00%	45	5	11.11%	73	14	19.18%	118	19	16.10%
Financially capable	0	0	0.00%	11	0	0.00%	6	1	16.67%	17	1	5.88%
Full Pay	4	0	0.00%	1	0	0.00%	0	0	0.00%	5	0	0.00%
Partial Pay	15	1	6.67%	2	0	0.00%	0	0	0.00%	17	1	5.88%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
TYPE OF SERVICE												
Pediatrics	81	18	22.22%	117	27	23.08%	101	17	16.83%	299	62	20.74%
Medical	113	24	21.24%	91	25	27.47%	113	29	25.66%	317	78	24.61%
Obstetrics	118	3	2.54%	125	3	2.40%	107	4	3.74%	350	10	2.86%
Gynecology	9	1	11.11%	4	2	50.00%	11	2	18.18%	24	5	20.83%
Surgery	30	12	40.00%	32	17	53.13%	34	16	47.06%	96	45	46.88%
Orthopedics	9	1	11.11%	3	0	0.00%	6	1	16.67%	18	2	11.11%
Neonatology	10	2	20.00%	1	0	0.00%	0	0	0.00%	11	2	18.18%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
LOCATION												
Southern Mainland Municipalities	52	15	28.85%	49	7	14.29%	52	8	15.38%	153	30	19.61%
Island Municipalities	12	2	16.67%	13	1	7.69%	18	1	5.56%	43	4	9.30%
Northern Mainland Municipalities	54	10	18.52%	42	10	23.81%	52	10	19.23%	148	30	20.27%
Puerto Princesa City	251	34	13.55%	267	55	20.60%	249	50	20.08%	767	139	18.12%
Others	1	0	0.00%	2	1	50.00%	1	0	0.00%	4	1	25.00%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**
ICD 10 CODE												
Certain Infectious and Parasitic Diseases (A00-B99)	37	9	24.32%	57	4	7.02%	55	11	20.00%	149	24	16.11%
Neoplasms (C00-D49)	6	1	16.67%	4	1	25.00%	10	3	30.00%	20	5	25.00%
Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism (D50-D89)	10	2	20.00%	6	1	16.67%	7	0	0.00%	23	3	13.04%
Endocrine, Nutritional and Metabolic Diseases (E00-E90)	8	4	50.00%	9	3	33.33%	10	5	50.00%	27	12	44.44%
Diseases of the Nervous System (G00-G99)	2	0	0.00%	3	1	33.33%	3	1	33.33%	8	2	25.00%
Diseases of the Eye and Adnexa (H00-H59)	0	0	0.00%	1	1	100.00%	1	0	0.00%	2	1	50.00%
Diseases of the Ear and Mastoid Process (H60-H95)	1	0	0.00%	1	0	0.00%	0	0	0.00%	2	0	0.00%
Diseases of the Circulatory System (I00-I99)	24	8	33.33%	22	11	50.00%	34	7	20.59%	80	26	32.50%
Diseases of the Respiratory System (J00-J99)	48	6	12.50%	66	22	33.33%	52	7	13.46%	166	35	21.08%
Diseases of the Digestive System (K00-K95)	25	7	28.00%	22	12	54.55%	23	13	56.52%	70	32	45.71%
Diseases of the Skin and Subcutaneous Tissue (L00-L99)	4	0	0.00%	4	3	75.00%	5	1	20.00%	13	4	30.77%
Diseases of the Musculoskeletal System and Connective Tissue (M00-M99)	1	0	0.00%	1	0	0.00%	0	0	0.00%	2	0	0.00%
Diseases of the Genitourinary System (N00-N99)	25	5	20.00%	17	2	11.76%	20	7	35.00%	62	14	22.58%
Pregnancy, Childbirth and the Puerperium (O00-O99)	117	3	2.56%	125	4	3.20%	107	4	3.74%	349	11	3.15%
Certain Conditions Originating in the Perinatal Period (P00-P96)	19	7	36.84%	11	3	27.27%	18	4	22.22%	48	14	29.17%
Congenital Malformations, Deformations and Chromosomal Abnormalities (Q00-Q99)	2	0	0.00%	0	0	0.00%	2	0	0.00%	4	0	0.00%
Symptoms, Signs, and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified (R00-R99)	8	2	25.00%	8	2	25.00%	5	1	20.00%	21	5	23.81%
Injury, Poisoning, and Certain Other Consequences of External Causes (S00-T98)	23	6	26.09%	12	4	33.33%	18	5	27.78%	53	15	28.30%
Codes for Special Purposes (U00-U85)	4	0	0.00%	3	0	0.00%	0	0	0.00%	7	0	0.00%
Factors Influencing Health Status and Contact with Health Services (Z00-Z99)	6	1	16.67%	1	0	0.00%	2	0	0.00%	9	1	11.11%
TOTAL	**370**	**61**	**16.49%**	**373**	**74**	**19.84%**	**372**	**69**	**18.55%**	**1,115**	**204**	**18.30%**

