



# Analysis of The Implementation System of The Health Service Program for People Living With HIV at The Bandar Khalipah Primary Health Center

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<p><b>Track Record Article</b></p> <p>Accepted: 28 November 2024 Revised: 17 December 2024 Published: 28 December 2024</p> <p><b>How to cite :</b> Ritonga, M. N., &amp; Gurning, F. P. (2024). Analysis of The Implementation System of The Health Service Program for People Living With HIV at The Bandar Khalipah Primary Health Center. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal</i>, 6(2), 1519–1533.</p>	<p style="text-align: center;"><b>Abstract</b></p> <p><i>The global HIV/AIDS health crisis continues to pose significant challenges, particularly for people of productive age. In Indonesia, the disease imposes a significant social and economic burden, with high HIV prevalence exacerbating the strain on public health and socio-economic systems. At the Bandar Khalipah Health Centre, the high number of HIV cases underscores the inadequacy of existing prevention efforts and health services. This study analyses the delivery system of the HIV health services programme at the Bandar Khalipah Health Centre using a qualitative case study approach. Data were collected through in-depth interviews, observations and document analysis with key informants including the health centre head, programme manager and clinical staff. Data analysis was conducted using ATLAS.ti version 9 software, which allowed for the systematic identification and categorisation of themes. The study identified key challenges in three primary programme components: input, process and output. In terms of input, critical human resource constraints and the lack of routine training for health workers were highlighted. In terms of output, while patient satisfaction with services was generally high, adherence to treatment was particularly low due to social stigma and inadequate community outreach. The findings highlight the importance of strengthening all components of the HIV healthcare programme at Bandar Khalipah Health Centre in order to improve service quality and patient outcomes. This includes building the capacity of health staff, promoting community engagement, and addressing social stigma. These findings have important implications for public health policies and strategies aimed at optimising local HIV services and reducing health inequalities.</i></p> <p><b>Keyword:</b> <i>System analysis, Program Implementation, Healthcare Services, HIV Infected Individuals, VCT</i></p>
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## INTRODUCTION

*Human Immunodeficiency Virus (HIV)* is an infection that attacks the immune system, thereby weakening the body's ability to combat infections. When left untreated, individuals infected with HIV may develop Acquired Immunodeficiency Syndrome (AIDS), which severely compromises immune function and increases susceptibility to opportunistic infections. HIV/AIDS remains a major global public health issue, having claimed over 40.4 million lives according to the World Health Organization (WHO). Despite considerable international efforts, HIV transmission continues in many countries, and some regions have even reported an increase in new infections, reversing previous declines.

In Indonesia, the challenges of preventing HIV transmission, particularly among vulnerable groups such as women, children, and adolescents, remain significant. Data from

2018 to 2022 indicate that the majority of HIV cases occur in the 25-29 age group, with an estimated 30,000 new cases annually. The 2022 HIV/AIDS report indicates that Indonesia is falling short of the 95-95-95 targets established for ending the HIV epidemic by 2030. These targets stipulate that 95% of HIV-positive individuals should know their status, 95% of those diagnosed should receive treatment, and 95% of those treated should achieve viral suppression. However, as of 2022, the data indicates that only 76% of individuals with HIV are aware of their status, 41% receive treatment, and just 16% achieve viral suppression (Ministry of Health of the Republic of Indonesia, 2022).

This phenomenon is indicative of a broader global trend, wherein regions such as Eastern Europe, Central Asia, and Latin America have witnessed a surge in new infections. In Indonesia, HIV/AIDS has been documented in 503 out of 514 regencies/cities, with an escalating number of cases on an annual basis (Kemenkes, 2022). North Sumatra, a province with one of the highest HIV/AIDS prevalences, has witnessed a substantial surge in new cases, with 2,208 cases reported in 2023 alone, marking a 69% increase compared to previous years. Deli Serdang regency, home to the Bandar Khalipah Health Center, has also experienced a persistent rise in cases, underscoring the pressing need for effective HIV prevention strategies (Sumatera, 2023).

