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Hospital-based rehabilitation services for drug disorders: Challenges and policy implications

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Abstract

Background: Substance use disorder (SUD) imposes a complex, multidimensional burden that necessitates comprehensive and integrated rehabilitation services. Hospitals play a pivotal role in the delivery of rehabilitation; however, implementation remains constrained by limited specialized human resources, inequitable access to services, fragmented intersectoral policy coordination, and persistent stigma toward individuals with SUD.

Purpose: To examine hospital-based rehabilitation for substance use disorders, with particular attention to service availability and conditions, program effectiveness, and the roles of key stakeholders.

Method: A qualitative case study was conducted between April and June 2025 at Prof. Ildrem Psychiatric Hospital, selected primary health centers, and related institutions, including the Provincial National Narcotics Agency of North Sumatra, the Health Office, National and Political Unity Agency, Regional Research and Innovation Agency, the police, and community-based organizations. Fifteen key informants and ten triangulation informants were purposively recruited. Data were collected through in-depth interviews, non-participant observations, and document review, and were analyzed thematically using NVivo 12 through open, axial, and selective coding processes.

Results: Seven major themes were identified: workforce capacity and competence, access to rehabilitation services, social vulnerability, program effectiveness, post-rehabilitation and community reintegration, policy processes, and stigma. Key barriers included shortages of addiction-trained professionals, complex and bureaucratic referral mechanisms, high non-medical costs, weak cross-sector collaboration, and insufficient aftercare services and community support systems.

Conclusion: The findings indicate that hospital-based rehabilitation alone is inadequate to address the complex needs of individuals with substance use disorders. An integrated rehabilitation model that combines medical treatment, psychosocial interventions, community-based support, and coherent policy frameworks is essential. Enhancing professional capacity, streamlining referral pathways, expanding community-based aftercare, and implementing systematic stigma-reduction initiatives are critical to improving rehabilitation outcomes and promoting sustainable recovery.

Keywords: Aftercare; Drug Rehabilitation; Hospital; Integrated Services; Stigma.

INTRODUCTION

Abuse of narcotics, psychotropics, and other addictive substances has become a global public health problem that has a multidimensional impact, not only on individual health but also on social, economic, and national security aspects (Corrigan, Schomerus, Shuman, Kraus, Perlick, Harnish, & Smelson, 2017). Recent data show that globally, there are more than 36 million people with substance use disorders, with an increasing trend especially in developing countries (David, Kremer, Kloft, & Goseberg, 2025). In Indonesia, the prevalence of drug abuse is estimated to reach more than 3.3 million people by 2024, but only a small percentage receive medical rehabilitation services. This condition indicates a significant disparity between the demand for services and the availability of facilities (National Research and Innovation Agency of Indonesia, 2025). Previous research confirms that hospitals play a central role in providing rehabilitation services, as they can integrate medical, psychosocial, and psychiatric aspects (Goh, Jeon, Park, & Ok, 2023). However, hospital-based rehabilitation services in Indonesia still face serious challenges. The limitation of human resources, both in terms of quantity and quality, is one of the primary obstacles (Ringoir, 2021). Studies in various cities show that the number of addiction doctors, clinical psychologists, and rehabilitation counselors is still far from the standard of needs (Garcia-Cerde, Valente, & Sanchez, 2024). In addition, access to services is still a problem, especially in suburban areas and poor communities (Ghandour, El Sayed, & Martins, 2022). Barriers to access are not only related to distance and cost, but also social stigma that makes patients reluctant to seek help. Emphasizing that stigma against drug users is one of the most significant barrier factors in the success of rehabilitation.

Social vulnerability further exacerbates the situation. Adolescents and community groups living in drug-prone environments are more at risk of relapse even though they have undergone rehabilitation (Ismail & Bangun, 2025). Longitudinal research in Latin America shows that family and community support is an important protective factor in rehabilitation success. Conversely, the absence of social support triples the likelihood of patients

returning to drug use. This is relevant to the Indonesian context, where many patients do not receive adequate support after being discharged from the hospital (Merrill, Boyle, Jackson, & Carey, 2019).