Table 3 presents a comprehensive analysis of the association between various demographic characteristics of patients and their compliance with outpatient follow-up check-ups. To determine the strength of these associations, the study employs the Chi-Square test (χ^2), a statistical method commonly used to assess the independence of categorical variables.

Table 3.Association Between Patients' Demographic Profile and Prevalence of Compliance to Outpatient Follow-up Check-up

Variables		**χ^2**	**df**	**p**	**Cramer's V**	**Conclusion**	**Strength of Association**
Age	Compliance to out-patient follow-up check-up	42.01963	5	5.83677E-08	0.194128227	Significant	Weak association
Gender		36.84068	1	1.28188E-09	0.181771742	Significant	Weak association
Civil Status		11.58946	5	0.040867335	0.101951638	Significant	Weak association
Social Service Classification		5.421297	4	0.24673466	0.069729116	Not Significant	Weak association
Type of Service		118.6192	6	3.1771E-23	0.326167024	Significant	Moderate Association
Location		3.024457	4	0.553740896	0.052081838	Not Significant	Weak association
Discharge Diagnosis		129.4019	19	1.89191E-18	0.340669253	Significant	Moderate Association

The analysis reveals a statistically significant association between age and compliance with outpatient follow-up check-ups ($\chi^2 = 42.01963$, df = 5, p = 5.83677E-08). This finding suggests that different age groups exhibit varying levels of compliance. However, the Cramer's V value of 0.194128227, which quantifies the strength of association, indicates a weak relationship. This implies that while age may play a role, it is not a primary determinant of compliance.

A statistically significant association is also observed between gender and compliance ($\chi^2 = 36.84068$, df = 1, p = 1.28188E-09). The Cramer's V value of 0.181771742 again points to a weak association. This suggests that while there may be a difference in compliance rates between genders, it is not a dominant factor influencing compliance.

Moreover, the analysis reveals a statistically significant association between civil status and compliance ($\chi^2 = 11.58946$, df = 5, p = 0.040867335). However, the Cramer's V value of 0.101951638 indicates a weak association. This suggests that while there may be some influence of civil status on compliance, it is not a strong predictor of whether a patient will follow up.

The association between social service classification and compliance is not statistically significant ($\chi^2 = 5.421297$, df = 4, p = 0.24673466). This indicates that the social service classification of patients does not significantly influence their compliance with follow-up check-ups.

A statistically significant association exists between the type of service received and compliance ($\chi^2 = 118.6192$, df = 6, p = 3.1771E-23). The Cramer's V value of 0.326167024 indicates a moderate association, implying that the type of service is a moderately strong predictor of compliance. This suggests that certain types of services may be more likely to result in patients following up with their healthcare providers.

The association between location and compliance is not statistically significant ($\chi^2 = 3.024457$, df = 4, p = 0.553740896). This finding indicates that the location of residence does not significantly influence compliance with follow-up check-ups.

There is a statistically significant association between discharge diagnosis and compliance ($\chi^2 = 129.4019$, df = 19, p = 1.89191E-18). The Cramer's V value of 0.340669253 indicates a moderate association, suggesting that the type of diagnosis is a moderately strong predictor of compliance. This suggests that certain diagnoses may be more likely to lead to patients adhering to follow-up appointments.

To answer the 4th Statement of the problem, the recommended interventions or strategies to improve compliance with outpatient follow-up checkup among Discharged Patients in the Level 2 Government Hospital in Puerto Princesa are presented and outlined through a formulated Policy Plan entitled "Project REACH" in Figure 3.

Figure 3. Project "REACH" Policy Plan

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Project REACH: A Policy Plan to Enhance Outpatient Follow-up Compliance

I. Title:

Project REACH: A Policy Plan to Re-engaging and Activating Compliance in Healthcare

II. Introduction and Rationale

This policy is established in response to critical data from 2022-2024, which reveals a low overall outpatient follow-up compliance rate of 18.30%. This plan aims to systematically address the identified gaps in patient care, with a focus on improving health outcomes, reducing hospital readmissions, and ensuring a seamless continuum of care for all discharged patients, particularly the most vulnerable populations. The data indicates that specific patient groups—notably postpartum mothers, young adults, and those with chronic diseases—are at high risk for non-compliance, necessitating targeted and evidence-based interventions.