The Bandar Khalipah Health Center, situated in the Percut Sei Tuan District, caters to a substantial and expanding population deemed to be at risk of HIV infection. However, the centre's service coverage for individuals in this high-risk category falls short of the stipulated targets, with a total of 3,653 individuals receiving assistance, representing a mere fraction of the targeted 5,615 individuals. This discrepancy underscores the necessity for more efficacious outreach and prevention strategies. Currently, 70 HIV cases have been reported at the centre, with new cases continuing to emerge each month, further emphasising the need for strengthened prevention and treatment measures (SPM, 2023). Similar challenges are observed in other regions, such as Bogor City, where a limited number of HIV care units and issues like high rates of loss to follow-up, treatment non-adherence, and stigma further hinder progress. Despite these challenges, the integration of HIV-related services into the health service facility information system remains incomplete, impacting effective program monitoring (Arabia et al., 2023).

(Listiyani, 2024) which highlighted the challenges associated with the implementation of HIV screening in high-risk populations in Pandeglang Regency. The identified barriers include policy deficiencies, insufficient human resources, budgetary limitations, logistical obstacles, and issues with data management. The lack of specific regulations governing HIV

programs in the region emphasizes the need for comprehensive policies to ensure that the program meets established health service standards. This finding suggests that the provision of services for individuals affected by HIV/AIDS should be governed by a distinct service system, distinct from the one utilised for other diseases (Eka Syavitri et al., 2023).

Based on the above background, the researchers are interested in conducting further research on the analysis of the implementation system of the healthcare service program for individuals living with HIV at the Bandar Khalipah Primary Health Center. This study aims to evaluate the current implementation of the HIV service delivery program, identify key challenges. By focusing on elements such as inputs, processes, and outputs, the study seeks to provide valuable insights into strategies for strengthening the program. The findings are expected to have significant implications for enhancing the quality of HIV services, informing public health policy, and addressing the gaps that hinder the effectiveness of HIV-related healthcare services.

## **METHODS**

This study utilizes a qualitative case study design, chosen to provide a comprehensive understanding of the implementation of HIV healthcare service programs for People Living with HIV (PLHIV) at the Bandar Khalipah Health Center. A case study is highly effective for exploring complex phenomena, such as the interactions between program implementers, patients, and policies that influence service outcomes (Creswell, 2014).

The research was conducted at the Bandar Khalipah Health Center in March 2024. Data collection was carried out through in-depth interviews, observations, and document analysis. A total of eight key informants participated in the study, including the head of the health center, the HIV/AIDS program manager, clinical staff, and five PLHIV who had visited the health center. The collected data were analyzed using the interactive model of analysis proposed by Miles and Huberman (Sugiyono, 2020) This approach allows for systematic organization, categorization, and identification of emerging themes from the data. Additionally, data analysis was supported by the use of ATLAS.ti software, which facilitated the coding process and aided in identifying patterns within the qualitative data.

## RESULTS

**Table 1. Characteristics of Deep Interview Informants**

No.	Informant Code	Position	Last Education Level
1	Inf-1	Head of Bandar Khalifah Health Center	Master's degree
2	Inf-2	Program Manager	Bachelor's degree
3	Inf-3	Analyst Staff	Bachelor's degree
4	Inf-4	PLHIV 1	Senior high school
5	Inf-5	PLHIV 2	Junior high school
6	Inf-6	PLHIV 3	Junior high school
7	Inf-7	PLHIV 4	Senior high school
8	Inf-8	PLHIV 5	Senior high school

Based on the table above, it is noted that the study involved a total of 8 informants. Two informants have a junior high school education, three informants have a senior high school education, two informants hold a Bachelor's degree, and one informant has a Master's degree. Informant 1 is the head of the health center, Informant 2 is the program manager, Informant 3 is an analyst staff member, and the remaining 5 informants are people living with HIV (PLHIV).

Based on the results, it can be concluded that both patients and healthcare providers involved in the Voluntary Counseling and Testing (VCT) services at the health center possess adequate educational levels. This is a critical supporting factor for the successful implementation of the service, as higher levels of education can improve understanding, facilitate the acceptance of health-related information, and enhance the overall quality of healthcare services provided.