Additionally, the effectiveness of rehabilitation programs in hospitals still requires evaluation. The study states that most programs do not have consistent monitoring and evaluation systems, making it difficult to measure the long-term impact on patients' quality of life (Arisanti, Swediana, Karubaba, Noviandhari, Sunjaya, & Dhamayanti, 2024). The lack of post-rehabilitation programs, such as job skills training or family counseling, also makes many patients vulnerable to drug use again. Research in Europe indicates that rehabilitation success increases significantly when follow-up interventions focus on social and economic reintegration (Anugrah, Anhar, Giffary, Zain, & Indhafi, 2025). The policy flow in Indonesia related to drug rehabilitation is also considered to be still fragmented. Coordination between agencies, such as Indonesian National Narcotics Agency, the Health Office, the police, and community institutions, often does not run synchronously. This fragmentation renders field implementation ineffective and sometimes even leads to overlapping authority. The health policy study emphasizes that regulatory integration and cross-sector harmonization are essential requirements for addressing drug disorders (Valentia & Turnip, 2022).

Stigma and fear of patients are also serious obstacles. Many patients are reluctant to seek rehabilitation services for fear of social discrimination or criminalization (Thornicroft & Tansella, 2022). Research in Southeast Asia shows that stigma can reduce service utilization rates by up to 40% (Vuong, Nguyen, Le, Shanahan, Ali, & Ritter, 2017). Therefore, efforts to reduce stigma through public education and public health campaigns are significant (Willoch, Blix, Pedersen-Bjergaard, Eek, & Reikvam, 2022). The interconnected nature of human resource shortages, access constraints, social vulnerabilities, and fragmented policy implementation underscores the complexity of hospital-based rehabilitation. Yet, while prior studies

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have addressed these issues separately, there has been no comprehensive study specifically examining the integration of hospital-based rehabilitation services in Medan City through a multi-stakeholder perspective. This research gap is crucial, as sustainable rehabilitation requires alignment of medical care, community support, and coordinated policy governance.

RESEARCH METHOD

A qualitative approach with a case study design to provide an in-depth understanding of the dynamics of hospital-based rehabilitation services in the treatment of patients with narcotics, psychotropics, and other addictive substances use disorders. A qualitative approach was chosen because rehabilitation of drug patients is a complex issue that involves medical, social, policy, and multi-stakeholder interactions. The case study method enabled the researcher to explore empirical experiences of informants and capture the local context of rehabilitation program implementation in Medan City. The study was conducted over six months (January–June 2025) at Prof. Dr. M. Ildrem Psychiatric Hospital as the main referral center, five public health centers (Glugur Darat, Terjun, Bromo, Denai, and Pulo Brayan), and related institutions such as Health Office of Medan City, National and Political Unity Agency, Regional Research and Innovation Agency, the police, and community-based rehabilitation institutions including the Fokus Foundation. The research population consisted of stakeholders with authority, involvement, and direct experience in hospital-based rehabilitation. Informants were selected using purposive sampling.

In total, 25 in-depth interviews were conducted: 15 with key informants (health office officials, heads of health centers, health workers, hospital representatives, Provincial National Narcotics Agency (PNNA), community rehabilitation leaders, academics, police officers, and survivors of drug use) and 10 with triangulation informants (community leaders, patients' families, and social workers). Each interview lasted between 45–90 minutes, depending on informant availability and depth of information provided.

The research process comprised several stages. First, interview guidelines were developed based on the conceptual framework of hospital-based rehabilitation and updated literature. Second, data collection involved in-depth interviews, limited observation at hospitals and health centers, and document review of policies and institutional reports. Fourth, interviews were recorded, transcribed verbatim, and analyzed using NVivo 12 software. Data analysis followed open, axial, and selective coding, which identified key themes: human resources and capacity, access to services, social vulnerability, program effectiveness, post-rehabilitation and community, policy flows, stigma and fear, and stakeholder engagement. Findings were visualized through relationship maps to illustrate factor and actor interactions. To ensure trustworthiness, triangulation of sources (different informants), methods (interviews, observations, documents), and researchers (team discussions) was applied. In addition, member checking was conducted by returning summary findings to selected informants to confirm accuracy and credibility.