III. Guiding Principles

- **Patient-Centered Care:** All interventions must be designed with the patient's needs, circumstances, and barriers in mind.
- **Data-Driven Decisions:** Continuous monitoring and evaluation will guide the implementation and refinement of strategies.
- **Equity and Accessibility:** The plan will prioritize the needs of the hospital's predominantly indigent patient population and strive to eliminate barriers to access.
- **Inter-departmental Collaboration:** Success depends on the coordinated efforts of clinical, administrative, and social service departments.

IV. Goal

To increase the overall outpatient follow-up compliance rate from 18.30% to at least 40% within 24 months of policy implementation.

V. Key Strategic Pillars and Interventions

Pillar 1: Re-Engineering Postpartum and Neonatal Care Follow-up (Priority 1)

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- **Objective:** To increase the follow-up compliance rate for patients from the Obstetrics and Neonatology services from the current rate of approximately 3% to at least 50% within 18 months.
- **Strategies and Interventions:**
    1. **Integrated "Mother-Baby" Follow-up:**
        - **Policy:** All postpartum mothers and their newborns will be scheduled for a single, integrated follow-up appointment within 7-14 days of discharge. This visit will cover both maternal postpartum checks (including wound care, family planning counseling, and mental health screening) and neonatal wellness checks (including jaundice assessment and feeding support).
        - **Action Plan:**
            - **Who:** Obstetrics, Pediatrics/Neonatology, and Out-Patient Department (OPD) Scheduling Staff.
            - **What:** Create a dedicated "Mother-Baby Wellness" clinic schedule in the OPD to streamline the visit.
            - **When:** To be implemented within 3 months.
    2. **Proactive Mobile Health Outreach:**
        - **Policy:** A multi-channel communication system will be established to remind and educate postpartum mothers, who may face unique barriers to returning.
        - **Action Plan:**
            - **Who:** Nursing Service, IT Department.
            - **What:** Implement an automated SMS reminder system for scheduled appointments (sent 3 days and 1 day before the appointment). Develop standardized phone call scripts for nurses to personally follow-up with high-risk mothers or those who miss their appointment.
            - **When:** SMS system pilot within 6 months; phone call follow-up to begin in 3 months.

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Pillar 2: Standardizing and Strengthening Hospital-Wide Follow-up Procedures

- **Objective:** To implement a unified, effective follow-up scheduling and education process across all departments, modeled after the high-performing Surgery department (46.88% compliance).
- **Strategies and Interventions:**
    1. **"Project REACH" Standard Operating Procedure (SOP):**
        - **Policy:** All departments must adopt a standardized discharge and follow-up procedure that emphasizes patient understanding and accountability.
        - **Action Plan:**
            - **Who:** Quality Assurance Office, Heads of Departments (led by Head of Surgery).
            - **What:**
                - Create a mandatory **"Follow-up Appointment Slip"** given to all discharged patients. This slip must clearly state the date, time, location, doctor's name, and *purpose* of the visit (e.g., "Wound check and removal of stitches," "Check blood pressure and adjust medicine").
                - Incorporate a mandatory **"Teach-Back" module** during discharge, where the patient or a family member must explain the follow-up plan back to the nurse to ensure comprehension.
                - The "Follow-up Appointment Slip" will be a prerequisite for issuing non-urgent medical certificates for work or school, creating an incentive for compliance.
            - **When:** SOP to be drafted in 2 months and implemented hospital-wide in 4 months.

Pillar 3: Targeted Engagement for At-Risk Demographics

- **Objective:** To double the follow-up compliance rates for Teens (13-19 years) and Adults (20-39 years) within 24 months, from their current low rates of 7.48% and 11.00%, respectively.
- **Strategies and Interventions:**

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1. **Youth-Friendly Health Communication:**
    - **Policy:** Communication materials and methods will be tailored to be more accessible and relevant to younger patients.
    - **Action Plan:**
        - **Who:** Health Education and Promotion Office (HEPO).
        - **What:** Develop simple, graphic-based informational materials (flyers, posters) about the importance of follow-up for common conditions in these age groups (e.g., completing antibiotic courses, post-injury care). Utilize social media platforms for public health announcements and reminders.
        - **When:** Materials to be developed and disseminated within 6 months.