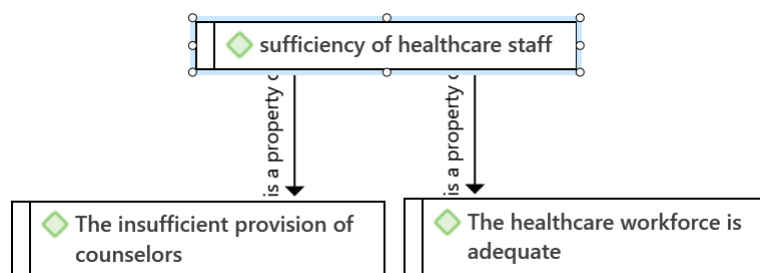
### **Analysis Results Based on ATLAS.ti**

This study explores the implementation of healthcare programs for People Living with HIV (PLHIV) at the Bandar Khalifah Health Center. Based on data analysis using ATLAS.ti version 9.



### a. Human Resources:

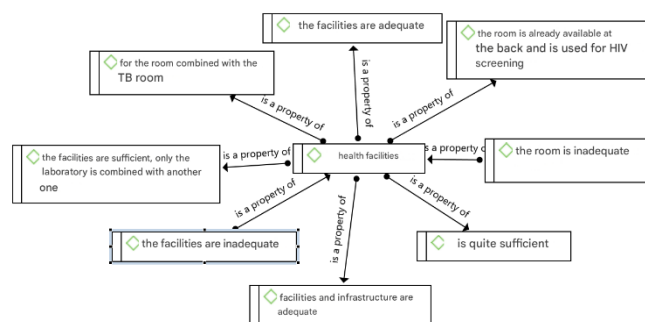
**Figure 3. The Availability of Human Resources at the Health Center (Atlas.ti Version)**



Based on the analysis above, human resources for the implementation of the healthcare program at the Bandar Khalipah Health Center are deemed adequate. However, the HIV/AIDS program manager at the health center identified a particular challenge "The issue we encounter is that the counselor is female, while the majority of our patients are men who have sex with men (MSM). As a result, when a patient arrives, they tend to prefer being attended by a male counselor. If approached by a female counselor, they often decline, which presents a barrier to effective service delivery."

### b. Infrastructure and Facilities:

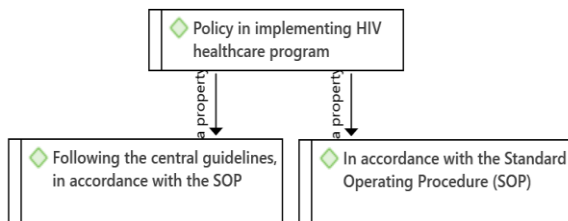
**Figure 4. Results of the Infrastructure and Facilities Analysis at the Health Center (Atlas.ti Version)**



The facilities at the Bandar Khalipah Health Center for the HIV/AIDS program align with the established standards. According to in-depth interviews and observations, it was found that the health center houses an HIV-specific room, which is integrated with a tuberculosis (TB) treatment room and a laboratory. Additionally, the center is equipped with essential support facilities, including medications, reagents, single-use medical supplies, condoms, and stationery, all of which are available to support the delivery of care.

**c. Policies:**

**Figure 5. Results of the Policy Scheme Applicable to Health Centers (Atlas.ti Version)**

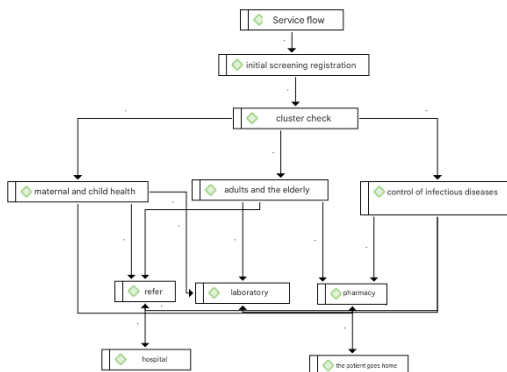


Based on the data analyzed using ATLAS.ti, the HIV service policies at the health center adhere to the national guidelines established by the Ministry of Health, ensuring the alignment of HIV/AIDS management practices with national standards.