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RESEARCH RESULTS

Table 1. Core Themes, Analytical Focus, and Key Stakeholders in Hospital-Based Drug Rehabilitation

Main Themes	Focus of Analysis	Related Actors (example from Figure 1)
Human Resources and Capacity	Availability of addiction medical personnel, workload, training, and technical competence	Prof. Ildrem Mental Hospital, Community Health Centers (Glugur Darat, Terjun, Bromo)
Access to Services	Bureaucratic barriers to referrals, non-medical costs, and affordability of services for the poor	Community Health Centers, Medan City Health Office
Social Vulnerability	Risk of relapse due to family, economic, and social factors	Focus Foundation, Denai Community Health Center
Program Effectiveness	Program focus on short-term detoxification, weak follow-up counseling and reintegration	Pulo Brayan Community Health Center, Prof. Ildrem Mental Hospital
Post-Rehabilitation and Community	Lack of after-care support, peer support, and skills training	Focus Foundation, community, patient's family
Policy Flow	Fragmented coordination between agencies, overlapping authority, and weak policy integration	North Sumatra National Narcotics Agency (PNNA), Regional Research and Innovation Agency of Medan City, National and Political Unity Agency of Medan City.
Stigma and Fear	Social discrimination, fear of criminalization, and reluctance to access services	Academics, former drug users (drug experts), police
Stakeholders (Cross-Actor)	Dynamics of cross-sectoral relationships and the role of multi-stakeholders in successful rehabilitation	All actors: Hospitals, Community Health Centers, PNNA, local government, NGOs, police

The results of qualitative research analyzed using NVivo 12 produced seven main interrelated themes, namely: (1) human resources and capacity, (2) access to services, (3) social vulnerability, (4) program effectiveness, (5) post-rehabilitation and community, (6) policy flows, and (7) stigma and fear.

First, human resources and capacity. Hospitals and health centers face limited trained personnel in handling patients with addiction disorders. Psychiatric hospital Prof. Ildrem is the primary reference, but the workload is high, and the number of psychiatrists and addiction counselors is limited. Community health center have an initial role in case detection, but health workers in the primary line do not have adequate addiction counseling skills. *Second*, access to services. Community health

center are the main entrance, but patients often encounter bureaucratic obstacles in the referral system to the hospital. In addition, although a free rehabilitation program is available, transportation costs and daily necessities during rehabilitation pose obstacles. *Third*, social vulnerability. Family, economic, and social factors worsen the patient's condition. Patients from poor and disharmonious families are more prone to recurrence. Community support, such as peer groups, has proven crucial to the success of rehabilitation. *Fourth*, the effectiveness of the program. Rehabilitation programs tend to focus on short-term detoxification. Aspects of advanced counseling, psychosocial therapy, and social reintegration remain underdeveloped. Cross-sector coordination has not

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been consistent. *Fifth*, post-rehabilitation and community. Post-rehabilitation patients often do not receive ongoing assistance. This results in a high recurrence rate. The Fokus Foundation is one of the community institutions that plays a role in assisting patients through peer groups, skills training, and family support. *Sixth*, the policy flow. Although the Medan City Government has prepared the P4GN RAD, the implementation in the field has not been fully integrated with health services. Coordination

between Regional Research and Innovation Agency, National and Political Unity Agency, the Health Office, PNNA, and law enforcement is still sporadic. *Seventh*, stigma and fear. Patients and families are still afraid to access rehabilitation services due to social stigma and fear of legal consequences. Some patients prefer to remain silent rather than seek formal help, because they are worried that they will be considered criminals by the public and law enforcement.