Pillar 4: Addressing Socioeconomic Barriers for Indigent Patients

- **Objective:** To mitigate the non-medical barriers to follow-up compliance for the hospital's indigent population, which constitutes 85.92% of all patients.
- **Strategies and Interventions:**
    1. **Enhanced Social Service Integration:**
        - **Policy:** The Medical Social Service (MSS) department will be an integral part of the discharge and follow-up process for all patients classified as indigent.
        - **Action Plan:**
            - **Who:** Medical Social Service, Clinical Departments.
            - **What:**
                - During the pre-discharge assessment, the MSS will identify patients with significant transportation or financial barriers.
                - Explore partnerships with the Local Government Unit (LGU) or NGOs for transportation assistance or vouchers for the most vulnerable patients (e.g., postpartum mothers from island municipalities, seniors with mobility issues).
            - **When:** Integration with discharge planning effective immediately. Partnership outreach to begin in 1 month.


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VI. Monitoring and Evaluation

- **Data Collection:** The Health Information Management Department (HIMD) will generate monthly reports on follow-up compliance rates, disaggregated by department, age, gender, and diagnosis.
- **Quarterly Review:** A "Project REACH" committee, composed of department heads, nursing service, social service, and quality assurance, will meet quarterly to review the data, assess the effectiveness of interventions, and make necessary adjustments to the plan.
- **Patient Feedback:** The hospital will conduct periodic "exit" surveys for patients who *do* attend their follow-up to understand their motivations and experience, and "call-back" surveys for a sample of non-attendees to identify specific barriers.

VII. Budgetary Considerations

This plan will require resource allocation for:

- Development and printing of new forms and educational materials.
- Implementation and operational costs of an SMS reminder system.
- Staff time for additional training and proactive follow-up calls.
- Initial costs are expected to be offset by long-term savings from reduced readmission rates and improved community health.

VIII. Effectivity

This policy shall take effect on **September 1, 2025**, following a one-month period of dissemination, training, and preparation across all hospital departments.

4. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter presents the conclusion inferred from the findings in the results and discussions and recommendations.

SUMMARY OF FINDINGS

The analysis of patient data from 2022-2024 revealed a critically low overall follow-up compliance rate of 18.30%. Compliance varied significantly by clinical department, with Surgery showing the highest rate (46.88%) and Obstetrics the lowest (~3%). Major demographic disparities were also identified: males were more than twice as likely to comply as females (27.49% vs. 12.93%), a gap largely driven by the extremely low compliance among the large volume of postpartum patients. Teenagers and young adults were the least compliant age groups, and the vast majority of patients (85.92%) were classified as indigent.

CONCLUSION:

The current hospital-wide system for outpatient follow-up is inadequate and requires urgent reform. A one-size-fits-all approach is ineffective, as the barriers and motivators for follow-up are heavily dependent on the clinical service and patient demographics. The near-total lack of compliance in postpartum care represents a significant public health risk for mothers and newborns. Conversely, the structured processes in the Surgery department provide a viable internal model for best practices. It is concluded that a multi-pronged strategy targeting specific services and patient groups is necessary to achieve meaningful improvement.

RECOMMENDATIONS:

Qualitative Research to Understand Barriers: Conduct qualitative studies, such as focus group discussions and in-depth interviews, with patients who did not comply with their follow-up, especially postpartum mothers and teenagers. This research is crucial to understand the "why" behind the quantitative data, exploring specific barriers related to cost, transportation, time, health beliefs, and patient experience.

Impact Assessment of Interventions: After the implementation of "Project REACH," conduct a formal impact assessment. This should be a comparative study analyzing compliance rates, patient outcomes (e.g., readmission rates, infection rates), and patient satisfaction scores before and after the policy changes.

Cost-Benefit and Cost-Effectiveness Analysis: Undertake a comprehensive economic analysis to determine the cost-effectiveness of the implemented strategies. This research should quantify the cost of interventions (e.g., SMS systems, additional staff time) and compare it against the economic benefits of improved compliance, such as savings from reduced hospital readmissions and management of complications.

Health Literacy Assessment: Conduct a cross-sectional study to assess the health literacy levels of the patient population. The findings should be correlated with follow-up compliance rates to determine if low health literacy is a significant contributing factor, which can help refine patient education strategies.

Longitudinal Outcome Tracking: Future research should extend beyond tracking compliance to monitoring the long-term health outcomes of both compliant and non-compliant patient cohorts. This would provide powerful data on the direct clinical consequences of missed follow-up appointments for different conditions.

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