**2. Process**

**a. Service Flow:**

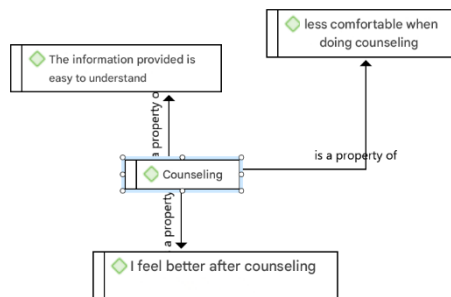
**Figure 6. Results of Service Workflow Scheme (Atlas.ti Version)**



The data analysis reveals that the administrative process and registration for HIV patients, particularly for new patients, are time-consuming and often result in patient discomfort. Inefficiencies in the procedure necessitate extended waiting times for patients to complete administrative steps before accessing the services they require.

**b. Counseling:**

**Figure 7. Results of the Counseling Scheme (Atlas.ti Version)**

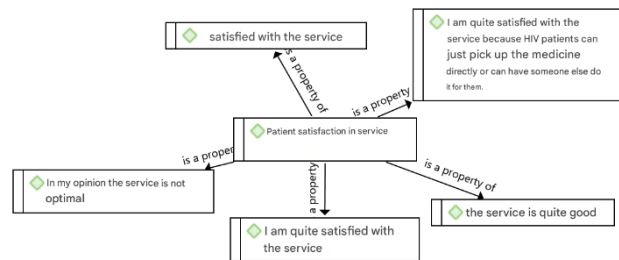


Based on the analysis above, counseling is conducted effectively and is generally well-received by patients. However, some patients report feeling uncomfortable during the counseling sessions. As stated by one PLHIV informant, "I felt uncomfortable when I first started, especially having to discuss many personal matters." (Inf 5)

**3. Output**

**a. Patient Satisfaction:**

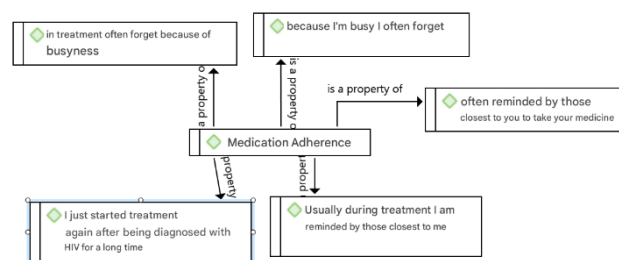
**Figure 8. The Analysis of Patient Satisfaction Framework (Atlas.ti Version)**



Patient satisfaction serves as a critical indicator of the success of healthcare services. The findings of this study reveal that the majority of patients expressed satisfaction with the approach of the healthcare staff; however, some patients noted that the services provided have not yet reached optimal levels.

**b. Treatment Adherence:**

**Figure 9. The Framework of Treatment Adherence (Atlas.ti Version)**





Based on the analysis above, according to the statement from the PLHIV informant: "It is usually due to my daily activities. So, sometimes I forget to take the medication on time." (Inf 4). Another informant stated, " I experience anxiety regarding my HIV status, and the social stigma associated with it exacerbates my sense of pressure. The requirement to take medication daily sometimes makes it feel as though my life is centered around the medication, which can be exhausting. Furthermore, the potential side effects occasionally cause hesitation in taking the medication. While I understand that ARV treatment is essential for maintaining my health, the uncertainty about its side effects sometimes undermines my motivation" (Inf 6).

### **c. Program Impact:**

The HIV/AIDS service program at the Bandar Khalipah Health Center has had a notable, though limited, impact on addressing HIV-related healthcare needs. According to the data from the health center, the HIV healthcare service program in 2023 resulted in a minimal decrease in HIV prevalence. Specifically, only 64.37% of the community had undergone HIV testing, while 56.58% of people living with HIV (PLHIV) who visited the center received health evaluations, and 51% of PLHIV were provided with antiretroviral (ARV) treatment.

These findings suggest that the HIV healthcare service is not yet fully optimized, as several key performance indicators remain below the desired targets. For example, the proportion of PLHIV receiving ARV treatment and the coverage of HIV testing within the community have not achieved their maximum potential. This highlights the need for further improvements in the program to enhance its effectiveness.