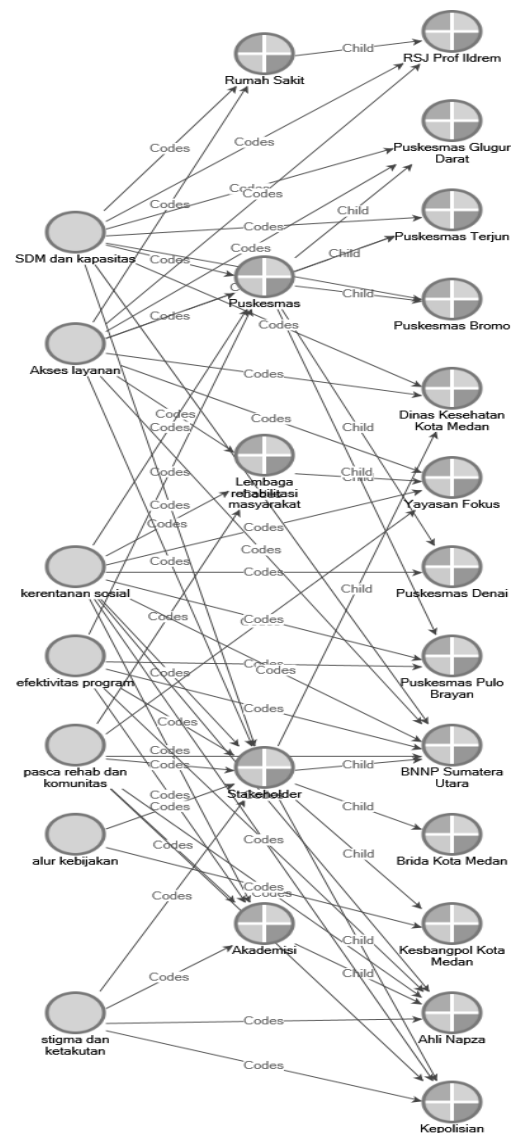


Figure 1. Map of the relationship between the central theme and stakeholders in hospital-based rehabilitation services for the treatment of individuals with SUD.

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DISCUSSION

The results of this study show that the success of hospital-based rehabilitation services is greatly influenced by a combination of structural, social, and policy factors. The theme of human resources and capacity shows the limited number of professionals trained in handling addiction cases. The limited capacity of health workers is the main obstacle in providing comprehensive rehabilitation services in developing countries. Continuous training support for healthcare workers in health centers and hospitals is a crucial step in enhancing service capacity (Ali, Unar, & Butzbach, 2022). In terms of access to services, research shows that bureaucratic obstacles and limited facilities are still challenges. Discovered that convoluted referral systems and limited resources often hinder patients' access to formal rehabilitation services. To overcome this, integrating digital referral systems and empowering health centers as primary rehabilitation service centers can be an effective strategy (McGinty, Barry, Stone, Niederdeppe, Kennedy-Hendricks, Linden, & Sherman, 2018). The aspect of social vulnerability highlights the crucial role of family and community in supporting patients. Patients who receive family support have a greater chance of sustaining recovery compared to those who do not receive support (Suzuki, Hibino, Takaya, & Inoue, 2019). In the context of the City of Medan, the involvement of local communities and civil society organizations can strengthen a rehabilitation system that focuses not only on the medical aspects, but also on the social aspects.

Regarding the effectiveness of the program, this study reveals that most programs remain focused on short-term medical detoxification. In fact, psychosocial interventions and behavioral therapies are indispensable to support long-term recovery. The success of long-term rehabilitation is primarily determined by the availability of ongoing counseling and peer group support, rather than medical intervention alone. Therefore, hospital services need to be integrated with community-based support programs (Priandani, Sulaeman, Sutrisno, Khumayah, & Prayitno, 2025). Post-rehabilitation and community are also important themes. The lack of aftercare services contributes to high rates of

recurrence. That patients who do not receive follow-up services after rehabilitation are twice as likely to experience relapse (Assar, 2025). The role of community institutions, such as the Fokus Foundation, which provides peer support and job skills training, demonstrates that communities can make a significant contribution to reducing the risk of recurrence.

In the context of policy implementation, this study highlights the disparity between policy documents and their actual application in the field. That one of the weaknesses of the rehabilitation system in Southeast Asia is the weak cross-sector coordination between health, social, and law enforcement agencies. Therefore, a more integrated governance mechanism with a precise monitoring and evaluation system is needed (Goldman-Hasbun, Nosova, Kerr, Wood, & Debeck, 2019). Finally, stigma and fear are significant factors that hinder access to services. Many patients are reluctant to visit health facilities because they are worried about getting negative labels from the community or discriminatory treatment. Public stigma against drug users exacerbates social isolation and reduces patients' chances of seeking help (Corrigan et al., 2017). Public education efforts and stigma reduction campaigns are urgently needed to encourage a paradigm shift in society from a repressive approach to a rehabilitative approach.

Overall, this study confirms that hospital-based rehabilitation services in Medan City have not been able to stand on their own. An integrative approach that combines medical services with psychosocial interventions, community support, and a more adaptive policy framework is needed. Cross-sectoral collaboration between hospitals, health centers, community institutions, academics, law enforcement officials, and families is the key to building a sustainable rehabilitation system. Thus, this study provides recommendations for the development of rehabilitation programs in Medan City in the form of a holistic model that integrates medical, social, and policy aspects, aiming to reduce the recurrence rate and improve the quality of life for patients.

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CONCLUSION

Hospital-based rehabilitation services for drug abuse still face various challenges, particularly a shortage of human resources and capacity, uneven access to services, weak policy coordination, and high social stigma. Strengthening health center networks, fostering cross-sector collaboration, empowering community institutions, and providing community-based post-rehabilitation support can effectively address these challenges.

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