In light of these findings, it is essential to implement strategies aimed at increasing the success of the program, particularly in reducing HIV cases among both PLHIV and the general population. The limited reduction in HIV prevalence underscores the necessity for a thorough evaluation and strengthening of the program's framework. This is in line with the recommendations by the World Health Organization (WHO, 2023), which advocates for greater integration of HIV/AIDS services into primary healthcare settings to improve service delivery, accessibility, and overall program outcomes.

## **DISCUSSION**

### **Human Resources and Staffing**

The analysis of human resources in the HIV healthcare service at Bandar Khalipah Health Center reveals a critical shortage of specialized counselors. This shortage has led the program manager to take on counseling duties, resulting in an imbalance in workload and staff

overload, which can negatively affect service quality and lead to burnout (Khasanah & Subowo, 2018). Adequate staffing is crucial in HIV care, particularly for counseling, treatment adherence, and patient monitoring. Insufficient staffing often results in service delays and lower care quality, ultimately impacting health outcomes for people living with HIV (PLHIV) (Hubaybah et al., 2021). Therefore, recruiting more counselors and healthcare workers is essential to prevent burnout and improve service quality.

Community-based interventions, such as involving local counselors, have been shown to enhance patient acceptance, improve treatment adherence, and reduce stigma (UNAIDS, 2019). Additionally, investing in healthcare staff training improves communication skills, patient satisfaction, and HIV treatment adherence (Suryadarma et al., 2023). Studies also indicate that investing in healthcare staff capacity results in better HIV treatment outcomes and higher viral suppression rates (Mahy et al., 2017). Thus, enhancing HR quality through recruitment and training can significantly improve HIV service quality, patient outcomes, and reduce transmission rates.

### **Infrastructure and Facility Support**

Adequate healthcare infrastructure is essential for the quality and accessibility of HIV services. (Marlinda et al., 2020) found that inadequate infrastructure limits the capacity of health centre, particularly in resource-constrained areas, leading to delays in services and higher non-adherence among HIV patients. (Marthin et al., 2018) recommend expanding physical facilities and integrating telemedicine to alleviate congestion and improve access, especially in remote areas. Improved infrastructure and telemedicine adoption can enhance service efficiency and health outcomes. (Marlinda et al., 2020) showed that better facilities and space management lead to faster, more focused care, boosting adherence and reducing follow-up loss. Supporting this, (UNAIDS, 2019) emphasize that infrastructure improvements enhance patient satisfaction and care quality, while reducing stigma and encouraging more patients to seek HIV care. Thus, investing in healthcare infrastructure, telemedicine, and community-based approaches can significantly improve HIV service quality and patient outcomes in resource-limited settings.

### **Policy and Local Implementation**

Improving the effectiveness of HIV policies at the local level necessitates the development of clear and actionable strategies that are both aligned with national policies and adaptable to the specific needs of the local context. Critical to the effective implementation of such strategies are adequate funding, the strengthening of local health services, and fostering collaboration among governments, non-governmental organizations (NGOs), and the private

sector. It is essential that local governments are empowered to allocate resources effectively and to integrate HIV strategies into long-term development plans, thereby ensuring both sustainability and proper coordination of HIV-related initiatives. Research underscores the importance of aligning local and national policies. (Suryadarma et al., 2023) emphasize that discrepancies between national policies and local budget allocations can significantly impede the success of HIV programs, thereby highlighting the necessity for sufficient local funding to support these initiatives.

Furthermore, (Ratnawati et al., 2024) advocates for the continuous training of healthcare workers to ensure that HIV care remains consistent with national guidelines and best practices. In addition, (Putri, 2023) stresses the vital role of NGOs in facilitating HIV education and stigma reduction, leveraging their established rapport with communities. Similarly, (Sudarta, 2022) highlights the importance of involving the private sector, particularly health service providers, in expanding access to HIV services, particularly in underserved areas. The integration of HIV policies into regional health development plans, as proposed by (Fauzi & Sri Rahayu, 2023), is pivotal for securing the necessary funding and ensuring the long-term coordination of HIV programs. Moreover, (Pratiwi et al., 2024) recommend the establishment of comprehensive monitoring and evaluation mechanisms to assess the effectiveness of HIV programs and guide necessary adjustments.

Community-based initiatives, including campaigns involving local leaders and the media, are essential tools for reducing stigma and transforming public attitudes towards HIV. Policies that are flexible and tailored to regional contexts, as argued by (Suryadarma et al., 2023) allow local governments to adapt strategies to meet the unique challenges faced by their communities, thus ensuring a more effective and responsive approach to HIV care and prevention.

### **Counseling and Education**

Counseling and education are fundamental components of HIV care. Research indicates that Voluntary Counseling and Testing (VCT) and Provider-Initiated Counseling and Testing (PICT) programs at healthcare facilities play a pivotal role in assisting patients in understanding their HIV status. However, the reliance on posters and banners as primary educational tools restricts patient engagement and limits the depth of comprehension. As (Hasibuan et al., 2024) assert, the integration of diverse educational materials such as pamphlets, videos, and digital tools—substantially enhances patient understanding. Expanding the range of these materials and incorporating digital platforms would likely optimize the effectiveness of counseling. Moreover, the inclusion of peer support groups and community-based initiatives is essential

for reinforcing prevention messages, mitigating stigma, and creating a more supportive environment. (Kartini et al., 2023) emphasize the significant role of peer support in reducing feelings of isolation and improving treatment adherence, making it a critical element in the holistic care of individuals living with HIV.

### **Patient Satisfaction and Treatment Adherence**

Despite the fact that a considerable number of patients have expressed satisfaction with the approach adopted by healthcare providers, significant challenges to adherence to antiretroviral (ARV) treatment persist, notably social stigma and a lack of understanding regarding the importance of consistent medication (Collins et al., 2018). The necessity to enhance patient education on the benefits of ARVs and to address stigma through comprehensive awareness campaigns is emphasised by the aforementioned authors. Mobile health technologies, such as mobile applications, offer a solution to these challenges by enabling real-time data collection on treatment adherence and the health status of patients (Aisyah, 2023).

These applications also facilitate continuous monitoring, provide access to educational resources such as videos and infographics, and foster improved communication between patients and healthcare providers. Kermode et al. (2020) highlighted that mobile applications notably enhanced the effectiveness of communication and increased patient engagement. The utilisation of mobile applications to broaden the dissemination of health information, schedule counselling sessions, and support ongoing care is especially pertinent to improving patient engagement and adherence to treatment. The integration of customized multimedia materials, including videos and interactive digital tools, proves to be more effective in conveying essential information and improving both patient comprehension and adherence to ARV treatment.

### **Program Impact**

The HIV service program at the Bandar Khalipah Health Center has demonstrated a noticeable impact; however, several areas require significant improvement. The community-wide coverage of HIV testing remains relatively low, with only 64.37% of the population having undergone testing. Additionally, the proportion of People Living with HIV (PLHIV) receiving ARV treatment falls short of the expected target. According to (Aisyah Aminy Anwar, 2023), improving testing rates and increasing the proportion of patients on ARV therapy are key indicators of a successful HIV care program.

To optimize the program, it is crucial to enhance outreach efforts, raise community awareness, and reduce stigma surrounding HIV. (Fardiansyah, 2022) recommend the use of mobile health technologies as a strategy to promote HIV testing and encourage treatment

adherence. Furthermore, improving supply chain management to ensure a consistent and uninterrupted supply of ARV medications and other essential supplies is critical in preventing treatment disruptions and ensuring the continuity of care.

## CONCLUSIONS

Based on the findings of this study, several significant challenges were identified within the HIV service program at the Bandar Khalipah Health Center, including suboptimal HIV testing coverage, insufficient adherence to ARV treatment, and barriers related to human resources and stigma. The program has not yet achieved the anticipated targets, particularly in enhancing the reach of HIV testing and increasing the proportion of patients receiving ARV treatment. Consequently, the findings of this study provide a valuable foundation for healthcare practitioners to formulate strategies that focus on raising community awareness, reinforcing HIV education, and addressing the stigma that hinders access to care. Future research should prioritize the implementation of longitudinal studies to evaluate the long-term effects of the changes introduced in the HIV service program. Furthermore, the integration of quantitative research methods is essential to complement the existing qualitative data, thereby offering a more holistic and comprehensive evaluation of the program's effectiveness and sustainability over time.

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